

*ASPECTS OF THE THEORY OF*  
**INTERNATIONAL  
CAPITAL MOVEMENTS**

BY

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## INTRODUCTION

It is generally recognized that international capital movements have assumed a great and growing importance during the last two generations,<sup>1</sup> but at the same time it must be admitted that the international trade theory of the past has not paid adequate attention to the complicated problems to which such capital movements give rise. It is the purpose of the present study to meet this deficiency in some measure; its aim is to treat the most important aspects of these problems and explain both the *essential nature* of such capital flows and the *mechanism* through which they are effected. It regards the analysis of international capital movements as an *integral part of an adequate theory of international trade*. Consequently, our first task must be to present a brief outline of the main propositions of this theory of international trade as it stands to-day.

In general, the *object of the theory of international trade* is to explain international exchange, i.e. the trade between different countries, its causes and effects. This involves two main problems: (1) why, on what terms, and with what effects, are particular commodities and productive factors rather than others exported or imported, and (2) how is equilibrium in international accounts maintained?<sup>2</sup>

The question at once suggests itself, why a *special* theory of international trade should be called for in order to solve these two problems: can they not be adequately treated by the general theories of value and of money, or is international trade subject to special laws of its own? The classical econom-

<sup>1</sup> A brief sketch of their development and volume is given infra, pp. 330 et seq.

<sup>2</sup> Besides, the classical treatments of the subject have placed great importance on a discussion of the incidental question how the gain from international trade and its division between the trading countries can be measured.

ists answered this latter question in the affirmative, pointing to their own development of the principles of comparative cost and reciprocal demand, and to their analysis of specie flows. But even if it is admitted that the fundamental laws of domestic and international trade are of the same nature, it may be argued that the exchange between countries possesses certain peculiarities which make a supplementary special treatment necessary.<sup>1</sup>

Till recently, general treatises on economic theory have usually dealt with *a single market*, in which at any given time each commodity or productive service had only *one price*<sup>2</sup> The theory of international trade, on the other hand, comprises *several markets*, in which both commodities and productive services may obtain *different prices*. That such price differences may persist must be due to *the limited mobility or even the complete immobility* of some or all of the productive factors; were they all perfectly mobile, they would distribute themselves in such a way between places and occupations as to equalise all prices.

It is well known that the corner-stone of the classical theory of international trade was the assumption of *perfect internal mobility and complete international immobility of the productive agents*. This rigid assumption may be useful as a first approximation in the analysis of the complex phenomena of international trade. But it goes without saying that the next steps in the explanation should be to take into account: (1) that some, at least, of the productive factors may move with greater or less difficulty *between* countries, and (2) that *within* countries there are also considerable obstacles in the

<sup>1</sup> Apart from the purely *theoretical* considerations with which we are here alone engaged, a special treatment of international trade *policy* may, of course, be justified on the "value-premise" that the welfare of our countrymen is more important than that of foreigners.

<sup>2</sup> Cf. e.g. Marshall's definition drawn from Cournot, of a market as "any region in which buyers and sellers are in such free intercourse with one another that the prices of the same goods tend to equality easily and quickly." (*Principles of economics*, 8. ed., London 1922, p. 324). Cf., on the other hand, F. Zeuthen, *Afstanden mellem Bedriftcellerne og det prispolitiske Sammenspil*, Nationalök. Tidsskr. 1933, Tillægshäfte: Til Harald Westergaard, particularly p. 237 and Erich Schneider, *Preisbildung und Preispolitik unter Berücksichtigung der geographischen Verteilung von Produzenten und Verbrauchern*, Schmollers Jahrb. 1934 and *Bemerkungen zu einer Theorie der Raumwirtschaft*, *Econometrica* 1935.



way of factor movements. When these further steps in the analysis are taken, it becomes evident that *international trade is merely one form of interlocal trade.*

The analysis of such trade between different places may be greatly facilitated if these places can be assigned to a definite number of *markets* within which—in the first instance at least—price differences may be neglected. To deal in this manner with certain greater or smaller geographical districts as distinct markets is to assume that the boundaries between them can be drawn in such a way that the *degree of mobility* of one or more of the productive factors is *essentially* greater within a given district than from district to district. It is fairly obvious that countries can be considered as distinct markets in this respect, but it can hardly be maintained that political frontiers are the *only* border lines that are relevant in this connection. On the contrary, it must be admitted that both larger and smaller regions than countries may show such characteristic differences with regard to factor mobility that they are naturally treated as distinct markets. Conceived in this way the theory of international trade is merely a special—though perhaps the most important—application of this more general theory of *interregional trade*, dealing with all sorts of regions. This point of view—that the element of space can only be given full consideration in the theory of price formation through the extension of the latter from a one-market theory to an analysis of a number of more or less closely related markets or regions—has been stressed by *Ohlin*.<sup>1</sup>

The general character of this many-market analysis may be briefly indicated as follows: economic theory in general explains the trade between different individuals or economic units within the same market as a consequence of *two fundamental facts*: (1) individuals or units are differently equipped and, consequently, not equally efficient in the production of all commodities, and (2) economies of large-scale production are to be gained through specialisation. In a similar way different geographical units (districts, countries, continents) may (1) have an *equipment of productive powers* which makes them

<sup>1</sup> Bertil Ohlin, *Handels teori*, Stockholm 1924 and *Interregional and international trade*, Cambridge Mass. 1933. Cf. also James W. Angell, *The theory of international prices*, Cambridge Mass., 1926, p. 366.

better suited for the production of some commodities than for the production of others,<sup>1</sup> and likewise (2) the *economies of scale* may lead to a division of labour between such regions no less than between individual persons or plants. Thus the "causes" of interregional trade are to be found in the lack of (1) mobility and (2) divisibility of the factors of production. Besides, the (3) costs of transport and all other *impediments to commodity movements* must be taken into account. Owing to them there are different markets for commodities no less than for productive factors, and *all* the obstacles to movements between these markets or regions must be considered in the theory of interregional trade. It thus appears that interlocal trade is conditioned by the same basic facts as exchange in general, but at the same time it has certain peculiarities of its own just because of its space dimension.<sup>2</sup>

The purpose of this general theory of interregional trade is to analyse the interplay of commodity and factor movements between different regions and their effects on the whole price structure of each region; it demonstrates, in other words, the *interdependence of the price systems of trading regions, com-*

<sup>1</sup> Strictly speaking it is not necessary that the supply of productive factors is different; the differences between the districts or places may be found in their *demand* conditions. The condition of trade is that the regions are unequally equipped in relation to their demand. The relative scarcity of productive factors must be different.—Besides, certain conditions must be fulfilled with regard to the technical coefficients, i.e. the proportions in which the productive factors are combined in different commodities, but as these conditions obviously *are* fulfilled everywhere in practice it is not necessary to dwell on them here. Cf. Eli F. Heckscher, *Utrikeshandelns verkan på inkomstfördelningen*, Nationalekonomiska studier tillägnade Professor David Davidson, Uppsala 1920, pp. 5 et seq.

<sup>2</sup> In the general treatises this space aspect of trade is usually touched upon only in connection with the influence of location on the value of land. In general, the total supply of the productive agents is included among the basic data without reference to its distribution over the market area. Only in the particular case of land it has been recognized that the *same* productive factor—land of a certain quality—may have *different* values according to its location. And even here the attempt to treat "situation" simply as a quality of the land akin to its fertility has led to inadequate results, because it disregards possible interregional differences in *all other prices* (e.g. the higher wage rates prevailing in or around big cities which undoubtedly influence land values). A complete theory of rent must be part of a theory of interregional trade. Cf. L. V. Birck, *Den økonomiske Virksomhed* II, Kbhvn. 1928, p. 291 (Nr. 35) and pp. 292—95 and the references given supra p. 2, note 2.

munication between which is hampered by various obstacles. Thus the lack of complete factor mobility explains the necessity not of a special theory of international trade, but rather of a general theory of interregional trade dealing with a number of distinct markets.<sup>1</sup>

But what, then, are the special peculiarities of *international trade*? A number of reasons have been enumerated in the literature of international trade theory for dealing with countries as the main regional concept; the most important among them, however, is that countries usually have independent currency systems. Within each country there exists normally one unit of account in which values and debts are expressed, and one system of media of payments—coins, notes, etc.—by means of which monetary transactions are settled. Moreover, modern banking systems usually provide facilities for the making of payments between different parts of a country, either gratuitously or for a nominal charge, whereas the rate at which the money of one country can be converted into that of another is generally subject to some degree of variation. International trade may be defined, therefore, as *trade between regions maintaining currency systems of their own*.<sup>2</sup> This definition is given for instance by Cassel.<sup>3</sup> That the existence of different independent currencies is of prime importance to the mechanism through which international payments are effected,

<sup>1</sup> Beside the narrow "single price market" defined above Ohlin applies a wider concept the "multiple price market" in which the prices of commodities and productive services differ exactly by their cost of transfer (*Loc. cit.*, p. 5). This, obviously, is the sense in which the term "market" is used when one speaks of a "world market" for certain goods. But in those cases at least in which prices differ by less than the costs of transfer (including the cases where transfer is completely impossible), it is necessary to speak of *different markets*, although they may be indirectly communicating.

<sup>2</sup> That "Staat" and "Währungsgemeinschaft" are not always identical is pointed out at some length by Walter Sulzbach in an article *Zur Transferfrage*, *Zeitschr. f. d. ges. Staatsw.* 1927, pp. 116 et seq. Cf. also his article *Der wirtschaftliche Begriff des Auslandes*, *Weltw. Arch.* 1930 II, pp. 55 et seq.

<sup>3</sup> *Theoretische Sozialökonomie*, 4. ed., Leipzig 1927, p. 609. Cf. Eugen Melchinger, *Die internationale Preisbildung*, Tübingen 1929, pp. 65—66, Franz Eulenburg, *Aussenhandel und Aussenhandelspolitik*, Tübingen 1929, p. 9, and Barrett Whale, *International trade*, London 1932, pp. 10—11. Cassel is wrong, however, when he adds that the existence of different currencies is the characteristic feature in every many-market theory of prices, i.e. in the theory of interregional trade in general. Cf. *infra*, p. 7, note 1.

is particularly true in case of paper-standard countries where it is self-evident that each country must have its own national monetary policy. When the gold standard is maintained in a number of trading countries this fact in itself compels these countries to adopt, to a certain extent at least, a common monetary policy with the immediate object of maintaining stable rates of foreign exchange. But though the gold standard is thus essentially an international standard, establishing a sort of informal monetary union between all gold-standard countries, it is still important to distinguish between national and international payments, as long as a genuine international central bank, guaranteeing a homogeneous world monetary policy, has not been created. The chief reason is that a transfer of buying power between countries in the form of gold will ordinarily influence the total volumes of bank credit outstanding to a larger extent than local redistributions of buying power within a single country. Even countries entering formal monetary unions retain their independent currencies; each member of such unions is responsible for the maintenance of the value of its currency at the agreed parity, and with that object in view each of them carries on its own independent monetary policy; even when the monetary community becomes as comprehensive as e.g. according to the agreement of 1885 between the Scandinavian central banks always to maintain the rate of exchange at par, the currency independence of the individual countries is not given up. Moreover, such currency unions are terminable, and the gold standard itself may be abandoned without notice, so that any moment may bring a plurality of disconnected monetary units, free to diverge in value, whereas in the domestic trade of a particular country there must always be a definite limit to the cost of sending money from one part of the country to another. Take, for instance, the German states. They are not self-contained economic units in this respect; they have a common currency system controlled by one single authority, the Reichsbank. Similarly, the United States of America has long had a common monetary standard; up to 1913 the lack of a central bank made it difficult now and then actually to keep the dollars of different parts of the country at par with one another; but since the creation of the Federal Reserve System these difficulties have been gradually overcome, although each of the

Federal Reserve Banks is granted a certain autonomy in its fixing of discount rates.<sup>1</sup>

A general criticism of the classical theory of international trade lies outside the scope of the present study. Its defects obviously centre round its foundation upon the Ricardian theory of value. It is a peculiar irony of destiny that the field of international trade should become the last stronghold of the labour theory of value; for Ricardo points out himself in the famous chapter VII of his *Principles* that in the case of trade between countries, i.e. regarding *international* values, this theory is insufficient; and the principle of reciprocal demand, with which his doctrine of comparative cost was supplemented by Mill and Cairnes, may be regarded as a forerunner of the modern theory of value formulated by the Austrian school.<sup>2</sup> It is one of the strangest anomalies within the science of economics—due probably to the unfortunate habit of compartment thinking—that this inconsistency between the theories of value applied in the general treatises on economic theory and in the special treatises on international trade has not been strongly felt until quite recently.<sup>3</sup> As a general rehabilitation of the Ricardian theory of value is obviously out of the question, the only logical procedure seems to be to discard this theory completely and try to build up a

<sup>1</sup> Cassel properly remarks (*Loc. cit.*, p. 610) that a study of the trade between the different Federal Reserve districts and its importance for the maintenance of the parity of the dollar might throw interesting light on the closely related problems of international trade. Here Cassel evidently admits that a general theory of interregional trade is called for; cf. *supra*, p. 5, note 3. The existence of a plurality of domestic markets in the United States and the necessity, therefore, of applying the tools of international trade theory to the adjustment of debits and credits between the different localities, is also emphasized by Theodore J. Kreps, *Export, import, and domestic prices in the United States 1926—1930*, *Quart. Journ. of Ec.* 1932, p. 219. Remembering that the Eastern states have been the creditor states, while the states of the South and West have been debtor states, studies of this sort might also throw light on the theory of capital movements.

<sup>2</sup> This is pointed out by Frank A. Fetter (*Principles of economics*, New York 1922, p. 218, note). Jevons and the Austrians never seemed aware of this doctrinal resemblance. And, of course, Cairnes lacked the marginal concept; he dealt only with average sacrifices.

<sup>3</sup> Cf. Edward S. Mason, *The doctrine of comparative cost*, *Quart. Journ. of Ec.* 1927, pp. 63—93 and Bertil Ohlin, *Ist eine Modernisierung der Aussenhandelslehre erforderlich?* *Weltw. Arch.* 1927 II, pp. 97—115, which further develops a chapter in *Handelns teori*.

theory of international values more in harmony with current general theories of value and prices, running in terms of equilibria and of the principle of variable proportions. Independent attempts at a reconstruction of the theory of international trade along such lines have been made by Pareto<sup>1</sup> and Ohlin,<sup>2</sup> and it is a modernised theory of international trade of this sort which forms the starting point of the analysis in the chapters to follow.

The merits of the mutual interdependence theory of special relevance to the problems of the present study are two: (1) while the classical economists usually confined their analysis to the price relations of the commodities and services actually traded between countries,<sup>3</sup> the modern theory of international or interregional trade must of its very nature extend its considerations to *the whole price structures* of the trading regions. Starting from the assumption of an interdependence of all prices within each region it attempts to demonstrate how the interregional movements of goods and productive

<sup>1</sup> In two articles in *Giorn. d. Ec.* (1884 and 1895) and later in *Cours d'économie politique II*, §§ 862—78, Lausanne 1897.—Cf. also Theodore Otte Yntema, *A mathematical reformulation of the general theory of international trade*, Chicago 1932. Yntema describes his study as a mere re-examination and extension of the conclusions which follow from the classical premises (p. 1), but it contains in fact, within certain restricted limits, a formulation in true Walrasian fashion of the conditions of international equilibrium in terms of a system of simultaneous equations.—Gottfried Haberler attempts to retain the principle of comparative cost by substituting "opportunity cost" for the Ricardian "labour cost" (*Die Theorie der komparativen Kosten und ihre Auswertung für die Begründung des Freihandels*, *Weltw. Arch.* 1930 II, pp. 353—70 and *Der internationale Handel*, Berlin 1933, ch. 13).

<sup>2</sup> In the works already referred to p. 3, note 1. In *Interregional and international trade*, pp. 30—33 Ohlin mentions that similar viewpoints have been expressed by Sismondi and Longfield.

<sup>3</sup> Taussig, it is true, has analysed the relation between the prices of international and domestic commodities (*Wages and prices in international trade*, *Quart. Journ. of Ec.* 1906 and *International trade*, New York 1927, ch. V), but he does not properly stress their mutual interdependence; to his notion it is the effectiveness of labour and the height of money wages in the export industries that "determine" the prices of home-market goods; his doctrine is typically unilateral. The limitation of the classical analysis to the international commodities themselves is also apparent in the numerous attempts of the classical economists to measure the gain from international trade by variations in the "barter terms of trade". For criticism of these attempts cf. Ohlin, *Interregional and international trade*, passim. The concept of "barter terms of trade" will be examined *infra*, pp. 337 et seq.

factors tend to influence not only the prices of these goods and factors themselves, but also the prices of the immobile commodities and agents of production. (2) While the classical economists assumed complete interregional immobility and perfect internal mobility of labour and capital,<sup>1</sup> the modern theory leads directly into a study of *the degree to which these two factors of production are actually mobile or immobile* under different conditions of time and place, and of the consequences of this more or less limited mobility with regard to comparative prices, to size and distribution of incomes, and, in general, to the whole economic position and development of the trading regions.

With the problems of international capital movements in view the Ricardian assumption that labour and capital are combined in *equal proportions* in the production of all commodities seems particularly unfortunate.<sup>2</sup> It precludes an adequate

<sup>1</sup> International capital movements, it is true, are dealt with in some detail by authors like Cairnes and Bastable, but mainly with regard to the mechanism through which they were effected. That they also exercised a definite and permanent influence on the basic data of price systems: the supply of productive factors, the technical coefficients and demand conditions of different regions, was hardly touched upon, and it was not intimated that their existence might necessitate a reformulation of the traditional international trade theory. Not even Taussig has taken up these problems. Just like J. S. Mill he refers his discussion of the transfer mechanism to tributes rather than to ordinary capital movements. (Cf. Ragnar Nurkse, *Ursachen und Wirkungen der Kapitalbewegungen*, Zeitschr. für Nationalök. 1934, p. 78).

<sup>2</sup> It is strange that Cassel, who criticises this assumption of the Ricardian theory, exposes himself to the same objection when he defines his well-known concept of a uniform rate of economic progress. For progress inevitably means the addition from time to time of entirely new products to the stream of goods of which real income consists, and even if we could surmount the difficulties involved in measuring whether the stream is really expanding at a uniform rate when such new items are added, it is certainly unwarranted to assume that the production of these new goods require a uniformly growing supply of the elementary factors of production. Böhm-Bawerk, on the contrary, assumed as well-nigh self-evident that the relative importance of capital would show a steady growth with the increase in productive efficiency. This contention was based on the experience of the generations following the industrial revolution, but its validity is by no means universal. Whether this tendency will be maintained or reversed will depend on the character of the demand which appears when economic progress allows an ampler satisfaction of our wants. If we prefer commodities—or services—in the production of which capital does not play a large part, the tendency may well be reversed (Cf. Allan G. B. Fisher, *Capital and the growth of knowledge*, Ec. Journ. 1933, pp. 379 et seq. and L. V. Birck, *Den økonomiske Virksomhed*, I pp. 219 et seq.).

analysis of the varying relative scarcity of capital and labour in different countries and its effects on factor movements and commodity trade. As soon as this assumption is given up, it appears that a change in the relative heights of wages and interest rates in opposite directions in two countries, which may be expected—*ceteris paribus*—in case of a capital flow, will influence their costs of production in different ways. The classical assumption, on the other hand, must lead to the conclusion that *relative* prices on which international trade alone depends are left entirely unaffected. If labour and capital were really of the same importance in the production of all commodities, it is evident that whatever changes in production might result from the opening of trade between two countries they would be unable to influence the relative scarcity of labour and capital; the only possibility would be that the relative scarcity of land might be altered. The obvious consequence of these considerations is that the relation between foreign trade and the distribution of income is very inadequately and insufficiently treated by the classical economists.<sup>1</sup>

Like the classical theory of international trade the modern interdependence theory may start from the assumption of complete interregional immobility and perfect internal mobility of the productive agents, but as already suggested its advantage when compared with the classical analysis is that one may proceed to a modification of these assumptions without violating the logical structure of the theory. Proceeding in this way the analysis will amount to nothing less than a complete theory of the *localisation of production*. Ultimately, all exchange of commodities and all movements of factors—within countries as well as between them—must be explained along the same lines, on the basis of a determination of the circumstances governing the places where all the different branches of production are to be located. A satisfactory solution of this localisation problem necessarily presupposes a comprehensive knowledge of the actual degree of mobility of all the different productive factors under concrete conditions. A general localisation theory of this sort, running in terms of regions, would

<sup>1</sup> Cf. *infra*, chs. III and XII. A special aspect of this deficiency has already been touched upon *supra*, p. 4, note 2.



have to assume that the world can be divided into several larger regions, each containing a number of smaller territories, each consisting perhaps in their turn of still smaller districts. How far it would be practicable to carry this subdivision in particular cases, would depend, of course, upon the immediate problem in hand, but a complete study of the factors determining the localisation of production obviously necessitates a consideration at the same time of territories and districts of the most different sorts. In this general theory of localisation countries would be nothing but a particular kind of regions possessing uniformities in some respects, differences in others.

It is not the purpose of this book, however, to give a general localisation theory of this type;<sup>1</sup> it does not intend to deal with all the problems arising out of the greater or smaller obstacles to the external and internal mobility of commodities and factors. The object of study will be limited in a double respect: (1) only the mobility of *capital* will be treated in any detail, and (2) attention will be concentrated mostly on its *international movements*. The main question which we set out to answer is this: how are international capital transfers actually effected? In *part I* the general nature of such international capital movements, their causes and effects will be considered. *Part II A* will review the more important theories put forward to explain the mechanism of these international capital movements. In *part II B* some statistical material will be produced bearing on the adequacy or inadequacy of these theories. Finally, *part II C* will discuss the main problems and conclusions suggested by these theories and facts.

As long as either *full mobility* or *complete immobility* of commodities and productive factors between different markets is assumed, the many-market analysis is comparatively simple.<sup>2</sup> In that case it is relatively easy to work out systems of equations which give a bird's-eye view of the mutual interdependence of all prices and quantities exchanged in all the

<sup>1</sup> The outlines of such a theory are sketched by Ohlin, *Interregional and international trade*, chs. X—XII.

<sup>2</sup> It should be noted that complete geographical immobility does not necessarily mean physical immobility—as in the case of land—but merely that the costs of transfer are prohibitive.

trading countries. In that case the adjustment to possible changes may be assumed to take place immediately and without friction so that their effects can be adequately revealed by a comparison of two states of definite equilibrium. Under such conditions the markets are *always* in equilibrium in the sense that if no further changes occurred the existing prices and quantities would remain unaltered for ever. When a certain *limited mobility* is assumed it may still be argued, of course, that every change which alters (1) the price differentials of the mobile commodities or productive factors, or (2) the obstacles to their mobility, i.e. the costs of transfer, will affect movements of goods or productive factors between the markets. But *such movements may take time*; friction may be encountered, so that equilibrium is no longer re-established overnight. Consequently, it does not suffice to compare two states of final equilibrium; the *transition* between them will also be of interest both in itself and because the final outcome may depend upon the character of the transitional process. The essential difficulty is that the readjustment does not take place with equal ease and speed in all directions; some effects come about quickly, others slowly, some last long, others are short-lived; at any given instant a variety of cooperating or counteracting tendencies and forces will be at work, the relative strength of which may vary from moment to moment.<sup>1</sup> Moreover, *new changes* in any number may occur during the period of transition, necessitating new adjustments of the whole price structures. In real life we always live in a period of transition; "in the long run we are all dead," as Keynes once remarked.

<sup>1</sup> It may perhaps be well to stress that the difference between short-run effects and long-run effects refers only to the point of time at which they show themselves. Exposing his famous doctrine of short- and long-period price Marshall uses the misleading phrase that in the long period the normal supply price "is governed by a *different set of causes* and with different results." (*Principles of economics*, p. 370). Given a certain alteration in the data of the price structures the whole process of price change through time is determinate. It is dangerous to reason as if a certain time must elapse before the long-run tendencies begin to operate. They *operate* from the beginning, but their effects do not *appear* immediately. Short-run and long-run analysis does not explain different processes, but different *sections* of the same process. This distinction must never close our eyes to the essentially continuous nature of the economic process. (Cf. Lionel Robbins, *Remarks upon certain aspects of the theory of costs*, Ec. Journ. 1934, pp. 16—17).

A great amount of effort and ingenuity has been spent in recent years on the further development of the systems of simultaneous equations in such a way as to take due account of the elements of *time, uncertainty, and friction*. A detailed account or criticism of these attempts cannot be given here. In our present state of knowledge the utility of this apparatus depends chiefly on the lucidity with which it brings out the interdependence of all economic phenomena. To solve the innumerable complicated non-linear equations in concrete cases is obviously out of the question. For the present, the study of international capital movements must remain, therefore, in the realm of "historical dynamics" rather than in that of "analytical dynamics."<sup>1</sup>

A few points of particular interest to the investigations of the following chapters must be briefly touched upon. To take account of *costs of transfer* is comparatively easy. As will be demonstrated in chapter II the obstacles in the way of movements of both capital and labour from place to place are largely of a psychic nature. Such psychic checks may be treated in the same way as those affecting the domestic supply of capital and labour within an isolated market; they may be regarded, in other words, as functions of the price differentials between the markets, the nature of these functions depending upon the psychological make-up of the various individuals. The actual costs of transport both with regard to factors and to commodities are most easily taken into consideration by treating "transport services" as goods produced in each country besides all other commodities and services, and demanded in each country in "joint demand" with imported goods. Just as all other production, the delivery of transport services commands part of the total supply of productive agents; like other goods they are "produced" by certain definite combinations of the different factors, and as usual these technical coefficients are functions of the prices of the factors.<sup>2</sup> Finally, the demand for all different goods will be influenced by the prices of transport services as well as by all other prices, and these transport charges, on the other hand, will depend not only on other

<sup>1</sup> Cf. Ragnar Frisch, *Statikk og dynamikk i den økonomiske teori*, *Nationalek. Tidsskr.* 1929, p. 330.

<sup>2</sup> Because of imperfect factor divisibility (economies of scale) they also depend on the quantity of the transport services that have to be rendered.

costs of transport, but on all prices (and on the distribution of incomes). In this way the transport services, their prices and costs can be made integral parts of the general interdependence system of economic phenomena; the limitations to mobility are added to the data of the price systems; they, too, will influence the result in the way briefly indicated; they, too, are conditions of equilibrium in the sense that wherever they are removed or reduced new movements will ensue.

Among the data by which the price structures are determined, *anticipations of the future* play an important rôle.<sup>1</sup> If all future changes could be fully anticipated, they would, in due time, be taken into account in all economic dispositions. Now, a good many changes in the price system are in fact almost completely foreseen—many seasonal fluctuations, for instance. The obvious consequence of such foresight is that all price movements and price differences must be evened out and subdued to a far greater extent than where the future is not completely foreseen. If one knew beforehand what commodities the whims of fashion would suddenly place in greater demand, their production would be increased in time, possibly by the attraction of capital from abroad; if it was known beforehand that rich natural resources would suddenly be discovered in a certain country, capital would flow in from abroad in time for their immediate utilisation; if it was known beforehand that the savings of a certain country would suddenly increase, an adaptation to this changed factor supply would take place in time, perhaps involving not only alterations in the character and methods of production but also international movements; and finally, if one knew beforehand that considerable international movements of labour or capital would start from a certain moment, this would also give rise in due time to the necessary readjustments.

If, on the other hand, completely unexpected changes occur, the previous anticipations of the future are modified. This means that *gains and losses* are entailed upon the owners of the capital values that have changed as a result of the unexpected events. As has been pointed out by Myrdal<sup>2</sup> such gains

<sup>1</sup> Cf. Gunnar Myrdal, *Prisbildningsproblemet och föränderligheten*, Uppsala 1927, Erik Lindahl, *Prisbildningsproblemet och dess uppläggning från kapitalteoretisk synpunkt*, Ek. Tidsskr. 1929 and Myrdal, *Om penningteoretisk jämvikt*, ibid. 1931.

<sup>2</sup> *Loc. cit.*, p. 44.

and losses are of quite another character than incomes and costs; the latter may be regarded as *prices* (of commodities or productive services), the former, on the other hand, are *price changes* or *price differences*. The income from capital in the form of interest refers to a *period of time*, whereas these capital gains or capital losses refer to the *instant of time* at which the owner of the capital is compelled to alter his valuation of it.<sup>1</sup>

If, e.g., an international capital movement unexpectedly sets in, either because of a change in the costs of transfer, or because alterations in demand conditions, in the methods of production, or in the supply of productive agents, have increased the difference between the rates of interest in two countries, this will occasion capital gains and capital losses, which in their turn may release secondary transfers of capital.

In actual life people usually have some knowledge of the future; they have certain expectations regarding the coming course of events; as a rule their anticipations take the form of a *number of more or less probable possibilities*. In that case their choice between these possibilities will be determined—as Myrdal has shown<sup>2</sup>—not only by (1) the *objective risk* to which they are actually exposed, but also by (2) their *apprehension* of this risk, and (3) their *valuation* of this presumed risk.

The *element of friction* gives rise to a number of *new gains and losses* besides those already mentioned. Myrdal speaks of “losses of recession” and “gains of affluxion,”<sup>3</sup> due to the fact that the agents of production are unable to move *quickly enough* from some places and occupations to others; other losses are due to technical improvements which may make existing productive agents obsolete; and even apart from that, the variations in relative prices may change the optimum factor combination and thereby reduce the value of existing combinations. All these gains and losses have their secondary

<sup>1</sup> An important consequence of the occurrence of such gains or losses is that the size of a country's capital, measured in money, may change not only as a result of positive or negative net saving, but also on account of an appreciation or depreciation of existing capital goods.

<sup>2</sup> *Loc. cit.*, p. 103.

<sup>3</sup> “Bortströmningsförluster” and “tillströmningsvinster”, *loc. cit.*, pp. 74—75.

effects on the whole price structures, although to some extent they will probably tend to outweigh one another.

The existence of a certain time lag between the actual price situation and its virtual equilibrium position means that *the next change* strikes a price system the equilibrium of which is already disturbed, and that, as already suggested, may modify the effects of this second change. In general, the conditions during the period of transition may affect the character of the subsequent settlement and, in particular, the final position may be different from that which would have been reached *if the same changes in data had set in at greater intervals*. The cumulation of the effects depends on the speed with which the changes occur. It is not a mere summation.

Moreover, certain changes may have *potential effects* which will never actually appear unless a new change of data occurs. Rosenstein-Rodan<sup>1</sup> uses as an analogy a glass filled so full of water that the surface of the water is slightly higher than the rim of the glass. It is only the surface tension which prevents the water from running over. Now, if one drop of water be added, an amount of water far in excess of this one drop will overflow.

It may be asked, finally, whether the multitude of co-operating or conflicting forces at work does not effectively impede conclusions of any definiteness and reliability. As a matter of fact it often does, and more often still it prevents an inductive test of the validity of the a priori reasoning. The influence of a great many minor factors will often be so intricately mingled with the effects of other causes as to be lost in the complexity of the situation. In such circumstances deductive analysis cannot proceed beyond an enumeration of the tendencies at work and a more or less arbitrary balancing of their relative importance, and inductive attempts to ascertain the effects, no matter how detailed and painstaking, will only lead to results still more open to question. It is only in exceptional cases that a single force or some few forces are of sufficient importance to influence the whole set of phenomena related to them to such an extent that one is enabled to reach more definite and clear-cut conclusions and to verify them by way of induction.

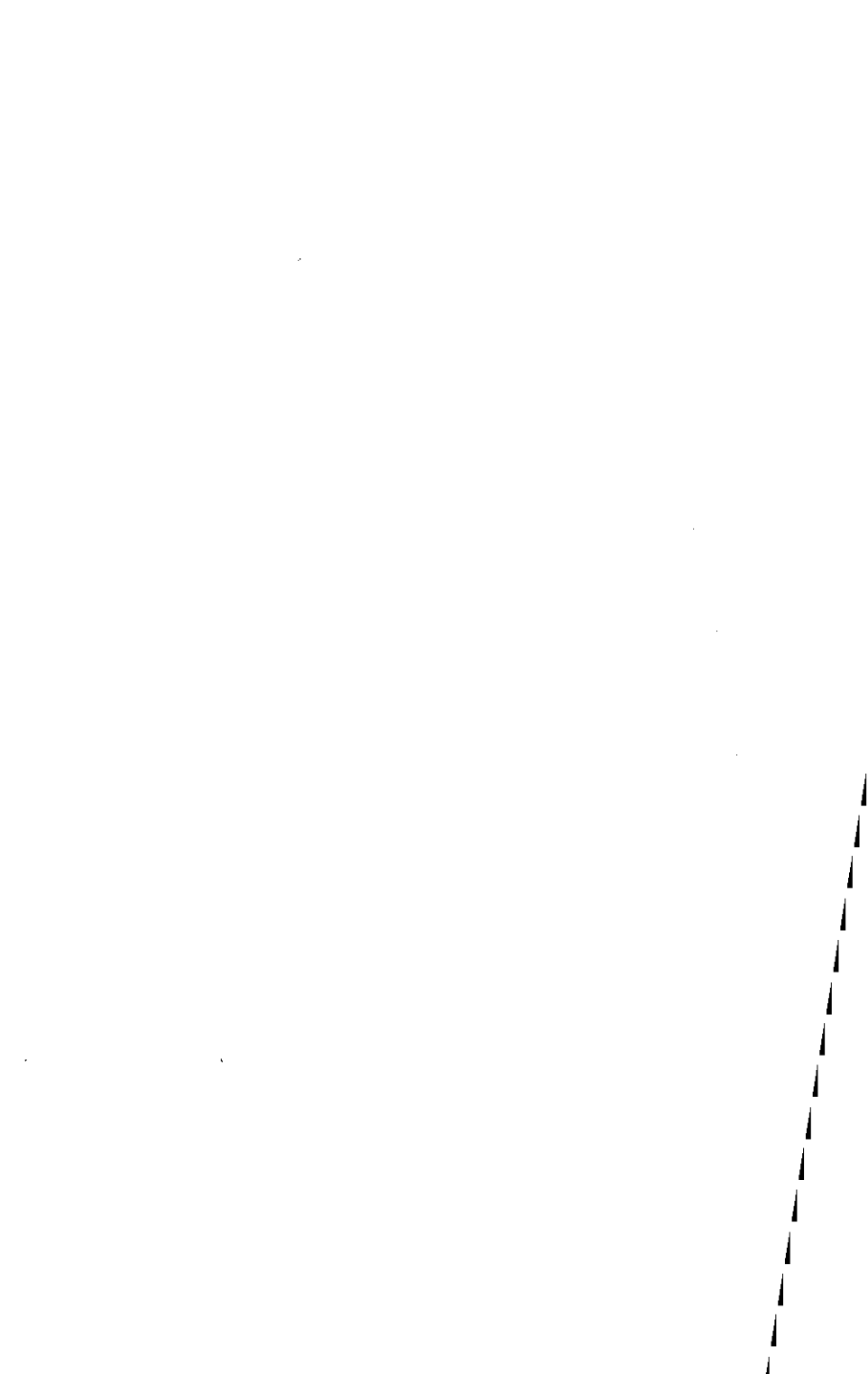
<sup>1</sup> *The rôle of time in economic theory*, *Economica* 1934, p. 96.

**PART I**

**ESSENTIALS**

**OF**

**INTERNATIONAL CAPITAL MOVEMENTS**





## CHAPTER I

### THE NATURE OF INTERNATIONAL CAPITAL MOVEMENTS

#### 1. THE CAPITAL CONCEPT.

The first thing necessary in order to get a clear notion of the fundamental nature of international capital movements is to make sure exactly *what should be meant by capital* in this connection.<sup>1</sup>

A characteristic feature of the modern interdependence theory of value which forms the starting point of the present study is that all the different agents of production are given an exactly similar position within the price structure, and that no assumption is made beforehand as to the number of these productive agents.<sup>2</sup> As has been pointed out by economists like Wicksteed and Davenport there are in reality countless classes and varieties of productive factors. But this does not necessarily mean, as these authors seem to believe, that the traditional distinction between land, labour, and capital is entirely without value. No scientific progress is possible without grouping together the innumerable individual

<sup>1</sup> At this fundamental point the earlier monographs dealing with this subject leave much to be desired. C. K. Hobson merely says (*The export of capital*, London 1914, ch. I) that "foreign investments consist of that part of the property of a country and its inhabitants, situated abroad, from which its owners expect to derive an income." The capital concept of A. Sartorius von Waltershausen (*Das volkswirtschaftliche System der Kapitalanlage im Auslande*, Berlin 1907, ch. I) is "eine Wertsumme, die dazu dient einen Gewinn zu bringen." Similarly Ernst G. Preuss (*Die Kapitalanlage im Auslande*, Berlin 1923, p. 8) defines capital as "dem Erwerbe dienendes Vermögen, das rechnungsmässig als erwerbende Geldsumme gebucht wird."

<sup>2</sup> Cf. e.g. Zeuthen, *Den økonomiske Fordeling*, Kbhvn. 1928, p. 267.

phenomena of the actual world according to common general characteristics. It must only be remembered, that there are differences as well as similarities between the phenomena comprised by any one group, and that for particular purposes a further subdivision in a greater number of groups may be called for. The expediency of retaining the old tripartition in general economic theory is based mainly on the differences between land, labour, and capital with regard to what Marshall calls the "reflex influence of remuneration on supply." In the theory of international trade this consideration is reinforced by the fact already alluded to that, as a rule, the degree of international mobility of these three groups of productive factors is essentially different. That land lacks geographical mobility completely needs no particular demonstration; nor would many people doubt that labour is usually much less mobile internationally than is capital—whatever that term is taken to mean.

When used in connection with land and labour to signify the third main group of productive agents the term capital is generally defined in economic text-books as the *material means of production produced by man*, the intermediate products—"Zwischenprodukte" in the terminology of Böhm-Bawerk. Sometimes this is taken to mean only "goods of the second and higher order", i.e. goods possessing indirect utility as contrasted with consumers' goods, "goods of the first order" yielding direct satisfaction, but other economists take capital in a wider sense, as comprising all goods produced by man existing at a given moment.

Historically this concept of "*real capital*" emerged from the demonstration of the fallacy of the mercantilistic contention that "capital consisted in money" (with its corollary that the rate of interest depended on the quantity of money). Undoubtedly, this "removal of the veil of money" was meritorious at the time, but grave difficulties arise, when it is attempted to refer *solely* to these concrete capital goods, whether the object of analysis be the functioning of the capital market, the nature of the processes of production and distribution or—the international movements of capital. These difficulties were probably vaguely felt by Macleod, but the first to state them clearly was Davenport.<sup>1</sup> And during the last twenty

<sup>1</sup> *Value and distribution*, Chicago 1908.

years the tendency has been towards a return to the original starting point in the capital-concept controversy: the popular concept of monetary capital. This development is described with eminent propriety by Schumpeter:<sup>1</sup>

“Einmal ist in der gegenwärtigen Theorie des Produktions- und Vertheilungsprozesses gar kein Raum für jenen Fonds an Leihgeld, der in den Zentren der kapitalistischen Wirtschaft entsteht und dort praktisch eine so grosse Rolle spielt. So gründlich hat die Theorie das, was sie als “täuschenden Geldschleier” erklärte, beiseite geschoben, dass sie über die Vorgänge des Geld-, Kredit- oder Kapitalmarktes nichts aussagen kann. Da nun die einfachste praktische Erfahrung lehrt, dass die Vorgänge des Geld- und Kreditverkehrs keineswegs bloss ein passiver Abdruck der Vorgänge der Güterwelt sind, vielmehr die letzteren sehr wesentlich beeinflussen, so musste die Verankerung alles kapitalistischen Geschehens in der Güterwelt allein von diesem Standpunkt als ein den Fortschritt der Analyse behindernder Fehler erscheinen. Sodann aber überzeugt man sich leicht, dass eine ganze Reihe von Dingen, die über das Sachgüterkapital ausgesagt zu werden pflegen, nicht von ihm, wohl aber von einem anders gearteten Fond, der mit Sachgütern zunächst nichts zu tun hat, behauptet werden können. So erfolgt z. B. der Uebergang des Kapitals von einer Industrie in die andere, welcher eine der wichtigsten Voraussetzungen einer ganzen Reihe fundamentaler Theoreme ist, nur ausnahmsweise durch Uebergang von Sachkapitalien zur anderen Verwendung, vielmehr in der Regel, wie schon die Vulgärauffassung sagt, durch Uebergang des in einer Industrie investierten “Geldes” in eine andere, und dieser Uebergang ist es, der bewirkt, dass sich die ursprünglichen Produktionsmittel, also Arbeits- und Bodenleistungen von einer Verwendung ab- und einer anderen zuwenden.”

Exactly similar considerations hold good, when we come to the geographical mobility of capital. Here too, it is *not the capital goods, but something else* which moves.

In order to discover what this “something” is, we must remember that the new element which is required besides the two original productive factors in order to enter upon the “roundabout” methods of production from which the intermediate products emerge, is *waiting*. The original agents of production—labour and land, the “goods of the highest order”—may be used either directly to produce immediate satisfactions or in an indirect roundabout way to produce

<sup>1</sup> In the article “*Kapital*” in *Handw. der Staatsw.*, 4. ed., Jena 1923, V p. 583.

capital goods that will bring greater satisfaction at a later date. The new elementary productive service, a supply of which is required in order to obtain this greater future satisfaction, is waiting. This term points to the negative side of the process, the abstention from present consumption;<sup>1</sup> in order to indicate the positive command which this abstention makes possible, Cassel and others use the term *capital disposal*.<sup>2</sup> The term *capital disposal* is not a very happy one, for what people abstain from consuming and what they or others thereby get command over is not capital, but income;<sup>3</sup> but the fact that by abstaining from immediate consumption of their whole income people supply waiting which enables

<sup>1</sup> It should perhaps be stressed that this does not necessarily imply psychological reluctance ("abstinence"). Just as labour would remain a cost, however much people enjoyed working, unless all its products became free goods, waiting would still be a cost of each particular commodity into which it entered, even if people were able and willing to postpone all consumption and save their entire incomes, provided, of course, that any motive for production was still existing and that production could be increased by arrangements requiring time. Fundamentally, it is the necessity of choice which makes us economise anything. But obviously, it will affect the prices both of the productive services and of the commodities for the making of which they are combined, if people work or save less because of the "effort and sacrifice" involved.

<sup>2</sup> *Theoretische Sozialökonomie*, p. 181. Cf. also Carl Menger, *Grundsätze der Volkswirtschaftslehre*, Wien 1871, pp. 129—31 and Exkurs XIII in Böhm-Bawerk's *Positive Theorie des Kapitals*, 4. ed., Jena 1921. The widespread failure to distinguish clearly between real capital or capital goods and that new element, command over which is necessary in order to create those capital goods, is partly due to the fact that this latter concept was left nameless by Böhm-Bawerk, though he was well aware that instead of identifying capital and intermediate products it might have been better "einem jener anderen Kapitalbegriffe den Vorzug zu geben, die — wie der Begriff des "Subsistenzfonds" oder der Begriff der "der Zukunft" dienenden Güter — eine genauere Fühlung mit wesentlichen Gedanken der Kapitaltheorie halten" (*Loc. cit.* p. 91. Cf. Fritz Machlup, *Börsenkredit, Industriekredit und Kapitalbildung*, Wien 1931, p. 10; also his article *Begriffliches und terminologisches zur Kapitaltheorie*, *Zeitschr. für Nationalök.* 1931; C. Halm, *Warten und Kapitaldisposition*, *Jahrb. f. Natök. u. Stat.* 1931 II; Richard S. Siggel, *Kapital und Produktion*, Wien 1934, part. p. 41; Hellmut Schneider, "Kapital" und "Warten", *Jahrb. f. Natök. u. Stat.* 1934 II; G. Warndahl, *Grundforholdet mellem Realkapital, Kapitaldisposition og Kredit*, *Nationalök. Tidsskr.* 1934.

<sup>3</sup> Cf. Wicksell's criticism in *Ek. Tidskr.* 1919, p. 211 and also Robert Liefmann's definition of saving simply as "Einkommen Kapital werden lassen" (*Theorie des Sparens und der Kapitalbildung*, Schmollers *Jahrb.* 1912, p. 1579).

a lengthening of the "period of production", i.e. the adoption of more roundabout "capitalistic" methods of production is of pre-eminent importance, not only in general economic theory, but also in the many-market analysis with which we are here concerned. For what takes place when capital moves from country to country is exactly that *part of the supply of waiting or capital disposal in one country is put at the disposal of people in another.*<sup>1</sup>

The stock of capital goods in existence at any moment is the result of past saving and investment. But in order to maintain this stock of capital goods intact the "saving" must be *continued.*<sup>2</sup> The sacrifice of present satisfactions for future satisfactions which people undergo in order to reap the advantages of capitalistic production is not something done once for all; it is a *continuous sacrifice*. Waiting or capital disposal has *two dimensions*: amount and time; it is "embodied" in the individual concrete capital goods for the length of their life. Thus waiting or capital disposal may be said to correspond to J. B. Clark's famous "true capital"; it is exactly this "abiding thing" which lives by "transmigration" in concrete forms constantly changing. A distinction must be drawn, therefore, between "*free*" and "*invested*" or embodied waiting or capital disposal.<sup>3</sup> With regard to the latter the term capital

<sup>1</sup> Machlup gives the following illuminating exposition: "Wenn in manchen Darstellungen vom "Kapitalangebot" gesprochen wird, bleibt der Leser oft vollkommen im Ungewissen, ob es sich um das Angebot von Sachkapital oder um das Angebot von Kapitaldisposition handelt. Besonders unangenehm ist dies, wenn vom Kapitalmarkt selbst die Rede ist, denn hier werden Sachkapital (bzw. Anteilscheine an Sachkapital) und Kapitaldisposition gegeneinander ausgetauscht .... Auf dem Kapitalmarkt findet also ein Tausch von Anteilsrechten an Kapital im Böhm-Bawerkschen Sinne gegen Kapital im Menger-Casselschen Sinne statt. Es ist natürlich ganz einerlei, welche der beiden Parteien des Kapitalmarktes als Angebots- oder als Nachfragepartei betrachtet wird: die eine Partei bietet Kapitaldisposition an und fragt nach Sachkapitalanteilen, die andere Partei bietet Sachkapitalanteile an und fragt nach Kapitaldisposition" (*Loc. cit.*, pp. 13-14).

<sup>2</sup> Gustav Akerman speaks of "*festgehaltenes Sparen*" as contrasted with "*eigentliches*" or "*ursprüngliches Sparen*". *Realkapital und Kapitalzins* I, Stockh. 1923, p. 50.

<sup>3</sup> The distinction between free and embodied capital disposal must not be confused with the distinction between (1) *circulating and fixed capital*, which refers to the capital goods, nor with the distinction between (2) *unspecialized and specialized capital goods*.—

*disposal* is somewhat unfortunate; over "resources" which are already invested in concrete capital goods no "disposal" is possible; they are already disposed of. The terminology may be retained, however, if it is always remembered that the object of the capital market consists only of *free capital disposal*.<sup>1</sup> Similarly, *the productive factor which moves in the case of international capital flows is free capital disposal*.<sup>2</sup> Consequently, the largest quantity of capital which can be transferred from one country to another in a given period, is the total amount of free capital disposal available in the period. However large international interest differentials may arise and however great capital flows they may ultimately call forth, the speed with which the adjustment can take place is limited by the rate at which free capital disposal is generated through savings, amortisations, or credit creation. Thus the durability of the concrete capital goods in which the capital disposal is embodied is of importance, not only to its occupational, but also to its geographical mobility.<sup>3</sup>

The supply of free capital disposal during a given period of time comes from (1) the *new savings* of the period, i.e. the part of the national income which is used to buy future rather than present goods, and (2) the *amortisations* of the period, i.e. the quota of the capital disposal previously invested which is set free—"matures"—for reinvestment or consumption.

In a closed "barter economy" these would be the only sources of free capital disposal. But in a "money economy" a further source is opened in the form of (3) *buying power*

That capital disposal which has been embodied in fixed capital is set free gradually over a considerable period of time is obvious; but the fact that the circulating capital used at each stage of the productive process is transformed completely into goods of a lower order, is apt to conceal that *here, too, the capital disposal is not set free till the goods reach their final consumable form*.—The higher the order of the goods, the less specialized they generally are, i.e. the *more different ways* are open for their further employment in production; but capital disposal is "embodied" both in unspecialized and in specialized capital goods.

<sup>1</sup> Cf. Gustav Akerman's definition of "the real object of the capital market" as "das auf gewisse Zeit ausgestellte Verfügungsrecht über freigewordene Produktivkräfte" (*Realkapital und Kapitalzins* I, p. 50).

<sup>2</sup> For exceptions cf. *infra* pp. 27, note 1, and 172—73.

<sup>3</sup> Cf. the interesting analysis of *The mobility of capital* by Lawrence H. Seltzer, *Quart. Journ. of Ec.* 1932.

created by the banks.<sup>1</sup> Through expansion or contraction of their credit the banks are able to increase or reduce the total volume of monetary buying power, which would otherwise be equal to the sum of (a) the aggregate of money incomes (including profits) and (b) the aggregate of amortisation quotas. Regarding the productive apparatus as the "natural" source of the flow of buying power, its enlargement or reduction through credit operations is often described as something "artificial". This is not the place, however, for discussing the problems connected with this creation of buying power or the nature of the "forced saving" to which it may give rise. Suffice it to say that in a money economy free capital disposal comprises all monetary buying power which is not devoted to consumption, irrespective of its origin.<sup>2</sup>

Finally, the amount of capital disposal at the command of an individual country may be increased by (4) *foreign borrowing* or decreased by *foreign lending*. As already explained international capital movements mean exactly that part of the supply of free capital disposal in one country is placed at the disposal of another.

It is hardly necessary to add that these different "sources" of the supply of waiting or capital disposal are not independent of one another. Obviously, both changes in the volume of credit and in the volume of international capital flows will affect the money incomes of the countries concerned in subsequent periods. And besides, credit policy and international

<sup>1</sup> Most authors speak of "purchasing power." But since "changes in purchasing power" would easily be misunderstood to mean variations in the purchasing power of money, i.e. a rise or fall in some sort of general price level, it is safer to speak of "changes in buying power" in order to indicate variations in its aggregate volume. Cf. Ohlin, *Interregional and international trade*, p. 61, note 1.

<sup>2</sup> Cassel: "Das Angebot von Bankzahlungsmitteln ist also ebenso wie das Geldangebot gleichbedeutend mit einem Angebot von Kapitaldisposition" (*Loc. cit.*, p. 394). — Schumpeter: "Unter diesen Kapitalbegriff fällt daher nicht nur effektives Geld in weitester Bedeutung, so weit es nicht dem konsumtiven Güterverkehr dient, sondern auch alle Formen von aus dem Kreditverkehr geborenen Kaufkraftsummen" (*Loc. cit.*, p. 584). Machlup: "Kapitaldisposition ist das Bankzahlungsmittel zuerst nur einmal, nämlich zur Zeit seiner Schaffung; nach seiner ersten Verwendung als Kapitaldisposition durch den Unternehmer wird es ein Teil des allgemeinen Geldstroms; . . . es kann ein zweitesmal zur Rolle als Kapitaldisposition nur dann gelangen, wenn es zum gesparten Einkommensteil eines auf Gegenwarts-konsum versichtenden Einkommensbeziehers wird" (*Loc. cit.*, pp. 112—13).

capital movements are mutually interdependent. These relationships will be taken up in due course in the following chapters. Here another apparent complication must be disposed of. In many general treatises on economic theory a distinction is made between two capital concepts: *social and private capital*. The former term generally indicates the capital goods or the capital disposal embodied in them, whereas the latter concept is usually defined as the sum total of income-yielding goods and rights possessed by all the individuals or other economic units. This concept of private capital is much wider than the concept of social capital; it obviously covers land as well as man-made means of production, and sometimes man himself is included, so that capital becomes the discounted present value of all future productive services (or future incomes), the stock or fund from which the flow of these services (or incomes) originate (Irving Fisher). Or, as it has been expressed by Zeuthen, instead of distinguishing between something which is capital and something which is not, capital is rather to be regarded as a certain "point of view", a special aspect applicable to all the different agents of production.<sup>1</sup> This is not the place to settle these difficult questions of terminology. What must be pointed out in this connection is merely that the supply of "capital" created through capitalisation of such durable incomes is engaged in advance in the "waiting" for their gradual maturing; one might say that this supply calls forth automatically a corresponding demand for "capital disposal", thus leaving the net balance, the equilibrium of demand and supply, unaffected. And as an international transfer of capital obviously involves a corresponding *net* reduction or *net* increase in the total supply of capital disposal of the respective countries between which it takes place, it appears to be without direct importance to the analysis of international capital movements, whether capital is defined one way or the other.<sup>2</sup> The fundamental fact remains the same: international capital movements mean that part of the supply

<sup>1</sup> *Loc. cit.*, p. 312—15.

<sup>2</sup> But it goes without saying that the capital transfers are not entirely independent of the size of the "capitalised" durable incomes. The larger and more concentrated these incomes are, the greater may be the saving capacity and, on the other hand, the capital movements may influence both the size of these future incomes and their present capital value (through their effects on interest rates and, consequently, on the "factor of capitalisation").



of waiting or capital disposal in one country is put at the command of another.

In the light of these remarks it becomes clear what is meant when *the mobility of commodities and the mobility of capital* as a productive factor are contrasted. In that connection capital goods—machines e.g.—are to be treated as commodities no less than consumers goods. Of both these classes of commodities some are able to move between countries (international goods) while others are not (home-market goods), and when the international capital goods move between countries, they are *bought and sold, not borrowed and lent*;<sup>1</sup> the transactions may take place on credit, of course, and in that case the movement of commodities is *accompanied* by a transfer of waiting or capital disposal, but these two aspects of the transaction must not be confused. The mobility of capital, in other words, refers not to the concrete capital goods, but to the productive factor for the services of which interest is the price, and that is precisely waiting or capital disposal.<sup>2</sup>

That the proper relation between the mobility of capital goods and capital disposal is not generally recognized, is shown by the following introductory passage from a recent article on the structure of international capital movements:<sup>3</sup>

“Für die internationale Wanderung des Kapitals ergeben sich zwei Wege: die Transferierung kann einmal in der Form von Realkapital, zum anderen als Kapitaldisposition erfolgen.”

The arguments with which it is attempted to substantiate this entirely misleading contention will engage us at a later point.<sup>4</sup> Here we turn instead to several other confusing statements, on which the foregoing considerations may throw light. One of them is backed by the authority of *Frank H. Knight*; he writes:

<sup>1</sup> The only important exception are ships, which are in fact lent by one country to another (most obvious, perhaps, in the case of time-charter).

<sup>2</sup> Thus the prohibition upon the export of machinery from England, in force until 1825, cannot be regarded as a capital embargo, though indirectly it may have weakened the stimulus to capital export.

<sup>3</sup> Hans Herbert Hohlfeld, *Die Struktur der zwischenländischen Kapitalbewegungen*. Weltw. Arch. 1933 I, p. 473.

<sup>4</sup> Cf. *infra*, pp. 46—47.

"The peculiarity of international trade as compared with domestic lies in the immobility of population viewed as labor power. Natural resources are immobile even within a country, and capital goods enter into international commerce in the same way as goods ready for consumption."<sup>1</sup>

Apparently, this characterisation of international and domestic trade varies from the classical definition by restricting the specific international factor immobility to labour—land being immobile even within countries and *capital being equally mobile between and within countries*. True, Knight speaks only of *capital goods* and with regard to them his assertion is literally correct. But to inform us that both capital goods and consumers' goods are partly international partly domestic is irrelevant in an elucidation of the peculiarities of international and domestic trade. What Knight has in mind, therefore, is undoubtedly the third factor of production; but with regard to *capital* (waiting, capital disposal) it is *not* true that it moves with the same ease between countries as within them. International capital goods sell at approximately the same prices in all countries (allowing for costs of transport, dumping, duties, etc.), but though the international mobility of capital is probably greater than that of labour, the relative scarcity of capital disposal is by *no means* equalised as between countries; interest rates differ and waiting is combined with labour and land in very unequal proportions in different countries.

A similar confusion appears when *James W. Angell*, speaking of "such immovable economic goods as land or buildings or industrial plant in . . . adjacent districts", maintains that

"the transfer of titles to such property may be so easy . . . that the immovable property *in effect* becomes mobile as between the two countries. The full competitive conditions, with substantial equalization of prices and profits, may well prevail. A temporary difference in prices or profits, leading to an international movement of the corresponding capital, would thus produce results not dissimilar to those that would have ensued could the property itself have been actually moved across the border."<sup>2</sup>

<sup>1</sup> *Some fallacies in the interpretation of social cost*, Quart. Journ. of Ec. 1924, p. 583.

<sup>2</sup> *The theory of international prices*, p. 375, note 1.

It is difficult to see how free mobility of capital can equalise not only profits or interest rates, but also the prices of commodities and other productive services. Even the most perfect mobility of capital cannot make up for the limited or completely lacking mobility of labour and land.<sup>1</sup>

That the terms land and labour signify different types or groups of productive factors, each comprising a large number of miscellaneous agents, is easily perceived. No one will deny the necessity of distinguishing between different qualities of land or different categories of labour. But when capital is taken, not in the sense of the concrete capital goods, but in the sense of capital disposal or waiting it might be argued that this factor of production is always and everywhere the same. And in a certain sense this is obviously true. Yet it does not always suffice to consider the *quantity* of capital over which different countries have command in any given period. There are *qualitative differences* here, too.

Most important from the point of view of international capital movements is probably the difference between "*short-term capital*" and "*long-term capital*".<sup>2</sup> Besides, it is necessary to distinguish between capital preferring *risky* occupations and capital seeking *safer* investments. These different sorts of capital are traded to a large extent in different markets and transferred between countries in different forms, and it is hardly necessary to point out that the function or service performed by the capital (or capitalist) varies in these cases. The quality of the waiting is not the same when the capitalist takes over an explicit obligation to continue his waiting for a certain definite period as when he reserves the right to stop waiting at short notice. In a great many cases a series of short loans is a poor or even a useless substitute for an irredeemable loan of long duration. Similarly, the degree of risk which the capitalist is able or willing to run will influence the quality of his waiting because a certain greater or smaller risk

<sup>1</sup> Cf. *infra*, ch. III.

<sup>2</sup> The distinction between "short" and "long" investments refers to the intention of the investor, not to the form of the investment. If foreign securities are sold with the intent of buying them back when the rate of exchange drops, the transaction is a short-term investment. And conversely, day-to-day loans may be renewed year after year.

is inseparably connected with all forms of roundabout production.<sup>1</sup>

Another distinction which will appear in subsequent chapters is that between "real" and "equalising" or equilibrating movements of capital. As will be demonstrated more fully in the next chapter the main purpose which people have in mind when they transfer their capital from one country to another is to obtain a higher price for their waiting. There is a fundamental difference, however, between (1) the cases in which capital moves from countries where it is abundant to countries where it is scarce in order to take lasting advantage of the higher rates of interest prevailing in these latter countries, and (2) the cases in which a disturbance in the balances of payments through its influence on the foreign exchanges or on short-term interest rates call forth temporary flows of capital between countries. In the former cases it is the movements of capital which necessitate a readjustment of the balances of payments, whereas in the latter cases it is readjustments of the balances of payments which give rise to the movements of capital. The former cases will be called "real" capital movements, the latter "equalising", because they serve to compensate other movements in order to maintain the equilibrium of the balances of payments.<sup>2</sup>

But though the function of the capital movements within the mechanism of international payments is essentially different in these two sorts of cases, the quality of the flowing capital is not necessarily different. The equalising capital movements are always of a temporary and short-lived character, but it is by no means all short-term capital transactions that are of the equalising sort; ordinary commercial credit extended to customers in foreign countries, e.g., is to be regarded as a real capital transfer. And conversely, long-term loans—international bonds quoted in different markets—may move to and fro between them for equalising purposes.

<sup>1</sup> Cf. Pigou's statement that "concrete capital is always made up of a combination, in varying proportions, of two factors, namely waiting and uncertainty-bearing" (*Economics of welfare*, 3. ed., London 1929, p. 163).

<sup>2</sup> Compare the familiar distinction between real and equalising differences of wages. Melchior Palyi speaks of the "Streckungsfunktion inverser Kredite" (*Das Reparationsproblem* I, Berlin 1929, pp. 376 and 381).

## 2. THE BALANCE OF TRADE, THE BALANCE OF PAYMENTS, AND THE BALANCE OF INDEBTEDNESS.

Before we proceed to the investigation of the nature of international capital transfers a few observations must be made on the interrelations of the different balances of international accounts. For here again much ambiguity has been due to the failure to agree upon the exact meaning of the terms employed.

The very word *balance* is not quite unambiguous. Sometimes it means the *difference* between a total of debit items and a total of credit items; if the debits exceed the credits there is said to be a debit balance, if the credits exceed the debits there is said to be a credit balance. But the term is also used sometimes to signify an even balance or *equilibrium* between debits and credits. And, finally, sometimes the word designates merely *the balance sheet itself*, the tabulation of all the different debit and credit items without special reference to the quantitative relations between them. Usually, however, the context will show what meaning must be given to the term in each case.

The special interest generally taken in the different balances of *international* accounts and especially in the balance of international commodity trade goes back to the early days of Mercantilism.<sup>1</sup> That comparatively reliable figures regarding imports and exports, based on custom-house observations, were obtained at an earlier date than most other economic statistics may also have contributed to the concentration of interest on the trade balance.<sup>2</sup> And under primitive conditions commodity trade is in fact the most important form of international economic intercourse.<sup>3</sup> *The balance of commodity trade* simply tabulates the value of a country's commodity exports and commodity imports during a certain period of time, i.e. the credits acquired and the debits incurred abroad on account of commodity trade by persons or other economic

<sup>1</sup> Cf. B. Suvirante, *The theory of the balance of trade in England*, Helsingfors 1923 and Jacob Viner, *English theories of foreign trade before Adam Smith*, Journ. of Pol. Ec. 1930. Cf. also Leo Petrisch, *Die Theorie von der sogenannten günstigen Handelsbilanz*, Graz 1902.

<sup>2</sup> Cf. Harald Westergaard, *Contributions to the history of statistics*, London 1932, p. 201.

<sup>3</sup> Cf. the dominating importance of the balance of commodity trade within the Russian balance of payments.

units in the country in question during that period. If there were no other international economic transactions than trade in commodities, and if all commodity trade took place on a cash basis, it is a commonplace that these credits and debits must balance exactly, i.e. that the value of exports must be equal to the value of imports. In fact, however, there are a great many other economic transactions between countries, and commodity trade often takes place on credit. Other concepts are necessary, therefore, to give a full account of the economic intercourse between nations.

The starting point must be to provide a complete inventory of all payments passing the frontiers in either direction. This inventory is called the *balance of payments*. Like the balance of trade it refers to a certain period of time, but it includes *all* the credits and debits which mature and are settled in this period *regardless of their origin*.

Obviously, an inventory of this sort can be made, not only for a country, but for any region around which we choose to draw an imaginary boundary line; the region might even be so small as to comprise only one individual person or economic unit. A balance of payments can be made for each single person or for any arbitrary group of persons, and wherever we place the boundary lines it is one of the fundamental principles of the interdependence theory of prices that in a state of equilibrium the inward and outward payments of any period must be equal to one another. This holds good with regard to countries no less than to other regions or groups of persons. The importance of this fact that the balance of payment is always in equilibrium will appear as we proceed.

If the boundary line is a national frontier, different currencies will usually be in use on either side of the frontier. In that case all the payments passing the frontier involve a *foreign exchange transaction*, by which one national money is converted into another. As already pointed out it is this peculiar mechanism of international payments which justify a special treatment of international transactions and international balances of account.

In the case of countries it is conceivable, therefore, to compute the balances of payments simply by registering all

operations in the foreign exchange markets.<sup>1</sup> If the balance of payments is defined in this way as the *actual purchases and sales of foreign exchange* during a certain period, it is self-evident that it must always be in equilibrium; that each purchase of foreign exchange corresponds to a sale of domestic currency and vice versa is, of course, a mere truism. The function of the foreign exchange market is exactly to cancel inward and outward payments against one another.

But as already suggested the balance of payments is usually defined in a slightly different way, namely as *the payments actually made to or by the inhabitants of a country during a given period*. The difference between these two definitions arises from the fact that payments abroad can be effected, not only by a simultaneous purchase of foreign exchange, i.e. by a sale of domestic currency, but also from a *previously acquired fund* of foreign media of payment. If we assume this fund to be concentrated in the central bank, it consists of (1) the latter's *foreign exchange holdings* and, (2) in the case of a gold- (or silver-) standard country, its *stocks of gold* (or silver.) And if we realise that the bank's foreign exchange holdings are nothing but short-term loans granted to other countries, and include both (1) such short-term credit operations and (2) the trade in precious metals in the balance of payments,<sup>2</sup> it remains true that the latter must always be in equilibrium.<sup>3</sup>

In statistical studies of the balance of payments it is hardly conceivable to get information regarding all payments actually

<sup>1</sup> Note, however, that the foreign exchange transaction by which A's currency is converted into B's may take place, not only in A or B, but also in a third exchange market.

<sup>2</sup> In a country not on the gold (or silver) standard, the foreign trade in gold (or silver) is included in the balance of commodity trade, cf. *infra*, p. 313.

<sup>3</sup> A payment abroad may also take place, of course, by direct shipment of domestic currency to which the receiver is in some way persuaded to hold on. But this merely means that the other country's foreign exchange holdings are augmented. Here again we have a short-term credit transaction. An example on a large scale was the export of German bank notes during the post-war inflation which were taken up by foreign speculators. In the same period American paper money, mostly in small denominations, flowed out in considerable quantities to be used or hoarded in several European countries with extreme currency depreciation. Clearly, this outflow was equivalent to a short-term capital import into Germany and the United States.

made; the only thing which it is possible to determine is *the volume of maturing obligations* in either direction during a certain period. If it is assumed that all obligations are met at maturity, the two definitions are identical. Otherwise allowance must be made for repudiations and bankruptcies, in which case the equilibrium in the balance of payments is maintained simply by not making the excess payments.<sup>1</sup>

It is unnecessary in this connection to enumerate in detail the different sorts of transactions that may give rise to international payments; their extremely varied nature is sufficiently familiar. But it may not be out of place to make some general observations on the ways in which these payments are most adequately grouped together.<sup>2</sup>

There are four main purposes for which payments may be made by the residents of one country to those of another.<sup>3</sup> (1) They may send the money across the frontier to pay for the purchase of commodities and services; (2) they may carry it with them when they pass the frontier; (3) they may lend it to foreigners or repay their own previous borrowings; or (4) they may give the money away voluntarily or involuntarily. A distinction is often made between "visible" and "invisible" payments. The former include only payments arising out of movements of merchandise or bullion; all other transactions are "invisible". Invisible items, in other words, are those which

<sup>1</sup> On the different definitions of the balance of payments cf. Gottfried Haberler, *Der internationale Handel*, Berlin 1933, pp. 13—15. On the statistical treatment of defaulting loans cf. *Die deutsche Zahlungsbilanz*, Berlin 1930, p. 10, note 2.

<sup>2</sup> The most comprehensive annual statistical estimate of a balance of payments is that compiled since 1922 by the United States Department of Commerce. In Germany the "Enquête-Ausschuss" made a still more elaborate estimate for the single year 1927 (*Die deutsche Zahlungsbilanz*, Berlin 1930). Annual balances of payments have been carried back for the United States to 1860, for Great Britain to 1870, for France to 1880, for Austria-Hungary to 1892, for Germany to 1894, for Canada and Australia to 1900, for Italy to 1905, and for Denmark to 1920 (cf. *infra*, part II B). A standard form of the balance of international payments has now been recommended by the League of Nations in its memoranda on trade and balances of payments. Cf. also Cleona Lewis, *The international accounts*, New York 1927, which contains a useful description of the proper procedure of constructing international balance sheets.

<sup>3</sup> Cf. R. F. Harrod, *International economics*, London 1933, p. 81.



do not appear in the balance of trade.<sup>1</sup> Of greater importance is the distinction within the balance of payments between a *balance of current transactions*<sup>2</sup> and a *balance of capital transactions*. The distinctive mark is that in the case of current transactions there is an immediate quid pro quo, whereas the capital transactions, for the time being at least, are unilateral.

In general it is obvious whether a given item belongs in the balance of current or of capital transactions. That cash sales or purchases of commodities are bilateral transactions is self-evident, and the case is exactly similar when transportation services are bought from foreign shipping companies, or when payments are made for the use of such foreign services as insurance, brokerage, etc. The most clear-cut example, on the other hand, of a unilateral operation is probably that of a tribute or a reparation or indemnity payment; in that case there is no quid pro quo of any kind obtained either directly or indirectly, either immediately or ultimately, from the country receiving the payment. Another typically one-sided item, often erroneously counted among the current transactions, are remittances from emigrants to relatives in the mother country.<sup>3</sup> In a certain sense payments connected with foreign loans stand midway. The rendering of a loan may be succeeded, of course, at a later date by the repayment of the principal. But for the time being, both these transactions must be regarded as unilateral. The interest payments, on the other

<sup>1</sup> The attempts sometimes made to express all international transactions in terms of imports and exports, visible or invisible, necessitate a certain distortion of popular language which may cause confusion. It seems better, therefore, to speak of debits and credits. Even the phrase "export of capital" might be misleading to the layman, seeing that an export of commodities occasions a payment to the exporting country, whereas an export of capital involves a payment by the exporting country to the capital-importing country. It has been suggested that it might be better to speak of an "import of securities" in order to stress the fact that the import of securities (export of capital) like the import of commodities is a debit item in the balance of payments (Barrett Whale, *International trade*, London 1932, p. 31).

<sup>2</sup> Also called "balance on income account." Wilhelm Röpke speaks of "Handels- und Leistungsbilanz" (*Weltwirtschaft und Aussenhandelspolitik*, Berlin 1931, p. 22).

<sup>3</sup> As Cannan remarks it is obviously absurd "to call the letter in which Biddy O'Callaghan thanked her son Pat for sending her ten dollars from Chicago an invisible export to be set down at £2 1s. 1d. in the British Account." (*Balance of trade delusions*, London 1931, p. 10).

hand, to which the loans give occasion are most logically referred to the balance of current accounts, as payments for the service of waiting or for the disposal of capital during a certain period of time. Tourists' expenditures are also of the bilateral sort; here an immediate quid pro quo is obtained in the form of hotel accomodation etc.<sup>1</sup>

If capital disposal could be transferred from country to country in the same immaterial way in which the tourist brings home his impressions of foreign scenery, international capital movements would affect the balance of payments in exactly the same way as tourists' expenditures.<sup>2</sup> But as will be demonstrated in the next section the transfer of tributes, emigrants' money, foreign loans, and similar one-sided payments can only take place in the form of commodities or services.<sup>3</sup> Foreign loans, therefore, affect the balance of payments three times: (1) when they are made, (2) while they are in existence (through the interest payments), and (3) when they are to be repaid; and owing to the obvious direct connection between the volume of loans and the volume of interest payments it is very common to treat both the latter and the former as "capital transactions".<sup>4</sup> The procedure adopted above seems more logical, however. Just as the inhabitants of a country may demand either commodity imports or e.g. shipping services or travelling pleasures in return for their exports of commodities and services, they may also choose to go without some of these present goods and instead

<sup>1</sup> If the tourists carry *gold coin* abroad instead of credit instruments this ought to appear on the other side of the balance to offset their expenditures. For the expenditures covered in this way do not require subsequent transactions for their liquidation. In a similar way the furniture and other effects belonging to emigrants or immigrants moved out of or into a country together with their owners, create no international obligations. If imports and exports of such things are recorded in the balance of payments they ought to appear on both sides in order to indicate that these transfers do not create obligations to be liquidated by subsequent transactions.

<sup>2</sup> International interest and rent charges are in fact created or extinguished in this immaterial way in three cases: (1) when the owners of capital or land move from country to country (absentee ownership), (2) when property belonging to foreigners rises or falls in value, and (3) when the frontiers are altered. Cf. *infra*, p. 40.

<sup>3</sup> Here again Cannan ridicules the practice of calling the registration of a person's name as an owner of foreign stock or even "scrip" issued to owners of foreign bonds as an "invisible import" counterbalancing the export of locomotives and rails bought with the loan.

<sup>4</sup> Cf. Haberler, *Der internationale Handel*, p. 56.

let other countries render them the service of waiting.<sup>1</sup> It is only when interest payments are counted among the "current transactions" that we can truly say that a country having a credit balance on account of current transactions is building up a creditor position or reducing a debtor position in relation to the rest of the world; and, conversely, that it reduces its creditor position or runs into debt if it has a debit balance of current transactions. It remains true, of course, that as far as the mechanism of international payments is concerned, new loans and interest or amortisation charges on old loans may tend to offset one another; in any given period it is only the *net* amount of buying power to be transferred one way or the other to which all the other items in the balance of payments have to adapt themselves. But just as one may borrow to cover the interest on old loans, one might borrow to meet e.g. freight charges; and here again it would only be the difference between the two amounts to which *all the other* items should be adjusted. In general, the usual way of describing the balance of commodity trade and the different balances of other transactions as co-ordinated partial balances, as different accounts, so to speak, within the all-embracing balance of payments, may easily lead to misunderstandings, if it is not always remembered that *all* these different accounts are mutually interdependent. One must take care not to lock up this interdependence system by assuming beforehand that the chain of causation runs one way rather than the other.

The trade in *gold coin and bullion* is sometimes included in the balance of commodity trade. And in a certain sense it is true, of course, that in international trade gold is merely a commodity like all others, though perhaps the most mobile, the most truly "international" of all goods. But owing to their special functions in the economic intercourse between gold-standard countries it seems better to keep special accounts of the international gold movements.<sup>2</sup>

<sup>1</sup> If the capital borrowed abroad is consumed, the volume of present goods available is increased at the expense of the future when interest and amortisation payments have to be met. At all events the time shape of the income stream is readjusted. Cf. J. Grunzel, *Handels-, Zahlungs- und Wirtschaftsbilanz*, in *Die Wirtschaftstheorie der Gegenwart* IV, Wien 1928, p. 87.

<sup>2</sup> Cf. A. C. Whitaker, *The Ricardian theory of gold movements*, *Quart. Journ. of Ec.* 1904 and Paul Einzig, *International gold movements*, London 1931.

Most important under normal conditions are probably the large and more or less steady flows of gold from the remote gold-mining countries to those central markets, notably the London market, from which the metal is again distributed between the currency reserves of the different countries, the industrial uses, and the hoards of the East. This transportation is but a stage in the larger process of manufacturing refined bullion, coins, jewellery, teeth, etc. As Whitaker has pointed out it is a peculiarity of these movements of gold that frequently they neither create a credit in favour of, nor discharge a debt on behalf of the gold-mining country. Thus, if gold shipped from South Africa to London is the property of English miners who keep and expect to use their wealth in Great Britain, the receipt of the gold from South Africa creates no claim there against England to be settled e.g. by a subsequent export of English goods. In cases of this kind the single international shipment is the end of the matter as between these two countries, and the subsequent effects are the same as if this gold had been mined within the borders of Great Britain.

Besides, gold is flowing constantly back and forth between gold-standard countries. The rôle played by these oscillatory gold movements in the mechanism of international payments will engage us in detail in part II.

A common characteristic of all the balances hitherto considered is that they refer to certain periods of time; they are in the nature of running accounts. The *balance of foreign indebtedness or foreign investments*, on the other hand, refers to a given instant of time; it is in the nature of a stock-taking. It comprises all foreign assets and all foreign debts of the inhabitants of a country at a particular moment irrespective of their being due or not.<sup>1</sup>

If the balance shows a net indebtedness to other countries, the country in question is called a *debtor country*; if there is a net balance of investments abroad, it is called a *creditor country*. Obviously, however, a debtor country is not necessarily a *borrowing country*, a creditor country not necessarily

<sup>1</sup> Note that this use of the term "balance of international indebtedness" is completely different from the sense in which it is taken e.g. by Viner (*Canada's balance of international indebtedness 1900-1913*, Cambridge Mass. 1924, p. 21).

a *lending country*. The debtor country may be improving its balance of foreign indebtedness by repayments of previously incurred debts, just as a creditor country may impair its balance of foreign investments by consumption of previously acquired assets. Here again we meet the difference between the situation at a given moment and the trend of development during a given period.

It must be added, though, that it is not always easy to draw a sharp line between obligations that are due and others that are not. Within certain limits it may be optional exactly when an obligation is to be liquidated. In such cases items from the balance of foreign indebtedness or foreign investments are on the point of entering the balance of payments; they represent a latent demand for or supply of foreign exchange which will appear in the market if the rate of exchange becomes sufficiently favourable. Conversely, the settlement of many obligations can be postponed in one way or another when exchange rates are unfavourable. Consequently, it would be incorrect to regard the balance of payments as unilaterally determining the quantities of foreign exchange which will be demanded and supplied during the period to which it refers. These quantities must be included in the system of mutual interdependence.<sup>1</sup>

If, in a closed community, the total stock of capital existing at a certain date were increased only through investment of new savings and decreased only through consumption of previous savings, it is obvious that from year to year the *total capital balance*, registering the total quantity of capital existing in the country and owned by its inhabitants, would show a surplus or deficit equal to the volume of savings or capital-consumption.<sup>2</sup> If capital could be borrowed or lent abroad, domestic savings and investments would no longer necessarily coincide, but under the assumption just made

<sup>1</sup> This was pointed out by Ricardo against Malthus. "You appear to me not sufficiently to consider the circumstances which induce one country to contract a debt to another. In all cases you bring forward, you always suppose the debt already contracted." *Letters of D. Ricardo to Th. R. Malthus*, ed. by J. Bonar, Oxford 1887, p. 11.

<sup>2</sup> Notice that this discussion completely abstracts from the complications of money and credit, and defines savings and investments as identical. Cf. Myrdal, *Der Gleichgewichtsbegriff als Instrument der geldtheoretischen Analyse*, in F. A. Hayek, *Beiträge zur Geldtheorie*, Wien 1933, pp. 410 et seq.

the surplus of domestic investments over domestic savings would be equal to the increase in the balance of foreign indebtedness. If, in a certain period, 400 mill. have been invested in a given country while its domestic savings during the same period have amounted only to 300 mill., it follows that *apart from other changes* its domestic capital balance must have been improved, between the beginning and the end of this period, by the 400 mill., whereas its balance of international indebtedness will be increased by 100 mill.<sup>1</sup> In this simple case the deficit (or surplus) in the balance of domestic savings and investments and the increase (or decrease) in the balance of international capital transactions must correspond exactly to one another.

Unfortunately, however, it is not possible to disregard "other changes" in a dynamic world where more or less unforeseen events constantly occur.<sup>2</sup> As mentioned in the Introduction such unexpected changes give rise to gains and losses that alter the capital values. Other difficulties involved in determining a country's total capital stock were briefly touched upon in the preceding section; if capitalisations of differential or monopoly rents are included in the capital concept, the stock of capital will increase e.g. with a rise in land values which does not appear, of course, in the balance of savings and investments.

Moreover, a country's balance of foreign indebtedness may change in several other ways than through the actual transfers of capital disposal which alone appear in the balance of international capital transactions. (1) Changes in capital values due to the gains and losses already mentioned may also affect capital owned by foreigners. Reserve funds accumulated by companies owned by foreigners will also increase a country's foreign indebtedness without appearing in the balance of international capital transactions. (2) It may not be the capital but its owner that migrates. (3) Finally, alterations of the frontiers between countries will upset both their domestic and their foreign capital balances.<sup>3</sup>

<sup>1</sup> Cf. Jens Warming, *Danmarks Erhvervs- og Samfundsliv*, Kbhvn. 1930, pp. 336—37.

<sup>2</sup> Cf. Myrdal, *loc. cit.*, pp. 414 et seq. and W. Susat in *Das Reparationsproblem I*, Berlin 1929, pp. 412—13.

<sup>3</sup> Cf. *supra*, p. 36, note 2.

But in spite of all such complications it is obvious that there is a certain connection between changes in the domestic and in the foreign capital balance. That this connection is not always kept in mind was apparent, e.g., in the discussions of Germany's capacity to pay reparations without the aid of foreign loans. Between the adoption of the Dawes plan and the suspension of the Young plan the Germans paid some 10,000 mill. marks on reparation account, but during the same period Germany's foreign debt increased by about twice that amount. Very often these figures have been quoted as if *they alone* proved that the reparations were paid completely out of foreign loans and could not have been paid without such loans. But this proof is obviously inconclusive, until something is known also about the development of Germany's domestic capital balance during the same period.

Suppose that a country has a certain domestic capital equipment and a certain foreign debt. Three possibilities must then be distinguished: (1) If the debt is repaid on maturity by means of a new foreign loan, both the domestic and the foreign capital balance remain unchanged. (2) If the country repays the debt out of its current savings, its domestic capital equipment is unchanged, but its balance of foreign indebtedness is improved. (3) But if the country *both* contracts a new loan for repayment of the old debt *and* increases its domestic savings by a corresponding amount, its domestic capital balance is improved while its foreign debt remains the same. In the first case the total capital balance is unaffected, but in the third it is improved no less than in the second.<sup>1</sup>

A general discussion of the problems arising in connection with the *statistical determination of the balances* described falls outside the scope of this study. One point must be mentioned, however. There are two methods available for computing the balance of international capital transactions; they may be ascertained directly or indirectly. To get *direct* information of the volume of international capital movements is exceedingly difficult. Scattered bits of evidence must be pieced together from various sources. Information regarding public issues of

<sup>1</sup> Cf. D. Davidson, *Tyska skadestandsproblemets nya fas*, Ek. Tidskr. 1931, pp. 11 et seq. and Haberler, *Der internationale Handel*, pp. 67—68.

bonds or shares on foreign account may usually be collected from financial periodicals, but part of such issues are merely conversions or renewals of old loans, and besides, part of the securities may not be bought by residents of the country in which they are issued, but by inhabitants of the borrowing or a third country. The later movements of such securities from country to country are still more difficult to ascertain, and regarding other forms of capital flows one must usually rest content with rough estimates, though under favourable circumstances they may be partially checked by special data.<sup>1</sup> The *indirect* way of estimating international capital movements starts from a computation of *all the other* items in the balance of payments. If the annual balance of current transactions shows a surplus or deficit, this obviously indicates transfers of commodities or services one way or the other for which no payment is made during that year. And if this sum is further corrected by adding or deducting the amounts transferred as tributes, gifts, emigrants' remittances, etc., the remainder must represent the "net amount to be transferred on capital account". This balance is the resultant, however, of four unknown quantities: capital exported and imported and interest payments in both directions. To ascertain the net export or import of capital, independent information regarding the volume of interest payments is necessary. If the total foreign investments in a country and the country's total investments abroad at a certain date and the rates of interest then obtained on these investments are known, the aggregate volumes of interest payments can, of course, be calculated, and if we know also the changes in the rates of interest from year to year it is a comparatively simple arithmetical problem by working backward and forward to find the aggregate interest payments for any year.<sup>2</sup> The gross amounts of capital import and capital export cannot, of course, be obtained by the indirect method. And even regarding the net amounts the two methods will not always be wholly independent of one another. This is obvious if e.g. (1) the newly exported and imported capital each year is estimated by the direct method, if (2) these estimates are made the basis of a computation

<sup>1</sup> Cf. e.g. Harry D. White, *The French international accounts 1880—1913*, Cambridge Mass. 1933, pp. 89 et seq.

<sup>2</sup> Cf. Bowley, *England's foreign trade in the nineteenth century*, London 1905, p. 79.



of the aggregate interest payments, and if (3) these interest payments are then included in the balance of payments in order to find the net capital export or import by the indirect method.<sup>1</sup> The most serious drawback of the indirect method is that errors in any of the other recorded or estimated items of the balance of payments will appear in the final credit or debit balance if they do not by chance offset each other, and since the totals of all the credit and debit items are large compared with this balance, it may be violently distorted. In particular it must be pointed out that if an estimate of the aggregate interest payments is made on the basis of the total investments as computed by the indirect method in all the previous years, errors in this estimate will have a cumulative effect; if a mature creditor country,<sup>2</sup> e.g., over-estimates its receipts on interest account, it will also over-estimate the volume of capital available for export, and this will make the estimated interest income still more exaggerated next year.

In spite of the difficulties involved the two methods have often been used as partial check on one another. It should be noted, however, that they reflect different phases of the international capital movements. As will appear more fully in the next section the first step when capital flows from country to country is usually that monetary buying power is transferred from one to the other; the lender puts *titles* or *claims* to goods or services at the disposal of the borrower. Subsequently these claims are exercised, and the last step in the capital transfer is not taken until the *goods and services* themselves are moved from country to country. What the direct method measures is the first step, the monetary transfer, whereas the indirect method records the second step, the real transfer. The two methods cannot, therefore, be expected to give identical results for any single year, unless the time lag between transfer of titles and transfer of goods is very short or the flow of capital is, for a period, steady.

If the only object of the statistical inquiry is to ascertain the net balance to be transferred on capital account, it is immaterial whether one has access to the gross amounts on each of the other accounts (the trade balance etc.) or merely

<sup>1</sup> Cf. *infra*, p. 345.

<sup>2</sup> For definition of this concept cf. *infra*, p. 55.

to their net balances. But if the total volume of a country's international transactions is sought, the only adequate procedure is, of course, to sum up all debits and all credits within the balance of payments. Viner makes a distinction here between the two-sided and the one-sided transactions, maintaining that it would be an over-statement of the total volume of international transactions to add these one-sided debits and credits to the other current debit and credit items; here, he says, the proper thing to do is to include only the net balance of such transactions, for they do in fact offset one another.<sup>1</sup> Referring to the distinction introduced a moment ago this statement may be assented to, if we want to determine the volume of "real transfers" which must be made in a certain period; but if we want to determine the total volume of "monetary transfers" in both directions, we must include the gross amounts of both current and capital transactions in our balance sheet.

### 3. INTERNATIONAL TRANSFERS OF CAPITAL.

It has often been pointed out that "true capital" (capital disposal; waiting) can never exist within a given country in a "disembodied state", without being "invested", clothed in some concrete form (the capital goods); nor can its final transfer from one country to another take place *except in the form of concrete commodities or services of some sort or another*. The idea of a transfer of capital in the abstract, which undoubtedly has formed the basis of tenacious and widespread popular misconceptions regarding commercial policy, has nothing to do with economic reality.<sup>2</sup> As suggested a

<sup>1</sup> *Canada's balance of international indebtedness*, pp. 103—04.

<sup>2</sup> Cf. Gustav Cassel, *Foreign investments*, Lectures on the Harris Foundation 1928, Chicago 1928, pp. 37—38: "We find nowadays plenty of people strongly opposed to the export of capital. Still, many of these people would find it only natural that every endeavor should be made to create a surplus in their country's balance of payments. They keep to the mercantilistic idea of a "favorable balance" and they regard such a balance as representing an essential national interest. At the same time they do not hesitate to preach that an export of the nation's capital is an act of an unpatriotic mind, not to say an act of treachery against one's own country! Obviously it is fruitless to discuss such a complicated matter as the international movements of capital as long as opinions are formed on the basis of such logical contradictions."

moment ago the *first* thing which happens when an international capital movement is to take place, is usually that part of the monetary buying power of one country is put at the disposal of people in the other (the monetary transfer). This first step is eliminated only where goods are sold abroad on long-term credit or in case imports of goods are financed by permanent loans after the shipment of the goods. In all other cases the transferred titles or claims to goods and services may not be exercised until weeks or months or even years after the monetary transfer. Part of the transfers of titles are, indeed, never converted into transfers of goods and services, but simply used to offset one another. But the balance of claims in either direction *must* eventually be exercised. The *final* step must be that the capital passes from country to country in the form of commodities or services (the real transfer).<sup>1</sup> The different aspects of the *mechanism* which connects the monetary and the real transfer will be studied in detail in part II below.

As Taussig has pointed out<sup>2</sup> the fundamental nature of international capital movements has perhaps never been more clearly exhibited than by the creation of the interallied debts during the World War; nor has it ever been more completely misunderstood. The huge American commodity exports of these years were generally regarded by the public as cash sales by Americans to foreigners. And the usual anxiety over the simultaneous foreign lending was removed because "the money stayed in the country". But what happened was, of course, that *Americans* bought from Americans. One group of Americans produced goods for export, another group supplied

<sup>1</sup> One of the earliest formulations of this elementary truth is to be found in an interesting article in the "*Times*," Febr. 12. 1817 by "I. A.," appearing at the time when the first Baring loan to France was launched. Loans to foreign governments—I. A. explained—could be effected by an export of gold, of bills of exchange, or of merchandise to the borrowing country. If gold were exported, that gold must have been secured from the Spanish mines by equivalent exports of merchandise. Bills of exchange likewise represented exports of merchandise either to the borrowing or to some other country. In short, a loan to a foreign government could be neither more nor less than the "exportation of a certain quantity of the industry of one country, either directly or circuitously, to another country, whose government borrows." I. A. concluded, therefore, that such loans would stimulate export trade and prove highly beneficial to English industry at large.

<sup>2</sup> *International trade*, pp. 310—16.

funds for paying them by taking over Liberty loans the proceeds of which were placed at the disposal of the allied governments:

"The actual merchandise—the iron and steel, copper, railway material, motor cars, cotton, leather, breadstuffs and meat-products—went to foreigners. What came from foreigners was merely some scraps of paper, their governments' promises to pay; nay, in sundry cases nothing more than an entry on the books of the Treasury ... The country was supposed to receive much and to relinquish nothing; whereas in fact it parted with much and received nothing."

Recently, it has been contended that the doctrine that capital must always move between countries in the form of commodities or services holds good only with regard to long-term capital movements, but is not true of the migrations of what is often called the "international short-loan fund." Thus it has been explicitly stated by Hans Herbert Hohlfeld that

"alle Wanderungen des kurzfristigen internationalen Leihfonds aus Gründen der Zins-, Gold- und Devisenkursarbitrage ... erfolgen ohne das Medium der Ware oder der Dienstleistung. Sie stehen—deutlich nachweisbar—in keinem Zusammenhang mit den Handelsbilanzen der betroffenen Staaten; soweit tatsächlich Goldbewegungen ausgelöst werden, sind diese meist im Verhältnis zu den übertragenen Kapitalien so gering, dass sie unter keinen Umständen als Mittel der Transferierung aufgefasst werden dürfen."<sup>1</sup>

What Hohlfeld does not sufficiently realise is merely that transfers of titles in opposite directions may be used to offset one another. It is not accidentally, of course, that he draws the line between short-term and long-term capital movements. A large part of the short-term capital flows being of the equalising sort, it is their very function to prevent or postpone a movement of goods or services which would otherwise be necessary to retain the equilibrium in the balance of payments. No wonder, that in such cases "die Übertragung nicht irgendwie in Güterform erfolgt." A similar misunderstanding is involved when Hohlfeld speaks of "unecht-langfristige" capital movements as another instance where no commodity transfer is involved. What he has in mind is merely the well-known case in which part or all of a loan is used to increase the balance kept as demand deposit in the lending country. But here again, the long-term loan is offset by a short-term capital movement in the opposite direction.

<sup>1</sup> Hans Herbert Hohlfeld, *Die Struktur der zwischenländischen Kapitalbewegungen*, Weltw. Arch. 1933 I, pp. 473 et seq. Cf. supra, p. 27.

At first sight Hohlfeld's contention might seem to be confirmed by a study of the American balance of payments in the post-war period undertaken by Angell.<sup>1</sup> Comparing the figures for excess merchandise export and capital export he finds that the curve for long-term capital taken alone stays nearer to the commodity curve than the combined capital curve for most of the time between 1922 and 1926. But its *fluctuations* correspond less closely to the commodity curve than do those of the combined capital curve. Angell concludes therefore that it is the *combined* movements of capital, long-term and short-term taken together, that have had the more significant relationship to the movements of commodities. It appears, moreover, that the two capital curves approached and drew apart every second year; that is, foreigners seemed to build up a net excess of short credits over similar American credits abroad, and then draw down the excess about every second year. Hesitatingly Angell advances the explanation that from time to time foreigners accumulated more credits in U. S. A. chiefly by sales of securities than could at once be transferred abroad. As the final transfer of the credits was later gradually effected, the short-term balances disappeared.

Two things must be pointed out in this connection:

(1) When capital is to be moved from country to country in the form of commodities or services, it must be by means of such goods as are able to pass between countries, i.e. in the form of *international* commodities or services. If no goods at all were able to move between countries a real capital transfer would be impossible. In that case the monetary transfer would be the end of the story, which is to say that an attempt to transfer capital from one country to another would result merely in a contraction of currency in the former and increased circulation in the latter. If all commodities and services, on the other hand, were equally mobile internationally, a change in the *local distribution* of buying power and demand between countries would be of no importance. An international capital movement might change the *direction of demand*, increase the demand for some commodities, decrease

<sup>1</sup> *Equilibrium in international trade: The United States 1919-26*, Quart. Journ. of Ec. 1928, p. 392. Cf. *infra*, p. 370.

the demand for others, in a similar way as a capital transfer within a single isolated market, but it would cause no complications whether a greater or smaller part of this changed demand came from one country or the other.

Not so, however, when the costs of commodity transport are of unequal importance. What makes the mechanism of international capital movements complicated is exactly that the costs of transport are prohibitive in some cases, i.e. that some commodities and services are *home-market goods*, and that part of the transferred monetary buying power will usually be spent in the first instance in payment for such home-market goods (paid out, e.g., as wages to domestic labourers). To effect the real transfer in such cases a roundabout process of readjustments is necessary in the productive systems both of the capital-importing and of the capital-exporting country, and perhaps even in that of outside countries as well.

(2) But while it is self-evident that the direct transfer of capital must take place by means of international commodities or services, it is generally argued that it is impossible to say a priori whether it will be in the form of *consumers' goods* or of *capital goods* in the narrower sense of the word (instrumental goods). That will depend on the whole price structures of the countries in question and primarily on the different degree of transportability of the two sorts of goods. It is not possible, therefore, to lay down as a general rule that the exports of lending countries or the imports of borrowing countries must consist primarily of machines and other sorts of capital goods. It may just as well happen that the capital-exporting country sends consumers' goods to the capital-importing country for the support of labourers engaged in increasing the productive equipment of this latter country. In general, one might think that finished goods containing relatively little raw material and relatively much manufacturing labour would be more easily transportable than the semi-manufactured articles or even the raw materials themselves. As a matter of fact, however, it is the raw materials and foodstuffs that bulk largest in the international trade of all countries;<sup>1</sup> local differences in taste play a larger rôle with regard to finished products than with regard to the great

<sup>1</sup> Cf. Cassel, *Theoretische Sozialökonomie*, p. 617.

staples, and besides, the customs duties usually weigh much more heavily on manufactured goods than on their raw materials. And when the trade of capital-exporting and capital-importing countries is compared, the exports of the latter will generally consist of *less* finished products (goods of a higher order) than those of the former; for natural resources will usually be more scarce in the capital-exporting than in the capital-importing countries. If capital were necessarily transferred in the form of capital goods one would be inclined to expect the opposite result. Thus, the character of the international trade of countries that export or import capital will depend in the usual way upon the different relative scarcity of the productive factors, not on a necessary connection between movements of capital disposal and capital goods; capital disposal may just as well move in the form of consumers' goods.

This consideration also goes to show that no inference can be drawn from the composition of the imports of a borrowing country as to whether the imported capital has been productively applied or not.<sup>1</sup> Incidentally, it may be pointed out that this distinction between *productive and unproductive loans*, which is always a vague one, is of very little value when applied only to foreign loans; during the years of the Dawes plan it was argued that a control of the inflow of foreign capital into Germany was necessary to prevent part of this capital from being turned into "unproductive" uses (dwellings, stadiums, swimming pools, etc.) by the state or the municipalities; but as it is always only a minor part of a country's demand for capital which is satisfied from abroad, a control of unproductive *foreign* loans is clearly insufficient. Whether a certain utilisation of capital is appropriate or not, depends on the scarcity of the total capital supply of the

<sup>1</sup> Cf. Max Sering, *Deutschland unter dem Dawes-Plan*, Berlin 1928, p. 202: "Die Bedeutung der Anleihen für das empfangende Land, das Mass der ihnen zuzuschreibenden Produktivität hängt deshalb sehr wesentlich von den konkreten Sachgütern ab, die mit Hilfe des Kredites eingeführt werden." Cf. on the other hand, Wilhelm Röpke, *Auslandskredite und Konjunktur*, in *Schr. des Vereins für Sozialpol.* vol. 173, München 1928, pp. 225—26: "Sind es nicht Produktionsmittel, wie z. B. Maschinen aller Art, sondern Verbrauchsgüter, die eingeführt werden, so besagt das nichts darüber, dass die Auslandskredite, statt zur Erweiterung des deutschen Produktionsapparates beizutragen, sich nunmehr als Konsumtivkredite im volkswirtschaftlichen Sinne erweisen."

country; it is immaterial how that part of the capital which comes from abroad is distributed between so-called productive and unproductive uses; decisive in this respect will be that the foreign loans are taken by those borrowers that are able to obtain the most favourable terms abroad; and as this will often be the state and the municipalities, it is only natural if a comparatively large part of the imported capital is applied "unproductively"; the satisfaction from abroad of this unproductive public demand for capital leaves a greater part of the domestic capital supply free to be productively invested in private business.<sup>1</sup> It is conceivable, however, that easy access to foreign capital makes the public authorities more lavish than they would otherwise be.

It has recently been argued<sup>2</sup> that the popular identification of movements of capital disposal and of capital goods is not entirely without foundation. Against the reasoning outlined above it is contended that it overlooks how a capital movement of itself tends to alter the structure of relative prices; an import of capital means that demand is expanded more for future than for present goods; there is a relative shift in demand from consumers' goods to capital goods widening the margin between the prices of goods of a higher and of a lower order.

Two objections to this argument suggest themselves. At best it is relevant only in the *short run*; in the long run the prices of all goods whether of a higher or of a lower order will coincide with their costs. Then the decisive question is how the changed direction of demand affects the relative scarcity of the productive agents. It may be true that

"im allgemeinen Zwischenprodukte eine kürzere durchschnittliche Produktionsperiode hinter sich haben als Endprodukte d. h. zu ihrer Erzeugung "weniger Kapital" benötigen."

But this does not warrant the further conclusion that consequently

<sup>1</sup> Besides, the Americans were apt to forget that important services are rendered in Germany by means of state and municipal institutions which are discharged in the United States by public utility companies, the capital requirements of which rose to colossal proportions within the same period.

<sup>2</sup> Ragnar Nurkse, *Ursachen und Wirkungen der Kapitalbewegungen*, Zeitschr. für Nationalök. 1934, pp. 93—96.



“die durch die Kapitaltransferierung entstandene Mehreinfuhr von Waren eher aus Produzentengüter als aus konsumreifen Endprodukten bestehen wird.”

It is *not the whole average period of production* of the final product which counts in this connection, but the relative quantities of capital, labour and land of specific qualities required at *each stage* of the productive process. It may well happen, therefore, that it is more advantageous to import consumers' goods and turn out the producers' goods at home.

Besides, and this is the second objection, the *costs of transport* will exercise a dominating influence both in the short and in the long run on the composition of a country's foreign trade. Goods that can be obtained from abroad at a low transportation cost may be imported even though their cost of production in the narrower sense is higher abroad than at home, in order that the domestic agents of production may be turned to making other goods more difficult to transport.

In order to discover whether the import of capital into Canada affected the proportions in which her imports consisted of capital goods and consumers' goods respectively, Viner has compared total imports with two groups of selected items most nearly representing these two categories of goods.<sup>1</sup> He found that the group representing capital goods in percentages of the total import value amounted to

1900.....	28.8	1907.....	33.2
1901.....	27.2	1908.....	29.3
1902.....	29.7	1909.....	30.6
1903.....	32.3	1910.....	33.6
1904.....	31.9	1911.....	35.2
1905.....	31.1	1912.....	38.2
1906.....	30.5	1913.....	37.6

Thus there was a certain moderate shift in the composition of imports during the period of rapidly increasing borrowings between 1900 and 1913, but predominantly the loans entered Canada in the form of consumers' goods. A similar result has been found in the case of Australia. In spite of heavy borrowings the imports of capital goods and consumers' goods

<sup>1</sup> *Loc. cit.*, pp. 277—79.

expanded almost proportionately between 1908 and 1925—26 (by 250 and 220 per cent respectively).<sup>1</sup>

Just as capital disposal may move equally well in the form of consumers' and of capital goods, it is impossible to say whether the transfer will take place by means of *material commodities* or of *services* of one sort or another. Very often the possibilities of making substantial payments in the form of services have been unduly minimized. The inductive investigations of past experiences have dealt in the main with the mechanism of transfer of British capital to countries with relatively small purchasing power for foreign and especially for luxury services. The case may be different as between more highly developed countries at the present time; a substantial shift in relative price levels in England and the United States might conceivably bring about a heavy decline in the American export of services, especially shipping, and a substantial increase in the sales of British services, especially shipping, tourist, and insurance, to Americans.<sup>2</sup> The more the movements of merchandise are impeded by high tariff walls, the greater will probably be the relative importance of payments in the form of services, if these are accepted without similar resistance.<sup>3</sup> Large international capital movements may also influence the balance of freight payments through their effects on the volume of commodity trade.<sup>4</sup> Besides, they may affect the total volume of capital carried by immigrants through their influence on labour movements.<sup>5</sup>

Just as it is impossible to say a priori through what *kinds* of commodities or services a capital movement will be effected, it cannot be predicted from what *country* the capital-importing country will get these commodities or services. Obviously, it need not get them directly from the capital-exporting country. The real transfer may take place through

<sup>1</sup> Gordon Wood, *Borrowing and business in Australia*, Oxford 1930, pp. 198—99.

<sup>2</sup> The American post-war figures quoted *infra*, p. 370 show, however, that the service items have been remarkably insensitive to the large fluctuations in capital exports.

<sup>3</sup> Cf. Jacob Viner in a round-table discussion at the annual meeting of the American Economic Association in 1925 (*Am. Ec. Rev.*, Suppl. 1926, p. 93) and Wilhelm Röpke at the Pyrmont conference (*Das Reparationsproblem I*, Berlin 1929, pp. 340—42).

<sup>4</sup> *Infra*, pp. 245 et seq. and 483 et seq.

<sup>5</sup> *Infra*, pp. 175 et seq.

triangular or still more roundabout "polygonal" transactions. This form of adjustment is a familiar phenomenon in international trade, but nevertheless it is often lost sight of in connection with the mechanism of international capital movements.<sup>1</sup>

It is often assumed in popular discussions of these questions that a creditor country ipso facto has an excess of commodity imports, and a debtor country an excess of exports; the creditor country—people seem to think—has payments to receive from abroad, whereas the debtor country has payments to make abroad. This superficial impression must be corrected in two respects: (1) as just pointed out it is not the balance of commodity trade, but the whole balance of current transactions that counts in this connection; (2) moreover, this balance may run either way both in debtor and in creditor countries. The first detailed analysis of this question was made by Cairnes<sup>2</sup> and forms one of his most important contributions to the theory of international trade.

Cairnes supposes that a colony, starting on its career, borrows £ 1 million annually from its mother country for a considerable number of years. After a description along classical lines of the effects of specie flows on the commodity balances of trade, Cairnes concludes that in the long run the whole amount of the loan must be remitted in the form of commodities. The initial effect of the capital flow, therefore, is to create an *export surplus* in the mother country and an *import surplus* in the colony.

But as the process of borrowing is continued a *counter-acting tendency* develops. With every million annually remitted, the colony becomes indebted to the mother country for the interest on the amount. Supposing the rate of interest to be 5 per cent per annum, the debt of the colony to the mother country at the end of the first year would be £ 50,000. Consequently, in making its next remittance, the mother country would only need to send commodities to a value of £ 950,000. In the following year the colony would owe on account of interest £ 100,000 which, still supposing the same

<sup>1</sup> *Infra*, p. 488.

<sup>2</sup> *Some leading principles of political economy*, London 1874, part III, ch. III § 6.

amount of capital to be lent, would reduce the liabilities of the mother country on this score to £ 900.000, and at the end of twenty years the sum due by the colony on account of interest would equal the entire amount of the annual loan; at this moment, therefore, the balances of trade both of the lending and the borrowing country would show an *equality of imports and exports*.

This state of things, however, would be but momentary; for if the colony continues its borrowings on the former scale of £ 1.000.000 annually, its debt to the mother country on account of interest at the end of the twenty-first year would be £ 1.050.000, of which £ 1.000.000 can be set off against the annual loan. In other words, a net balance of £ 50.000 will now be due to the mother country, and on the supposition that the borrowing continues, this balance will grow year by year in arithmetical proportion and act upon trade, in proportion to its amount, in the manner already shown. In this later stage of the borrowing process the balance of trade in the colony will show an *export surplus*, while that of the mother country will show an *import surplus*.

Thus, according to Cairnes' analysis, the normal development of a borrowing country comprises three stages: (1) a period with an increasing import surplus, (2) a period with a decreasing import surplus, and finally, (3) a period with an increasing export surplus.<sup>1</sup>

Similarly, it might be demonstrated that the normal development of a creditor country runs through (1) a period of increasing export surplus, (2) a period of decreasing export surplus and, (3) a period of increasing import surplus, as the interest payments catch up with and finally outweigh the new investments of the current year.

In practice the international movements of capital rarely take place with such regularity as Cairnes' analysis seems to imply. On the contrary, they often show violent fluctuations thus giving rise to spasmodic changes in international payments and commodity movements.<sup>2</sup> Yet, underneath the successive waves of international borrowing and lending the stages indicated by Cairnes' deductive analysis are clearly to be dis-

<sup>1</sup> To be quite exact, one should speak rather of a debit and a credit balance, a deficit and a surplus, in the balance of current transactions.

<sup>2</sup> Cf. *infra*, pp. 67 et seq.

cerned. At all events, a distinction may always be drawn between "immature" and "mature" debtor or creditor countries. As new or immature debtor countries having an import surplus (a deficit in the balance of current transactions) may be mentioned the United States prior to 1874, Australia prior to 1893, and Canada prior to 1914,<sup>1</sup> as mature debtor countries one might mention the United States 1874—1914 and Russia before the Bolshevist revolution. It is already intimated that a debtor country may develop into a creditor country. (U.S.A. during and immediately after the War). Among the creditor countries England passed into the "mature" stage in the middle of the nineteenth century, whereas France, contrary to common opinion, was only on the verge of this stage at the outbreak of the World War; the United States is still a young creditor nation.<sup>2</sup> But ere long the States may have passed into the fourth and last stage, that of the mature creditor with a surplus in the balance of current transactions.<sup>3</sup>

Quite apart from its irrationality in other respects, the fallacy of the popular argument that the balance of trade between any two particular countries ought always to be in equilibrium is clearly seen as soon as it is realised that international loans must ultimately be liquidated in the form of commodities and services. Yet, in spite of the fact that the collapse of the international capital market in 1931 made it impossible for the principal debtor countries to cover their interest and amortisation payments by means of new borrowing, public opinion in the leading creditor countries, notably in England, persistently demanded that the debtor countries should buy as much from the creditor countries as they sold to them. Or, in other words: the creditor countries deliberately declined to accept the export surplus without which it was impossible for their debtors to meet their obligations.

<sup>1</sup> Cf. *infra*, ch. X.

<sup>2</sup> Cf. *infra*, ch. IX.

<sup>3</sup> Hartley Withers in an analysis of this problem (*Money changing*, 2. ed., London 1916, p. 67) distinguished only three groups of nations having (a) greater export of securities than import of coupons (i.e. new debtor countries), (b) greater import of coupons than export of securities (i.e. mature debtor countries) and (c) greater export of coupons than import of securities (i.e. mature creditor countries). He apparently forgets between (b) and (c) the third stage, that of the young creditor country having a greater import of securities than export of coupons.

It is sometimes said that the creditor country merely *re-invests abroad* part or all of the interest payments which it receives from abroad, so that its foreign investments grow at compound interest, so to speak.<sup>1</sup> But it goes without saying that it need not be the same persons that both obtain the interest payments and make the new investments.<sup>2</sup>

Some authors even go so far as to maintain that a real transfer of capital from the creditor to the debtor countries has *never* taken place, but that all the foreign capital holdings of the creditor countries are reinvested profits.<sup>3</sup> They deny, in other words, that the creditor or debtor countries have ever been "young;" they only admit the existence of "mature" creditor and debtor nations, respectively showing an import and an export surplus. To the argument that reinvestment of profits assumes the existence of previous investments created in another way they say that these older assets consist of property of which the natives have been violently or cunningly deprived.

International transfers of capital disposal take place in a *great variety of forms*. The most important among them may be summarised as follows; the balance of foreign indebtedness of a given country—say Denmark—may be rendered less favourable in the following ways:

I. Short-term loans and investments.

a) Transactions increasing Denmark's foreign debt.

1. Increase in foreign deposits in Danish banks.
2. Increase in the overdrafts allowed Danish banks by foreign correspondents.

<sup>1</sup> Cf. the French figures quoted *infra*, p. 344.

<sup>2</sup> To the extent to which new savings are made out of income from capital, there will tend to be identity between investors and receivers of income from past investments.

<sup>3</sup> Cf. e.g. Johan Vogt, *Kva tener Europa på koloniena sine?* Syn og Segn, 1930. Cf. also Sir Josiah Stamp (*Reparation payments and future international trade*, a report submitted to the committee on economic restoration of the International Chamber of Commerce, May 1925, Paris 1925, p. 45, note 1): "It is difficult to demonstrate that any country has ever really exported large capital sums for a period of years over and above the compound interest from abroad due to that country for actual investment. In other words, it is difficult to demonstrate that any country has persistently exported a large surplus of actual production over consumption (allowing for services) at the expense of home investment of capital . . . One cannot, of course, push this argument too far. There must have been at least at some time or other an initial export surplus which was invested abroad."

3. Increase in foreign holdings of Danish bills and acceptances.
  4. Increase in the foreign commercial debts of Danish firms.
  5. Increase in foreign holdings of Danish "floating" (international) securities.
  6. Increase in foreign holdings of Danish bank notes and subsidiary coinage.
- b) Transactions decreasing Denmark's foreign assets.
1. Decrease of Danish deposits in foreign banks.
  2. Decrease in the overdrafts allowed foreign banks by Danish correspondents.
  3. Decrease in Danish holdings of foreign bills and acceptances.
  4. Decrease in the Danish commercial debts of foreign firms.
  5. Decrease in Danish holdings of foreign "floating" (international) securities.
  6. Decrease in Danish holdings of foreign bank notes and subsidiary coinage.
- II. Long-term loans and investments.
- a) Transactions increasing Denmark's foreign debt.
1. Floating of new Danish bonds in foreign capital markets.
  2. Sale of existing Danish investment bonds abroad.
  3. Sale of Danish investment shares abroad.
  4. Sale of Danish business firms to people living in other countries.
  5. Sale of Danish land, buildings, etc. to people in other countries.<sup>1</sup>
- b) Transactions decreasing Denmark's foreign assets.
1. Repayment by other countries of foreign investment bonds held by Danish investors.
  2. Sale by Danish holders of foreign investment bonds.
  3. Sale by Danish holders of foreign investment shares.
  4. Sale of foreign business firms owned by Danes.
  5. Sale of foreign land, buildings, etc. owned by Danes.
- III. Miscellaneous items.
1. Tributes, reparation payments, and the like.
  2. Amounts taken out by Danish emigrants or foreign immigrants returning home.
  3. Remittances of foreign immigrants living in Denmark.
  4. Amounts presented to or inherited by people living abroad.<sup>2</sup>

<sup>1</sup> Joseph B. Esslen, *Die Politik des auswärtigen Handels*, Stuttgart 1925, p. 22, seems to count foreign purchases of German land as commodity trade.

<sup>2</sup> If patent rights, copyrights, etc. are conveyed to people in other countries without compensation they should be included among other gifts.

As will appear in chapter II the forms of international capital movements will depend to a certain extent on the motives by which they are called forth.

In order to evade the rules of taxation or the regulations of authorities controlling the foreign exchanges, the most ingenious procedures have been invented. If a firm agrees to pay excessive prices for foreign raw materials obtained from its own branches or from intimate business friends, the excess above the current market price may be regarded as refugee capital. Similarly, commodity exports at low mock-prices may conceal an export of capital. On the other hand, many transactions may create suspicion of capital flight though in fact they only amount to evasion of a domestic tax. This is true, for instance, if a firm with a branch in another country (1) adjusts its accounts in such a way that all its profits accrue abroad, and (2) pretends to borrow these profits from its foreign office.

It has already been mentioned that bonds issued by the state or the municipalities will often obtain better prices abroad than those issued by less known private persons, firms, or institutions, even though the degree of security of the latter may actually be just as good. It is only natural, therefore, that *public borrowing* plays a large rôle among international capital movements. The state or the municipalities undertake to provide a supplement to the domestic supply of capital leaving to private borrowers the utilisation of the latter. Usually it will be private foreign capitalists, banks, insurance companies, trust companies, etc. that buy such public bonds, but it may also happen that loans are made directly by one state to another; such operations played a large part in the financing of the World War (the interallied debts), and were not unknown in earlier periods of war.

It is also clear that the development of *joint-stock companies*,<sup>1</sup> by securing an easy transfer of ownership, has greatly influenced both the volume and the mobility of the capital supply at the disposal of the world's industries. The special importance of the joint-stock form of organisation for *international* capital movements follows from the fact that although the different fields of modern joint-stock capitalism vary widely

<sup>1</sup> A brief sketch of this evolution is given by J. A. Hobson, *An economic interpretation of investment*, London 1911, ch. I.



with regard to the area from which they draw their capital, there is a marked tendency not merely to increase the number of joint-stock business units, but to increase also the area of appeal, so as to bring on to the international market shares which were formerly of purely local interest.<sup>1</sup>

Beside the growing size of the business unit the increasing importance of *investment trusts* must be mentioned in this connection; through this intermediary many capitalists invest in foreign securities who would not have done so directly.<sup>2</sup>

The most obvious difference between loans and investments on one side and *tributes or reparation payments* on the other is that the former give rise to subsequent current payments of interest and dividends and, some day perhaps, to a repayment of the principal; and in the course of time this offsetting element may make the accommodation of the balance of current transactions easier than in the case of other invisible items. But for the time being, the character of the operations would seem to be essentially the same. Yet there is an important difference of degree between the two cases. Ordinary loans and investments are the natural outcome of a given economic situation, even though they may meet with obstacles and friction of various sorts. Not so, however, with capital movements arising out of reparation payments or intergovernmental war loans; their size and direction may be quite out of proportion to the other elements in the situation; they are of an entirely arbitrary or even catastrophic character. Consequently, the transfer of reparations may very often meet with much greater practical difficulties than ordinary foreign lending and borrowing.<sup>3</sup> *Immigrants' remittances* are also of a rather arbitrary character, but their range is usually too limited to create material disturbances.<sup>4</sup>

Transfer difficulties may apparently arise also in connection with a sudden and extensive *flight of capital*. Yet the danger in

<sup>1</sup> Cf. J. A. Hobson, *loc. cit.*, p. 50.

<sup>2</sup> The influence of the English *Trustee Act* on the direction of the flow of capital is mentioned by C. K. Hobson, *Export of capital*, London 1914, pp. 48 et seq.

<sup>3</sup> It might perhaps even be argued that forced capital movements will usually "flow uphill", since otherwise they would have taken place voluntarily. (Cf. Ragnar Nurkse, *Ursachen und Wirkungen der Kapitalbewegungen*, Zeitschr. für Nationalök. 1934, p. 79).

<sup>4</sup> Interesting figures are given in the League of Nations' *Memorandum on balances of payments 1930*, Geneva 1932, pp. 39-44.

this respect is much less than often supposed by politicians. The individual capital owner, who wants to transfer his capital abroad, has direct and immediate command over free capital disposal in three cases only: (1) if he "dishoards," to use Robertson's well-known expression, (2) if he saves part of his presently acquired income, and (3) if he omits to reinvest presently ripening amortisation quotas.<sup>1</sup> Indirectly he may get possession of capital disposal (4) by selling his property rights, (5) by recovering loans previously made (including bank deposits), and (6) by borrowing. But in these cases the capital disposal must be provided by the other party to the transaction (the buyer; the debtor; the lender) in one of the three ways first indicated. Thus we are reminded once more that it is only free or floating capital which is able to move between countries.

Only in rare cases will the release of purchasing power previously hoarded reach proportions worth mentioning. And at all events this leaves the domestic capital market completely unaffected, since the hoarded amounts do not constitute part of the capital supply on which its roundabout production depends; if the hoarded money is now used to buy foreign securities previously owned by other people in the same country its capital market may even be relieved. This is merely a particular way in which the obvious inflatory effects of dishoarding may show themselves.

Nor is it to be expected that the entrepreneurs themselves will transfer their amortisation quotas abroad to any large extent rather than use them for the upkeep of their capital equipment. At any rate, this presupposes not only a relative unprofitability of the business, but a wide-spread and deep-rooted distrust in the future.<sup>2</sup> But indirectly they may be forced to close down if their credits are recalled, because their creditors want to bring their capital out of the country in question.<sup>3</sup> And in this case even perfectly sound and profitable

<sup>1</sup> Cf. Fritz Machlup, *Die Theorie der Kapitalflucht*, Weltw. Arch. 1932 II, p. 515.

<sup>2</sup> Fritz Machlup points out, however, that the very regulations which intend to prevent capital flight may reinforce it by causing losses to entrepreneurs and thus making them more apt to contract their business or completely stop operations (*Loc. cit.*, p. 522 note 1).

<sup>3</sup> It is immaterial, of course, whether it is foreign capital which is called home, or whether domestic credits are recalled in order that the creditor may transfer his capital abroad.

enterprises may be unable to continue. It may be the depositors at the banks who want to withdraw their money and thus force the banks to contract their loans. Here too, however, amortisation quotas and new savings form the only sources from which the refugee capital must ultimately originate; consequently, a "run" on the banks by depositors wanting to transfer their capital abroad may soon force the banks to suspend payments, but this means, on the other hand, that the limit to which the intended capital flight may be effective, is reached *equally soon*.

The case becomes different, however, if the banks receive support in such emergency from the central bank. Ordinarily, the raising of the capital to be transferred means that ipso facto a corresponding amount of buying power is withdrawn from the domestic market, and that again tends by direct and indirect routes to adjust the balance of trade to the new situation. Accordingly, the foreign exchange reserves of the central bank may be *temporarily* depleted, but ere long they are likely to be restored. The capital flight will not cause a *permanent* diminution of the exchange reserves. But if the central bank provides the necessary capital disposal through credit expansion, the refugee capital is created without any buying power being withdrawn from the domestic market; no goods are set free for export, nor are imports curtailed. In this case the additional credits are used simply to buy foreign exchange from the central bank, the exchange reserves of which are therefore permanently reduced. But this means, of course, that per saldo no capital export has taken place. The foreign holdings of the refugee capitalists have been increased *at the expense* of those of the central bank. The bank itself has financed these demands for foreign exchange.<sup>1</sup>

In this situation the central bank is likely to demand an artificial control of the exchange market, the most probable effect of which is to curtail the supply of foreign exchange at the very moment when demand for it increases. And increased scarcity in the exchange market will tend to reinforce the capital flight by strengthening the motives from which it was originally called forth.

<sup>1</sup> This was what took place in England in September 1931.

The whole trend of this reasoning goes to show that even in case of capital flight it is the procurement of the capital disposal at home (das Aufbringungsproblem)<sup>1</sup> which is the salient question. As soon as the free capital disposal is procured, it is also possible to transfer it from country to country. This aspect of the problem, however, will be studied in greater detail in part II. Here it will suffice to add in conclusion that without the aid of the central bank a capital flight will never reach the proportions which are feared by politicians, and when it gets this aid it ceases to be a true export of capital.

#### 4. THE INTERDEPENDENCE OF INTERNATIONAL ECONOMIC TRANSACTIONS.

The balances of trade and payments are nothing but statistical fictions. For practical purposes they usually comprise a calendar year, but in any case their beginning and termination is purely arbitrary;<sup>2</sup> in reality economic life is a *continuous process*. For the sake of simplicity one may assume that each year's transactions are completed within the year, or perhaps rather that the outstanding transactions at the end of one year are about equal to those at the end of the next; but this is not always true.<sup>3</sup>

When looking at the balances in which the dynamic economic evolution is recorded our attention is easily concentrated in an undue degree on the *quantities* of imported or exported commodities and on the *quantity* of capital transferred between countries. It is worth while to point out, therefore, that in the great system of mutual interdependence the vari-

<sup>1</sup> Cf. *infra*, p. 260.

<sup>2</sup> When the rates of foreign exchange are regarded as determined, in the short run, by the balance of international payments, it might seem natural to strike a weekly or even a daily balance. As Axel Nielsen points out, (*Bankpolitik*, II, Kbhvn. 1930, p. 222) this would be a mistake, however. For the demand and supply in the foreign exchange market of a single day is partly determined by the probable development of the rates in the very near future. Cf. *supra*, p. 39. To serve as a determinant of the rates of exchange the balance must cover a period long enough to eliminate this factor.

<sup>3</sup> Cf. Marshall, *Money, credit and commerce*, London 1923, pp. 136—37. "If bad harvests in Europe coincide with good harvests in wheat exporting countries, much grain comes to Europe in the autumn and is likely to be valued rather high; so that the imports into Europe for that year are swollen considerably, while some of the exports that are to pay for them follow a little later."

ables are not only the quantities exchanged, *but also the prices of goods and productive agents*. It is often said that a threatening deficit in the balance of payments must be met either through borrowing or through a changed relation between exports and imports; and in a sense this is true, of course; but it should always be remembered that prices and interest rates and their changes are just as important elements in the process of adjustment as are the quantities exchanged.

Attention has already been called to the misleading way in which the relation between the balance of trade and the balance of payments is usually stated. It is often implied that the balance of trade is merely a segment of the wider balance of payments; to the balance on merchandise account are then added the balances of freight charges, tourists' expenditures, etc., and finally the residue is said to be balance on capital account. It is not to be denied that the net balance of capital transactions may be *calculated* in this indirect way if all other items in the international balance sheet are known. But it is appropriate to sound a warning against the inference commonly drawn that the constituent parts of the import and export aggregates are *independent* of either the invisible items or the capital transactions. Here again, the modern theory of value reminds us that *all* the different items are mutually interdependent.

On the nature of this interdependence some general observations must be made. As already suggested the simplest conceivable case is that in which the balance of trade and the balance of payments coincide:

<i>Example I.</i>	
<i>Credit</i>	<i>Debit</i>
Export of commodities .. 300 mill.	Import of commodities .. 300 mill.

When invisible items are included, the balance of international payments may look as follows:

<i>Example II.</i>	
<i>Credit</i>	<i>Debit</i>
Export of commodities .. 275 mill.	Import of commodities .. 325 mill.
Freight income ..... 75 »	Tourists' expenditures ... 25 »
350 mill.	350 mill.

Including capital transactions it is evident that—apart from gold shipments—the “balances” on current account and on capital account must correspond to one another:

<i>Example III.</i>			
<i>Credit</i>		<i>Debit</i>	
Export of commodities ..	300 mill.	Import of commodities ..	350 mill.
Balance on current account ..	50 »		
	350 mill.		350 mill.
Foreign borrowing .....	50 mill.	Balance on capital account .....	50 mill.

<i>Example IV.</i>			
<i>Credit</i>		<i>Debit</i>	
Export of commodities ..	300 mill.	Import of commodities ..	350 mill.
Balance on current account ..	100 »	Interest on previous loans ..	50 »
	400 mill.		400 mill.
Foreign borrowing .....	150 mill.	Repayment of foreign loans .....	25 mill.
	150 mill.	Foreign lending .....	25 »
		Balance on capital account .....	100 »
			150 mill.

It is obvious that if no borrowings had taken place in these two cases, the current items would have looked quite otherwise. Exactly *how* the adjustment would have been brought about—by an increase in the value of exports or a decrease in the value of imports or both or by changes in the invisible items—is impossible to say a priori, but in some way or other the value of the current items would have been equalised in case III, and in case IV a credit balance would have been created corresponding to the foreign lending and repayments of old debts. Thus it is only the *difference* between the current credit and debit items, not their *absolute* amounts, which may be foretold, when a known capital balance is to be settled.<sup>1</sup> Yet it is fairly clear that these credit and debit items are not independent of one another. Take the simple case of

<sup>1</sup> Hjalmar Schacht (*Stabilisierung der Mark*, Berlin-Leipzig 1927, pp. 176—77) shows by means of a diagram how German imports remained constant in spite of increasing foreign borrowing, and concludes that not all the borrowed money was used as payments for imports. No such inference can be drawn, of course, without knowing also the development of exports and other current items.

exports and imports. It is sometimes asserted that a nation's total exports constitute a sort of *free fund* which can be used in any one of three ways: (1) to purchase imports, (2) to make foreign investments, or (3) to pay other foreign obligations (tourists' expenditures; freight charges; reparations, etc.). But this is not the case, of course. The export of manufactured goods, e.g., often necessitates a certain import of raw materials and food stuffs. But it is equally fallacious to suppose, as some of the more pessimistic participants in the discussion of the German reparation problem have done,<sup>1</sup> that there is a more or less *fixed* relation between exports and imports. This would be the case only if (1) all imported raw materials were used for making products to be exported later on, and if (2) all export goods contained a certain proportion of previously imported raw material. But as is well known domestic trade is everywhere much greater than international trade; the bulk of the imported raw materials is in all countries made into goods for home consumption, and only so much of the manufactured goods is exported as is necessary to pay for the imported raw materials. To demonstrate that in general there is a close correlation between the values of exported manufactures and of imported raw materials and food, therefore, shows nothing but the self-evident fact that as no country gets its imports from abroad for nothing it is simply compelled to send out an equivalent value of its typical exports.<sup>2</sup>

Nor is it permissible to maintain that lack of natural resources of itself prevents a country from developing an export surplus.<sup>3</sup> Such a country must import all its raw materials, it is true; but then the capital and labour that might otherwise have been absorbed in the domestic production of such raw materials is set free to make a greater quantity of manufactured commodities, part of which can be exported in payment for the raw materials. Lack of natural resources only means that it will be *other goods* (containing little nature and much labour and capital) in the production of which the

<sup>1</sup> Notably H. G. Moulton in his well-known book *Germany's capacity to pay*, New York 1923.

<sup>2</sup> Cf. Frank D. Graham's criticism of the arguments put forward by H. G. Moulton. (*Am. Ec. Rev.* 1925, p. 219).

<sup>3</sup> E. Heimann (*Das Transfer und die Preishöhe*, *Wirtschaftsdienst* 1924, p. 1489) holds up to scorn the "idyllische Vorstellung von der gottgewollten Passivität der Zahlungsbilanz."

country will be relatively superior, and that *both imports and exports* must be increased in order to create an export surplus. The necessary readjustments of production may be more far-reaching in this case, but they are by no means impossible.

The procedure repeatedly referred to of calculating the balance of capital transactions as a residue is particularly dangerous because it may convey the impression that the items in the balance of current transactions *determine* the size of the international capital movements. Strongly biased as the layman usually is by quasi-mercantilistic ideas, he naturally regards an international loan as the remedy to which it becomes necessary to have recourse in order to cover a "deficit" in the balance of trade, the "causes" of which are then explained in the most naïve way.<sup>1</sup> But in fact the chain of causation is more likely to run in the opposite direction. In principle, *all* the different phenomena mutually govern one another, and it is not difficult to find examples of changes in the basic data of the price systems that affect at the same time both current transactions and capital movements; if new natural resources are discovered within a given country e.g., it may cause both an inflow of capital and labour, and a radical change in the character of the country's foreign trade; similarly, both merchandise movements and capital movements may be influenced by the cyclical fluctuations in business activity. Yet, some phenomena are more sensitive to certain definite changes in the data than others, and as a general rule basic changes which primarily affect the balance of current transactions *very seldom* call forth secondary readjustments with regard to long-term lending or borrowing, whereas basic changes which primarily affect the capital movements *practically always* lead to repercussions in the commodity and service transactions.<sup>2</sup>

That this is so has been strongly maintained and con-

<sup>1</sup> Conversely, it has often been asserted in the United States that the high tariff has been the "cause" of the large export of capital after the War. The tariff has reduced commodity imports and created an export surplus. Undoubtedly, there may be a connection between tariff policy and international capital movements, but its nature is much more complicated than this superficial reasoning would suggest.

<sup>2</sup> Cf. Ohlin *Interregional and international trade*, pp. 383—84. Ohlin is hardly justified in maintaining that service transactions are, on the whole, less elastic in this respect than commodity trade; cf. *supra*,



vincingly proved by Jacques Rueff<sup>1</sup> in a dispute with J. M. Keynes<sup>2</sup> who shares the popular belief that

“historically, the volume of foreign investment has tended to adjust itself—at least to a certain extent—to the balance of trade rather than the other way round, the former being the sensitive, the latter the insensitive factor.”

Cases may probably be found in which this holds good, but they are certainly exceptions and not the rule,<sup>3</sup> and all evidence speaks against Keynes' two contentions that (1) at a given time the economic structure of a country in relation to the economic structure of its neighbours permits of a certain natural level of exports, and that (2) arbitrarily to effect a material alteration of this level by deliberate devices is extremely difficult.

In order to test the first part of Keynes' judgment Rueff compares the French commercial balance before and after the War. In the years 1912 and 1913 the commercial balance showed a deficit of approximately 1,500 mill. francs, equivalent to about 300 mill. dollars. In 1921 and 1922 the deficit represented 170 and 206 mill. dollars or 57 and 69 per cent of the 1913 figure. Thus the deficit was considerably reduced, although the reduction in the country's productive capacity, owing to the entire destruction of its most active factories on the one hand, and its enormous reconstruction needs on the other, would have led one to expect a considerable increase in the deficit. Rueff concludes, therefore, that the notion of a “natural” level of exports is a complete fallacy and cannot legitimately be invoked.

Nor does recent French experience corroborate the view that an arbitrary and deliberate encroachment on the existing

p. 52. There is one item, however, in the balance of current transactions which is almost completely inelastic, namely interest and amortisation charges on existing loans; their amount is given and must be procured irrespective of all other changes in the economic situation.

<sup>1</sup> Ec. Journ. 1929, pp. 391 et seq., *Théorie des phénomènes monétaires*, Paris 1927, and *Une erreur économique: l'organisation des transferts*, Doin 1928.

<sup>2</sup> Ec. Journ. 1929, p. 6.

<sup>3</sup> A long-term loan may be launched to consolidate short-term credits contracted to meet a deficit in the balance of trade. Such was the procedure e.g. during the War when the Allied Powers became indebted to the United States. Cf. G. W. Edwards, *American policy with reference to foreign investments*, Am. Ec. Rev. Suppl. 1924, p. 28 and Taussig, *International trade*, pp. 312—13.

commodity-trade situation would meet with extreme difficulties. On the contrary, the balance of trade adjusted itself with surprising ease to the abrupt disturbance of the French balance of payments produced by the decision suddenly taken by Great Britain and the United States at the beginning of 1919 to cease granting France the sterling and dollar credits which had previously equilibrated her balance of payments. This decision to cease to shoulder the expense of pegging the franc removed an item of approximately 20,000 mill. francs from the credit side of the balance. On Keynes' assumptions this should not have had any material influence on the balance of trade, since the economic structures of the countries concerned were not affected by this arbitrary decision of the British and American governments, and consequently, there should have remained a deficit in the balance of payments of approximately 20,000 mill. francs per annum, presumably leading sooner or later to some sort of default. The facts, however, were quite otherwise. In 1919 the deficit in France's commercial balance was approximately 23,000 mill. francs. In 1920 it was about the same. But in 1921 it had been reduced to a little over 2,000 mill. francs, and at this level it remained during 1922 and 1923. If Keynes' premises were correct this remarkable re-establishment of the equilibrium in the balance of payments would appear to be a mere coincidence, or perhaps rather to constitute a transition from the "natural level" of the state of war to the "natural level" of the state of peace, caused by the changes in economic structure attending this transformation. But then one would expect the commercial balance to remain more or less constant after this movement or, at any rate, to change only with modifications in the economic structures of the countries. Again, however, the facts tell another story. For during 1924 the commercial balance underwent a new striking change, showing no longer a deficit, but a surplus of over 1,500 mill. francs. This surplus was well maintained in 1925; in 1926 it fell to 80 million, but in 1927 it rose again almost to 2,000 mill. The obvious explanation is that this was the period of "capital flight," which introduced a new debit item in the balance of payments, and the lesson to be drawn is that again the commercial balance responded quickly and effectively.

To this account of recent French experience may be added a number of cases carefully analysed by Taussig<sup>1</sup> who has been puzzled no less than Keynes by the rapidity and exactness of the readjustments in the balance of trade.<sup>2</sup> With special reference to the German reparation problem he says:

“Sie folgt so rasch, dass man versucht ist zu sagen, Kapitalexport rufe ein für allemal *durch einen automatischen Prozess* ein Ausströmen der Waren hervor. Diese rasche Reaktion hat sich bei jedem Geldsystem gezeigt . . . diese Erscheinung hat mich nicht wenig beschäftigt und doch muss ich eingestehen, dass ich keine Erklärung, die standhält, dafür zu geben vermag. Wir mögen mit einiger Zuversicht theoretisieren, aber auf festem Grund stehen wir nicht. Wir sehen, was geschieht; wie es geschieht, wissen wir nicht mit Sicherheit.”<sup>3</sup>

Keynes' answer<sup>4</sup> to Rueff's criticism was rather weak. He pleaded that he did not contend that readjustments were *impossible*, but only that they were difficult, and pathetically exclaimed:

“The violent social disturbance, the enormous redistribution of fortunes, and the wholesale disappointment of pre-existing contracts, which attended the prolonged and disastrous story of the depreciation of the franc to a fifth of its previous value, hardly afford a happy example of the *ease* of adjusting things . . . How short memories are, that M. Rueff, himself a Frenchman, should cite the postwar economic history of France in order to prove that economic readjustments are as easy as shelling peas!”

But other evidence to disprove Rueff's conclusions Keynes did not produce, and in “A treatise on money” the only reference to this point is a remark in a footnote<sup>5</sup> that

“Professor Taussig is, I think, a little too ready to assume that exports adjust themselves to the other factors in the situation, rather than—in part—the other way round.”

The discussion with Rueff seems completely forgotten. The position which is thus still advocated, “in part” at least, by Keynes, is the natural corollary of the popular theory according to which the rates of foreign exchange are determined by the balance of trade, and conversely, Keynes would seem

<sup>1</sup> *International trade*, *passim*.

<sup>2</sup> *Loc. cit.*, pp. 239, 247, 261, and 275. Taussig's whole view of the monetary mechanism involved will be critically examined in part II A.

<sup>3</sup> *Deutschlands internationaler Handel und das Reparationsproblem*, Archiv für Sozialw. u. Sozialpol., vol. 60, 1928.

<sup>4</sup> *Ec. Journ.* 1929, pp. 404—07.

<sup>5</sup> Vol. I, p. 334.

bound in order to be consistent to accept also this superficial theory.

Recently, this problem of the causal connection between capital movements and merchandise movements has been carefully analysed on the basis of French pre-war experience by Harry D. White.<sup>1</sup> On the whole, he sides with Rueff rather than with Keynes; for the most part, merchandise movements are treated as the dependent factor, but not invariably.<sup>2</sup> The main exception to the rule, which White suggests, is the possibility that increased domestic expenditure on imported food-stuffs caused by a crop failure may curtail the rate of savings and thus diminish the export of capital, while a bumper crop may serve to increase both food and capital export. But White's figures offer no substantiation of this; the fluctuations in capital exports show no consistent relationship with years of large or small food imports induced by harvest variations. Moreover, White stresses the point already suggested that besides the two causal sequences discussed by Rueff and Keynes there is the *third possibility* that both capital exports and merchandise movements are the concomitant effects of a common cause, namely the *fluctuations in business activity*. In order to test this hypothesis he presents the interesting figures reproduced in table 1.<sup>3</sup>

In *France* the years 1883—86 were years of depression and also years of comparatively low capital exports. Conversely, the revival and prosperity in 1887—89 and more particularly in 1903—06 were accompanied by rapidly growing export of capital. But during the remaining years there is no marked agreement. In the case of *Great Britain* 1886—90, 1896—1900, 1904—07, and 1909—13 were years of high or expanding business activity and at the same time periods with a relatively large capital export, whilst the depressions in 1891—95, 1901—03, and 1908—09 brought also setbacks in the export of capital. But here again there is a number of years without correlation.

<sup>1</sup> *The French international accounts 1880—1913*, passim.

<sup>2</sup> *Loc. cit.*, p. 223.

<sup>3</sup> The classification of the years according to degree of business activity is drawn from W. L. Thorp, *Business Annals*, New York 1926. Depression = -3; mild depression = -2; recession = 0; revival = +1; mild prosperity = +2; prosperity = +3. For the sources of the figures on capital export cf. *infra*, part II B.

TABLE 1.

	France		Great Britain	
	Business activity	Capital export (Mill. francs)	Business activity	Capital export (Mill. £)
1880 .....	3	120	0	4
81 .....	2	720	2	33
82 .....	0	350	2	24
83 .....	-3	235	0	16
84 .....	-3	235	-3	41
85 .....	-3	420	-3	34
86 .....	-3	500	-2	62
87 .....	0	700	0	67
88 .....	2	805	2	74
89 .....	2	685	3	69
1890 .....	0	590	2	83
91 .....	-2	390	-3	48
92 .....	-3	490	-3	34
93 .....	-3	695	-4	40
94 .....	-3	485	-3	21
95 .....	-2	680	-3	23
96 .....	0	865	0	39
97 .....	2	545	3	27
98 .....	3	930	3	17
99 .....	3	810	3	28
1900 .....	2	1000	2	31
01 .....	-2	1280	-2	14
02 .....	-3	1080	-1	11
03 .....	0	1295	-2	23
04 .....	2	1440	0	27
05 .....	3	1620	2	63
06 .....	3	1790	3	104
07 .....	3	1220	2	140
08 .....	-2	1490	-3	130
09 .....	0	1460	0	110
1910 .....	3	1830	3	151
11 .....	3	1030	3	192
12 .....	3	1340	3	226
13 .....	2	1115	3	...

U. S. A.

	Business activity	Capital export (Mill. \$)
1922 .....	0	378
23 .....	2	- 33
24 .....	-2	517
25 .....	3	621
26 .....	3	181
27 .....	1	695
28 .....	3	944
29 .....	3	306
30 .....	-3	733

In the *United States* the prosperity in 1923, 1926, and 1929 was accompanied by low capital exports, while the recessions in 1924, 1927, and 1930 concurred with rising export of capital. Here, apparently, the correlation between the two series of figures is negative.<sup>1</sup>

On the whole, this material does not reveal a consistent correlation between capital exports and the state of business activity in the world's principal creditor countries. But an absence of correlation does not, of course, necessarily mean an absence of causal relationship; it may merely be due to the fact that *other* factors influencing capital movements are more powerful in some years than in others.

On a priori grounds this cyclical hypothesis is rejected by Angell.<sup>2</sup> For two reasons: (1) in general, the cyclical oscillations are more or less parallel in different countries,<sup>3</sup> and (2) even in the case of non-coincident cycles the outcome must depend on the form of the foreign investments. If the cycles are coincident and of roughly equal magnitude in different countries, Angell argues, they will not materially affect the international flows of capital. If they are not, discrepancies of various sorts may arise and release capital movements, but the *direction* of these capital movements will depend, according to Angell, upon whether the investments are of the fixed-yield type or not:

"Suppose, for example, that one country is in the midst of a boom period, while the other is in a less active phase of the cycle or even

<sup>1</sup> White's comments on the French and English figures are somewhat careless; in several instances the text contradicts the classification of the years as given in the table.

<sup>2</sup> *The theory of international prices* pp. 527—28. In an analysis of the post-war fluctuations in the balance of payments of the United States (*Equilibrium in international trade: The United States 1919—26* Quart. Journ. of Ec. 1928, pp. 388—433) Angell treats the two major factors in operation, the changes in commodity movements and the changes in capital movements, as the common direct or indirect, result of a common antecedent condition of a more special sort, the fluctuating state of economic affairs in Europe. This conclusion will be more closely examined, however, in part II. Cf. *infra*, p. 374.

<sup>3</sup> On this point Angell sides with Pigou (*Industrial fluctuations*, 2. ed., London 1929, p. 11) and Hawtrey (*Currency and credit*, 2. ed., London 1923, *passim*), although he mentions that a plausible partial alternative might perhaps be made to run in terms of *coincident* cycles with respect to the leading industrial countries of the world, which must then be regarded as constituting a closely integrated economic unit, and of *inverse* cycles as between them and the less advanced countries.

in a depression. In the first country, prices are relatively high. This stimulates commodity importation relative to exportation. Profits and interest rates are also high, thus stimulating the import of capital for investment in fixed-yield securities (the prices of which are low), and checking its export. On the other hand, however, the capitalized value of businesses and of shares of stock is high too. This will check the import of capital for investment in them. In the other country, prices are low, and commodity exportation from it will be relatively increased. Profits and interest rates are also low. This will check the import of capital for investment in fixed-yield securities (the prices of which are now high), and stimulate its export. On the other hand, the low capitalized value of businesses and of stocks will stimulate the *importation* of capital for investment in them."

These last considerations do not sound convincing. As long as stocks and other titles of direct ownership are *rising* they may continue to be demanded by foreign capitalists, even though their prices be very high, and conversely, the foreign capitalist will hardly be tempted to invest in shares the dividends and prices of which are on the decline.<sup>1</sup>

The relationship between capital export and business fluctuations must obviously depend on the nature of the lending and the borrowing country's economic life. White points to the highly sensitive industrial development of the United States as an explanation of the inverse correlation,<sup>2</sup> whereas in a country such as pre-war France with a rather sluggish industrial life he finds it more probable that a period of prosperity will increase capital exports. In Denmark it has been clearly noticeable that the import of capital increased in boom periods, while repayments were made during years of depression. This is a natural consequence of the dominating importance of agriculture; both the quantity and the prices of the exports of agricultural products have been relatively unaffected by the cyclical fluctuations of business, whereas the imports of iron, lumber, coal, etc. are obviously very sensitive to business activity both regarding quantities and prices.<sup>3</sup> The increasing exports, in recent years, of articles the demand for which is more sensitive to the cyclical variations, such as ships, machinery, automobiles, and cement, will perhaps be able to

<sup>1</sup> Cf. Wilhelm Röpke, *Geld und Aussenhandel*, Jena 1925, pp. 80—81.

<sup>2</sup> The same explanation is found in the analysis of recent American capital export given in *Balances of payments 1930*, Geneva 1932, pp. 20 et seq.

<sup>3</sup> Cf. Warming, *loc. cit.*, p. 340.

reverse this correlation.—Besides, the outcome may differ with the relative intensity of business fluctuations in the different countries. If the domestic industry of a lending country is expanding more rapidly than industries in the borrowing or in other lending countries, it may absorb so much of the additional funds available as to cause capital exports to decline, or at least to prevent them from increasing. Conversely, if the intensity of the depression is greater in the lending country than elsewhere, the domestic demand for capital may decline so much that, notwithstanding a decreased rate of saving, there may be more capital available for export.<sup>1</sup>

A thorough-going analysis of the relation between the cyclical movements in capital exports and in economic conditions in general cannot be attempted here. This would necessitate a detailed investigation of the whole question, how variations in prosperity are spread from one country to another.<sup>2</sup> And this again is intimately connected with the wider problem of the relation between relative price movements in the domestic markets on one hand and the supply of capital and its distribution among different branches of production on the other. The dislocation between the even pace in the production of consumers' and capital goods, which characterises the business cycle, is likely to change the relative scarcity of productive factors and the costs of transferring them between countries, i.e. the very conditions on which both commodity trade and international capital movements depend.

Recent investigations seem to show that it is important in this connection to distinguish between the short 3—4 year cycles and the longer 7—8 year cycles. While the longer cycles are more or less world-wide, the short cycles are by no means parallel in different countries. They manifest themselves by changes in the relation between prices of primary products and manufactured articles; accordingly, prosperity in industrial countries often means depression in agricultural or mining countries, and vice versa.

Comparing the export of capital from the three leading creditor countries—the United States, Great Britain,

<sup>1</sup> Cf. White, *loc. cit.*, p. 221.

<sup>2</sup> Cf. D. Hammarskjöld, *Konjunkturspridningen*, Stockh. 1933 and Albert v. Mühlenfels, *Internationale Konjunkturzusammenhänge*, Jahrb. für Natök. u. Stat. vol. 130, 1929, pp. 801 et seq.



and France—in the period 1922—29, Folke Hilgerdt<sup>1</sup> finds a marked tendency to simultaneous expansion and contraction.<sup>2</sup> And when correlating capital exports with movements in the barter terms of trade (measured by the relation between (1) American wholesale prices of industrial raw materials and manufactured articles and (2) average export and import prices for a number of countries exporting primary goods and importing manufactures), he finds that the export of capital culminated in the years in which the prices of primary products, both in the United States and on the world market, were highest in relation to manufactured articles (1925 and 1928). Before and after these years, as well as in 1926, capital exports were smaller and prices of primary goods relatively low.

But here again, it is extremely difficult to say what is "cause" and what is "effect." The two factors influence each other reciprocally, and it is hardly possible to determine which factor has been decisive in any given case. A restriction in the supply of capital from abroad induces borrowing countries to try to increase exports and reduce imports. This increase in offer and reduction in demand from borrowing countries tends to depress prices in the world market, and owing to the way in which competition works in different branches of production primary products will generally be harder hit than manufactures. But, conversely, a relative fall in the prices of primary goods which has an adverse influence on the economic and financial situation in the borrowing countries, will affect, not only their terms of trade, but also their ability to attract foreign capital. In other words: if the capital supply to debtor countries is reduced, the prices of primary goods will fall; and if the prices of primary products fall, the financial position of countries producing them will deteriorate, and foreign investments in these countries will be discouraged. Hilgerdt

<sup>1</sup> *Foreign trade and the short business cycle*, in *Economic essays in honour of Gustav Cassel*, London 1933, pp. 273—91. Cf. his excellent analysis in the League of Nation's memorandum on *Balances of payments 1930*, Geneva 1932, pp. 9—39.

<sup>2</sup> The only exception was a continuation of the French capital exports in 1926 when those of Great Britain and the United States fell off. But this is easily explained as a "capital flight" due to the depreciation of the franc in that year."

has little doubt, however, that the initial factor is generally a variation in capital movements, determined at the outset by political or monetary factors unconnected with price movements.

The contractions in international capital movements in 1923 are explained as due largely to the repercussions of the reparation dispute, the Ruhr occupation, and the ensuing hyper-inflation of certain Central European currencies; with the termination of the occupation and the introduction of a stable currency in Germany there came a revival of capital movements and an increase in the prices of primary products. In 1925—26 the stabilisation of the pound at a relatively high level and the subsequent British coal dispute adversely affected the capital exports of Great Britain, and both the ensuing fall in the prices of primary products and the boom tendencies, provoked by this price fall in other lending countries, made capital exports from these countries fall. Only French capital exports continued in the form of a flight of capital from the fluctuating French franc. The settlement of the coal dispute and a certain adjustment of wages in Great Britain restored capital exports and prices of primary goods. Various factors had by that time led to an increase in the production of primary goods and prepared the way for a fall in their prices; but the main factor determining the fall, which began in 1928, was in Hilgerdt's opinion the legal stabilisation of the French franc, leading to a heavy contraction of the large French capital exports.

Hilgerdt points out, however that variations in the supply of foreign capital to *each individual* borrowing country will not necessarily be reflected in the barter terms of that country. If during a certain year when international credit is abundant an agricultural exporting country, say Australia, cannot borrow abroad for any local (e.g. political or monetary) reason, then her export products — wool, wheat, etc. — will not necessarily fall in price, as they are sold in the world market in competition with the same products exported by other borrowing countries, such as the Argentine, Canada, etc. If the capital which is not invested in Australia is instead lent to these countries, it supports the international price of wool, wheat, etc., in the same way as if it had been lent to Australia, and

there is no reason why Australia's terms of trade should deteriorate. Moreover, as prices of primary products have a tendency to move together, it may be that even if the capital were lent to non-industrial countries whose products—like those, for example, of Java or Mexico—are not sold in competition with Australian goods, it would nevertheless help to support the price of these goods.

One of the most elaborate attempts to analyse the relationship between the longer cycles and international capital movements has been made by Gordon Wood in a study of "Borrowing and business in Australia."<sup>1</sup> His main contention is that behind the fluctuations in business activity in Australia one finds

"one efficient cause that is external to Australian business, rather than the operation of a number of interrelated factors forming a complex whole *within* the economic structure itself,"

and that this sole "efficient cause" is the varying rate of capital import.

Wood points out that other students of Australia's economic development have also usually sought the dominant control in external conditions, but that apart from the meteorological factor, a contraction of world credit has been the factor most commonly referred to. And he admits that there is a marked correlation between credit contraction in London and commercial crises in Australia. But he holds that these events overseas were not *in themselves* responsible for the crises in Australia:

"The true facts of the situation are that we have suffered in the past and are suffering in the present not from the effects of the business cycle, but from the natural accompaniments of the borrowing cycle."

This interpretation of Australian business fluctuations is admittedly inspired by Taussig's vivid account of the spasmodic changes in international capital movements:

"The loans from the creditor country, so far from being made at the same rate year by year, begin with modest amounts, then increase, and proceed *crescendo*. They are likely to be made in exceptionally large amounts toward the culminating stage of a period of activity and speculative upswing, and during that stage become

<sup>1</sup> Oxford 1930.

larger from month to month so long as the upswing continues. With the advent of a crisis, they are at once cut down sharply, even cease entirely. The interest payments on the old loans thereupon are no longer offset by any new loans; they become instantly a net charge to be met by the borrowing country. A sudden reversal takes place in the debtor country's international balance sheet; it feels the consequences abruptly, in an immediate need of increased remittances to the creditor country, in a strain on its banks, high rates of discount, falling prices. And this train of events may ensue not once only, but two or three times in succession. After the first crisis and the first overturn, the debtor country is likely to recover. Within a few years loans from the creditor country may be resumed, another period of activity and speculative investment set in, the old round repeated until finally another crisis comes and another sudden overturn in the balance of international payments."<sup>1</sup>

There is a considerable difference, however, between Tausig's guarded statement and Wood's one-sided emphasis on the varying rate of capital inflow as the *sole cause* of the commercial cycles. It is a comparatively easy matter to demonstrate that growing import of capital and boom conditions go hand in hand, and that, conversely, crisis and depression will ensue when interest payments on previous loans have to be met in face of slackening or ceasing capital import.<sup>2</sup> But this does not inform us whether the changing rate of capital movement is a "cause" or an "effect" of changing prosperity, either in the borrowing or in the lending country.

As already suggested the severe depression occurring in Australia after 1929 might appear at first sight to offer a conclusive proof of Wood's thesis. Admittedly, the refusal of the British investor at the beginning of 1929 to continue lending played an important part. But the slump in wool and wheat prices and the rigidity of the Australian wage structure were probably of equal importance, and in the interaction of these factors it is hardly possible to assign the rôle of "cause" to one of them rather than another.<sup>3</sup>

Regarding the crisis of 1893, Wood's explanation appears to be more convincing. Wood gives a very impressive description of the way in which British capital was forced upon Australia in the Eighties:

<sup>1</sup> *International trade*, p. 130.

<sup>2</sup> The way in which this is demonstrated by Wood is criticised in part II B.

<sup>3</sup> Cf. F. C. Benham in *Ec. Journ.* 1931, pp. 483 et seq., E. Ronald Walker, *Australia in the world depression*, London 1933, pp. 76 et seq., and R. C. Mills, *The lesson of Australia*, Index, Stockh. July 1934, p. 139 et seq.

"Capital was poured into the country at such a rate that the ordinary channels of finance became choked, and anything in the nature of efficient direction of capital investment became an utter impossibility. Thus the search for profit and the hectic prosperity of the community led, on more than one occasion, to reckless speculative investment in land, since all economic undertakings were already well supplied with capital."<sup>1</sup>

The crisis of 1853, on the other hand, presents a case in which Wood's argument most obviously breaks down. Quite clearly, this collapse was the inevitable reaction against the "gold fever" of the preceding years; to fit this instance into his picture Wood merely says that

"in all its essential features the expansion of the gold supply after 1851 amounted to nothing less than a sudden vast injection of capital; and the trade situation which arose was, in its immediate effects, *little different from that which ordinarily follows lavish borrowing.*"<sup>2</sup>

On the whole, F. C. Benham is probably correct in asserting that booms and depressions would have occurred in Australia at about the same times, although not with quite the same force, in the complete absence of external borrowing, and that when such borrowing occurs it must be treated as one of a number of interrelated factors rather than as the sole "efficient cause."

The difference of opinion between Keynes and Rueff referred to the permanent readjustments in the long run. Everybody will agree that *in the short run* capital movements of the equalising sort together with specie flows exercise a balancing influence and may thus be regarded as the "effects" of occurring disturbances. The *modus operandi* of these equalising influences will be discussed in chapters XII and XIII, but two general observations must be made in this connection: (1) Both specie flows and equalising capital movements are necessarily of a *temporary character*. In case of greater or more enduring disturbances in the balance of payments other readjustments of the sort indicated above become necessary. For when a disturbance of one kind or another has depleted a country's "cash reserves" in the form of gold or foreign balances, these reserves must be restored sooner or later to something like their former sizes in order to be ready for use in a

<sup>1</sup> *Loc. cit.*, pp. 7—8.

<sup>2</sup> *Loc. cit.*, pp. 28—29.

new emergency.<sup>1</sup> — (2) As already suggested<sup>2</sup> short-term credit transactions are *not always of the equalising sort*. The flight from the franc just referred to is a case in point; here the piling up of enormous French balances in London and New York provided the initial disturbance.

As we have seen, it follows from the very definition of the balance of payments that it must always be in equilibrium. If the statistics show a surplus or deficit, it must be due to "errors and omissions." The interesting point, in other words, is not *that* the balance is always in equilibrium, but *how* this equilibrium is created and maintained. To say that imports—visible and invisible—cannot exceed exports, because a nation like an individual must in the long run pay for what it buys, is a true, but inadequate solution of the problem. The transactions of international trade are individual transactions;<sup>3</sup> the mere statement that exports must balance imports because people must pay for what they buy, requires further explanation, because the persons who are the direct payees are not the same persons who have done the buying. As already indicated the monetary mechanism securing equilibrium between international payments will be studied in detail in part II below.

It is not uncommon, however, to hear trained economists speak of a surplus or a deficit in the balance of payments even though they use the definitions of this concept given above.<sup>4</sup> What they have in mind, then, is generally not the total balance of international payments, but what is here called the balance of current transactions. What they want to point out, in other words, is that here as in the accounts of a private business firm the *formal* equality of debits and credits is estab-

<sup>1</sup> But among the more permanent readjustments following upon a given change in the economic situation may also be an alteration, of course, in the size of the "cash reserve" of this sort which a country finds it suitable to hold.

<sup>2</sup> Cf. *supra*, p. 30.

<sup>3</sup> Cf. in particular J. A. Hobson, *International trade*, an application of economic theory, London 1904, p. 88.

<sup>4</sup> Thus Joseph B. Esslen (*Loc. cit.*, p. 21) says that "die Zahlungsbilanz wird passiv, oft auch ungünstig genannt, wenn die Volkswirtschaft weniger vom Ausland zu empfangen als an das Ausland zu zahlen hat ... Die Zahlungsbilanz kann auch im Gleichgewichte sein, wenn Aktiva und Passiva gleich gross sind."

lished only by adding the requisite "balance" to the items on one side or the other, and that the *real* problem is whether the current items balance among themselves, or whether equilibrium is only brought about through a flow of capital in either direction.<sup>1</sup>

What the practical banker or business man has in mind when he speaks of a deficit in the balance of payments, will often be still another thing. He makes a loose distinction between (1) the "normal" international economic transactions, i.e. not only all the current transactions, but also long-term loans, immigrants remittances, etc., and (2) the special short-term credit operations upon which a country falls back in order to make up for a threatening deficit. He distinguishes, in a sense, between what has here been called "real" and "equalising" movements of capital, and only in case resort must be had to the latter he will speak of a deficit in the balance of payments. What gives concern to him are the acute difficulties that may arise in the foreign exchange market if foreign loans are not secured *in time*.<sup>2</sup> But to be strictly logical one must insist that as soon as the "deficit" appears it must also have been covered by some sort of counterbalancing credit transaction. The difficulty lies in getting the obtained credit *prolonged*.

## 5. DIRECT LINKING OF CAPITAL EXPORT AND COMMODITY EXPORT.

It has frequently been argued that a capital-exporting country ought to take specific measures to secure that the exported capital is used directly for the purchase of its own export goods.<sup>3</sup>

In *France* where governmental supervision of the official listing on the Paris Bourse goes back at least to 1785, and where governmental control of foreign loan issues has ever

<sup>1</sup> Cf. Esalen, *loc. cit.*, p. 23: "Wenn ein Land längere Zeit hindurch Staatsschuldverschreibungen, Eisenbahnobligationen u. a. Wertpapiere ausführt, so wird seine Zahlungsbilanz so lange aktiv sein."

<sup>2</sup> Cf. Warming, *loc. cit.*, p. 336.

<sup>3</sup> This problem is dealt with in Gert Tacke, *Kapitalausfuhr und Warenausfuhr*, eine Darstellung ihrer unmittelbaren Verbindung, Jena 1933. Cf. also Herbert Feis, *Europe, the world's banker 1870—1914*, an account of European foreign investment and the connection of world finance with diplomacy before the War, New Haven 1930.

since been open and acknowledged, a resolution passed by the Paris Chamber of Commerce had demanded that whenever a foreign loan was admitted to official listing, admission should be made conditional upon the concession of advantages to French commerce and industry. And in 1909 the French Minister of Foreign Affairs made the statement that applications for listings on the Paris market of loans to foreign governments were met with a demand for satisfactions of a commercial and industrial order to be given in exchange.<sup>1</sup> Several cases may be mentioned in which loans have been tied to the placement of orders with French firms.<sup>2</sup> But, on the whole, the official French control of capital export has been used for political rather than for such strictly commercial purposes.<sup>3</sup>

In *Germany*, on the other hand, considerations of this sort have played a greater rôle. Here the bankers were often representatives also of manufacturing enterprises for the output of which they wished to secure a market. And the government, keen on promoting exports in every possible way, fortified the tendency. According to the Stock Exchange Act of 1896, the commissioner of the exchange secured a power of veto against the listing of "issues which endanger a public interest," and besides, the government exercised a more informal influence on German banking houses in order to control their international transactions. And these powers were used on several occasions to promote exports and secure concessions.<sup>4</sup>

In *England* a striking change in the attitude of the government towards the activities of the City has taken place since the War. In pre-war days its general policy was that of non-interference; the Secretary of State for Foreign Affairs, Sir Edward Grey, declared in the House of Commons in 1914 that

"British financiers run their business quite independent of politics . . . I do not say that there are no cases in which loans have a political

<sup>1</sup> Cf. E. Becque, *L'internationalisation des capitaux*, Montpellier 1912, p. 185.

<sup>2</sup> Siegmund Schilder, *Entwicklungstendenzen der Weltwirtschaft* I, Berlin 1912, pp. 343—44 and 348, and Feis, *loc. cit.*, pp. 127 et seq.

<sup>3</sup> Cf. Jacob Viner, *International finance and balance of power diplomacy 1880—1914*, Southwestern Pol. and Soc. Sc. Quart. 1929.

<sup>4</sup> Werner W. Grundherr, *Über die wirtschaftliche und politische Bedeutung der Kapitalanlagen im Auslande*, p. 10.



character and in which financiers come to the Foreign Office and ask if there is any objection to them. But generally speaking, and especially in South America, these are things in which the Foreign Office does not interfere."<sup>1</sup>

Normally the granting or withholding of foreign loans was not employed either for purely political purposes or as a means of attaining specific commercial advantages; never were such loans made directly contingent upon the placing of orders with British industry to the extent of a part or the whole of the funds provided. When the borrowers used their funds for buying British commodities they did so without pressure, simply because they found it advantageous to do so, Great Britain being the cheapest place in which to buy the industrial equipment they wanted.

Since the War the case has been different, however. Under the *Trade Facilities Act of 1921* the Treasury was given power to issue its guarantee for loans raised by borrowers at home or abroad, provided that the proceeds of such loans were to be applied to the creation of fixed capital of a kind calculated to promote employment, and were to be spent, in Great Britain. Here financial support for overseas ventures was for the first time made explicitly contingent upon tangible benefits accruing to British industries.<sup>2</sup> — *The Export Credits Guarantee Department* may also be mentioned in this connection. When first put in operation in 1926 this department confined itself to what are commonly called self-liquidating transactions, i.e. shipments of goods financed by means of bills of exchange drawn on the purchaser or his banker. But these were for the most part long-dated maturities, and besides, the department has

<sup>1</sup> Cf. Feis, *loc. cit.*, p. 85.

<sup>2</sup> But it should be noted that the Act applies equally to domestic and foreign investment; in fact, after nearly four years' operation the foreign loans guaranteed were only 24 per cent of the total (*Economist*, Sept. 26, 1925). The aggregate amount which the Treasury was authorized to guarantee was initially fixed at £ 25 mill. and the period during which these guarantees could be issued was limited to one year. Subsequent acts raised the maximum amount to £ 75 mill. and prolonged the period, until it finally expired in March 1927. By that time the guarantees accorded amounted to practically all the £ 75 mill., of which £ 59 mill. were still outstanding at the end of 1932. Among the completely foreign issues guaranteed under these Acts may be mentioned a loan to Esthonia the proceeds of which were used for the purchase of British railway material, and a loan to the Hungarian Trans-Danubian Electrical Company raised to enable this concern to construct a large electrical generating station.

more recently extended its guarantee also to trading operations not financed by bills of exchange. The scheme may therefore justly be regarded as another instance of direct linking of capital export and commodity export. The department has probably been called upon to assist in such cases mainly where the amount involved was too small to be obtained by a public bond issue in London, but too large, on the other hand, for the British exporter to carry on his books perhaps over a lengthy period.

Apart from these special measures to promote British export trade in connection with British capital export, a change of a more general nature is noticeable in the attitude of the London market towards foreign loans.<sup>1</sup> Before the War, bankers and others engaged in the flotation of loans on foreign account were guided entirely by market factors. If a present or future stringency in the market resulted in a high bank rate or a rate of foreign exchange approaching the gold export point, these factors, which obviously restricted the gains to be expected from such issues, were in themselves likely to deter both the London banker and the prospective foreign borrower from offering a loan at such a juncture. Thus the machinery was essentially self-regulating. Nobody asked whether the country as a whole had a surplus on international account available for foreign lending; no serious estimate of the balance of payments was attempted; and if an outflow of gold occurred and was attributed to the loan operations, it was generally assumed that the resulting contraction of credit and rise in money rates would set in motion corrective forces sufficient to bring about the necessary adjustments.

This picture—says the report referred to above—has changed altogether since 1914. The Bank of England, acting in the interests of the country as a whole, and performing a duty which in most other countries falls directly upon the government, has on occasion placed an embargo on foreign lending. It has no official or statutory authority to do so, but it has long been the practice of the principal financial houses of the City to notify and consult the Bank of England before

<sup>1</sup> Cf. a memorandum "*Recent British measures affecting international finances*," submitted to the Conference of Institutions for the Scientific Study of International Relations, London 1933, by the British Coordinating Committee for International Studies.

floating important foreign loans.<sup>1</sup> Thus, without legislation or state action, the Bank of England has in fact, though not in law, been controlling British foreign long-term lending from the standpoint of the immediate financial and economic implication of the operations, primarily with a view to the rates of exchange and the domestic monetary situation; short-term credit operations, on the other hand, have not been subject to such control.

This supervisory function on the part of the Bank first became active in 1920;<sup>2</sup> in 1921 the restrictions were relaxed, and in 1922—24 considerable issues of foreign loans took place; in 1925 the embargo was renewed in connection with the restoration of the gold standard,<sup>3</sup> but in 1926—29 foreign lending again assumed considerable proportions. Since 1929 the general embargo has been in effect; but in the earlier phases of the crisis, and more particularly in 1930, certain operations were specifically sanctioned by the Bank of England in the hope of relieving the already dangerous tension. In the case of the Young loan it was explicitly stated, however, that no more should be issued in London than would in any case accrue to the British government under the newly ratified reparation plan, so that none of the funds subscribed would leave London. Similarly, considerable parts of a Brazilian and a Japanese loan were to be used for refunding purposes, so that no remittance of funds from London was involved. As conditions grew worse in the course of 1930 and 1931, the foreign long-term borrowing in London ceased altogether, and by the middle of 1932 the embargo was reinforced by the Treasury in connection with the great conversion scheme.<sup>4</sup>

That this embargo may also be used for a more direct promotion of English export industries is shown by the 4½ per cent Danish government loan floated in London in April 1933;

<sup>1</sup> A second line of defence against evasion of the Bank's dictates exists in the strict prohibition, enforced by the committee of the Stock Exchange, of dealings for which permission has not been given.

<sup>2</sup> During the War there were special restrictions of the export of capital under the Defence of the Realm Act.

<sup>3</sup> Cf. T. E. Gregory, *The first year of the gold standard*, London 1926, pp. 83 et seq.

<sup>4</sup> Cf. S. Hartogsohn, *Londons Kapitalmarked og Udlandet*, *Nationalök. Tidsskr.* 1933, pp. 182 et seq.

for the permission to this issue, amounting to £ 1 mill., was given only on condition that the entire proceeds of the loan were spent directly on British materials.<sup>1</sup>

A modification of the embargo upon foreign loans was announced by the Chancellor of the Exchequer in July 1934. Two classes of loans were now to be permitted to be floated in London on behalf of borrowers in the sterling area: (1) loans which will be of direct benefit to British exports, and (2) loans the proceeds of which are to be used to strengthen the borrowing country's sterling reserves. The first issue under these provisions was of the latter sort, a 5½ per cent first mortgage loan of approximately £ 1.150.000 to a Norwegian company "Aktieselskabet Union", Oslo, the proceeds of which were used to repay the company's loan at the Bank of Norway, and thus increased the latter's foreign holdings.

Regarding Great Britain's future policy in this field it is worth while to recall the opinion expressed in 1931 by the Macmillan Committee<sup>2</sup> that

"it is all-important to the community that its savings should be invested in the most fruitful and generally useful enterprises offering at home, . . . in the realm of foreign investment it is primarily towards British-owned enterprises abroad that we should wish to see our energies and capital turned, rather than merely towards subscribing to foreign government and municipal loans, which absorb our available foreign balance while doing little for our industry and commerce."

The committee feared that

"so far as heavy industry is concerned we may find ourselves cut more and more out of the world if our competitors advancing with combined and powerful industrial and financial resources, develop abroad one "tied" enterprise after another, or in the alternative purchase from us enterprises previously "tied" to us."

Since the *United States* became a creditor country the American government has also sought, on occasion, to ensure that a part of the proceeds of foreign loans should be spent

<sup>1</sup> Steel for the construction of a bridge between Seeland and Falster.

<sup>2</sup> Committee on Finance and Industry, *Report*, London 1931, (Cmd. 3897), pt. II ch. IV.

within the United States.<sup>1</sup> And when the American Department of State blocked a project for extension of commercial credits to Soviet Russia in 1926, the interference was based, in part at least, on the fact that the money was to be used to finance German exports to Russia and would thus subsidize German manufacturers in a foreign field where American manufacturers were also competing.<sup>2</sup>

It is often alleged that even without contract stipulation or government compulsion a preference is usually given to the manufacturers of the capital-exporting country in the sale of materials and equipment for the undertakings in which the borrowed capital is invested. When a European or American company, for instance, obtains a concession for a railway enterprise in China or South America, it is a widespread opinion that, quite apart from governmental interference, nationalistic motives will serve, by the voluntary choice of the investors, substantially to extend markets for producers unable to compete by their own efforts. An American economist, A. P. Winston,<sup>3</sup> after analysing the extent to which trade has actually "followed the dollar" in the case of the Chinese and South American railway loans, concludes that nationality does not in general exercise the influence ascribed to it; where the motives of economy and patriotism are clearly opposed to each other, the best market seems to prevail.

In a similar way Harry D. White<sup>4</sup> maintains that the French policy, though it probably served to secure orders for certain French industries which would otherwise have gone elsewhere, had on the whole only very slight effects. But he admits, of course, that the pressure was used, not only

<sup>1</sup> Cf. United States Senate Committee on Finance, *Hearings to investigate the sale, flotation and allocation of foreign bonds or securities in the United States, Dec. 18, 1931—Febr. 10, 1932* (Johnson Committee inquiry) pp. 959, 963 and 964.

<sup>2</sup> The attitude of the State Department was described in the *New York Times* (Apr. 11, 1926) as follows "While the State Department never disapproved of or discouraged trade between the United States and Russia, it would not be to the interest of the United States to lend money to a foreign country to trade with Russia."

<sup>3</sup> "Does trade follow the dollar?" *Am. Ec. Rev.* 1927, pp. 458—77.

<sup>4</sup> *Loc. cit.*, pp. 144—46.

to link commodity exports directly to the export of capital, but also to secure tariff favours<sup>1</sup> or to attain purely political ends.

To demonstrate the quantitative unimportance of the increase in merchandise exports due to this policy White points out that during the period when the French claims for government pressure on foreign borrowers were at their height—1908-13—almost 1,000 mill. francs were invested in Spain, while the *total* French exports to Spain in the same period were only 800 mill. francs, or only 50 mill. more than in the six preceding years, when investments were small. Between 1880 and 1913 over 10,000 mill. francs were lent to Russia, and yet the *total* French export to Russia during those years were only 10 per cent of that sum; indeed, more goods were exported annually to Russia in the period before the French loans to that country began than subsequently. Loans to Austria-Hungary during the same period were over 3,000 mill. francs, while *total* exports to the double-monarchy were less than 1,000 mill. Between 1900 and 1913 3,000 mill. francs were invested in Roumania, but the *total* exports of the period did not reach 100 mill. Since the total French exports to the heavy debtor countries formed so small a proportion of the sums which France invested in those countries, it is obvious that the direct expenditure of the borrowed money in France was of very slight importance.

Comparing the extent of railway ownership in the Argentine, Chile, and Brazil by the main industrial countries with the extent of their respective sales of locomotives, cars, and rails to the three countries Winston reaches the interesting results summarised in table 2.

Even the British, with all their capability as manufacturers and their advantage as pioneers, failed to supply fully their own railways. Their sales in the Argentine were only about 40 to 50 per cent of the total, instead of the 75.9 per cent which they should have sold, even though their sales went solely to their own lines and not at all to the other foreign or to the Argentine properties. In Chile likewise, their sales

<sup>1</sup> In 1908 listing was refused to a Danish loan because of an intended increase of the tax on French wines; concessions having been obtained the veto was later withdrawn. Similarly, Norway and Sweden were asked in 1910 to reduce the duty on certain French wines before they were permitted to borrow in the official market.

of cars were only 30.6 per cent and rails 25.9 per cent—their property being 46.9 per cent of the total. Operating by ownership or lease one-fourth of the Brazilian railways, they sold of the several classes of goods, 12.4, 15.3, and 10.3 per cent,

TABLE 2.

	Per cent of railway ownership	Share of each selling country as per cent of total imports 1908-13.		
		Locomotives	Cars	Rails
<b>The Argentine.</b>				
Investing countries				
United Kingdom.....	75.9	47.5	49.2	39.7
France.....	9.5	1.2	2.6	3.7
Non-investing countries				
Belgium.....	»	5.4	31.6	7.5
United States.....	»	3.9	9.4	18.5
Germany.....	»	40.8	7.0	27.0
<b>Chile.</b>				
Investing country				
United Kingdom.....	46.9	56.5 <sup>1</sup>	30.6	25.9
Non-investing countries				
United States.....	»	14.6 <sup>1</sup>	15.9	20.9
Germany.....	»	26.2 <sup>1</sup>	19.4	25.1
Belgium.....	»	2.7 <sup>1</sup>	33.0	18.0
France.....	»	»	»	0.4
<b>Brazil.</b>				
Investing countries				
United Kingdom.....	23.5	12.4	15.3	10.3
France.....	} 46.3	{ 0.2	1.7	27.1
Belgium.....		{ 4.8	52.1	31.2
Non-investing countries				
United States.....	»	51.5	26.5	17.8
Germany.....	»	21.0	4.0	13.1

<sup>1</sup> Some obvious miscalculations have been corrected.

respectively. — The French, with nearly 10 per cent of the Argentine roads, sold only 1.2 per cent, 2.6 per cent, and 3.7 per cent of locomotives, cars and rails.

The countries without substantial investment sold more of these goods in the Argentine than the two nationalities which owned 85.4 per cent of the railways in the country. In Brazil the Americans and Germans, with insignificant investment, sold 72.5 per cent of the locomotives (against 17.4 per cent sold by the investing nations). In Chile the non-investing countries sold about two-thirds of the cars and rails — apparently encroaching on the putative claims of the British who owned nearly half of the total railway capital.

In China the results are closely similar. The following table shows the importance of the same five nationalities as lenders to Chinese government railways and as sellers of rails and rolling stock to the entire Chinese railway system<sup>1</sup> in the years 1898—1912.

TABLE 3.

	Railway loans to the Chinese government (Mill. \$)	Exports to China of rails and rolling stock	
		Value (Mill. \$)	Per cent of the loans
United States .....	3.0	11.5	382.8
Belgium .....	11.6	12.9	110.8
Germany .....	29.8	9.5	31.8
Great Britain .....	52.4	6.9	13.2
France .....	27.1	0.7	2.4

Here again, Winston finds large sales with scant investments from the United States, and heavy investments but small sales from France, whereas Belgium, Germany, and Great Britain contributed both capital and material in fairly large amounts, though by no means in equal proportion.

In principle, all measures to induce or force foreign borrowers to use the funds put at their disposal to buy the products of the capital-exporting country must be condemned as superfluous. It follows from the explanation given above

<sup>1</sup> Including sales to other lines than those built with the aid of government loans.



of the fundamental nature of international capital movements that the entire capital exported from the lending countries *must* be used for the purchase of the combined additional exports of these countries, and *once equilibrium is restored* it is immaterial whether the relation between a given country's capital export and commodity export is more or less direct. Through the familiar mechanism of the triangular (or still more roundabout) exchange the necessary connection is established. If a South American state, building a railway, has raised a loan in London, it may spend the proceeds on Belgian steel rails or American rolling stock, but in that case the Belgian or American sellers of these goods, or somebody else to whom they pass the sterling drafts with which they are paid, must ultimately use the sterling to buy something in England.<sup>1</sup> Even if preference for the capital-exporting country's export goods were stipulated in *all* foreign loan contracts, it would make no addition, therefore, to the total excess exports of the creditor countries in the new state of equilibrium.

But *this restoration of equilibrium is not always an easy matter*. It has already been intimated that the chief cause of the difficulties is that a considerable part of both the lender's and the borrower's demand is directed in the first instance towards home-market goods. For this means that a reorganisation of production becomes necessary both in the lending and in the borrowing country before their balances of commodity trade are adjusted to the movement of capital. In the meantime the reduction in the amount of buying

<sup>1</sup> The report on "*Recent British measures affecting international finance*" already referred to admits that "it is *theoretically* correct to maintain that a sterling loan affords the borrower purchasing power which must, in the last resort, be expended on purchases in the United Kingdom, either by him or by those to whom the sterling has, on succession, been transferred." But it contends that "nevertheless it has been shown in *actual practice* that the funds may never be used for the purchase of goods or services—which afford employment and stimulate reciprocal trade—but may be . . . ultimately applied by the foreign recipient to the purchase of British securities such as War Loans or Treasury Bills. In so far as this occurred, the final outcome of the original loan transaction was an exchange of a long term loan to an Empire country for a short term indebtedness to foreign creditors." The answer to this is, of course, that in this case no net export of British capital has taken place. That the practice of "lending long and borrowing short" may entail grave dangers, is another story.

power spent directly in the capital-exporting country will exercise a depressing influence. It cannot be denied, therefore, that a capital-exporting country that succeeds in directing the buying power put at the disposal of foreign borrowers directly towards its own goods may avoid a difficult and costly process of reorganization. But this advantage will usually be bought at the expense of greater disadvantages to the world at large. For the difficulties of reorganization are increased, the more the range over which the readjustments are allowed to take place is narrowed.<sup>1</sup> And if the stipulation that goods must be purchased in the creditor country, which could be obtained more cheaply elsewhere, means that the lenders must be content with a lower rate of interest than they might otherwise have got, the stipulation is equal to a subsidizing of the export industries of the capital-exporting country paid by the lenders of the exported capital. But the more numerous and severe the restrictions of international commodity trade, the greater the temptation in the creditor countries to use their export of capital as a bargaining instrument in commercial treaty negotiations to secure an outlet for additional exports. It is seldom realised, however, that the counterpart of this policy must be to allow an additional *import* in future years from the borrowing countries with which the latter may liquidate their interest and amortisation payments.

It must also be admitted that a creditor country may influence its *barter terms of trade* by directing the buying power lent to other countries towards its own exports. And finally, account must be taken of the fact that the productive agents are not always fully utilised; in a period of depression the linking of capital export and commodity export may *reduce the volume of unemployment*.

<sup>1</sup> Cf. the following statement by Wilhelm Röpke (*Das Reparationsproblem*, Berlin 1929, p. 357) on triangular reparation payments in kind (the so-called "Assisted schemes" first proposed by Sir Josiah Stamp): "Der dreieckige (oder mehreckige) Reparationsverkehr bewirkt, dass der deutsche Reparationsexport auf dem Wege zu den Gläubigerländern eine *Umformung* aus einer dort weniger gewünschten Art seiner qualitativen Zusammensetzung in eine erwünschtere erfährt und so den mit der Aufdrängung einer weniger erwünschten Ware notwendigerweise verbundenen Preisdruck oder aber die Schwierigkeiten einer Umstellung der Produktion auf die erwünschtere Gattung erspart. Diese Transformatorfunktion übernehmen die in den Verschuldungsnexus nicht einbezogenen dritten Länder."

## CHAPTER II

### THE CAUSES OF INTERNATIONAL CAPITAL MOVEMENTS

#### 1. INTRODUCTORY REMARKS.

An inquiry into the "causes" and "effects" of international capital movements might seem to run contrary to the point of view adopted above, according to which such movements are regarded as integral parts of the system of mutual interdependence connecting all economic phenomena. This point of view suggests *functional relationships* rather than explanations running in terms of causes and effects. It is a commonplace in modern theory of value or price that it is equally wrong to say that factor prices (costs) determine commodity prices, and that commodity prices determine factor prices. Both are the simultaneous and mutually interdependent outcome of certain basic conditions. These, in turn, may not be given once for all; they may also be functions of the prices of commodities and factors.

In order to facilitate the analysis, it may prove helpful, however, to *consider* certain factors primary in relation to others, to act *as if* they are primary. Then it becomes possible to regard changes in these basic factors as the *causes* of variations in the others, which are thus treated as "dependent variables". *Between themselves*, these dependent variables are usually interdependent; but there are cases in which a primary variation affects the other factors *almost exclusively* through its effect upon a single dependent factor. In such cases the change in this dependent variable may reasonably be called the "cause" of the further changes in the price system. Thus, the immediate "cause" which calls forth an international capital movement is usually a difference between the

interest rates of two countries, which is large enough to outweigh the costs of transfer occasioned by the obstacles to such capital flows. But the ultimate "cause" of such movements may be found in any change in the primary elements—the "basic data"—of the interrelated price systems of the trading countries.

The first task in an inquiry into the causes of international capital movements, therefore, is to analyse the nature of the obstacles in the way of these movements, i.e. to investigate why interest rates differ as between countries. Were the international mobility of capital perfect, it is obvious that interest rates in all countries would be brought to a common level irrespective of differences in the demand for and supply of capital in each particular country. The problem, therefore, is to determine the actual degree of international mobility of capital.

The next question is what basic changes are most likely to affect either the international differences in interest rates or the costs of international capital transfer, and thus to result in capital movements between countries.

And finally, it must be inquired whether other economic or non-economic considerations besides the differences in interest rates may influence the course and magnitude of these movements.

## 2. THE OBSTACLES TO INTERNATIONAL CAPITAL MOVEMENTS.

That the famous classical assumption of perfect mobility of productive agents within each country and complete immobility of factors between countries is contrary to reality will nowadays be readily admitted by everyone. It is obvious that both capital and labour show a certain degree of international mobility, and it is equally manifest, on the other hand, that factor movements within the same country meet friction and obstacles of various sorts.

As a matter of fact, many of the best exponents of the classical theory themselves conceded that the sharp contrast set up between perfect internal mobility and complete international immobility was merely one of those "strong cases" which both Ricardo and his followers liked to imagine in

order to show the operation of their principles. A cursory review of a few of these concessions may serve to throw some light on the nature of the obstacles to international capital movements.

Although it is now generally agreed that capital is usually more mobile than labour, the movements of labour have attracted much more attention in economic literature. They probably were, in fact, more important in earlier days than the movements of capital, and at all events, they were much easier to trace and understand. In part at least, this early interest in labour mobility may also be derived from the peculiar position of labour in the doctrines of the Mercantilists.<sup>1</sup>

Turning first to *Adam Smith* it is astonishing how little he has to say about the mobility of the agents of production and more particularly about the mobility of capital. In the famous chapter in which he laid the foundation of the free trade doctrine<sup>2</sup> he maintains that

“home is in this manner the centre, if I may say so, round which the capitals of the inhabitants of every country are continually circulating, and towards which they are always tending though by particular causes they may sometimes be driven off and repelled from it towards more distant employments.”

The reason why the capitalist prefers to employ his funds at home is (1) that “in the home trade his capital is never so long out of his sight as it frequently is in the foreign trade”; besides, (2) he can “know better the character and situation of the persons whom he trusts”; and if he should happen to be deceived, (3) “he knows better the laws of the country from which he must seek redress.” *Adam Smith* points out, however, that

“the greater part both of the exportation and coasting trade of America is carried on by the capitals of merchants who reside in Great Britain. Even the stores and warehouses from which goods are retailed in some provinces, particularly in Virginia and Maryland, belong many of them to merchants who reside in the mother country, and afford one of the few instances of the retail trade of a society being carried on by the capitals of those who are not resident members of it. Were the Americans, either by combination or by any other

<sup>1</sup> Cf. *Edgar S. Furniss' admirable study: The position of the laborer in a system of nationalism*, Boston and New York 1920.

<sup>2</sup> *Wealth of nations*, bk. IV, ch. II.

sort of violence, to stop the importation of European manufactures, and, by thus giving a monopoly to such of their own countrymen as could manufacture the like goods, divert any considerable part of their capital into this employment, they would retard instead of accelerating the further increase in the value of their annual produce, and would obstruct instead of promoting the progress of their country towards real wealth and greatness."

Evidently these paragraphs contain, not only a demonstration of the nature of the benefits resulting from interlocal trade, but also a striking example of an international movement of capital. It is doubtful, however, whether Adam Smith would treat it as such; being still English colonies the American states were to him only oversea provinces of the mother country; consequently, he does not go further into this problem which, had he realised its full importance, would, no doubt, have led him to interesting conclusions.

On the other hand, Adam Smith was too much of a realist to shut his eyes to the marked obstacles that might meet the movements of capital even within the same country:

"The inhabitants of many different parts of Great Britain have not capital sufficient to improve and cultivate all their lands. The wool of the southern counties of Scotland is, a great part of it, after a long land carriage through very bad roads, manufactured in Yorkshire, *for want of capital to manufacture it at home.*"<sup>1</sup>

Ricardo paid less attention to such "exceptions"; in his endeavour to "elucidate principles" he consciously brushed aside all facts which in the actual world might obstruct the unhampered working of these abstract principles.

As the cause of the international immobility of capital Ricardo like Adam Smith mentions.

"the fancied or real insecurity of capital, when not under the immediate control of its owner, together with the natural disinclination which every man has to quit the country of his birth and connections, and intrust himself, with all his habits fixed, to a strange government and new laws."<sup>2</sup>

Besides, he speaks in another connection about the strength of that disinclination which most men feel to abandon that employment of their capital to which they have long been accustomed, as well as about the restrictions and prohibitions to which the absurd jealousies which prevail between the

<sup>1</sup> Bk. II ch. V.

<sup>2</sup> *Principles of political economy and taxation*, ch. VII.

different states of the commercial commonwealth give rise.<sup>1</sup> And finally, he points out that the duration of the interval before market price must conform to natural price is not the same in all cases, and that, consequently, the fall in profits may proceed much further in some cases than in others before the capital is removed to more favoured employments.<sup>2</sup> Although Ricardo would be sorry to see the feeling of disinclination to leave one's native country weakened he is convinced, of course, that

"for the general prosperity there cannot be too much facility given to the conveyance and exchange of all kinds of property as it is by such means that capital of every species is likely to find its way into the hands of those who will best employ it—in increasing the productions of the country."<sup>3</sup>

And he points out explicitly in the previous chapter in connection with his well known example from the English-Portuguese trade in cloth and wine that undoubtedly it would be advantageous to the capitalists of England as well as to the consumers in both countries that, in the circumstances supposed, wine and cloth should both be made in Portugal, and that, therefore, the capital and labour of England employed in making cloth should—if possible—be removed to Portugal for that purpose.

He admits, moreover, in another connection that an international capital transfer of this sort is not always impossible:

"The employment of machinery could never be safely discouraged in a state, for if a capital is not allowed to get the greatest net revenue that the use of machinery will afford here, *it will be carried abroad*, and this must be a much more serious discouragement to the demand for labour than the most extensive use of machinery; . . . by investing part of a capital in improved machinery there will be a diminution in the progressive demand for labour; by exporting it to another country the demand will be wholly annihilated."<sup>4</sup>

Similarly, he warns against excessive taxation on capital, since the temptation of the tax-payer

"to remove himself and his capital to another country where he will be exempted from such burthens, becomes at last irresistible, and over-

<sup>1</sup> *Ibid.*, ch. XIX.

<sup>2</sup> *Ibid.*, ch. XIII.

<sup>3</sup> *Ibid.*, ch. VIII.

<sup>4</sup> *Ibid.*, ch. XXXI.

comes the natural reluctance which every man feels to quit the place of his birth, and the scene of his early associations."<sup>1</sup>

What Ricardo had in mind in these cases was the migration of the capitalists together with their capital. Yet, it is surprising that in his discussion of the minimum rate of profit below which no accumulation would take place, he never mentions the possibility that when the rate of profit in a particular country approaches the dangerous minimum, an outlet might be found in a migration of capital. But this idea never seems to have occurred to Ricardo in this connection.

*John Stuart Mill* in his more elaborate and systematic treatment of the theory of international trade<sup>2</sup> stresses in the familiar way the different degree of mobility of productive agents between adjacent and distant places. But then he continues—and this is the new note he strikes:

*"Capital is becoming more and more cosmopolitan; there is so much greater similarity of manners and institutions than formerly, and so much less alienation of feeling, among the more civilized countries, that both population and capital now move from one of those countries to another on much less temptation than heretofore."*

But, in spite of this tendency towards greater international mobility of capital and labour which must lead, of course, to a corresponding limitation of the validity of the classical theory of international trade, Mill holds that

*"there are still extraordinary differences, both of wages and of profits, between different parts of the world. It needs but a small motive to transplant capital, or even persons, from Warwickshire to Yorkshire; but a much greater to make them remove to India, the colonies, or Ireland. To France, Germany, or Switzerland, capital moves perhaps almost as readily as to the colonies; the differences of language and government being scarcely so great a hindrance as climate and distance. To countries still barbarous, or, like Russia or Turkey, only beginning to be civilized, capital will not migrate, unless under the inducement of a very great extra profit."*

Here, as elsewhere in his *Principles*, Mill failed to harmonise the old doctrines taken over from his father and Ricardo and the new ideas developed by himself.<sup>3</sup> When he builds up his

<sup>1</sup> *Ibid.*, ch. XVII.

<sup>2</sup> *Principles of political economy*, bk. III, ch. XVII.

<sup>3</sup> Let it be remembered that though Mill devoted only part of his time to its composition the bulky volume was completed in little more than two years (*Autobiography*, ch. VII). This was an intel-



principle of reciprocal demand upon the law of comparative costs, he does not mention the possibility of international flows of capital or labour any more than Ricardo had done, but in the later chapters on the "Tendency of profits to a minimum" he remarks that the perpetual overflow of capital into colonies and foreign countries had been, in his opinion, for many years one of the principal causes by which the decline of profits in England had been arrested, and that

"it is to the emigration of English capital that we have chiefly to look for keeping up a supply of cheap food and cheap materials of clothing, proportional to the increase of our population; thus enabling an increasing capital to find employment in the country, without reduction of profit, in producing manufactured articles with which to pay for this supply of raw produce."<sup>1</sup>

Moreover, Mill points out in another connection<sup>2</sup> that

"there is a class of trading and exporting communities on which a few words of explanation seem to be required. These are hardly to be looked on as countries, carrying on an exchange of commodities with other countries, but more properly as outlying agricultural or manufacturing establishments belonging to a larger community. Our West India colonies, for example, cannot be regarded as countries with a productive capital of their own. If Manchester, instead of being where it is, were a rock in the North Sea (its present industry continuing) it would still be but a town of England, not a country trading with England; it would be merely, as now, a *place where England finds it convenient to carry on her cotton manufacture*. The West Indies, in like manner, are the place where England finds it convenient to carry on the production of sugar, coffee and a few other tropical commodities. *All the capital employed is English* ... The trade with the West Indies is therefore hardly to be considered as external trade, but more resembles the traffic between town and country, and is amenable to the principles of the home trade. The rate of profit in the colonies will be regulated by English profits: the expectation of profit must be about the same as in England, with the addition of compensation for the disadvantages attending the more distant and hazardous employment; and after allowance is made for those disadvantages, the value and price of West India produce

lectual accomplishment which would hardly have been possible, had not his strange education from his earliest boyhood made him so familiar with the whole Ricardian structure of thought that its unified systematic exposition was play to him. But the very ease with which the traditional body of doctrines took new shape under his hands more than once made him forget to take due account of the consequences of his own original suggestions and ideas on points where he had tried to break new ground.

<sup>1</sup> *Loc. cit.*, Ashley ed., London 1923, pp. 738—39.

<sup>2</sup> *Ibid.*, pp. 685—86.

in the English market must be regulated ... like that of any English commodity, by the cost of production."

If this is so there would not seem to be much reason to retain the classical theory of international trade. For it is exactly this interrelation between commodity trade and capital movements which is found everywhere; Canada and the Argentine, for example, are places to which England has found it convenient to send her capital in order to carry on her production of wheat and meat.<sup>1</sup>

Senior expounds the obstacles to international movements of labour and capital in the traditional way.<sup>2</sup> He points out that when the exchange is at par between two countries, capital can be transmitted in the shape of money without any direct expense, and that the occasional loss which occurs, when the exchange is against the country to which it is to be exported, tends to be compensated by the occasional gain when it is in favour of that country. The chief obstacle to international capital transfers is the unwillingness of capitalists either to trust their capital out of their own superintendence, or to encounter a change of government, habits, climate, and language, by accompanying it. Throughout the civilized world, however, he finds the inequalities in the rate of profit much less than the inequalities of wages; and as the general progress of improvement tends more and more to equalise the advantages possessed by different countries in government and habits and even in salubrity of climate, he believes that the existing inequalities of profits are likely to diminish.

Unlike the earlier exponents of the classical theory of international trade Cairnes explicitly points out<sup>3</sup> that the doctrine, as it has been laid down, for example, by Ricardo and Mill, does not necessarily assume an absolute impossibility of moving capital and labour from country to country, but merely *such a degree of difficulty* in effecting their transfer that it interferes substantially and generally with the "action of industrial competition". And he contends that the amount of capital that can be truly called cosmopolitan—disposable

<sup>1</sup> Cf. John H. Williams, *The theory of international trade re-considered*, Ec. Journ. 1929, p. 208.

<sup>2</sup> N. W. Senior, *Political economy*, Encyclopædia Metropolitana VI, 2. revised ed., London 1850, pp. 222—25.

<sup>3</sup> *Some leading principles of political economy*, pt. III, ch. 1 § 1—2, London 1874, pp. 361 et seq.

for investment in countries other than that to which it belongs—is after all but “a mere fraction of the national capital”.<sup>1</sup>

As the most important obstacles to the international movements of labour and capital Cairnes mentions (1) geographical distance; (2) difference in political institutions; (3) difference in language, religion, and social customs. As regards their relative importance Cairnes believes that the social and political causes are probably, in the present state of the world, more powerful than the physical, more particularly when they happen to be connected with differences of race.

Several of the later expositors of the classical doctrines were more doubtful as to whether the degree of internal and international mobility of capital was in fact essentially different. This doubt was expressed for instance by Walter Bagehot and Cliffe Leslie.

In one of the “Economic studies” edited after his death Bagehot analysed “The postulates of English political economy” and more particularly its assumptions with regard to the transferability of labour and capital.<sup>2</sup> Influenced by the German historical school he stressed the relativity of all economic concepts; he does not question that in “such a country as England, in such an economical state as our present one” labour and capital circulate readily within the national frontiers. On the contrary, he says explicitly that a rise in profits attracts capital almost instantaneously. Yet, even in England in his own day he found many limitations to this tendency, both of capital and of labour, to move towards the places and employments offering the highest return; and taking the world, present and past, as a whole, Bagehot realised that

<sup>1</sup> But to conclude from this, as does Preuss, that Cairnes would deny that such movements as do take place will exercise any influence on the rates of return, is beside the point. In this respect there does not seem to be the slightest difference between Cairnes and his predecessors among the classical writers; he would agree with Preuss that “jede noch so geringe Kapitalanlage im Auslande muss der Theorie nach erhöhend auf die Profitrate im Auswanderungs- und senkend auf die des Einwanderungslandes wirken.” (Ernst G. Preuss, *Die Kapitalanlage im Auslande*, Berlin 1923, p. 43).

<sup>2</sup> Walter Bagehot, *Economic studies*, edited by R. H. Hutton, London 1880, pp. 1—71.

"the exact contrary is true; in most ages and countries this tendency has been not victorious but defeated; in some cases it can scarcely be said even to have existed, much less to have conquered. If you take at random a country in history, the immense chances are that you will find this tendency either to be altogether absent or not at all to prevail as it does with us now. This primary assumption of our Political Economy is not true everywhere and always, but only in a few places and a few times."

But at the same time Bagehot points out that the international mobility of capital is essentially greater than supposed by the classical writers:

"A cosmopolitan loan fund exists, which runs everywhere as it is wanted, and as the rate of interest tempts it . . . we must not, however, fancy that this puts all countries on a level, as far as capital is concerned, because it can be attracted from one to the other. On the contrary, there will always tend to be a fixed difference between two kinds of countries. The old country, where capital accumulates, will always, on an average, have it cheaper than the new country, which has saved little, and can employ any quantity . . . The "speculative fund" . . . composed mainly of the savings of men of business . . . is also becoming common to all countries."<sup>1</sup>

Similarly, *Cliffe Leslie* contended that

"in both home trade and international trade the migration of labour and capital has some effect on wages and profits; . . . but . . . the effect is uncertain, irregular, and incalculable. In neither case is there an equalization of either wages or profits."<sup>2</sup>

The views of *Marshall*, on the other hand, represent a return to the original classical position. Turning directly against *Leslie*, who had been much impressed by the "prodigious" local differences of agricultural wages which persisted within all European countries,<sup>3</sup> *Marshall* pointed out that local variations in time wages did not disprove the internal mobility of

<sup>1</sup> Bagehot sums up, therefore, that "the same instruments which diffused capital through a nation are gradually diffusing it among nations. And the effect of this will be in the end much to simplify the problems of international trade. But for the present, as is commonly the case with incipient causes whose effect is incomplete, it complicates all it touches. We still have to consider, after the manner *Ricardo* began, international trade as one between two or more units which do not interchange their compound capitals, and then to consider how much the conclusions so drawn are modified by new circumstances and new causes."

<sup>2</sup> *Essays in political economy*, Dublin and London 1888, pp. 232—33.

<sup>3</sup> *Essays in political and moral philosophy*, Dublin and London 1879, pp. 371—72.

labour, since time wages and efficiency earnings generally correspond.<sup>1</sup> And in general Marshall holds that

"it is indeed constantly becoming easier and safer than formerly to invest capital in foreign countries; but of two investments of equal intrinsic merits, one at home and the other abroad, the former has still a great balance of pecuniary advantage as well as of sentimental attractiveness. For information with regard to it is more easily obtained and more easily tested; the income from the investment is drawn with less trouble and expense; and if any hitch arise with regard to the recovery of the capital itself in due time, the commercial and the legal difficulties of the task are likely to be much greater if the capital is invested abroad than if it is invested at home."<sup>2</sup>

Thus, according to Marshall, the main reason necessitating special treatment of the problems of international values is found now as a hundred years ago in the different degrees of mobility of capital and labour.

That investors insist on getting a higher rate of return on foreign than on domestic investments has generally been regarded as a well established fact. A careful study of the new public issues was undertaken in *England* by R. A. Lehfeldt<sup>3</sup> for the period 1888—1913. He calculated the rate of return on the actual cash capital subscribed separately for home, colonial, and foreign issues, and separately for shares and fixed-interest securities. His main results are tabulated below (table 4).

During this period the figures were disturbed by two wars. The Russo-Japanese war had the usual effect of raising interest rates. The Boerwar, on the other hand, appears to have had the extraordinary effect of lowering interest rates by persuading capitalists to lend money to the British government for less than they would have got in the ordinary course of trade. This, however, may be due merely to the dominance of British government loans among the issues of the years of war. Naturally, these wars affected also the differences in return between home, colonial, and foreign issues.

<sup>1</sup> *Principles of economics*, p. 548.

<sup>2</sup> *Money, credit and commerce*, London 1923, p. 9, cf. p. 108.

<sup>3</sup> R. A. Lehfeldt, *The rate of interest on British and foreign investments*, Journ. of the Royal Stat. Soc. 1912—13, pp. 196 et seq. and 415 et seq. and 1913—14 pp. 432 et seq.

TABLE 4.

	Home	Colonial	Foreign
<i>Issues at fixed interest.</i>			
1888.....	4.35	3.43	5.61
93.....	2.92	4.09	5.53
98.....	2.81	3.07	3.97
99.....	3.44	3.27	5.11
1900.....	3.35	3.20	4.05
01.....	3.00	3.40	5.34
02.....	3.12	3.21	4.94
03.....	3.44	3.21	5.77
04.....	3.46	3.78	5.83
05.....	3.39	3.78	4.99
06.....	3.37	3.85	5.14
07.....	3.61	3.99	4.90
08.....	4.00	4.04	4.95
09.....	3.60	3.96	4.88
1910.....	3.72	4.19	4.85
11.....	4.61	4.03	4.85
12.....	5.01	4.30	5.25
13.....	5.23	4.44	5.45
<i>Share issues.</i>			
1898-1902.....	3.45	2.63	4.53
1903-07.....	3.37	6.25	6.14

On the whole, it will be seen that capital invested in the bonds of British colonies brought the British capitalist very little more interest than he could have obtained at home, the difference in ordinary years being from a quarter to a third of 1 per cent.

Between home securities and foreign securities the difference in yield is greater, normally round  $1\frac{1}{4}$  per cent. Commenting on this difference Lehfelddt points out that bonds such as those considered by him give no more trouble to the investor and are just as saleable when issued by a foreign government or railway as by an English one. And it also appears to him.

that the difference in yield is excessive as a premium against risk; foreign defaults were hardly more frequent than home ones. He concludes, therefore, that foreign borrowers were still paying for the want of confidence resulting from the financial errors of a generation ago, and that although three pounds were invested abroad for every one pound at home<sup>1</sup> the opportunities of profitable use of capital abroad were really greater than even this proportion would suggest, so that non-economic motives—conservatism, prejudice, sentiment—kept a considerable amount of capital at home.

With regard to the future Lehfeldt expected that the difference between the rates on foreign and home loans would diminish:

“For both causes of the difference must weaken; the element of risk in foreign investments is diminishing, and *unless some unexpected catastrophe restores it*, should continue to do so, and the forces of conservatism and prejudice will weaken too, *unless some acute revival of national sentiment* makes foreign investment unpopular.”

The irregularities of the dividends earned are probably due to the limited material. There were several unfortunate issues in the earlier years, whilst the investments of the period 1903—07 were chiefly in Canadian and Argentine railways which were very successful. The considerable difference in these years between the yields of home and foreign shares is said to be due to the fact that the large issues of home railway ordinary stocks which were made in this period were regarded almost as gilt-edged securities. Apart from that Lehfeldt found it impossible to say whether foreign share investments were more profitable than domestic ones.

Recent investigations of the returns obtained in *France* on foreign and on domestic investments have cast some doubt, however, on the axiom that the yield of the former will always be higher than that of the latter. On the basis of an analysis of all the securities listed on the Paris Bourse in 1900 Harry D. White<sup>2</sup> computes the interest and dividends paid in 1899 as percentages of the nominal value, the issuing price, and the market value (on Febr. 28, 1900) of the securities (table 5).

It appears that at the current market prices the yield was

<sup>1</sup> Note, however, that Lehfeldt deals only with public issues.

<sup>2</sup> *The French international accounts 1880—1914*, pp. 105 et seq. and 271 et seq.

TABLE 5.

	Rate on nominal capital	Rate on issue price	Rate on price on Feb. 28, 1900
Russian government .....	3.87	4.27	3.87
Other governments .....	3.39	3.65	3.81
Insurance and banks.....	5.35	5.34	4.07
Railroads .....	2.58	4.12	3.85
Other foreign securities .....	8.88	8.67	4.51
Total foreign securities.....	3.46	3.85	3.84
Total domestic securities .....	3.54	4.28	3.23

0.61 per cent higher on foreign than on domestic securities.<sup>1</sup> But these rates of return based on the market value of the securities do not adequately indicate the relative profitability of foreign and domestic investments to France as a whole. In the case of domestic securities the gain must obviously be measured on the basis of the price at which the securities were originally issued. In the case of foreign securities it is the price at which they were originally *bought by Frenchmen* which is significant. Now, the greater part of these securities was floated in France and acquired by French investors at the price of issue. It is therefore the price of issue rather than the current market price with which the yields must be compared, and then it appears that the domestic issues yielded 0.43 per cent *more* than the foreign. The absorption of foreign loans at such low yields is explained by White as due to a definite bias in France before the War in favour of foreign investments, a bias created by political, economic and psychological factors, but encouraged above all by the peculiar structure of the French investment banking system. But of these special aspects of the problem more will be said in a moment.

<sup>1</sup> These rates are computed from *all* the securities listed. This gives a somewhat lower rate of return for foreign investments than if only those securities actually held by French investors had been considered. White estimates that allowance for this would raise the rate to 4.19 per cent. Cf. the figures quoted in Axel Nielsen, *Bankpolitik I*, Kbhvn. 1923, p. 130.



In general, the difference in interest rates which has usually been considered necessary to set a capital flow in motion between countries, may be regarded as a *measure of the costs of international transfer of capital*. As already intimated these costs are of a much less tangible nature than costs of commodity transport. The actual expenses involved in the shipment of capital disposal from one country to another are rather insignificant.<sup>1</sup> The commissions that must be paid to the intermediaries in the capital market for floating new loans or for buying or selling existing securities, stamp duties, collection fees, and similar expenses may, of course, be higher in case of international transactions,<sup>2</sup> but, on the whole, the higher interest rates on foreign loans must be regarded as a *compensation for the extra trouble and risk* which in the eyes of the ordinary capitalist are connected with such loans.

In recent years it has been customary to speak of "*capital flight*" or "*refugee capital*" as a special form of international capital movements. The peculiarity which has perplexed many observers is that in this case capital may apparently flow "up-hill," so to speak, i.e. from countries with higher to countries with lower interest rates. Fritz Machlup explicitly defines "*Kapitalflucht*" as a capital flow the motive of which is to

<sup>1</sup> What is decisive here it not, as in the case of commodity shipments, the cost of transport itself, but the interest and depreciation charges to which it gives rise when due account is taken of the number of years in which the capital will probably remain in its new home and yield its higher return. Cf. Pigou, *Economics of welfare*, 3 ed., London 1929, p. 140.

<sup>2</sup> Regarding both domestic and foreign bonds the underwriting commission differs, of course, with the credit of the borrower and other circumstances influencing the prospects of the loan. Lavington (*The English capital market*, London 1921, p. 197) gives the figure of 1 per cent on the total amount of the loan for foreign government and colonial issues, and, in addition,  $\frac{1}{4}$  per cent in overriding commission paid to brokers for placing the underwriting. But companies have to pay much more. Karin Kock (*A study of interest rates*, London 1929, p. 88) gives figures ranging from  $1\frac{1}{2}$  per cent for investment trusts up to 5 per cent for an ordinary industrial undertaking. Spread over 20 years, a 5 per cent commission will, on a 5 per cent basis, increase the annual interest charge by approximately  $\frac{1}{2}$  per cent. White (*Loc. cit.*, p. 106) mentions that in France the charges for floating loans vary from 2 to 6 per cent according to the size, security, and time of the loan. In his survey of the balance of payments he uses 4 per cent as an average before 1889 and 3 per cent thereafter. But he quotes instances of loans where the profits of the issuing bank were said to be 10—17 per cent (*Loc. cit.*, p. 278, note 1).

avoid risk rather than to obtain a higher rate of return,<sup>1</sup> but he is obliged to admit that the boundary line between this "risiko-orientierte" capital flight and the ordinary "ertrags-orientierte" capital export is indeterminate. The same ambiguity appears when E. Welter<sup>2</sup> distinguishes between "reine Kapitalflucht", depending upon distrust in the judicial or political security or in the stability of the currency, and "Steuerflucht", the motive behind which is a wish to avoid excessive taxation. If capital is taxed so heavily that in spite of an interest rate of 8 per cent the capitalist gets merely 4, it is only natural if he attempts to transfer his capital to another country where he may get a net return of 6 per cent. The wish to avoid the risk of high taxation, currency depreciation, political upheavals, and what not, and the desire to get the highest possible return are not two different or even conflicting motives, but merely two aspects of the same calculation. In this respect there is no fundamental difference between refugee capital and other forms of migrating capital. As already intimated the characteristic feature is rather to be found in the fact that in the case of capital flight short-term capital movements are of the real and not of the equalising sort; they provide the original disturbance in the balance of payments instead of exercising a stabilising or equilibrating influence.<sup>3</sup>

It should be noted that a foreign loan is not necessarily contracted in a foreign currency. This merely means, however, that the *exchange risk* is thrown on the foreign debtor. Wherever it is placed, the risk of a future discrepancy in the value of money in the two countries must be a factor of prime importance to the international mobility of capital. In fact, it was not till the general adoption of the gold standard that long-term international capital movements on a large scale became possible, and the recent economic world crisis has borne out how a derangement of currencies may paralyse

<sup>1</sup> *Die Theorie der Kapitalflucht*, Weltw. Arch. 1932 II, pp. 512 et seq.: "Flucht ist eine Bewegung, die von dem Motiv, sich einer bestehenden oder vermeintlichen Gefahr schleunigst entziehen zu wollen, geleitet wird. Das gleiche Motiv der Gefahrenvermeidung, der "Risikoverminderung", kennzeichnet einen Kapitalexport als Kapitalflucht."

<sup>2</sup> *Die Ursachen des Kapitalmangels in Deutschland*, Tüb. 1931, pp. 180 et seq.

<sup>3</sup> Cf. *supra*, p. 80. It should be noted perhaps that capital disposal may flee, not only across the frontiers, but also into hoards or into consumption.

ordinary international credit operations and give rise to "flight of capital" from particular countries.

Various measures have been resorted to in times of currency upheaval in order to avoid or reduce the exchange risk. A *gold clause* in one form or another was inserted in numerous international loan contracts in the years immediately after the World War. Recent legislation and judicial practice in various countries have shown, however, that such attempts at obtaining absolute security are likely to prove futile at the critical moment. One of the chief difficulties with using gold or gold exchange as a standard of deferred payments is, of course, that, in the short run at least, there may be wide divergencies between the domestic purchasing power of a depreciating currency and its value in terms of gold or other currencies. Instead it has been proposed to adjust the principal of debts directly to changes in the internal purchasing power of the currency in which they are contracted by means of an official price index, i.e. by introducing a so-called *tabular standard of deferred payments*. The practical difficulties connected with this procedure need not engage us in this connection, for we are not directly interested here in the question of how to give both the creditor and the debtor his due under conditions of monetary instability, but merely in the effects of such instability on the international mobility of capital. And though currency upheavals may reduce this mobility *less* when suitable arrangements are made regarding the division of the risk between creditor and debtor, the importance of a proper distribution of burdens between lender and borrower is mostly a problem of justice and equity.

Fluctuations of the exchange rates *within the gold points* are probably without material influence on long-term capital movements. In the long run they may be assumed to outweigh each other, and they may as a rule be met by purchases of foreign exchange at suitable moments. But it goes without saying that the chances and risks connected with variations in exchange rates in the near future exercise a considerable influence on short-term capital movements.<sup>1</sup>

But quite apart from exchange fluctuations there is a number of reasons why international capital movements involve extra trouble and risk. A certain *general knowledge*

<sup>1</sup> Cf. *supra*, p. 62, note 2.

of the conditions, laws, and business practices in the foreign country is necessary in addition to the *special information* as to the financial position of the foreign borrower. And in both respects people are likely to be less acquainted with conditions abroad.

Attempting to explain the figures quoted above White points out that the individual investor is ordinarily a very poor judge of the risk involved in different investments.<sup>1</sup> The French saver, he says, may have had a vague idea that certain investments involved more risk than a *rente* or less risk than gold-mining stock, but it is extremely doubtful whether he had sufficient information or experience to compare e.g. the risk connected with a Spanish railroad or a Turkish government bond.

And it must be remembered, that it is the risk *as conceived and valued by the lender*, which counts in this connection.<sup>2</sup> A borrower whose financial standing is widely known, e.g. a government or a municipality, will therefore be able to obtain better terms in a foreign market than a small farmer, artisan, or shopkeeper; the *insolvency risk* may actually be just as small in the latter case as in the former, but this fact is known only in his own neighbourhood; should he attempt to borrow in a foreign country he would probably be asked to pay a prohibitive rate of interest. But if a large number of such borrowers pool their credit, so to speak, as they have done in the Danish mortgage credit associations, they may get access to the international capital market. Similarly, the fact that banks and acceptance houses are usually better known outside their own country than are private industrial or commercial undertakings, makes the market for bank acceptances more truly international than that of ordinary fine trade bills.

It might be objected that the judge of the element of risk is not the individual investor, but the experienced banker or underwriter who undertakes to float or "place" the foreign securities. The investor merely chooses from a group of securities already selected by the bankers.<sup>3</sup> This is true, of course, but (1) even the most competent banker may easily

<sup>1</sup> *Loc. cit.*, pp. 276—77.

<sup>2</sup> Cf. *supra*, p. 15.

<sup>3</sup> Cf. *infra*, pp. 118—20.

be guilty either of over-estimation or under-estimation, and (2) the poorer the security of the borrower and the more pressing his needs, the greater may be the profits which accrue to the underwriters.

Apart from insolvency risks the so-called *inavailability risks*<sup>1</sup> may be greater in case of foreign investments. At any rate, the desire of the lender to make sure that, if necessary, he can get his capital free in one way or another tends to limit the international capital transactions to loans in a negotiable form: bills or securities having an active and extended market.

The growing importance of *direct investment of profits* within the same business in which they are made ("Unternehmungssparen"), may also tend to hamper the international mobility of capital. This practice of "ploughing savings back into the business" destroys to a certain extent the unity of the capital market. The tendency towards equalisation of interest rates for similar investments is weakened, simply because the prospective interest rates give way to other motives in the mind of the investor.

Just as it is only a minority of borrowers who have recourse to the international capital market, foreign investments obviously *appeal more to some lenders than to others*. The risk actually incurred by them varies according to their experience and judgment, and besides, both their estimation and their valuation of these risks is widely different; all sorts of sentiments and prejudices may influence the cumulative effects of these three factors. The amount of capital to be invested is also of importance in this connection; owing to the magnitude of their business, banks, investment trusts, insurance companies, etc. can afford to have access to the best available information and to the services of expert advisers in every field; the big investor has also possibilities of spreading his risks that are not open to the small saver who will therefore be confined to investments generally known to be safer. The obstacles thus created to the free flow of capital are fortified by the fact that big investors such as trustees, insurance companies, savings banks, etc. are often by

<sup>1</sup> Cf. Lavington, *Uncertainty in its relation to the net rate of interest*, Ec. Journ. 1912; Karin Kock, *A study of interest rates*, ch. III; Axel Nielsen, *Bankpolitik II*, Kbhvn. 1930, pp. 268 et seq.

law restricted in their choice between different classes of investments. Changes in such laws may therefore have a great influence on the international flow of capital.

The *psychology of capitalists* varies from country to country and from time to time.<sup>1</sup> Neymarck estimated the proportion between fixed-interest bearing securities and dividend papers owned in France at 75 : 25, in England at 35 : 65 and in Germany at 25 : 75.<sup>2</sup> Such differences between nations will obviously influence also the character and extent of their foreign investments. Through conscious propaganda and suitable organization of the capital market it is possible, however, gradually to change the investment habits of a given people.

The obstacles to international capital movements are thus mainly in the nature of psychic checks, different for different individuals. Consequently, it is meaningless to speak of the international mobility of capital in general; it is necessary to consider the mobility of particular units of capital. The decisive thing is how those units react for which the costs of transfer are lowest; we are interested in "fluidity at the edges";<sup>3</sup> it is *marginal mobility* which counts.

Moreover, this marginal international mobility may not be the same for different kinds of capital. Not only may the *level* of interest rates be different in different countries; there may also be considerable variations in *the relations between the individual rates*. All parts of a loan market are more or less closely connected with each other, either directly or indirectly, but the way in which, and the extent to which, a change in one part of the market will make itself felt in other parts varies according to differences in technique and organization.<sup>4</sup>

This explains why a country may both import and export capital at the same time. In the decades preceding the World War the United States, for instance, served as a sort of reservoir, an intermediary, between lenders in Europe and bor-

<sup>1</sup> Cf. R. G. Lévy, *Psychologie des placements*. Revue d'Éc. Pol. 1905, p. 116.

<sup>2</sup> A. Neymarck, *Finances contemporaines*, Paris 1911, vol. VII, p. 172.

<sup>3</sup> Cf. Pigou, *Wealth and welfare*, London 1912, p. 111.

<sup>4</sup> This problem has been analysed by Karin Kock in *A study of interest rates*.

rowers in other American countries or the Far East, because a certain national specialisation in investments had developed. European capital was available for investments in gilt-edged securities of well-established American railways and industrial concerns, while American capital went into foreign mining and manufacturing enterprises to which superior American methods of production might be applied. Thus Viner found the following three characteristics to be typical of American investments in Canada in the period 1900—1913:<sup>1</sup>

“They were not made in routine enterprises, but demanded for their success capable and venturesome *business direction* and modern *industrial technique*; they were not conservative investments, in the narrow sense of the term, but required the assumption of considerable economic *risk*; they offered a chance of unusually high profits as well as of losses.”<sup>2</sup>

It is even conceivable that capital may move in opposite directions *between two particular countries* at the same time, provided the investors in each supply capital for those occupations of which they have special knowledge. Such cross-currents may also be due to more special causes. Insurance companies operating in foreign countries are often compelled by the laws of these countries to invest their reserves in the same currency in which their obligations are due. In the case of capital flight it is conceivable that, in the country towards which the refugee capital flows, interest rates may fall to such low levels that other investors find it profitable, in spite of the extra risk involved, to invest their capital in the very country from which capital is fleeing.<sup>3</sup> A counterflow of

<sup>1</sup> *Canada's balance of international indebtedness*, p. 286.

<sup>2</sup> Similar national specialisation is illustrated by the investments of Canadian financiers in light, power, and tramway enterprises in the United States, Latin America, and Spain at the same time that Canada was borrowing heavily abroad. By virtue of these investments, representing only a small fraction of the actual capital put into these enterprises, a group of Canadian financiers acquired the opportunity to apply their specialized promoting and operating ability, in other countries when they had exhausted the Canadian field.

<sup>3</sup> It has been deplored in Germany in recent years that German refugee capital could obtain only 1—2 per cent interest in Switzerland and other countries while the German entrepreneurs had to pay 7 per cent or more for foreign loans. Fritz Machlup points out, however, that what takes place is merely that the German capital owner insures the delcredere. “Es ist also nicht ganz zutreffend von einem Zinsverlust zu sprechen, da es sich um eine Delcredereversicherung

capital of this sort may also be organized through cooperation between the central banks of the two countries. In such cases the refugee capital is offset by capital import, and no net outflow of capital has taken place.<sup>1</sup> If the compensatory inflow of capital is a direct result of the capital flight as in the case of supporting credits from other central banks we have to do with ordinary equalising capital movements. Then the capital flight cannot properly be said to have restricted the capital supply of the country in question, but this does not preclude, of course, that the replacement of capital which would have sought long-term investment by short-term funds may have grave consequences for domestic production.

Though, as a rule, the international mobility of capital is essentially greater than its international mobility, the former is by no means complete. It is a well-known fact that interest rates vary widely between different parts of the United States. In December 1923, for instance, when the discount rate was uniformly  $4\frac{1}{2}$  per cent at all Federal Reserve Banks, the average rate charged by member banks varied by districts as follows:<sup>2</sup>

Boston .....	5.30	St. Louis .....	6.03
New York .....	5.38	Richmond .....	6.10
Philadelphia .....	5.51	Atlanta .....	6.20
Cleveland .....	5.71	Kansas City .....	7.04
San Francisco .....	5.86	Minneapolis .....	7.99
Chicago .....	6.00	Dallas .....	8.21

And even within a small country like Denmark interest rates differ from district to district. Thus the Danish savings banks charged the following average interest rates on loans in 1932—33 in different parts of the country:<sup>3</sup>

handelt. Man kann über die Notwendigkeit der Versicherung oder über die Höhe der Prämie, die an den ausländischen Risikoträgern bezahlt wird, verschiedener Ansicht sein; über Fragen der Risikoeinschätzung lässt sich schwer streiten." (*Die Theorie der Kapitalflucht*, Weltw. Arch. 1932 II, p. 521).

<sup>1</sup> It is self-evident that when the "capital flight" performed by an individual capital owner takes the form of a purchase of foreign bonds from other inhabitants in the same country there is no outflow of capital whatever. And when he sells houses, factories, or other goods to foreigners the capital flight is directly financed by capital import, so that no net outflow takes place.

<sup>2</sup> E. A. Goldenweiser, *Federal reserve system in operation*, New York 1925, p. 44.

<sup>3</sup> *Beretning om Sparekasserne i Danmark*, Kbhvn. 1934, pp. 13—14.



Copenhagen .....	4.73
Funen .....	4.79
Seeland .....	4.93
North Jutland .....	5.17
South Jutland .....	5.63

Sixty or seventy years ago these local differences in interest rates were considerably greater. Before the establishment of the cooperative credit associations began in 1850, owners of real estate were under the necessity of borrowing either from friends and relatives or from the local savings bank; through the credit associations they got access to a wider capital market, which undoubtedly served to equalise interest rates in different parts of the country. The lending of each credit association being confined to certain parts of the country, this equalisation was by no means complete, however, and even at the present day the quotations of the bonds of the different credit associations reflect these local interest differences.<sup>1</sup>

It is usually contended that the classical assumptions as to factor mobility though they are unsuitable at the present day, were fairly adequate at the time they were made.<sup>2</sup> But the soundness of this view has recently been questioned by John H. Williams<sup>3</sup> who points out that international trade prior to the nineteenth century involved a considerable international diffusion of capital and enterprise at a time when internal mobility was slight, indeed; he points particularly to the merchants of the Italian city states and the Hanseatic League who spread their capital throughout western Europe and the Levant. He admits that under conditions of an approximately uniform development of all nations it is probably true that factors move more freely within nations than between them; but in the trade between two unequally developed countries the situation is different, for

inferior organisation of capital and labour in the more backward country, inferior domestic banking, inferior internal means of com-

<sup>1</sup> They are also influenced, of course, by the general opinion of the ability with which the association is conducted, etc. Cf. Axel Nielsen, *Det danske Kapitalmarked og Sparekasserne*, Sparekassetidende 1929, pp. 139—40.

<sup>2</sup> Cf. e.g. Eugen Melchinger, *Die internationale Preisbildung*, Tübingen 1929, pp. 3 et seq.

<sup>3</sup> *The theory of international trade reconsidered*, Ec. Journ. 1929, pp. 205 et seq.

munication, inferior perception of economic opportunity—these are obstacles to free movement which far outweigh those commonly cited as impediments to the movement of factors from the more advanced countries. The movement of capital, and to a less degree of labour, is therefore likely to be more free from a more advanced to a less advanced country than is the internal mobility of factors in the latter."

Be that as it may. It is evident that both the internal and the international mobility of capital has been greatly increased in the course of the nineteenth century. The post-war period, on the other hand, and particularly the world depression obtaining since 1929, have brought a considerable setback in this respect, culminating in the almost complete collapse of the international capital market in 1931 when England left the gold standard. In fact, the suspension of specie payments was, in a number of countries, merely the consequence of the disappearance of the long-term foreign loans from which they had been accustomed to seek support in times of distress.

To what extent, and in what forms, the international capital market will be restored in the future, is difficult to say. As long as the *restrictions of international commodity trade* are preserved or further developed on anything like the present scale, there is little likelihood that capital will again move freely between countries. Lending countries will probably demand an extra outlet for their exports as compensation for their granting of foreign loans, but of this direct linking of commodity export and capital export, enough has been said already. What must be pointed out in this connection is only that it is likely to place an extra obstacle in the way of the future international mobility of capital. But when, sooner or later, the leading countries of the world get together and agree to put an end to the present chaotic currency situation by restoring a *régime of stabilized exchanges*, the problem of reviving the international capital market will also necessarily present itself; often enough it has been pointed out that a free international capital market is a necessary prerequisite if an international gold standard is to function properly, and, characteristically enough, the modifications of the English embargo upon foreign loans announced in the summer of 1934, comprised, not only loans in the case of which the capital export was tied directly to export of British goods, but also loans granted to countries within the sterling block in order to

strengthen their foreign exchange reserves, i.e. *in order to enable them to maintain a stable sterling rate.*

As already mentioned Lehfelddt expected immediately before the War that the margin between the rates of return in foreign and domestic securities would diminish still further in the future *unless* (1) some unexpected catastrophe reinforces the risks involved in foreign investments, or (2) some acute revival of national sentiment makes foreign investments unpopular. In both these respects the subsequent years brought changes in the attitude of the investing public in a degree which could not then be foreseen. For a considerable period, therefore, the additional return which capital demands in order to go abroad is likely to be greater than it used to be in pre-war days. Whatever the absolute height of the levels of interest rates in different countries, the *differences between these levels* are likely to be greater than before the War.

### 3. CHANGES IN THE COSTS OF CAPITAL TRANSFER.

Regarding international capital flows as functions of international differences in interest rates, we must conclude that any basic change in the price systems which leads to a reduction in the costs of capital transfer, or to an increase in interest differentials, may release a movement of capital. And as, in principle, a change at one point involves changes at *all* other points of the price system, every possible alteration in the basic data of the price structure in any one country may call an international movement of capital in existence. This leads at once to the conclusion that a given country may experience an inflow or outflow of capital without any changes in *its own* price system; the movement may be due exclusively to changes that have occurred abroad.

But although no change in the elements of the price systems may be eliminated a priori as entirely irrelevant to the problem of international capital movements, it has already been suggested that certain changes may be more directly connected with such movements than others. Thus special attention must obviously be paid to all measures acting *directly* upon the costs of capital transfer.

By raising its standards of *business morals* or by providing for an *easy and rapid exaction of the claims* of foreign cred-

itors in case of non-payment, a country wanting to borrow abroad may reduce the actual risks of its prospective creditors, and by *suitable propaganda* it may influence their estimation of these risks. In France in particular the financial press has been notoriously bribed into flagrant misrepresentations of the status of foreign borrowers. The responsibility for this long-established system of bribery lies, of course, mainly with the French issuing houses. In planning a security flotation one of the most important points is said to be the establishing of a "budget of publicity", i.e. the fixation of the sum to be distributed to the press, not for paid advertisements, but for securing favourable comments in the financial news columns. The expenses on this account have been estimated at 1—1½ per cent of the nominal value of the issue.<sup>1</sup> Recently, similar abuses have been revealed in the United States.<sup>2</sup>

The most important factor, however, tending to reduce the cost of capital transfer is the creation of an *adequate market organization* by means of which part of the trouble and risk that would otherwise have fallen on the lenders or borrowers themselves is taken over by intermediaries who specialize in this kind of business.<sup>3</sup>

The unequalled facilities available in the *London market* to the capitalist who wants to invest abroad are well described by the Macmillan Committee:<sup>4</sup>

"He has the assistance of long-established issuing houses, whose reputation is world-wide. When subscriptions to a foreign issue are invited by means of a public prospectus, it is almost certain that that issue will be vouched for by one of these issuing houses whose name will be evidence that it has been thoroughly examined and the interests of the investors protected as far as possible. For the issuing house's issuing credit, which can easily be affected, is involved, and it is very highly to its own interest to make sure that the issue is sound. If, as must from time to time happen, something goes wrong with the loan or the borrower the issuing house regards it as its duty to do everything it can to put matters straight, and, in-

<sup>1</sup> E. Kaufmann, *Das französische Bankwesen*, Tübingen 1911 and Yves le Roy, *Les syndicats d'émission*, Paris 1914.

<sup>2</sup> *Johnson Committee Hearings*, Wash. 1931—32, *passim*.

<sup>3</sup> For descriptions of the actual organization of the market in the leading financial centres cf. Axel Nielsen *Bankpolitik I*, Karin Kock. *A study of interest rates*, Appendix I and Pierre Costes, *Les grands marchés financiers*, Payot 1922, and the references given in these books.

<sup>4</sup> *Report*, pp. 166—67.

deed, to watch continuously the actions of the borrower to see that the security remains unimpaired. These duties are sometimes very onerous and involve a great deal of labour and expense, as well as judgment, skill and experience."

With regard to home industrial issues the situation is much less favourable in London; here the issuer may be the company itself or a finance company or syndicate (sometimes formed for the sole purpose of making a particular issue), and very often this means that the investor is left without a competent and responsible guide as to which issues he may safely support. The Macmillan Committee, therefore, found substance in the argument that in some respects the City is more highly organized to provide capital to foreign countries than to British industry. Proposals were made in the report for the creation of one or more institutions especially devoted to the financing of industry, but it was explicitly added that such institutions ought also to assist British industry and trade abroad by providing sufficiently long credits to finance export of machinery, long contracts for railways, harbours, roads and the like, or even the establishment of branch factories abroad.

In *France* there was also created during the nineteenth century an extremely efficient organization for the placing of large security issues. The numerous bank branches were channels for the distribution of such bonds to small investors who blindly followed the advice of the local bank manager. The central office of the bank would fix in advance the amount of securities which each branch ought to place, and during the period of flotation daily lists were issued to the branches, stating the percentage of its quota reached by each branch. The effectiveness of this organization may be judged from the answers given by one of the chief officials of the *Crédit Lyonnais* before the United States National Monetary Commission in 1910 according to which the bank could place an issue of 40—50 mill. francs by the public within a few days.<sup>1</sup>

And as already suggested the bankers strongly preferred foreign issues on account of the larger profits to be reaped. In recommending French *rentes* or City of Paris bonds there was little or no profit to be made, but in recommending a Bulgarian or Brazilian loan there was opportunity for big

<sup>1</sup> U. S. Senate Document No. 405, Wash. 1910.

gains. It also played a great rôle that foreign government bonds were tax-free; the only domestic bond which was equally free from taxes was the French *rente*, the price of which was usually very high. Foreign municipal and corporate securities, though not free from taxes, offered good opportunities for tax evasion. It has been estimated that holders of about half of the foreign securities subject to taxes, evaded them.<sup>1</sup>

An efficient organization of the market for international loans is also an important means of *avoiding waste of capital*. It is often contended that international borrowing and lending has, in the past, been too casual and disjointed a business. Referring to Australian conditions, Gordon Wood points out<sup>2</sup> that the existence of seven independent and often competitive governmental systems has caused too much foreign capital to be sunk in duplicated and alternative systems of power and transport. And this lack of coordination in efficient direction of capital may probably be given a much wider application. Wood quotes with approval a remark of Sir Josiah Stamp to the effect that great waste of capital is due to its "piecemeal application," though he admits that the situation has altered to an extraordinary extent in the last decade, when a much more scientific attitude towards the expenditure of savings has been noticeable. What is needed, is a closer cooperation between the market with its *generalized knowledge of supply conditions*, and governments, industrial groups, and individual entrepreneurs with their *specialized knowledge of demand conditions*.

By influencing the organization of the capital market, governments are able to promote or restrict the export of capital in a number of different ways. The technique and methods of which they have availed themselves are described at some length by Viner.<sup>3</sup> Here it will suffice to mention a few examples, mainly from the post-war period. Among the

<sup>1</sup> Cf. White, *loc. cit.*, pp. 279 et seq. and 90 et seq.

<sup>2</sup> *Borrowing and business in Australia*, p. XIII.

<sup>3</sup> *Political aspects of international finance*, Journ. of business of the University of Chicago 1928. Cf. also George W. Edwards, *Government control of foreign investments*, Am. Ec. Rev. 1928, pp. 684 et seq.

*British measures* the intermittent de facto embargo on foreign loans, the Trade Facilities Act, and the Export Credits Guarantee Scheme have already been dealt with. Concurrently, however, other positive measures have been undertaken.<sup>1</sup> *Direct government loans* to foreign countries, which were of great importance during and immediately after the War, are not likely to occur in times of peace. But both before and mainly since the War the British Treasury has given its *guarantee* for the principal and interest of overseas loans. Since the War it is mainly loans to colonial governments and mandated territories that have been protected in this way, the only exception being a guarantee for a substantial proportion of a loan to Austria in 1922. The total of these guarantees, however, amounts only to some £ 24 mill. for the post-war period. That is, it comprises less than 3 per cent of the post-war borrowings in London of the Dominions, Colonies and India.

Without incurring direct financial liability, the British government jointly with other governments has exercised a considerable influence over international capital movements by its support of the floating of the so-called *League of Nations loans*. These loans constituted a new departure, in so far as they were arranged in every case by international co-operation between the governments of a number of different states, acting through their representatives on the League of Nations Finance Committee, and, in some instances, through special commissions composed, as a rule, of Treasury or central bank officials or economists delegated by the interested governments. International cooperation for the purpose of big financial operations is, of course, nothing new in itself. But it has usually taken place between the leading international bankers of the great financial centres rather than between central banks and government departments.

As usual the banks and banking houses have been entrusted with the actual flotation of the loans, precisely as if these had been the outcome of purely private negotiations between the borrower and his bankers. But the direct government intervention in the preliminary negotiations rendered possible a much more careful and exhaustive investigation of the

<sup>1</sup> Cf. the *British memorandum* quoted *supra*, p. 94.

financial and economic position of the would-be borrower than could possibly have been insisted upon by a private lender. It also made it easier to insist upon the assignment of specific revenues such as customs receipts or the revenue derived from railways, government monopolies, etc., to the service of a proposed loan, or to demand the balancing of budgets, stabilisation of currencies, and the reform of administrative methods.

In this way it was hoped when these loans were first arranged under the auspices of the League, that more durable benefits could be conferred upon the borrowers than would have resulted from the mere provision of funds through the usual commercial channels. It has also been suggested, however, that in some cases the borrowers were relieved from, rather than urged into, the unpleasant task of readjusting their political, economic, and financial circumstances. It has been contended that some of these loans were almost too successful in restoring confidence in the borrowing countries, with the result that further credits were too lavishly extended to these countries by private lenders.

In a study of the "Financial foreign policy of the United States"<sup>1</sup> James W. Angell gives a detailed account of the *actions of the American government* to encourage or restrict the exportation of American capital and to protect it when once exported. The centre of this economic foreign policy has been Latin America; a great variety of motives has inspired the attempts of the United States to secure political and financial influence or even control over certain parts of this sphere. But whatever the initial motive the result was to influence the costs of international capital transfer, and consequently, other motives came into play to induce the continuance of these activities when American capital and business enterprise had once flowed in.

The direct promotion of particular foreign investments was a vital aspect of the American policy known as "*dollar diplomacy*". This policy, associated particularly with the name of P. C. Knox, Secretary of State in the Taft administration 1909—13, may be described as a sort of financial im-

<sup>1</sup> A report to the second international studies conference on the State and Economic Life, New York 1933. Cf. also Benjamin H. Williams, *Economic foreign policy of the United States*, New York 1929.



perialism; it embraced mainly the Central American countries, but extended also over other parts of the world; the *official* motive for the exercise of this dollar diplomacy was a desire to free the other American countries from their financial dependence on Europe, which incidentally threatened the Monroe Doctrine;<sup>1</sup> in China the stated purpose was to establish the "open door" in financial as well as in commercial matters.<sup>2</sup> *Actually*, the chief motive was the desire to expand the financial influence of the States, both for the sake of its political consequences and for the sake of business profits as such.

Since the War the instances of government promotion of specific loans have been less numerous. In 1924, President Coolidge explicitly urged the participation of American capital in the Dawes loan, and it was stated that he regarded American loans to foreign governments as "worthy of governmental and private encouragement".<sup>3</sup> In 1925 the Secretary of the Treasury advocated the use of surplus American resources to promote the economic reconstruction of foreign countries except where unadjusted war debts interfered,<sup>4</sup> and in 1928 the Treasury gave its formal approval to a proposed loan to Austria, and to an advance by the United States government itself to Greece.<sup>5</sup>

The American diplomatic and consular service has also been consistently used in the post-war period to present the case of the American concessionaire, contractor, banker, or business man as against competitors from other countries; it has vigorously combated restrictions and discriminations against American enterprises; and particularly under the influence of Herbert Hoover it flooded the United States with data bearing on the financial and commercial opportunities offered by other countries.<sup>6</sup>

<sup>1</sup> Cf. Charles P. Howland, *Survey of American foreign relations 1929*, New Haven 1930, pp. 246—49.

<sup>2</sup> Cf. F. W. Field, *American participation in the China consortium*, Chicago 1931.

<sup>3</sup> *New York Times*, March 15, 1924.

<sup>4</sup> United States Secretary of Treasury, *Annual report 1925*, pp. 54—55.

<sup>5</sup> Edwards, *loc. cit.*, pp. 699—700.

<sup>6</sup> Angell, *loc. cit.*, p. 96, note 8 praises these documents issued chiefly by the Department of Commerce, as remarkably free from bias or serious error.

There have also been attempts, however, in the post-war period to supervise or even prohibit the export of American capital. In 1921, at a conference between members of President Harding's cabinet and a group of investment bankers interested in international finance, the government expressed its desire to be kept informed in the future on contemplated flotations of foreign loans in the American market. This policy of control was reaffirmed by the "statement for the press" on flotations of foreign loans which read in part as follows:<sup>1</sup>

"The flotation of foreign bond issues in the American market is assuming an increasing importance and on account of the bearing of such operations upon the proper conduct of affairs, it is hoped that American concerns that contemplate making foreign loans will inform the Department of State in due time of the essential facts and subsequent developments of importance. Responsible American bankers will be competent to determine what information they should furnish and when it should be supplied.

... The Department will then give the matter consideration and, in the light of the information in its possession, endeavor to say whether objection to the loan in question does or does not exist. ...

The Department of State cannot, of course, require American bankers to consult it. It will not pass upon the merits of foreign loans as business propositions nor assume any responsibility whatever in connection with loan transactions. Offers for foreign loans should not, therefore, state or imply that they are contingent upon an expression from the Department of State regarding them, nor should any prospectus or contract refer to the attitude of the government."

This statement has since become known as the *Ruling of 1922*; the most important immediate motive for adopting this control was the prospect of defaults on the intergovernmental war debts, but no doubt there was also a more general desire to protect the ordinary American investor who was then comparatively inexperienced in the international field. The ruling applies to all loans publicly offered in the American market, i.e. to all bonds whether issued by governments or corporations, but not to share issues and not to the sale to Americans of securities already existing. Practically all new foreign loans floated in the United States since 1922 have been endorsed by the State Department, but since the sale in America of bonds floated elsewhere did not require the ap-

<sup>1</sup> Quoted by Edwards, *loc. cit.*, pp. 693—94.

proval of the department, the effect of its embargo has often been merely to increase the costs of international capital transfer.<sup>1</sup>

Such embargoes were imposed on loans to Roumania and France in 1922 and 1925 because these countries had not settled their war debts to the United States government. The checks upon Russian borrowing in 1926 and 1928 have already been touched upon. More general economic considerations have also determined the government's objection to certain proposed foreign loans. In 1925 the Department of State banned a loan designed to promote the São Paulo coffee valorization scheme. The ground advanced was simply the increase in prices to American consumers which successful coffee valorization would entail. A ban was likewise imposed in 1925 against a loan to the German Potash Syndicate, for a similar reason. And in the same year a more general warning was issued against the rampant German borrowing; in a circular letter to American bankers it was suggested that loans should be granted primarily for "productive and self-supporting objects" improving both Germany's internal economic situation and her transfer capacity;<sup>2</sup> it does not appear, however, that any loans were actually prohibited.

In this connection should finally be mentioned the Securities Act of 1933 which, in order to "provide full and fair disclosure of the character of securities sold in interstate and foreign commerce", demands registration containing detailed information on all public security issues. Regarding *foreign* issues it is required that the underwriters or agents in the United States must sign, and thus guarantee the accuracy of, the registration statement of any foreign government selling securities in the United States. The agent is also required to furnish full and accurate information of the condition of the borrowing government, which information could not, of course, be required of the foreign government directly. Be-

<sup>1</sup> The São Paulo loan mentioned just below was issued in London where an American investment house bought up a large share of the issue and advertised it for sale in New York. Cf. *New York Times*, Febr. 17, 1926. The paper stated that "bankers said that thus the only effect of the ban on an original offering here was that American investors paid higher prices for the bonds than would otherwise have been the case."

<sup>2</sup> *Johnson Committee Hearings*, pp. 378, 953—54 and 1555—57. Cf. *supra*, pp. 41 and 49—50.

sides, a corporation was set up to safeguard the interests of foreign bondholders.

In April 1934 an act was passed "to prohibit financial transactions with any foreign government in default on its obligations to the United States" (Johnson Act).

The idea of reducing the risk of foreign investments by forming a *protective association of holders of foreign securities* to deal more effectively with defaulting bonds goes back to the Sixties when the British Corporation of Foreign Bondholders came into existence. This organisation which has appointed on its committees leading personalities in banking or public life came to play an important rôle; it has carried on negotiations with and exercised moral pressure upon foreign governments, taken an active part in the reorganisation of American railroads, and performed various other services for its members.<sup>1</sup> A similar French association was created towards the end of the nineteenth century (Association Nationale des Porteurs Français de Valeurs Étrangères).

At the present juncture, when lack of confidence has reduced international capital movements to a minimum, various proposals have been made for national or international governmental action with the purpose of starting the machinery of the international capital market afresh.<sup>2</sup> At the sixth session of the International Studies Conference in London in 1933 this question was discussed at considerable length. It was suggested that for the immediate future no purely financial measures would be sufficient or indeed possible as a means of reviving the normal flow of capital between countries. It was a problem of world statesmanship to restore conditions of greater political security and economic stability. But, for a remoter future, various methods and institutions for official control of international capital movements were recommended. In particular, it was proposed to establish some *international* authoritative expert body which might be called upon to examine and settle difficulties arising between borrowing and lending countries, and which might perhaps also be entrusted

<sup>1</sup> Cf. Herbert Feis, *Europe: the world's banker*, New Haven 1930, pp. 113 et seq.

<sup>2</sup> Cf. e.g. Arthur Salter, *Recovery*, London 1933.

with the duty of elaborating a code of international financial ethics.

At the same time it was pointed out, however, that such national and international measures might create in the minds of investors an illusory feeling of security and place responsibilities on public authorities which they were not fitted to bear, and trust them with powers which might easily be abused.<sup>1</sup>

#### 4. CHANGES IN THE INTERNATIONAL DIFFERENCES IN INTEREST RATES.

Supposing the costs of international capital transfer to remain constant, the most important immediate "cause" of such transfers is to be found in increases in the differences between interest rates in different countries. As integral parts of the mutually interdependent price structures these international interest differentials are affected, of course, by all changes in the basic data of price systems.

These basic changes may be divided into four main groups: changes (1) in the wants and desires of consumers, (2) in conditions of ownership of the factors of production determining the distribution of incomes, (3) in the supply of these productive factors, and (4) in our knowledge of their physical properties (i.e. in the methods of production, the "technical coefficients"). Consequently, a systematic treatment of the influence of all these four types of changes on the combined price systems of a number of trading countries would reveal all sources of interest margins sufficiently large to call international capital movements into existence. It goes without saying, however, that a comprehensive analysis of this sort would go far beyond the scope of the present study. Here again it becomes necessary to single out those basic changes to which the heights of interest rates are *most directly* related. The answer to this question: why do interest rates in different countries diverge from one another, is most easily obtained by analysing the factors determining the demand for and supply of capital in each particular country. For, wherever they originate, the changes occurring will always affect the rate of interest *through* their influence on demand and supply

<sup>1</sup> Cf. *The state and economic life*, Paris 1934, pp. 125—177.

in the capital market.<sup>1</sup> Without aiming at an exhaustive enumeration of the factors which determine this demand and supply, it is the purpose of the present section to point to certain changes that are particularly likely to influence international capital movements.

As the domestic supply of capital of any given country, in the short run at least, is comparatively inelastic, anything which brings about a considerable alteration in the local demand for capital will have a relatively large immediate effect on interest rates. The possibility of sending capital from one country to another means a very important increase in the elasticity of the capital supply of particular countries.<sup>2</sup>

It may be the *domestic habits of consumption* that have changed under the influence of fashions and tastes or owing to alterations in the size and distribution of the national income. If the smaller incomes rise more than the larger, it will probably mean increased demand for articles of standardised mass production requiring comparatively much capital.<sup>3</sup> Such changes, however, will usually come about slowly and gradually, and to them the domestic supply of capital may therefore be able to adjust itself without marked fluctuations in interest rates.

The case may be different when the *foreign demand* for the products of a particular country varies; for such variations may be sudden and abrupt. The normal effect of an increased foreign demand for goods produced in a certain country will be to attract the mobile factors to that country; but the technical coefficients may be such that the relative scarcity of one of the mobile factors is decreased to an extent sufficient to drive it out of the country in question. Wicksell suggested that an increased foreign demand for Swedish wood which made it profitable to grow forests on all Swedish soil would lead to mass emigration from Sweden.<sup>4</sup> Similarly, an export of capital might conceivably result if the foreign

<sup>1</sup> Cf. Mombert, *Zur Frage von Kapitalbildung und Kapitalbedarf*, Festschrift für Lujo Brentano, 1916.

<sup>2</sup> Cf. Pigou, *Wealth and welfare*, pp. 88—89 and *Economics of welfare*, pp. 664—65.

<sup>3</sup> At the same time a more equal distribution of incomes may retard the growth of savings, cf. *infra*, p. 141.

<sup>4</sup> Cf. *Forum*, 1919, p. 17 and the discussion between Wicksell and Heckscher in *Ek. Tidskr.* 1919 and 1920.

demand in a particular country turned to goods requiring very little capital; a country in which the majority of the population was occupied in rendering personal services to foreign tourists might be a case in point.

This question of changes in demand has been taken up recently by Ragnar Nurkse in an interesting essay<sup>1</sup> the main object of which is to apply the Austrian theory of capital to the problem of capital movements. In the first instance Nurkse ignores, not only international mobility of labour, but also international trade in capital goods; he assumes, in other words, a group of countries trading with one another in consumers' goods only, asking how international changes in consumers' demands will affect the flow of capital between them. As both Marshall, Edgeworth, and Taussig have demonstrated, a change in the habits of consumption, decreasing, say, the demand for the goods of country A, and increasing the demand for those of country B, will turn the barter terms of trade in B's favour, lowering the prices of export goods in A and raising export prices in B. Now Nurkse pushes this analysis a step further. In country A the production of export goods becomes less profitable than before, in B it becomes more profitable to produce for export; in A production will be curtailed, in B it will be expanded. This will affect the demand for productive factors in both countries.<sup>2</sup> The rent of land will fall in A, rise in B; similarly, a "real" difference in wages in favour of B will ensue owing to the assumed immobility of labour; regarding capital it will tend to flow from A to B, in order that the combined capital supply of the two countries may be redistributed between them in better accordance with the new state of demand for their products.

Clearly, this result assumes that the increase in the demand for B's goods takes place *at the expense of the demand for A's goods*. If *some* of B's goods come more in demand at the expense of *other B goods* (or if the decreased demand for certain A goods is counterbalanced by increased demand for other A goods), the case is different. Then the *direct* effect will be an internal movement *both of labour and of capital*

<sup>1</sup> *Ursachen und Wirkungen der Kapitalbewegungen*, Zeitschr. für Nationalök. 1934, pp. 81 et seq.

<sup>2</sup> Cf. *infra*, chapter III.

from certain industries to others *within* the country in question. But since the technical coefficients in these industries may be different, the relative scarcity of capital may nevertheless be altered enough to call forth here, too—in *indirectly*—an *international* movement of capital. This latter inference is not drawn by Nurkse. He points instead to another interesting aspect of the problem: if the increased demand for B goods is at the expense of decreased demand for A goods, and a flow of capital from A to B is called forth, this means that in B a greater amount of capital than before is combined with an unchanged supply of land and labour, while A's land and labour are combined with less capital than before; the technical coefficients are changed, or to use the "Austrian" terminology: the "average period of production" is lengthened in B, shortened in A; in B more labour-saving machinery will be introduced, in A the development will be in the opposite direction. But if the shift in consumptive habits affects only B goods, increasing the demand for some of them at the expense of others, nothing of this sort happens, according to Nurkse; then both capital and labour will move "horizontally" from industry to industry within B, without changing either the total supply of the different agents of production or the average length of the period of production. But this obviously *assumes* that the technical coefficients (the length of the productive period) are the same in these different industries or vary in compensatory degrees; for otherwise the relative scarcity of the productive factors *will* be affected, tending to release a secondary capital movement of the sort indicated above.

In principle, it does not matter whether the change in demand takes place in country A or in country B or in both; the essential thing is *which commodities* become more or less demanded, those of country A or those of country B. But Nurkse justly points out that the greater part of the national income is everywhere expended on domestic commodities, and that, consequently, a change in domestic demand for some of a country's products is *more likely* to be at the expense of other domestic goods, while a change in the foreign demand for its products is less likely to be counterbalanced in this way.<sup>1</sup> This serves to reinforce the importance of the di-

<sup>1</sup> In this consideration Nurkse finds a new and interesting confirmation of the view commonly held that the analysis in international



stinction made above between demand changes of domestic and of foreign origin.

As will appear in part II the classical explanation of the transfer mechanism assumes that an inflow of capital will result in a shift of the barter terms of trade in favour of the capital-importing country. The preceding analysis shows that the causal relationship between capital flows and barter terms of trade may be the exact reverse of this: an improvement in the barter terms of trade—resulting from a shift in consumers' demands—may be *the cause, and not the effect*, of the import of capital. This possibility must be borne in mind when attempts are made at statistical verification of the conflicting transfer theories.

Now, it is obviously an unrealistic abstraction to assume that only consumers' goods are traded between countries. There is no reason why all the different stages in the production of a certain commodity should take place within the same country. The localisation of each step in the productive process is determined by the same basic elements, including the relative transferability of the commodity at each stage of its completion. In fact, the bulk of international trade consists of goods of a higher order,<sup>1</sup> and there may perhaps be said to be a certain correlation between the degree of "round-aboutness" in time and in place.<sup>2</sup> To be complete, the pre-

trade theory of *international* shifts of demand may be confined to supply curves positively inclined. This is his argument: suppose that a country specializes on the production, among other things, of a certain commodity made at decreasing cost. If the *domestic* demand for this commodity increases, it will probably be at the expense of other domestic goods; consequently, labour and capital will be released from these other branches of production, so that the "external economies" to be gained in the favoured industry will not be outweighed by greater scarcity and higher prices of the productive factors. In case of an increase in the *foreign* demand at the expense of other foreign goods, the situation is different; since international labour movements are ruled out by assumption, a "real" difference in wages will be created, which tends to counterbalance the decrease in costs resulting from external economies. Here it is less likely, therefore, that the net result will be decreasing costs. Cf. *infra*, p. 499.

<sup>1</sup> *Supra*, p. 48.

<sup>2</sup> Cf. Nurkse, *loc. cit.*, p. 86: "Je mehr höhere Produktionsstufen in den Produktionsprozess eingeschaltet werden, um so unwahrscheinlicher wird es, dass für alle Stufen eine bestimmte Region den geeignetsten Produktionsort darstellt, und um so weiter werden die verschiedenen Produktionsetappen räumlich zerstreut sein. Andererseits ist es vielleicht grossenteils erst die (durch Verbesserungen des Trans-

ceding analysis of "horizontal" shifts in demand between different consumers' goods must be supplemented, therefore, by an analysis of "vertical" shifts in demand between goods of a higher and of a lower order. But this aspect of the problem is more naturally dealt with in another connection.<sup>1</sup>

Improvements in *technical knowledge*, which alter the methods of production, are very likely to lead to sudden changes in the demand for capital. But the mere fact that the marginal productivity of capital is raised e.g. by labour-saving inventions, need not lead to interest *margins* of such magnitude that international capital flows are called forth; for the changed relative scarcity of the productive agents will probably make itself felt more or less in all countries. This point seems to be overlooked by Nurkse, whose analysis of the connection between capital movements and improved methods of production rests on the unrealistic assumption that only one country is affected by the change in technique. If that should happen in a concrete case he is right, of course, in pointing out that the effects on capital flows will depend on (1) whether the improvement made in country A is of the labour-saving or of the capital-saving sort, and (2) whether the demand for country A's products is elastic or not. The flow of capital *into* country A will be greater, (a) the more labour-saving the invention, and (b) the more elastic the demand. The introduction of the second factor is important. Otherwise it might be supposed that *capital-saving* inventions would always tend to call forth an *export* of capital from country A; a moment's reflection reveals, however, that this conclusion will hold only in case of inelastic demand. If the demand for the products in question is highly elastic, their cheapening may well increase production so much that, on balance, capital becomes more, and not less, scarce than before.<sup>2</sup> Moreover, technical progress may have far-reaching

portwesens erweiterte, durch Zölle verringerte) Möglichkeit räumlicher Produktionsumwege, die das Einschlagen entsprechend langer zeitlicher Produktionsumwege gestattet."

<sup>1</sup> Cf. *infra*, p. 142.

<sup>2</sup> Nurkse, *loc. cit.*, p. 80. Hicks points out (*The theory of wages*, London 1932, p. 125) that capital-saving inventions are relatively unlikely, but to this must be added Allan G. B. Fisher's demonstration (*Capital and the growth of knowledge*, Ec. Journ., 1933, pp. 379 et seq.) that even if more roundabout methods of production are introduced simultaneously for each and every commodity, the

indirect effects on international capital movements and on the localisation of different industries; the simplified processes of machine production have made the native population of a number of overseas countries available as industrial labourers; the improvements in the technique of ocean transportation which turned the Danish farmer from a grain seller into a producer of butter and bacon increased the demand for capital in Denmark.

The demand for capital may also change in consequence of *alterations in the supply of the other agents of production* with which it cooperates. Increased differences between interest rates in different countries are particularly likely to develop in case of discoveries of *new natural resources* in a particular country, i.e. in the case of sudden changes in the domestic supply of "land." Quantitative variations in the supply of labour may be due to changes either in the quantity of work performed by each labourer or in the number of labourers. That an increase in the *efficiency* of the labouring population may lead to import of capital, has already been touched upon. A shortening of the *working day* in a particular country will probably retard the inflow or accelerate the outflow of capital from the country in question.<sup>1</sup> Changes in the *domestic supply of labourers*, i.e. changes in the size and composition of the native population make themselves felt much more slowly, but in the long run their effects may be considerable; it is beyond dispute that the slow growth of the French population has had something to do with the export of capital from France.<sup>2</sup> Besides, the labour supply of a given country, the total quantity of labour with which its capital is to cooperate, depends also on *migrations*. This raises the difficult problem of the interrelation between the international movements of labour and capital.

When capital and labour move together from one country to another it is often quite impossible to say whether it is

average period of production for society as a whole, and thus the demand for capital, may nevertheless decrease, provided the new demands which a general increase of income make effective are directed towards commodities requiring relatively much labour and relatively little waiting.

<sup>1</sup> Cf. Ohlin, *Attetimmarsdagens ekonomiska verkningar*, Ek. Tidskr. 1925, p. 77.

<sup>2</sup> It is extraordinary that this factor is not mentioned at all in White's study of the French capital export.

the immigration which causes the capital import or vice versa. Ohlin is probably right in asserting that in Canada it was the capital invested in railways etc. which led to immigration, whereas in South America it was the inflow of labourers from Southern Europe which paved the way for large British and American capital investments: "the Italian farmer with American machinery and British capital grows wheat in the Argentine".<sup>1</sup> Usually, such combined capital and labour movements will be from "old" to "new" countries, i.e. towards countries in which the relative supply of capital and labour on one hand and natural resources on the other is widely different; in such cases an isolated movement of one factor would very soon affect the price of the other mobile factor sufficiently to start a parallel movement of this other factor.

Besides, a movement of labour will always lead directly to a certain capital flow, as the emigrants usually take some capital with them. On the other hand, emigration gives rise to subsequent capital movements in the opposite direction in the form of emigrants' remittances.

In other cases movements of capital and labour in opposite directions may be alternatives. The more mobile factors of production will, under all circumstances, tend to adapt themselves in the most appropriate way to the existing local distribution of the less mobile agents. Thus differences in the degree of mobility of labour and capital will be among the determinants of the size and direction of international capital movements. Consequently, changes in the mobility of labour may be the "cause" of an international flow of capital. If immigration is restricted in a country rich in capital and natural resources, part of its capital may go abroad to cooperate with foreign labour. There can hardly be any doubt that the recent immigration policy of the United States has accelerated its export of capital.

An analysis of the causes of international capital movements must include, therefore a study of the conditions governing the *mobility of labour*.<sup>2</sup> Here as in the case of ca-

<sup>1</sup> *Interregional and international trade*, pp. 352 and 357. Cf. also the article *Das Verhältnis zwischen dem internationalen Handel und den internationalen Bewegungen von Kapital und Arbeit*, *Zeitschr. für Nationalök.* 1930 and *Handelns teori*, Stockh. 1924, pp. 103—05.

<sup>2</sup> Valuable contributions to the analysis of the factors affecting the

pital, the obstacles do not depend primarily on the actual expenses involved in transporting the labourer, his family, and personal property to a new place of residence; they consist rather in certain checks of a psychic order; often the labourer exaggerates these transfer costs, or he underrates the advantages to be obtained in other places; and, in general, he has a deep-rooted aversion against changes, particularly changes to something more or less unknown.<sup>1</sup> Thus we find once more that the costs of factor transfer are much less tangible and definite than the costs of transport of commodities. But Adam Smith's well-known remark that "a man is of all sorts of luggage the most difficult to be transported"<sup>2</sup> has not lost its importance even in the age of railways and automobiles. It must be realised that it is the home of the labourer which has to be transplanted. Consequently, distance plays a rôle quite apart from its influence on costs of transport, though suitable migration propaganda or personal connections may make people better acquainted with conditions in distant than in neighbouring countries.<sup>3</sup> Increased density of population is likely to make labour more mobile, directly because information is more easily spread in a dense than in a sparse population, indirectly because the national character is likely to show different peculiarities in these two cases; accordingly, the urban population will usually possess a greater mobility than that of the rural districts. In this connection the form of the labour contract will also be of importance; piece-work appears to be more difficult to compare than time-earnings; moreover, the tendency of higher wages to attract labourers of superior quality makes it difficult to ascertain whether "efficiency earnings" are equalised in spite of apparent differences in gross wages.

geographical and occupational mobility of labour and their probable effects are given by Pigou (*Wealth and welfare*, and *The economics of welfare*) and particularly by Gösta Bagge (*Arbetslönens reglering genom sammanslutningar*, Stockh. 1917).

<sup>1</sup> There are exceptions, however; migrations like the feverish gold rush into California have been due no doubt to vastly exaggerated conceptions of the rewards to be obtained.

<sup>2</sup> *Wealth of nations*, bk. I., ch. 8.

<sup>3</sup> The travellings of the journeyman in older days, though probably in a very uneconomical way, informed him of the situation in many different places.

In general, it may be said that both reductions in the actual costs of transport and improvements in the labourer's knowledge of the situation will tend to increase the mobility of labour; but if costs of transport are prohibitive, even the most perfect knowledge is obviously incapable of calling factor movements into play, and if the lack of contact with conditions elsewhere is complete, even the most glorious advantages may remain unnoticed. This lack of sufficient information concerning the actual market situation elsewhere is of particular importance in the case of labour, because no one but the labourer himself has any economic interest in finding out where he can secure the highest pay; no trained professional speculator will buy up labour in order to make a profit by transferring it to these places.<sup>1</sup>

The perishability of labour also tends to hamper its mobility; the time lost while a labourer is on his way towards a new place or trying to find a job when he has arrived there, can never be recovered; particularly the newcomer's greater risk of unemployment weighs heavily in this connection. Very often he lacks the necessary reserve funds.<sup>2</sup> It is astonishing, though, how often even the most poorly paid workers succeed in migrating to the remotest places of the earth.<sup>3</sup>

Moreover, the fact that labourers are human beings means that all kinds of non-economic motives—ethical commandments, traditions and customs, ties of family or friendship, community of language, race and culture, patriotism or love of personal independence, dissatisfaction with political or religious institutions at home, lust of adventure, attempts

<sup>1</sup> Labour exchanges might conceivably to some extent take the place of the speculator. Besides, the agents of shipping companies have an interest in securing passengers for their lines; their representation of conditions in the country of immigration has often been misleading.

<sup>2</sup> It might be inferred, therefore, that anything which relieves the labourer of the pressure of poverty will also tend to increase his mobility. And in general this is undoubtedly true; it should be noted, however, that subsidies granted according to the rules of the old English allowance system (allowances inversely proportionate to the wage rates) may hamper and not increase the mobility of labour, as obviously there will be no stimulus for the worker to move to a better paid job, if his subsidy is reduced proportionately.

<sup>3</sup> The American legislation concerning "contract labor" is directed explicitly against transactions through which the employer by paying the passage for immigrants tries to secure their labour for a certain period.

at starting afresh after a failure, etc.—are of considerable importance to the local distribution of the supply of labour. But that economic considerations are at least equally important is shown, among other things, by the close correlation that generally exists between the intensity of labour movements and the phases of the business cycles both in the country of emigration and—particularly—in the country of immigration.

Among the economic considerations governing labour movements the most important is obviously the prospect of obtaining higher wages. Even if the immediate prospects are no better, there may be a more open road towards higher positions and larger incomes in one country than in another. Such more remote advantages, however, are apt to be underestimated by the labourers. Besides, it may be differences not in wages, but in other forms of income (e.g. land rents or profits) that lead to movements of labour.<sup>1</sup>

The cost of labour transfer may vary according to the direction of the movements. The barrier of language has acted more strongly as an impediment to migration from England to Germany than vice versa. The transfer of labour may be facilitated if it can take place step by step; Pigou speaks of the "virtual" costs of transfer<sup>2</sup> to indicate the sum of costs of movement along each of separate stages between two centres of demand, and very often this sum is smaller than the cost of one direct movement between the two places<sup>3</sup> This case is exactly analogous to the phenomenon already touched upon that e.g. the United States could advantageously import capital from Europe and re-export it to Central and South America; owing to differences in local knowledge this roundabout method of investment involved a smaller aggregate cost.

As will appear more fully in the next chapter international trade in commodities and international movements of capital and labour are to some extent alternatives; both tend to equalise prices of commodities and productive factors in different countries, seeking in their joint operation the line of

<sup>1</sup> Cf. *infra*, p. 145 and Sartorius v. Walterhausen, *Das volkswirtschaftliche System der Kapitalanlage im Auslande*, p. 44.

<sup>2</sup> *Economics of welfare*, p. 500.

<sup>3</sup> Cf. also Warming, *Danmarks Erhvervs- og Samfundsliv*, p. 61.

least resistance. Consequently, *increased impediments to commodity trade* may prove a stimulus to international capital movements.<sup>1</sup> If the indirect equalisation of relative factor prices through commodity trade is obstructed, the scope is widened for a direct equalising of factor return through movements of the productive agents themselves. Capital movements due to protective tariffs often take the form of establishment of branch factories within the tariff wall. In such cases the fear of losing one's market in the protected country, or the prospect of reaping high profits sheltered by the tariff barrier, may be more powerful motives to capital export than differences in interest rates. Among the different "qualities" of capital, that which prefers risky investments may be attracted to particular industries, even though the general level of interest is not higher than abroad.<sup>2</sup>

In a free-trade country patent laws, moderate taxes, lenient regulation of joint-stock enterprise, mild factory acts, small social insurance burdens on the employer, and campaigns of the "Buy-British" type may have similar effects of attracting foreign capital for founding branch factories.

In all such cases, municipalities or other local authorities often take the initiative and attempt to attract the attention of foreign entrepreneurs by communications to the industrial corporations of the interested country, by advertisements in the daily and technical press, etc. Thus, after the enactment of the new Austrian tariff act in 1906 a central committee for the promotion of the Bohemian Erzgebirg district addressed a circular letter to all German chambers of commerce stating that the region offered most favourable opportunities for the establishment of branch factories. After the passage of the new English patent Act several English cities ad-

<sup>1</sup> Cf. Gerhard Mackenroth, *Zollpolitik und Produktionsmittelversorgung*, Weltw. Arch. 1929 I.

<sup>2</sup> Ohlin points out, however, (*Interregional and international trade*, pp. 364—65) that this inflow of foreign capital may not mean a *net* increase. The Canadian tariff has attracted American capital to the eastern manufacturing districts; but at the same time the tariff has hampered the utilisation of the natural resources in western Canada. It is obviously impossible to say how much foreign capital the investments made unprofitable by the tariff might otherwise have attracted; it may be either more or less than what has been called in by the tariff. The chief result may be, therefore, that capital is led into *less* efficient channels.



vertised in German and American journals offering cheap sites for the erection of branch plants.<sup>1</sup>

There are other cases, however, in which the two tendencies towards price equalisation act cumulatively, and in which, therefore, greater impediments to commodity trade will tend to reduce factor movements; a flow of capital towards far-off oversea countries may be checked when the exports of these countries are blocked by tariffs abroad; and conversely, a reduction of the obstacles to commodity trade may stimulate the inflow of capital. This result may occur when the general level of productivity in a particular country is especially contingent on its foreign trade; for when such countries are cut off from the international division of labour, their total national income may be so considerably reduced that an increase in the *part* accruing to either capital or labour may fail to call them in from abroad.<sup>2</sup>

In general, *tariffs* will extend the production of certain commodities and reduce the output of others, which may change the relative scarcity of the different agents and perhaps cause them to move from country to country. Thus Mackenroth points out that both a duty on agricultural products in an "old" industrial country and a duty on industrial goods in a "new" agricultural country are likely to call forth a movement of capital towards the new country.<sup>3</sup>

As already explained the exports of a country tend to consist of goods containing relatively large quantities of the productive agents which are abundant and cheap in that country. The branches of production, on the other hand, in which the more scarce and expensive factors weigh heavily, find it difficult to compete with other countries on a free-trade basis. It is these latter branches of production, therefore, which are most likely to ask for protection, and consequently, the effects of protection on factor prices will probably be

<sup>1</sup> Cf. Josef Grunzel, *Economic protectionism*, Oxford 1916, pp. 271—72.

<sup>2</sup> Cf. Ohlin, *loc. cit.* pp. 359 et seq.: "Factories intended to supply a great number of countries naturally tend to be placed where cost levels are low. Protection tends to raise nominal factor prices, and therefore to repel such factories. The demand for the factors in protected countries is thus reduced and their prices in terms of goods lowered. This is the same as a reduction in the attracting power of such countries or of their natural resources."

<sup>3</sup> *Loc. cit.*, pp. 101—02.

to enhance the prices in the protected country of those agents that are already expensive and to cheapen still further the low-priced agents abroad.

The further consequence may be either an inflow into the protected country of the factors the scarcity of which is increased, or an outflow of those that are made more abundant, and as the reduction of the national income occasioned by the tariff will probably hit the protected country more severely than the outside world, the *outflow tendency* is likely to be the stronger one. But here again, the different degrees of mobility of capital and labour will obviously determine the outcome in each concrete case.

It cannot, therefore, be denied a priori that tariff policy may be used deliberately to create international capital movements. As capital is usually more mobile than labour, duties or export bounties which favour capital-requiring goods may call capital in from abroad, especially if it is at the expense of natural resources which are unable to flow out, however much their relative scarcity is reduced. This consideration has been characterised as the strongest argument for permanent protection which can possibly be produced.<sup>1</sup> At the same time it reveals the fallacy of the popular demand for duties as a means of reducing the import surplus, the "deficit", which is supposed to necessitate foreign borrowing. If the duty attracts capital from abroad by increasing the profitability of certain industries, it will obviously *increase* the import surplus, since the capital must enter the country in the form of commodities or services.<sup>2</sup>

It is conceivable that changes in duties in one country may release capital movements between other countries, one or both of which have intimate trading connections with the former country. The low rate at which Cuban sugar goes into the United States has stimulated the flow of capital into

<sup>1</sup> Heckscher, *Ek. Tidskr.* 1919 p. 25. The argument is far from being new. It is found e.g. in Alexander Hamilton's famous *Report on the subject of manufacture* from 1790. Cf. Richard Schüller, *Schutzzoll und Freihandel*, Wien and Leipzig 1905, p. 81 and W. Ashley, *The tariff problem*, 4. ed., London 1920, p. 78. The argument is criticised by Pigou, *Protective and preferential import duties*, London 1906, pp. 9—12 and Haberler, *Der internationale Handel*, Berlin 1933, pp. 201—05.

<sup>2</sup> Cf. a discussion in "Nationaløkonomisk Forening" in Copenhagen in 1884 between Moritz Levy, Falbe Hansen, Scharling, Philip Schou and Marcus Rubin (*Nationaløk. Tidsskr.* 1884, pp. 417—33).

the Cuban sugar industry. In this case, most of the capital has come from the States, but some of it has also been European.

It is hardly necessary to go into details with regard to the factors determining the supply of capital in order to show that these factors are of greatly varying strength in different countries. The "effective desire of accumulation", the "time preference," on which the willingness to save depends, will vary with the national character and cultural development of the population, and similarly, the capacity to save will be influenced by the size and distribution of the national income. The insufficiency of the domestic supply of capital in Denmark in the last two generations is probably due largely to the comparatively equal distribution of wealth.<sup>1</sup> Keynes points out, on the other hand, how the "new rich" created by the industrial revolution, educated in a Puritan spirit, preferred investments to lavish consumption,<sup>2</sup> and Frank H. Knight even questions whether the modern European peoples, and especially the Teutonic stock and the west European Jews, may properly be said to "discount the future"; they seem to him rather to "look before and after and sigh for what is not" and neglect the present moment. In large part the earnings of their invested capital are never "enjoyed", but reinvested indefinitely.<sup>3</sup> There can scarcely be any doubt that differences in their rate of growth will also influence the savings of different populations, though it may be difficult to tell a priori how a change in the increase of population will affect accumulations. Much has been said lately on the question of how the supply of and the demand for capital will probably develop in a country with a stagnant population; but so many variable factors enter into the determination of this problem that it is sheer guess-work to try to balance their relative importance. A rigid wage structure leading to unem-

<sup>1</sup> As early as in the 1870'ies and 1880'ies this was repeatedly suggested by the eminent Danish banker, Moritz Levy (cf. *Nationalek. Tidsskr.* 1875, p. 295 and 1884, p. 417). Recently, Warming has pointed to the anomaly that hospitals e.g. are better equipped in Denmark than in the countries from which Denmark has borrowed money for building them (*Danmarks Erhvervs- og Samfundsliv*, p. 337).

<sup>2</sup> *Economic consequences of the peace*, London 1919, pp. 16—17.

<sup>3</sup> Frank H. Knight, *Professor Fisher's interest theory*, *Journ. of Pol. Ec.* 1931, pp. 202—03.

ployment and capital consumption may give occasion to foreign borrowing.<sup>1</sup>

Ragnar Nurkse makes some interesting remarks on the ways along which an increased supply of capital in a particular country is diffused.<sup>2</sup> He points out that owing to the different costs of capital transfer the international difference in interest rates must reach a certain point before a capital flow is called forth; it must be sufficient to offset all the different "elements of friction". Until that point is reached the increased supply of capital will be invested at home. But this may start a mechanism the indirect result of which is to release an international movement of capital. Nurkse assumes three countries or regions. Country A specializes on production of goods of the highest order ("Urproduktion," mining, etc.), country B produces intermediate products (machines, semi-manufactured goods), while country C completes the manufacturing process and turns out goods of the first and lowest order (consumers' goods). Of these consumers' goods one third remain in C to be consumed by its inhabitants while two thirds are sent to B in exchange for imported machines and semi-manufactured goods; B consumes half of the imported finished goods and gives the other half in connection with some of its output of machinery in exchange for the raw materials produced in A. Suppose now that the rate of saving increases in C, i.e. that C's demand is shifted towards more distant future goods. The rate of interest falls in C. It becomes profitable to employ more roundabout methods of production and C's productive apparatus is enlarged. Consequently, C's demand for B goods is increased, and the barter terms of trade are turned in B's favour. This makes production in B more profitable and increases its interest rates. In this way the interest differential between C and B is *widened enough to cover the costs of capital transfer*, and then capital disposal moves from C to B in the form of some of the additional consumers' goods now produced in C. This means more roundabout production in B, resulting in increased demand for A goods. In an exactly similar way profits and interest rates are raised in

<sup>1</sup> Cf. Hayek, *Kapitalaufzehrung*, Weltw. Archiv, 1932 II.

<sup>2</sup> *Ursachen und Wirkungen der Kapitalbewegungen*, Zeitschr. für Nationalök. 1934, pp. 86 et seq.

A, until capital disposal moves from B to A in the form of C or B goods.

This gives an interesting explanation of the correlation between (1) changes in the relation between the prices of raw materials and finished goods, and (2) variations in the movements of capital between the countries producing these goods. Obviously, the real world does not correspond to the simplified picture outlined above where each region produces only goods of a certain order; on the contrary, the same country makes goods belonging to all the different stages; yet it seems safe to say that, on the average, the industrial countries of Europe produce goods of a lower order than the overseas countries producing raw materials, and as already mentioned<sup>1</sup> it appears from the League of Nations' Memorandum on balances of payments for 1930 and the studies of Folke Hilgerdt, that the years in which price relations were most favourable to the countries producing raw materials and foodstuffs were also the years in which the capital export from the industrial countries reached its maxima.

The preceding considerations have reference mainly to long-term investments or, at any rate, to what has been called "real" capital movements. The rôle played by short-time fluctuations in interest rates and particularly their influence on "equalising" capital movements can be more adequately explained in connection with the analysis of the mechanism of capital transfers.

It has already been suggested that in order to be quite correct the analysis should deal with changes, not in *the* rate of interest, but in *one* of the interest rates prevailing in different parts of the loan market. For as explained above<sup>2</sup> it is not only the *level* of interest rates, but also the *relation*—the "spread"—between the individual rates which varies from country to country, owing to the fact that the foreign demand and supply is concentrated in certain definite parts of the capital market. Consequently, the only changes in interest rates which will lead directly to international capital movements are those which affect such forms of loans as are open to foreign lenders or borrowers; changes in

<sup>1</sup> *Supra*, p. 75.

<sup>2</sup> *Cf. supra*, p. 112.

interest rates in other parts of the capital market will not directly bring about an inflow or outflow of capital; they must first spread their effect, by means of internal capital movements, to those parts of the market at which the foreign lenders or borrowers appear, and the extent to which such internal substitutions of different kinds of loans are possible depends upon the organization of the market in question.<sup>1</sup>

#### 5. OTHER FACTORS INFLUENCING INTERNATIONAL CAPITAL MOVEMENTS.

Although a sufficiently large international difference in interest rates may generally be regarded as the prime mover of capital between countries, both the direction and the extent of international capital flows may also be affected by a number of other circumstances.

Among the economic motives governing the dispositions of the investor his fear of putting all his eggs in one basket is especially relevant in this connection. It may be argued, of course, that his *inclination to spread his capital* over a great number of investments in order to minimize his risk, is but a particular aspect of his desire to obtain the largest possible return on his capital. Yet, it is fairly obvious that this procedure may lead to capital movements even between countries having the same level of interest rates, and that this motive to capital export must be added, therefore, to the desire to take advantage of international interest differences.

The growing significance of banks, investment trusts, insurance companies, and similar institutions has reinforced the importance of this motive, and thereby promoted international capital movements. During the World War the insurance companies operating in different countries discovered the difficulties which might arise when their reserves were not invested in the same country in which their future payments were due.

In order to spread his capital over a sufficiently wide field the investor may have to give up the full utilisation of his special knowledge in a particular branch; in such cases the

<sup>1</sup> Karin Kock, *loc. cit.*, p. 105.

advantages of each procedure must be weighed against those of the other.

This motive of diffusion of risk must not be over-emphasized, however. In the case of France, for instance, the geographical distribution of her foreign investments has tended to *increase* rather than to decrease the risk of loss. One-fourth of the French foreign holdings before the War were concentrated in Russia, and the rest consisted of loans to countries of very doubtful political and economic stability.<sup>1</sup>

A kindred motive for exporting capital is sometimes supposed to spring from the *protection of a country's gold reserve* which holdings of international securities provide. The implication is, of course, that when gold movements are avoided, the country is also insured against credit and price fluctuations. There is no doubt that equalising short-term capital movements serve to obviate the necessity of shipping gold in case of temporary exchange disturbances.<sup>2</sup> But, obviously, this purpose may be served better by first class domestic securities having an international market than by second rate foreign bonds (French *rentes* versus Russian bonds in French possession). At all events, foreign bills, or deposits with foreign banks, may be more adequate than a portfolio of long-term securities. The experiences made during the War and in 1931 disclose how ill-adapted such portfolios are for providing *liquid reserves in times of national strain*. When it becomes necessary to dispose of the securities in large quantities, they are likely to be unsaleable except at great loss.

Quite another thing is that a creditor country which normally reinvests abroad a considerable part of its income therefrom may keep up its standard of living in a period of depression simply by curtailing its export of capital. This was what England and other creditor countries did after 1929. But this interrelation between business fluctuations and capital movements has already been considered.

The inducement to send capital abroad may be the prospect of reaping *other gains or incomes* than interest proper. To get a share of the *rising land values* of rapidly growing new communities it will usually be necessary for the capitalist to move

<sup>1</sup> White, *loc. cit.*, p. 289.

<sup>2</sup> Cf. *infra*, chapter XIII. 2.

to the new country together with his capital,<sup>1</sup> but in special cases part of such rents may accrue also to absentee owners.<sup>2</sup> And similarly, the large *business profits* which often lure in such new countries will attract not only business leaders, but also foreign-owned capital seeking active investments. Increased duties that make the production of particular commodities more profitable than before, may attract foreign capital to these special branches of production, even though the effects on interest rates in general are inconsiderable. In all such cases the international differences in interest rates will be of small or no importance to the size or direction of the capital movements. Capital migrating in search of high profits is particularly sensitive to changes in general business conditions. It is especially when this motive is prominent that the capital movements may be expected to show violent fluctuations.

On the whole, these active foreign investments may be influenced by a great variety of motives.<sup>3</sup> Capital may go abroad to create or conquer a new *market* or to get a secured access to important *raw-material supplies*. It has already been pointed out how high tariff walls or other obstacles to commodity trade may lead to the establishment of foreign branch factories; in such cases the ties connecting the branches with their mother concerns may pave the way for a capital flow from the home country even if there be no material interest differences. But it is also possible, of course, that large concerns operating in a number of countries make a conscious endeavour to use their international connections so as to draw their capital supplies from the cheapest market in each particular instance.<sup>4</sup>

<sup>1</sup> Cf. Marshall's well-known account of the settler who looks to the value of the land for part of his reward for his labour and hardship. "The new settler regards his wheat almost as a by-product; the main product for which he works is a farm." (*Principles*, p. 129).

<sup>2</sup> As already mentioned Gordon Wood (*Borrowing and business in Australia*, pp. 7—8 and 49 et seq.) explains how capital was almost forced upon Australia by the eagerness of the foreign investor to share the opportunities for profit offered by land speculation.

<sup>3</sup> Besides, it is self-evident that the *form* in which the foreign investments are made will depend to a large extent on the motives by which they are prompted.

<sup>4</sup> As Ohlin points out there seems to have been a marked tendency in this direction in recent years; such firms as the Dutch Shell Company or the Swedish Match Company have taken deliberate advantage



The desire of evading *high taxes* or the handicaps imposed on production by *onerous social legislation* should also be mentioned among the economic motives that may cause capital to move between countries.

Short-time capital movements may likewise be prompted by other motives than the desire of getting higher interest. For the financing of international trade and for other purposes it is necessary to keep certain *cash reserves* in foreign countries; they are comparable to the internal clearing balances held by the banks at the central bank. The total amount of such balances and the choice of the market in which to hold them will depend on the size and direction of the country's foreign trade and other international transactions, on the sensitiveness of its domestic economic life to discount changes, on the more or less advantageous organization and geographical position of the different foreign money markets, and on a number of other circumstances among which international differences in interest rates are not very prominent. In the post-war period special circumstances have contributed to augment the volume and importance of these short-term foreign balances. In several countries monetary stabilisation took the form of a gold exchange standard under which the reserves of the central bank consisted, wholly or partially, not of gold, but of foreign exchange, i.e. titles to gold held in other monetary centres where gold was freely obtainable. In the period 1924—26 when the franc was depreciating and its future highly uncertain, large volumes of French capital were placed abroad for safety; when the franc was stabilized these funds did not return home immediately; the French banks, into whose hands they gradually drifted, retained them in London or New York, but now the desire to take advantage of the higher rates of interest prevailing in these markets became more decisive. Concerning the foreign balances of central banks, on the other hand, it has often been legally prescribed where they must be held if they are to count as reserves against the note issue, and sometimes the capacity to serve as note cover is restricted to non-interest bearing foreign deposits, so that the influence of interest differentials is completely ruled out.

of their ability to borrow in different markets wherever the rate of interest is low (*Interregional and international trade*, p. 334).

Consequently, it is changes in all these other circumstances rather than in interest differentials which will cause movements of such balances. They are mainly confined to a few important money markets, notably those of London and New York. No doubt, the abundant supply of capital seeking short-time investment has contributed to the comparatively low discount rate in the London money market, while at the same time it has made possible the large-scale financing of international trade. These two phenomena, the first representing an import of capital and the second an export, are thus interdependent. Big foreign holdings may, however, entail grave inconveniences for the market concerned. Events which occur outside this market may force banks abroad to withdraw their holdings in gold and thus cause a stringency and rising interest rates which, if coincident with a stringency in the domestic market due to internal conditions, may involve considerable difficulties. How fatal such withdrawals are liable to be was seen in 1931 when they were largely responsible for Great Britain being forced off the gold standard.<sup>1</sup>

Foreign reserves of the type here described usually take the form of bank balances, but bills, call loans, and international securities are also used for this purpose. And among the forms of investment available the foreign bank will obviously choose that which, all circumstances considered, gives the highest return just as in the case of an investment of balances in an isolated market.<sup>2</sup>

Apart from purely economic motives, *political considerations* have often exercised a powerful influence on international capital movements between particular countries. There can be no doubt, for instance, that the flow of French capital into Russia, and of German capital into Italy before the War was partly due to the peculiar atmosphere created by the friendly political relations between these countries. Similarly, Viner points to the closeness with which new Russian loan issues on the London market followed the variations in British diplomatic relations with Russia.<sup>3</sup>

<sup>1</sup> An excellent account of the debacle is given by Lionel Robbins, *The great depression*, London 1934, pp. 91 et seq.

<sup>2</sup> Cf. Karin Kock, *loc. cit.*, p. 101.

<sup>3</sup> *Political aspects of international finance*, p. 157.

Even without being exposed to direct government pressure, the bankers of the leading creditor countries have shown a marked reluctance deliberately to counteract the known diplomatic policy of their countries; they have an obvious interest in avoiding financial commitments with nations that may soon be involved in war with their own countries. Thus it was quite generally understood by French bankers after 1870 that there was a tacit government veto on the public flotation of German securities.<sup>1</sup>

But as already mentioned there have also been numerous instances of direct promotion or restriction of capital movements through government action. One of the purposes of this interference: the attempt to link capital exports and commodity exports directly together, has been dealt with at some length in chapter I. A number of other motives are exemplified in the studies made by Viner and Angell. One of the most curious examples is the American objection in 1927 to a loan to a Czechoslovakian brewery on the ground that "the administration could not consistently approve a loan for the manufacture of a beverage abroad considered illegal at home."<sup>2</sup>

The League of Nations loans referred to above were intended in each case for the purpose of general economic and financial reconstruction of the recipient countries. That is, they were meant to fund excessive floating debts, to meet budget deficits which were both a cause and an effect of currency instability, or to provide a newly created central bank with an appropriate amount of gold or gold exchange. Here, accordingly, the action of the countries cooperating under the auspices of the Finance Committee of the League of Nations was prompted by political and economic considerations which were only indirectly related to their domestic trade and employment situation. They did not expect immediate commercial advantages; their aim was rather to contribute to the restoration and rebuilding of those countries whose protracted inability to extricate themselves from the distress of the War and its aftermath had come to be regarded on all sides as a political menace.<sup>3</sup>

<sup>1</sup> Emile Beque, *Internationalisation des capitaux*, p. 180.

<sup>2</sup> Cf. Edwards, *loc. cit.*, p. 699.

<sup>3</sup> Cf. the British memorandum referred to *supra*, p. 84, note 1.

This general policy of promoting the financial rehabilitation of Europe has also been actively supported on several occasions by the Federal Reserve Banks in the United States, which concerned themselves especially with the restoration of the gold standard. Beginning in 1925, they arranged a series of credits to European central banks and treasuries for this purpose and the lowering of discount rates in 1927 was effected with an explicit view to European conditions. In 1931 both the Federal Reserve System and the Banque de France granted huge credits to the Bank of England in order to defend the "Old Lady" against the run on sterling, without staving off the disaster, however.

In a number of the Central American countries the main American financial interest is represented by the United Fruit Company. This powerful concern appears to have adopted a policy of appealing as little as possible to the United States government for help; instead it seems to have built up types of control which, it has been suggested, bear some analogy to the operations of the old British East India Company.

That non-economic considerations play the dominant rôle when the size of subsidies, tributes, or reparation payments is determined need hardly be explicitly mentioned. And it is equally clear that other factors than differences in interest rates govern the size and direction of capital flows resulting from migrations.

It is conceivable, however, that once the amount of the reparation payments is settled, their actual transfer may come about as the automatic result of interest differences deliberately created by the government of the paying country through domestic loan transactions. The French government, e.g., floated two great internal loans in 1871 and 1872 (of 1,500 and 3,000 mill. francs respectively). These large loans depressed the prices, not only of other French securities, but also of foreign bonds owned by French capitalists. Consequently, it became a profitable business to buy such securities in Paris and sell them abroad where their prices were higher. Thus the French capitalist by converting his foreign holdings into French *rentes*, supplied the foreign exchange with which the indemnity to Germany was paid. In other words, the indemnity payment caused an offsetting flow of previously exported capital back to France. Similarly, the German reparation

payments after the Great War have fortified the inflow of capital into Germany.

Finally, purely *personal preferences* may influence the direction of international capital movements. As already mentioned capitalists differ in their capacity to bear risks as well as in their estimation and valuation of these risks. But it is especially when the owner migrates together with his capital that a number of such purely personal motives come into play. He will consider landscape and climate, language and culture, and a dozen other things in the country towards which he sets out, but *directly* these considerations concern the mobility of his own person, of course, rather than the mobility of his capital.

## CHAPTER III

### THE EFFECTS OF INTERNATIONAL CAPITAL MOVEMENTS

#### 1. INTRODUCTORY REMARKS.

In order to understand the influence of international capital movements on prices and incomes it may be useful to adopt for a moment the classical assumption of complete international immobility of both capital and labour. In that case commodities alone will move and serve as an indirect exchange of the factors of production; each country will specialize in the making of goods calling for large quantities of the productive factors which are most abundantly supplied in that country, and through the export of such commodities its copious supply of these agents is put in contact, not only with its own local demand, but with the demand of other countries as well; thus the transfer of goods acts as a substitute for the supposedly impossible transfer of factors.

The most obvious effect of this commodity trade is to equalise the prices of the commodities actually exchanged (barring the influence of costs of transportation). But unlike the classical explanation the modern mutual interdependence theory of value at once suggests that its effects extend to all parts of the price structures of the trading countries, i.e. to the prices of home-market goods and of productive agents.<sup>1</sup>

(1) When commodity trade is regarded as an indirect exchange of the productive agents by means of which the international goods are produced, it is easily perceived that this indirect exchange must alter the relative scarcity or marginal

<sup>1</sup> Cf. Ohlin, *Interregional and international trade*, chs. II, VI and VIII and *infra*, pp. 476 et seq.

productivity of the different *factors*. When outside demand is brought to play on the abundant supply of certain productive agents, their scarcity will be increased, whereas the scarcity of other factors will be lowered when the domestic demand can be satisfied also from the ampler resources of other countries. Thus the original inequalities in the productive equipment of the different countries are diminished; and consequently, the trade in commodities exercises an equalising influence also on the prices of productive factors. In the simple case of two countries—say England and Australia—and two factors of production—say land and labour—this is almost self-evident; an exchange between English cloth and Australian wheat means increased scarcity of labour and decreased scarcity of land in England, and decreased scarcity of labour and increased scarcity of land in Australia. But the same sort of reasoning can easily be applied to a greater number of countries and of productive agents. In these more complicated cases the rule is not without exceptions, however. — (a) If the technical coefficients are given once for all, so that the principle of substitution is not allowed to work, the differences in relative scarcity may be widened with regard to particular factors or countries; a commodity requiring much of an abundant and cheap factor may very well be produced in a certain country although it also requires a small quantity of another very scarce and expensive agent, with the result that the international differences in the price of this latter factor are increased. — (b) If a certain commodity is produced in different countries by very unequal methods, i.e. if the technical coefficients vary greatly from country to country, the transfer of its production from one country to another may mean that the increased demand in the latter will benefit *other* factors than those for which demand falls off in the former; this is merely an application of the general rule well known in economic theory that whenever two agents of production are competitive rather than cooperative, an increased scarcity for one of them means a higher and not a lower marginal productivity in respect of the other.<sup>1</sup> The

<sup>1</sup> Suppose that rice has been produced both in U.S.A. and in China by means of relatively much labour and relatively little capital. In that case the opening of trade between the two countries and the transfer of rice-growing to China means falling marginal productivity of capital in China, rising marginal productivity of capital in U.S.A. But

importance of this exception is reinforced by the fact that when import takes the place of home production it is not always identical goods that are substituted for each other, but entirely different commodities catering to the same wants; for there is no necessity, of course, why these different goods should require identical proportions of the different agents (i.e. identical technical coefficients). In such cases where the factors set free in the importing country are others than those by which the imported goods are produced, it is even conceivable that the exports with which these imported goods must be bought require the different agents of production in exactly the same proportion as that in which they have been made superfluous; should that happen, no change in the relative scarcity of the different productive agents would take place in the importing country.<sup>1</sup>—(c) Finally, the desire to take advantage of the economies of scale may widen the international differences in factor prices or even lead to the creation of new differences; by making large-scale production possible international trade tends to increase the relative scarcity of the least divisible agents of production.<sup>2</sup>

Yet it seems safe to say that, on the whole, the degree of inequality in relative factor prices is diminished by commodity trade, although this concept of greater or less equality is not quite unambiguous when there are more than two factors.<sup>3</sup>

(2) Regarded as a function of *all* commodity prices the demand for *home-market goods* cannot be unaffected by the influence which trade exercises on the prices of international goods. Besides, the changed relative scarcity of productive factors will alter the costs of home-market goods. Conse-

if U.S.A. employed other methods for rice-growing, requiring much capital and little labour, the transfer of this cultivation to China may mean decreased scarcity of capital relatively to labour both in U.S.A. and in China.

<sup>1</sup> Cf. Heckscher, *loc. cit.*, pp. 8—11, and *infra*, p. 499.

<sup>2</sup> Suppose that the relative prices of all productive agents coincided in a number of isolated countries, but that economies of scale led to international division of production and trade between them. In that case the trade might be said to be the cause of the ensuing differences in relative factor prices, differences which would lead in turn to further commodity trade of the usual price-equalising sort.

<sup>3</sup> Pigou asks in this connection: "Are we to measure the degree of equality by the mean deviation from the average value, or by the standard deviation, or by the "probable error," or by some other statistical measure?" (*Economics of welfare*, p. 139, cf. p. 99).



quently, though the price movements of home-market goods in different countries may differ, they are not completely independent. International trade in some commodities has a certain equalising influence also on the prices of all other commodities.

To sum up: the trade in commodities, besides equalising the prices of the goods actually traded, exercises a certain equalising influence on the prices of other goods and of the factors of production.

What has been said so far of the influence of commodity trade on the prices of the factors of production, refers only to their *relative* prices in different countries. As a general rule, their *absolute* prices in terms of commodities in each country, i.e. the real incomes accruing to their owners, will be increased in consequence of international trade, which, of course, is but another statement of the familiar fact that territorial division of labour makes production more efficient and increases the total national dividend. If the relative scarcity of a given agent of production is increased its real income is augmented in a double way: it gets a larger share of a larger total. In the cases of reduced relative scarcity of certain productive agents the result is more uncertain; they get a smaller share of a larger total, and it is impossible to say a priori which of the two opposed tendencies is the stronger one. In the case of wages and salaries which normally constitute the major part of the total national income, the general increase in productivity will usually mean more than the possible reduction in the part of the produce going to labour, but with regard to interest or rent the outcome is doubtful.

Further, these changes in the size and distribution of the national income will react in the usual way on the quantities demanded of each particular commodity and service according to its elasticity of demand, which means further readjustments in the relative scarcity of the different productive agents.<sup>1</sup> Similarly, the methods of production will react on the altered situation of factor prices; in the making of both domestic

<sup>1</sup> Besides, international trade may affect the character of demand by influencing the tastes and desires of the trading peoples; new wants are created, or new means of satisfying old wants brought within their reach.

and international goods it will be profitable to change the proportions in which the different factors of production are combined. And finally, the reflex influence of supply will vary from agent to agent according to its degree of elasticity.

When costs of transfer<sup>1</sup> restrict the trade in commodities they also indirectly counteract the tendency towards equalisation of factor prices, and the more so because they reinforce the importance of the lack of factor divisibility. Consequently, the existence of costs of commodity transfer will lead, not only to different commodity prices in different countries, but also to *greater* international differences in factor prices than would otherwise have been possible.

## 2. EFFECTS ON PRICES AND INCOMES.

The preceding brief sketch is intended merely to give a background for the following analysis of the influence of international capital movements on prices and incomes. It is necessary to examine, therefore, how the picture outlined above is modified when the assumption of complete international immobility of all productive factors is given up.

Let us assume first that capital possesses a certain degree of international mobility whereas all other agents of production (i.e. all grades of labour and all natural resources) are immobile as between countries. As explained in chapter II the chief "cause" of international capital movements is to be found in the varying relative scarcity of capital in different countries. Similarly, the main "effect" of such movements is to create a tendency towards an equalisation of this relative scarcity. When capital is transferred from a country, in which it is abundantly supplied, to another, in which it is sparsely supplied, its scarcity is increased in the former country, lowered in the latter. Capital sets out in search of the other immobile factors, so to speak, in order to get combined with them in the most advantageous proportions. Its movements tend to neutralise the disadvantage of the uneven productive equipment of different countries. They also tend to

<sup>1</sup> Under this term is included, not only the costs of transportation, but also the rewards necessary to overcome all other obstacles to international trade (duties, preference of national goods; lack of intimate contact with the foreign market, etc.).

offset lacking factor divisibility; when all the factors of production were completely immobile, this imperfect divisibility might counteract the tendency of commodity trade to equalise factor prices, but when factor movements are possible, the desire to take advantage of the economies of scale is merely a further inducement to such movements. The most obvious effect of international capital movements, therefore, is to create a *tendency towards equalisation of interest rates as between countries*.<sup>1</sup>

Very often the flow of capital instead of equalising interest differences already existing prevents such differences from coming into existence. That is more likely the less friction the capital movements encounter and the more they take place *pari passu* with changes in the basic data of the price systems.

It is also conceivable that in actual life a considerable movement of capital may take place without exercising an appreciable influence on the rate of interest. As we are reminded by Richard Reisch,<sup>2</sup> the granting of credits takes place

“nicht nur nach der Höhe der angebotenen Verzinsung, sondern auch unter Berücksichtigung einer Reihe sonstiger Momente (wirtschaftliche Leistungsfähigkeit und Eigenvermögen des Kreditnehmers, verfügbare Sicherstellungen usw.) und insbesondere unter Berücksichtigung der bei einem bestimmten Zinssatz verfügbaren Kreditmenge vergeben wird. ... Unter diesen Umständen wird die schliessliche Aufteilung der zu einem bestimmten Zinssatz verfügbaren Kreditmenge auch durch ausserwirtschaftliche Momente—Berücksichtigung der übrigen Kundschaft, von altersher bestehende Geschäftsverbindungen usw.—bestimmt. Daher ist es eine durchaus nicht ungewöhnliche Erscheinung dass eine Kreditexpansion, die infolge vermehrter Ersparnisse oder Einfliessens ausländischer Kapitalien ermöglicht wird, *selbst ohne Herabsetzung des Zinsfusses* Platz greift

<sup>1</sup> Ohlin points out (*Interregional and international trade*, p. 397) that capital movements involve (1) a monetary transfer of purchasing power, (2) a real transfer of commodities and services, and (3) a change in the supply of the productive factor called capital, and he discusses in separate chapters (a) the transfer mechanism, and (b) the effects of the changed factor supply. It is worth noticing, however, that the transfer mechanism may also involve a change in the relative scarcity of productive factors in the countries concerned. And for the moment these indirect effects may be much more important than the direct effects, since the amount of capital transferred in any single period—a year, for instance—will usually be small compared with a country's total capital supply.

<sup>2</sup> *Begriff und Bedeutung des Kredites*, Weltw. Arch. 1932 I, pp. 505—06.

und zu Nachholung früher unerfüllt gebliebener Kreditwünsche... verwendet wird."

The mere fact that imported capital is used for consumptive purposes does not deprive the import of capital of its influence on the relative scarcity of capital in the borrowing country. The net supply of capital disposal after deduction of capital consumption will obviously be greater when the domestic savings are supplemented by an import of capital. It might be argued that if capital moving into a given country is used for an extension of immediate consumption which would not otherwise have taken place, the capital supply of the borrowing country is not affected. Similarly, the capital supply of the lending country might be said to be unaffected by the export of capital, if it were counterbalanced by an exactly equal increase in the domestic supply of savings.<sup>1</sup> But such cases are, of course, to be explained as the combined result of two independent changes in the price systems of the two countries: one leading to a capital movement between them, and another involving an alteration of their saving habits. It is also conceivable, however, that certain basic changes affect *both* the international movements *and* the domestic supply of or demand for capital. It has already been shown how changes in the domestic supply of or demand for capital may give rise to international capital flows, and the probable reactions of domestic capital supply and demand against such flows will be discussed in a moment.

Normally, it may be concluded, the international movements of capital add to the tendency towards indirect equalisation of factor prices through trade in commodities, a tendency towards *direct equalisation of the prices of the mobile factor*. It must be inquired, therefore, how these two price-equalising tendencies are interrelated. If all factors of production lacked every mobility, the whole adjustment, as already explained, would be left to the trade in commodities, and usually this will be quite insufficient to create a perfect equalisation of factor prices. When a certain mobility of the factors themselves is introduced, it means that whenever this new way towards price equalisation is easier it will be preferred. In all such cases, a transfer

<sup>1</sup> But it should be noted that unless a counterbalancing of this sort takes place in *both* countries, the *relative* scarcity of capital will be altered by its transfer.

of factors takes the place of an exchange of goods; *movements of factors are substituted for those of commodities*. If, on the other hand, commodities were completely incapable of transfer from country to country, factor prices could only be equalised by way of transfer of the productive agents themselves, and though under such conditions factor movements might take place on a much larger scale than at present, they could not bring factor prices to one level in all countries unless the mobility of all the factors were complete.<sup>1</sup> Consequently, when a certain mobility of commodities is added, this will be operative in all cases where commodity transfer involves smaller cost than factor transfer. In such cases the *transfer of commodities is substituted for that of productive factors*. So far, the effects of commodity mobility and factor mobility appear to be *alternative and not cumulative*; both contribute to the equalisation of the prices of productive factors, but *not at the same time*; their effects are not heaped upon one another; every transfer of factors makes superfluous a certain exchange of commodities, and vice versa. Whether one procedure or the other shall be set in operation depends on which is the more efficient in producing the equalisation of factor prices.

If the means of commodity transportation are improved, trade in commodities will increase and equalise factor prices to a greater extent than before, thus making certain factor movements superfluous. If the obstacles to factor transfer are reduced, these movements will take place on a larger scale than before, thus obviating part of the previous commodity trade.

There may also be cases, however, in which the two price-equalising tendencies are *cumulative in their effects*. Increased mobility of commodities may place oversea countries within the reach of distant markets and thereby call forth a movement of productive factors into these countries. And conversely, increased obstacles to commodity trade may put an end to the inflow of productive factors.

The equalising effect of international capital movements on interest rates is not without exceptions. It may happen that the previous supply of capital in a given country has been so scarce compared with its abundant equipment of natural resour-

<sup>1</sup> Cf. *supra*, pp. 2 et seq.

ces that an inflow of capital leads to higher and not to lower marginal productivity of capital. It is generally recognized in economic theory that the law of diminishing productivity is not operative until a certain point is reached. Up to that point the marginal productivity of capital moves in the same direction in the capital-exporting and in the capital-importing country.

Like commodity trade international capital movements will influence, not only the *relative* factor prices, but also their *absolute height* in terms of commodities. The transfer of capital disposal or waiting from countries where its marginal productivity is low to countries where it is high, means a more efficient combination of the productive agents and an *increase in the combined national income* of the two countries.<sup>1</sup> But against this increase must be placed the *temporary losses* caused by the readjustments of the productive process which capital movements make necessary.

When the subsequent effects of this increase in the total national income are studied, it must be remembered that in case of foreign loans the *interest payments will accrue to the lending country* and be consumed or invested by its capital-owning class, a fact of considerable importance to the mechanism of adjustment. This may also have important *social implications*. The usual contrast between capital owner and worker obviously gets a special character when the contrast is between a *foreign* capitalist and a native labourer. The aversion against the "absentee capitalist" is no uncommon feature in debtor countries; and the creditor country runs the risk of becoming a nation of "rentiers" rather than of "adventurers."<sup>2</sup>

This aspect of the effect of capital movements on the national income—the sluggish development of production in the lending country—has been repeatedly stressed by French authors.<sup>3</sup> It has been suggested that in the absence of a strong bias in favour of foreign investments a complete change in the psychology of the producers might have resulted from the additional supply of capital which would then have been at their

<sup>1</sup> The difficulties of measurement involved in this concept cannot be discussed in this connection.

<sup>2</sup> Cf. A. E. Davies, *Foreign investments*, London 1928, pp. 15—19.

<sup>3</sup> Cf. e.g. R. Masse, *La production des richesses*, Paris 1925, p. 4. A number of other references are given by White, *loc. cit.*, pp. 298—99.

disposal, and that this might have exercised far-reaching subsequent effects on both demand for and supply of capital.

In general, it is obvious that it does not suffice to demonstrate that international capital movements will normally increase the aggregate world income. It is at least equally important to inquire how this increase of income is divided between the different countries, and how functional and personal distribution within each country is likely to be affected by the capital flows.

To determine a priori how the total *national income in each individual country* will be affected by capital movements is hardly practicable. The relevant factors are too numerous, and their relative strength too uncertain, to allow a discounting to present values of all the future gains and losses accruing to a particular country.<sup>1</sup> As we saw in the preceding chapter it is by no means an undisputed fact that the lending country actually gets a higher rate of interest on its foreign than on its domestic investments, when due account is taken of the risks involved. And, as will appear more fully in part II, capital movements may be accompanied by changes in the barter terms of trade. Besides, Ohlin points to the fact stressed by Wicksell that

“from the point of view of total national output the marginal productivity of capital measured by changes in the volume of production, is less than the rate of interest. Increased supply of capital tends to raise wages and rents, and thus only partially takes the form of a greater supply of capital goods. Instead each capital good represents more wages and rent. Reduced supply of capital depresses wages and rents and, therefore, leads to a smaller reduction in the quantity of capital goods than in proportion to the reduction of the capital supply.”

Regarding the *functional and personal* distribution, the import of capital means lower interest rates in the borrowing country, not only on the foreign loans, but also on the investments of domestic origin, and higher return to land and labour. In this case it is probable, therefore, that the change in the size of the national income will go hand in hand with *greater equality* in its distribution. In the lending country, on the other hand, the export of capital will normally mean, in the first instance at least, an increase in interest rates on both foreign and

<sup>1</sup> Cf. Ohlin, *loc. cit.*, pp. 448—50.

home investments, relative to the returns to labour and land; in pecuniary terms the gain to the capital-owning class will exceed the losses of the other classes, but in terms of welfare many will regard it as a serious drawback that the increase in national income is accompanied by an *intensification of the inequality of distribution*. But here again, it must be remembered that if the total national product has increased, the income of a given class in terms of commodities may rise even though it gets a smaller share of the total than before.

Moreover, it is generally alleged that there may be a number of secondary, long-run advantages to be weighed against the temporary injury which the export of capital may do to certain classes. As intimated in the preceding chapter the exported capital may serve to promote the production abroad of *cheaper raw materials, foodstuffs, or manufactures* for which the lending country provides a ready market, or to develop *markets for the export goods* of the lending country. These benefits, which are merely one aspect of the increase in the national income, will tend to diffuse themselves among all classes in the capital-exporting country, thus counterbalancing the intensified inequality. John Stuart Mill's argument with regard to England stresses this aspect of the problem:

"It is to the emigration of English capital, that we have chiefly to look for keeping up a supply of cheap food and cheap materials of clothing, proportional to the increase of our population; thus enabling an increasing capital to find employment in the country, without reduction of profit, in producing manufactured articles with which to pay for this supply of raw produce. Thus, the exportation of capital is an agent of great efficacy in extending the field of employment for that which remains ..."<sup>1</sup>

It must be pointed out, however, that the reduction in the cost of imports arising from reduced costs of production abroad, will accrue, not only to the lending country, but to *all* countries importing the goods that have become cheaper; and on this head, the lending country would have benefited in the same degree if *other* countries had provided the capital export for developing the foreign lands. Besides, the gain from cheaper imports can hardly be regarded as a *net gain*; had the capital been employed at home it might also have made the production of certain commodities or services cheaper.

<sup>1</sup> *Principles*, Ashley ed., p. 739.



There are still other reasons why these secondary effects are not always so favourable to the capital-exporting country. Much depends on whether the production to which the capital export gives rise abroad is *cooperative or competing* in its relation to the industries of the lending country, i.e. whether it supplements or displaces the production of the latter country. If the exported capital is invested in the same branches of production in which the capital-exporting country excels, its export industries will meet increased competition in the world market. This may necessitate a reorganization of production in the capital-exporting country, resulting in considerable immediate losses of fixed capital, and perhaps in a permanent shift in the barter terms of trade to its disadvantage.

This is merely a particular aspect of an old problem by which many of the classical economists were puzzled; eager as they were to defend the case of free trade, they often argued that a particular country could never be damaged by productive improvements in other countries. If other countries became able to produce some of its previous export goods at smaller cost, this merely meant—they said—that it could obtain these goods cheaper than before by import and use its own agents of production to make other goods, thus obtaining a larger total income. The possibility of a shift in the terms of trade was suggested, though, by Senior as early as 1830.<sup>1</sup> He reminds us that England and the Continent are competitors in the general market of the world; an improvement on the Continent in making cottons—produced e.g. by an export of English capital—would have the effect (to retain Senior's peculiar terminology) to

“diminish the cost of obtaining the precious metals on the continent and increase it in England. The value of continental labour would rise, and the value of English labour would sink. They would ask more money for all those commodities in the production of which no improvement had taken place, and we should have less to offer for them. We might find it easier to obtain cottons, *but we should find it more difficult to import everything else.*”

To the world at large it is obviously an advantage that the efficiency in the production of cotton goods is increased, but to the previous exporter of cottons it may be a disadvantage

<sup>1</sup> *Three lectures on the cost of obtaining money*, Reprint, London 1931, pp. 25—26.

that its labour and capital are forced into other branches of production. Countries with a very one-sided export may be severely hit when a new competitor suddenly turns up (the nitrates from Chile), but such countries are more likely to be importers than exporters of capital. Given the necessary time, new outlets can usually be found in the highly developed capital-exporting industrial countries with their large number of different industries without much reduction of efficiency, but in particular industries the transitional losses may be considerable.

The development of competing industries is probable when the lending and the borrowing countries are in about the same stage of industrial evolution and have somewhat similar natural resources and transport conditions; if they differ in one or more of these respects, a capital transfer between them is more likely to call forth cooperating branches of production in the capital-importing country. And whenever considerable international capital movements have taken place, experience seems to show that such differences have in fact been present.<sup>1</sup>

It has often been maintained that an export of capital may reduce the costs of production in the lending country because of an increase in the foreign demand for its exports, leading to a development of more and larger plants utilising "*internal*" and "*external*" economies. That the foreign demand does increase as a result of the transfer of buying power is a fact of prime importance to the working of the transfer mechanism, but here again it must be pointed out that even if this leads to increased economies from a larger scale of production in the exporting industries, these economies do not necessarily represent a *net gain*. For the increased demand from abroad will be offset by a decrease in domestic demand,<sup>2</sup> and there is no reason to assume that this change in the direction of demand will be towards commodities in the production of which the economies of large scale are particularly important. Besides, we must remember that the *surplus* of commodity exports in which an export of capital results, may come about, not by increasing commodity exports, but by decreasing imports.

<sup>1</sup> The German post-war borrowing might perhaps be mentioned as an exception.

<sup>2</sup> But as will appear later, the increase in the foreign demand may be either greater or smaller than the decrease in domestic demand. Cf. *infra*, p. 461.

In that case there will be no economies in the export industries, whereas there may have been reverse effects in the contracting domestic industries.

To sum up: the investing country benefits from these secondary effects, if it gains more as an importer than it loses as an exporter. It may gain, not only by cheapening of the goods which it is in the habit of purchasing from the borrowing country, but also by now being able to buy here more cheaply goods previously imported from other countries or even produced at home. It may gain even though the article now imported displaces an article previously exported by the lending country. But it may also lose by being forced to turn its productive agents to what used to be a less advantageous industry.<sup>1</sup>

Though the detailed treatment of the effects of international capital flows on barter terms of trade will be postponed to part II, it may not be inappropriate to mention a misunderstanding of which both Taussig and Pigou seem to be guilty. Writing of English investments in the United States, the former gives the impression that the very fact that a country exports more than it imports goes to show that, for the time being, it suffers a loss; indeed, he comes very near to treating the grant of new loans to foreign countries and their liquidation of previous indebtedness as if, for the moment at least, they were equivalent to the grant or receipt of free gifts on the part of the creditor country. He writes:

"The people of Great Britain send merchandise to the United States, and add to the tangible equipment of the Americans, or to their consumable goods, giving up for the time being some of their own possessions and adding to those of the Americans. But not only do they give up something in this way—make a sacrifice, incur a loss, for the time being, but they incur a further loss in that the barter terms of trade become less advantageous to them."<sup>2</sup>

Similarly Pigou infers that in case of British foreign lending "the volume of things immediately available in this country will be diminished. This is practically certain to involve a direct injury to labour, either by making the things workpeople buy more expensive

<sup>1</sup> Cf. Charles R. Whittlesey, *Foreign investment and national gain*, Am. Ec. Rev. 1933, pp. 469—70.

<sup>2</sup> *International trade*, p. 127.

or by reducing the supply of tools and machines that help them in production."<sup>1</sup>

This latter statement may be interpreted, of course, as merely referring to the fact already mentioned that when an outlet is opened for capital investments abroad the fall of the rate of interest in the lending country is counteracted, and distribution made more unequal. But apparently, both Pigou and Taussig suggest something more; they seem to imply that *foreign* investments by creating an export surplus reduce the supply of goods available for domestic consumption, thus raising their prices and inflicting a *special* loss or sacrifice on labourers and consumers in general.

It is not a peculiarity of *foreign* investments, however, that they reduce the quantity of goods ready for immediate consumption. Had the same amount of capital been invested *at home* rather than abroad the same proportion of the productive agents would have been diverted to the creation of future, instead of present, utilities. No matter whether the investments are made at home or abroad, they involve the sacrifice of immediate well-being in order to obtain increased well-being in the future.<sup>2</sup> The decisive question is to what extent the productive resources shall be used in roundabout ways; that will depend on the terms on which present and future goods are to be exchanged for one another, i.e. on the rate of time preference. The higher return expected from investments abroad may obviously affect this choice between the present and the future, but apart from that the immediate export surplus which emerges in case of *foreign* lending merely indicates that present utilities are exchanged for future *imported* utilities instead of future utilities produced at home.<sup>3</sup>

Towards the end of the first volume of his "Treatise on money"<sup>4</sup> Keynes has analysed in some detail the factors determining the net national gain or loss from foreign investment.

<sup>1</sup> *Economics of welfare*, p. 661.

<sup>2</sup> And in either case, it is obviously the investor, not the labourer who is deprived of immediate consumption. The volume and prices of the consumers' goods ready for workpeople to buy is unaffected by the capitalists' choice between domestic and foreign investments except for the influence on wages and rents referred to *supra*, p. 161.

<sup>3</sup> Cf. Harry D. White, *The French international accounts*, pp. 239—41.

<sup>4</sup> Pp. 343 et seq.

His main contention is that against the increased marginal productivity of capital, the lending country must weigh a decrease in the marginal efficiency of its factors of production in obtaining foreign products. He takes for granted that a change in the barter terms of trade adverse to the lending country is the necessary concomitant of increased foreign investment, and on this assumption it is obvious that the total output in the lending country is reduced by an amount corresponding to the loss involved in giving more exports for a given quantity of imports or in replacing goods previously imported by goods produced at home;<sup>1</sup> and whether, on balance, there is a national gain or loss as a result of an increased proportion of investment abroad will then depend on

“a comparison between the prospective gain of increased *future income* from foreign investment and of improved terms of trade when this income is being paid, and the *immediate loss* occasioned by the deterioration in the terms of trade whilst the foreign investment is taking place.”

Whether Keynes' assumption as to the shifts in the terms of trade is correct will be examined in detail in part II. Granting, for the moment, its validity for the sake of argument, some comments must be added<sup>2</sup> on the more precise arithmetical form in which Keynes attempts to formulate his statement:

“Subject to the simplifying assumptions that earnings in the export trades are the same as in other trades, that there are constant returns to industry within the range of variation in question, and that the total volume of saving is unchanged, the loss through the fall in prices of exports relatively to those of imports is measured by  $E_2 (p_1 - p_2) - F_2 (q_1 - q_2)$ , where  $E_2$  is the volume of exports and  $F_2$  of imports in the new position;<sup>3</sup>  $p_1$ ,  $q_1$  the prices of exports and imports respectively in the old position; and  $p_2$ ,  $q_2$  their prices in the new position. On the other hand, the gain in the advantage of current foreign lending by reason of the rise in the rate of interest is measured by  $s \cdot L'$ , where  $s$  is the proportionate rise in the rate of interest and  $L'$  the amount of foreign lending in the new position. Thus the net national gain (or loss) to our country, *in respect of these two elements in the calculation*, is

$$s \cdot L' - E_2 (p_1 - p_2) + F_2 (q_1 - q_2).$$

<sup>1</sup> Moreover, such substitution may involve a loss of consumers' surplus.

<sup>2</sup> Cf. Charles R. Whittlesey, *loc. cit.*, pp. 466 et seq.

<sup>3</sup> This ignores loss of consumers' surplus through substitution of home-produced goods for imports.

I see no presumption in favour of this quantity being positive rather than negative . . . .

The above makes no allowance, on the one hand, for the subsequent effects of foreign investment in turning the terms of trade the other way when interest comes to be paid, or for any indirect advantages accruing to the lending country through the development of the world's resources—which advantages, however, would accrue to it equally if the foreign investment were undertaken by some other country. On the other hand, it also makes no allowance for the inevitable losses of any transition. As a rule, money-earnings will not fall to the necessary extent *immediately*; with the result that there will be an intervening period when the market-rate of interest exceeds the natural-rate, so that, total investment falling short of savings, business losses and unemployment ensue."

The expression  $s \cdot L'$  is not very fortunate. For the gain is not simply equal to the difference between the return received from abroad and the return that would have been obtained *on the exported capital* if that had remained at home. As explained above, the export of part of the domestic capital supply has also increased the marginal productivity of *the part which remains at home*. Moreover, since the total volume of savings may have been affected by the capital export, the gain also embraces the difference between the yield of satisfaction from investing abroad and the yield of satisfaction from consuming otherwise that part of the national income that would not have been invested at all except for the higher return afforded by foreign investment. Without attempting to give an unwieldy, precise formula we may simply indicate the increased future income by  $G$ .

A more important criticism is that Keynes' attempt to single out for quantitative treatment "two elements in the calculation"—the increased interest return and the immediate loss through worsened terms of trade—suffers from the inconsistency that the gain from increased return to capital is not realised till the interest is actually paid, and cannot, therefore, be included in the calculation without *also* including an item indicating "the subsequent effects of foreign investment in turning the terms of trade the other way, when interest comes to be paid." To make the equation valid, *two different periods of time must be taken into account*: (1) the period in which the loan is made, and (2) the subsequent period when the interest payments are received. It is perfectly logical to discuss by itself the worsening of the terms of trade which the first

operation is assumed to involve. But as soon as we move into the second period and include  $s \cdot L'$  or  $G$ , it becomes necessary to include also the following item:  $E_3 (p_3 - p_2) - F_3 (q_3 - q_2)$  where  $E_3$  and  $F_3$  are the volumes of exports and imports and  $p_3$  and  $q_3$  the prices of exports and imports in the interest-receiving position. The equation, then, should read: the national gain (or loss) to the lending country, in respect of these three elements in the calculation, is

$$G - E_2 (p_1 - p_2) + F_2 (q_1 - q_2) + E_3 (p_3 - p_2) - F_3 (q_3 - q_2).$$

Granting the initial assumption as to the effects on barter terms of trade this quantity may also be either negative or positive, but it is evidently *more likely* to be positive than the incomplete item set out by Keynes.

Moreover, even this statement does not include *all* the elements which ultimately determine the gain or loss from foreign investment. Beside the three elements now considered the *final repayment* of the loan must also, on Keynes' assumption, tend to cause a shift in the barter terms of trade. This repayment of principal involves a transfer of buying power to the lending country equal to the original transfer from the latter to the borrowing country. It would seem natural to expect, therefore, that the effects of these two transfers on the terms of trade would exactly offset one another, and that, viewing the entire process of foreign lending, there would be, on balance, a tendency for the terms of trade to move in favour of the lending country, simply because the payments to the latter exceed those to the borrowing country by the amount of the interest payments. Consequently, the gain from a higher return ( $G$ ) would seem, over the whole cycle of investment, to be subject to *addition* and not, as Keynes' formula suggests, to subtraction owing to the influence of such capital movements on the terms of trade.

However, three qualifications to this statement must be added. (1) The more favourable shifts in trade terms due to interest and amortisation payments lie *in the future*, whereas the less favourable terms apply to the present. It might be argued that the process of discounting renders the present value of the future benefits less than the value of the immediate loss. (2) It is conceivable that the effects on the terms

of trade depend, not only on the volume of transfers, but also on their more or less gradual *distribution over time*. (3) The "inevitable losses of any transition" to which Keynes himself refers may offset, or more than offset, the gain.

In another connection<sup>1</sup> Keynes has maintained that there is an important difference between the *default* of a foreign and a domestic borrower. In the case of foreign investments repudiation or failure leaves nothing to the lending country, whereas in the case of domestic investments the tangible instruments of production in which the capital has been embodied do remain in the lending country. But if they lose all their value, the loss is equally great, of course, irrespective of where they are situated. When free capital disposal has once been invested in fixed capital goods, it is their prospective earning power which counts, and a diminution of earning power represents a capital loss in the case of both domestic and foreign investments. It has been pointed out, however,<sup>2</sup> that it is only in the case of a privately operated and controlled industry that its earnings are a criterion of its value to the country, and that it is only in such a case that exception must be taken to Keynes' point of view. The default of a domestic public service corporation does not necessarily represent a national loss equivalent to that sustained from a similar default in a foreign public service corporation. The domestic default may be due to a too low rate schedule, an excessive tax rate, poor financing, excessive overhead costs, or any other cause which represents merely a *transfer* of wealth from one group to another. If so the default may entail only a slight loss to the people as a whole; whereas the foreign default represents not transfer, but total loss.

It has already been pointed out that considerable time may be required for the completion of the capital movements and other adjustments to which a certain change in the basic data of the price systems has given occasion, and that the result may be modified by new changes occurring in the meantime. In a dynamic society this process of readjustment will

<sup>1</sup> *Foreign investment and national advantage*, The Nation, London, Aug. 9, 1924, p. 584.

<sup>2</sup> White, *loc. cit.*, p. 274.



go on for ever, presumably involving constantly renewed capital flows in one direction or another.

But if it is asked *how long*—*ceteris paribus*—a given capital movement between two particular countries may continue, the preceding analysis gives the answer: such movements may go on until the equalisation of interest rates is carried as far as possible, i.e. as far as the costs of capital transfer allow. In the case of ordinary foreign investments it is obvious that sooner or later they will influence the marginal productivity of capital in opposite directions in the lending and in the borrowing country. And except in rare circumstances foreign loans for consumptive purposes will have similar equalising effects on the relative scarcity of capital. It is conceivable, of course, that a government, very eager to borrow abroad for unproductive purposes, offers a higher and higher rate of interest to attract the foreign capital; in such cases nothing but the willingness of foreign capitalists to advance the capital puts a limit on the amount of borrowing. And as the debt of the government is the debt of the citizens, the foreign lender will look primarily to their tax-paying capacity, the technical efficiency of the system of taxation, etc. But indirectly, a large public debt may injure the credit standing of the private citizens, since foreign capital is reluctant in moving towards a country where it may be called upon to share the tax burden occasioned by a heavy public debt.<sup>1</sup>

It is fairly obvious that the payment of interest and amortisation charges on old loans *by means of new borrowings* cannot continue beyond a certain point. The borrowing may proceed crescendo, it is true, but in that case the interest payments will also show a progressive increase, and sooner or later their total amount must outweigh the new loans.<sup>2</sup> Consequently, most of the economists discussing the German reparation problem have maintained that payment of reparations out of foreign loans meant *only a postponement, not*

<sup>1</sup> Cf. Davidson in *Ek. Tidskr.* 1931, p. 17, where it is suggested that the reason why the enormous growth of the British foreign debt during the Napoleonic wars did not lead to a flight of capital from England, was that the return on capital in England had been greatly increased in the same period as a consequence of the industrial revolution.

<sup>2</sup> Cf. Angell, *The theory of international prices*, p. 171 and Viner's criticism in *Journ. of Pol. Ec.* 1926, p. 615.

a final settlement. Some<sup>1</sup> have held, however, that it was possible finally to discharge the reparation payments by means of foreign loans; this might be argued, if the foreign capital flowing into Germany could be so productively applied that it was possible out of the return on this borrowed capital to pay, not only the total interest charges on all Germany's foreign loans (including those directly used for reparation payments), but also the total annual reparation charge. This would seem to be the only reasonable interpretation e.g. of Auld's position. In fact, he says explicitly that some day Germany

"will produce an economic surplus, not all of which will be needed at home. That is, she will have an export surplus ... She will have become a natural creditor country."

This is, of course, an admission, that in the long run payments can only be made out of an economic surplus, and that until they are so made they are not made at all; till then additional debts are being constantly created. At bottom, therefore, Auld's quarrel is only with the "length of the run". He seemed quite prepared to see the debts accumulate for fifty years or more. Hardly anybody familiar with the computation of compound interest would be ready to share his view.

In connection with the German reparation problem it has also been much debated in recent years *how large amounts of capital* it is possible to transfer from one country to another. In so far as it is free or floating capital and not concrete capital goods (as in the case of the German deliveries of ships, locomotives, railway carriages, etc.) which is to

<sup>1</sup> Notably G. P. Auld, *The Dawes plan and the new economics*, New York 1927. Also Walter Sulzbach, *Zur Transferfrage*, Zeitschr. f. d. ges. Staatsw. 1927, pp. 114 et seq. He writes: "In diesem Falle könnte die deutsche Handelsbilanz immer passiv geblieben sein, und die Kriegsschädigung wäre doch gezahlt worden. Es liesse sich einwenden, dass sie nicht gezahlt, sondern hinausgeschoben worden sei, da die Ausländer irgendwann den Wunsch haben würden, ihre deutschen Guthaben zu konsumieren, und dann müsse die deutsche Handelsbilanz um so stärker passiv (sic!) werden. Das ist aber nicht unbedingt richtig .... so gut wie Kapitalisten stets bestrebt sind, einen Teil ihres Einkommens im Inlande anzulegen statt es zu konsumieren, ebenso könnten sie diesen Teil im Auslande belassen." He does not seem to realise how quickly interest charges catch up with even a large volume of foreign investment.

be transferred, it is obvious that the utmost which it is possible to transfer in a given period is the total amount of capital disposal set free during that period;<sup>1</sup> if it is attempted to transfer more than this, it is *only the titles* to wealth remaining in the remitting country that are actually transferred, which is merely another way of saying that the recipients have granted the paying country offsetting credits to a corresponding amount. But it is self-evident that if its productive efficiency shall be kept up, a country cannot dispense with all the free capital which it has at its disposal. The largest amount, therefore, which can be transferred year after year, is the excess of total production over and above (1) the necessary domestic consumption and (2) the necessary domestic capital formation. To give a little more precision to this extremely vague statement, the "necessary consumption" might be defined as the minimum standard of living required to keep the efficiency of labour intact,<sup>2</sup> and similarly the "necessary capital formation" could perhaps be taken to mean the maintenance of an unchanged amount of capital disposal per worker. But even so, a general statement like this does not carry us very far. It has one merit, however; though its positive content is necessarily indeterminate, it serves to show the futility of all attempts to answer the question on the basis of an analysis of the balances of trade and payments in a preceding period.<sup>3</sup>

Whether particular difficulties arising out of the mechanism of transfer may limit the total volume of international capital flows still further, will be discussed in a later connection.

Remembering that there are many "kinds" of capital, we must finally take into account that when the equilibrium between interest rates is disturbed at a particular point, it may be restored, not only by means of an international movement of that particular kind of capital for which the interest difference has been increased, but also through a substitution of different kinds of capital within each of the two countries,

<sup>1</sup> Cf. *supra*, p. 24.

<sup>2</sup> This standard should be taken in a wide sense with reference also to the length of the working day (the relative desirability of more leisure and additional income).

<sup>3</sup> Cf. e.g. Wilhelm Röpke's pertinent criticism of Moulton, *Germany's capacity to pay*, Jahrb. für Natök. u. Stat. 1923, vol. 121, p. 470.

a substitution which in turn may lead to international transfers of *other kinds of capital*. The opportunities of such substitutions of different types of capital will depend to a large extent on the actual organization of the loan market.<sup>1</sup> It is impossible, therefore, to say a priori what the permanent effects on the spread between interest rates will be in the new state of equilibrium.

As an example, Karin Kock points to the large-scale importation of foreign bonds into Sweden in 1926—27. In the Swedish capital market the demand of the big life insurance companies, savings banks, public institutions, etc. had hitherto been directed primarily towards gilt-edged Swedish securities which, consequently, obtained a considerably higher price than both domestic industrials and foreign bonds. An increase in the supply of foreign bonds might therefore be expected to depress the prices of Swedish industrials *more* than the prices of Swedish gilt-edged securities. Yet, no such increase in the margin between the returns of the two groups of bonds developed. The yield on government bonds was 4.80 and 4.53 per cent at the end of 1925 and 1927, the yield on industrial securities 5.38 and 5.07 per cent, so that the margin was about 0.5 per cent in both instances. The causes are probably to be found in a growing scarcity of new internal industrials and a growing inclination among the life insurance companies to invest in foreign bonds. In a great many borrowing countries the export of securities consists almost exclusively of gilt-edged bonds.<sup>2</sup> The extent to which such capital import will give other borrowers the advantage of a lower interest rate, depends on the willingness of domestic lenders to transfer their capital to other forms of investment. If the gilt-edged securities form a special "non-competing group" the result will merely be a wider margin between the yields of the different sorts of securities.

At all events, the necessary internal adjustments may require considerable time; a sudden inflow or outflow of capital may therefore affect particular interest rates much more in the beginning than later on when their effects are spread over a greater part of the entire capital market.

<sup>1</sup> Karin Kock, *loc. cit.*, pp. 60 et seq. and 91 et seq.

<sup>2</sup> *Supra*, p. 58.

Obviously, short-term equalising capital movements may tend to equalise interest rates no less than the "real" movements of long-term capital. Though they are prompted to a considerable extent by variations in exchange rates and other considerations (the demand for working balances) there is also an important group of such short-run movements in which the motive for transfer is the higher rate of interest obtainable in a foreign market. But the equalising influence of these movements on interest rates is confined to periods of relatively brief duration. For they are of a decidedly oscillatory, self-reversing character; there is never a permanent export or import of short-term capital (except when a country's demand for working balances abroad is altered). Consequently, a country may at one time find its short-term interest rates higher than abroad, and at other times lower.<sup>1</sup> Moreover, the similarity in the fluctuations in short-term interest rates in different countries may be due less to the direct mechanical effects of movements of capital between them than to a coincidence or parallelism in the seasonal or cyclical oscillations to which they are exposed.<sup>2</sup>

Short-term capital movements in the form of arbitrage business in securities may serve to adjust rates of interest not only on short loans, but also on long loans.

### 3. EFFECTS ON THE STRUCTURE OF PRODUCTION.

A transfer of capital disposal from country X to country Y, means that more waiting than before is combined with land and labour in Y just as if the domestic savings and investments in Y had been increased. Its processes of production become more roundabout.<sup>3</sup>

How the productive apparatus in X is affected by the capital movement will depend upon the causes by which it has been called forth. If the outflow of capital is the result of *increased savings* in X, it means that part of these additional savings are invested abroad rather than at home or, in other

<sup>1</sup> Here too, the comparison must evidently be drawn between those forms of investment which are available to foreign lenders; it does not suffice simply to compare the official discount rates in different countries.

<sup>2</sup> Cf. Angell, *The theory of international prices*, p. 383.

<sup>3</sup> Cf. *supra*, p. 142.

words, that the domestic period of production is lengthened to a smaller extent than if all the additional savings had been invested at home. As has already been explained: the capital export partly relieves the capital-exporting country from experiencing the fall in the marginal productivity of capital to which increased domestic investments normally lead. But if *other causes* than increased savings in X have widened the interest differential between X and Y, the case is different. Then a distinction must be made between the two sources from which X's capital disposal originates: its new savings and its amortisation quotas.

Suppose it is a new invention or the discovery of rich natural resources which make investment in Y more attractive than before. In that case X's *new savings* are drawn upon before its amortisation quotas; as long as there is any new savings left, the amortisation quotas will not be tempted to go abroad. For reinvestment of amortisation quotas merely means the maintenance of the existing degree of roundaboutness of production, while the investment at home of new savings would mean a further lengthening of the productive processes with the resulting decrease in the marginal productivity of capital; if part of the amortisation quotas happened to be transferred they would be replaced by the new savings, and no net migration of amortisation quotas would have taken place.

But if transfer of an amount equal to the new savings does not suffice for re-establishment of equilibrium between the interest rates in X and Y, the consequences of an outflow of capital become more dangerous. For then some of the *amortisation quotas* will also move to Y, which means that the period of production must be shortened in X. But that cannot be done overnight. Unfortunately, the "turnover" of the different capital goods is widely different. The so-called circulating capital may be free for reinvestment several times a year while capital disposal clothed in fixed capital may require a number of years before it ripens again into free or floating capital. Consequently, an emigration of amortisation quotas may deprive the fixed capital of part of the circulating capital without which it cannot properly perform its task in the productive process. The consequence is that ca-

pital losses are entailed.<sup>1</sup> Owing to the fact that the less durable capital goods are not replaced, the more durable forms of capital lose their value. For, as we are reminded by Nurkse,<sup>2</sup> isolated capital goods are generally useless; all capital goods are complementary, and the more durable and specialized they are, the more do they depend upon the cooperation with other capital goods.

Thus a change in the optimal geographical distribution of capital may lead to capital losses in exactly the same way as any other change occurring too suddenly for the productive processes to be adapted in time. These losses would not have taken place if all capital goods had the same durability, or if only new savings should be transferred. This is another instance of the well-known fact that adaptation and adjustment to changed conditions take place much easier in an expanding than in a stationary or even retrogressive community.

These considerations are of particular importance in the case of the so-called "flight of capital," because this sort of capital flow is apt to be more sudden and extensive than others. And it makes no difference, of course, whether the refugee capital is foreign capital which returns home or domestic capital which leaves its native country to seek a safer hiding place abroad.

#### 4. THE INTERRELATION OF DIFFERENT FACTOR MOVEMENTS.

The next step in our analysis is to give up the simplifying assumption that capital is the only factor of production which is internationally mobile. When a certain degree of international labour mobility is introduced it must be inquired how an international capital flow will affect the movements of labour between countries.

In part this question has already been considered in the preceding chapter.<sup>3</sup> It was demonstrated that when capital

<sup>1</sup> Cf. *supra*, p. 14. It is sometimes supposed that these losses are due to the present private-capitalistic organization of society. This is not so, however. Such productive equipment would be just as useless in a socialized system of planned economics.

<sup>2</sup> *Loc. cit.*, p. 92.

<sup>3</sup> Cf. *supra*, p. 134.

and labour move hand in hand, it is extremely difficult to say which movement is cause, and which is effect. One of the effects of an international capital movement, therefore, may be to release a parallel movement of labour. In other circumstances such combined factor movements may go in opposite directions. A flow of capital may also have the effect of making migrations superfluous. For just as trade in one commodity, following the line of least resistance, may serve as a substitute for trade in another, so the movement of one factor may replace the movement of another either in the same or—more likely—in the opposite direction.

In general, it may be said that when an isolated movement either of capital or of labour takes place, it is not because the relative scarcity of all the other productive agents is about the same in the two countries, but rather because the mobility of the moving factor is essentially greater than that of the others. As the mobility of capital is usually greater than the mobility of labour, capital flows can be regarded, in a great many cases, as substitutes for migrations. If the international movements of capital are impeded, labour flows may be called into existence, and conversely, increased capital mobility may retard migration movements. The export of British capital to the continental countries of Europe has restricted emigration from these countries by raising their wage levels.

*Isolated movements of capital* are most likely towards countries with scarcity of capital, but possessing both natural riches and an abundant labour supply; for if the latter were very scarce, labourers would flow in, too; and if both nature and capital were very scarce, labour would probably flow out. In fact, such isolated movements of capital are usually from more to less developed industrial countries. If natural resources, transport relations, and the potential qualities of labour are materially different in the two groups of countries, the capital flows are likely to stimulate cooperating rather than competing branches of production in the borrowing countries. The import of capital which helped to bring about the transformation in Danish agriculture in the Eighties, created a cheap supply of butter and bacon in the creditor countries in western Europe. Similarly, British lending to Sweden, Nor-



way and Finland reduced the prices in Great Britain of such import goods as wood pulp and paper.<sup>1</sup>

The most important case of combined factor movements is that of *parallel movements of labour and capital* towards new countries possessing rich national resources, but a very scarce domestic supply of both labour and capital. The inflow of labour which accompanies the capital import of such countries may consist either of ordinary skilled or unskilled labourers or of technical experts. That a certain number of technicians from the creditor country will go abroad together with its capital is but natural, since the creditor countries are likely to have a more advanced productive technique than the debtor countries to which the capital moves. Thus international capital movements tend to diffuse the knowledge of all sorts of technical improvements much more rapidly than would otherwise be possible; as it has been well expressed: the export of capital has fundamentally meant an export of the industrial revolution from the industrialised to the undeveloped countries.<sup>2</sup> A particularly strong tendency to draw the leaders from the lending country may be expected when the export of capital takes the form of establishment of branch factories in the new countries. And in such cases the capital is evidently more likely to be invested in competing than in cooperating industries; for it is probably in their export industries that the technicians of creditor countries have acquired their superior skill.

In the cases where an export of capital is accompanied by emigration, not only of technical experts, but also of common labourers, there is a greater likelihood that these factors of production will be employed in fields that are cooperative from the point of view of the capital-exporting countries. The opening of the oversea countries to European capital and labour increased the market for industrial goods at the same time as it cheapened the foodstuffs and raw materials necessary for their production.

In exceptional cases a combined flow of capital and labour may go to countries that are not particularly rich in natural resources, provided their transfer relations with the rest of the world are especially good. And both capital and labour

<sup>1</sup> Ohlin, *loc. cit.*, p. 344.

<sup>2</sup> Cf. L. D. Edie, *Economics; principles and problems*, 1926, p. 660.

may leave out-of-the-way countries which, in spite of their natural riches, have a low marginal productivity of capital and labour because of poor transport facilities or high duties in the countries to which they look as their markets. In general, the transfer conditions deserve more attention than is usually given to them as a factor governing the localisation of production.

*Movements of capital and labour in opposite directions* are comparatively rare. If capital is relatively abundant in one country X and labour in another country Y, a change which increases this difference in relative scarcity or diminishes the cost of transfer for both factors may release, at the same time, a movement of capital from X to Y and a movement of labour from Y to X. But here again it may be impossible to describe the labour flow as an effect of the capital movement, or vice versa. Both are most naturally regarded as the joint effect of certain basic changes in the price structures. If natural resources are also abundant in X, the inflow of labour is likely to be more important than the outflow of capital, whereas a relative abundance of natural resources in Y will tend to have the opposite effect. In case of such cross currents the relative size of the total national income of the different countries is less likely to be altered than in the cases where capital and labour move together.

It is scarcely necessary to add that the transfer of factors no more than the trade in commodities will lead to a complete "equalisation of factor supply." Differences between countries will remain with regard to natural resources, to transfer relations, and to demand conditions, and to all this the supply of capital and labour will tend to adapt itself as effectively as possible. Countries with great natural riches, excellent transfer conditions, and a population already numerous and wealthy will attract capital and labour much more than others not possessing such particular advantages, and their superiority may be further increased by economies of large-scale production. Even if the factor supply were exactly identical in all countries, differences as to demand and transfer conditions together with economies of scale, might cause sufficiently large divergencies in factor prices to call forth international transfers of capital and labour.

## 5. EFFECTS ON VOLUME OF FOREIGN TRADE.

When the effects of international capital movements on the volume of commodity trade are discussed, two different trains of reasoning must be kept distinct. (1) As already explained capital must always be transferred between countries in the form of commodities or services. It is obvious, therefore, that capital flows, *while they are going on*, must influence the international movements of commodities. But as it is merely the *relation* between imports and exports which counts in this connection, it is not possible to say beforehand how the total volume of foreign trade will be influenced. For the necessary change in the balance of current transactions may be brought about through changes either in imports or in exports or in both; an export surplus, for instance, may be created, not only through an increase of exports, but also through a curtailment of imports. (2) An entirely different question is how international capital movements *permanently* affect the course of commodity trade. It is only this latter question which will engage us here.<sup>1</sup>

It has already been mentioned that increased factor mobility may obviate part of the previous commodity trade. To some extent commodity trade and factor movements alternate in equalising the prices of factors; when the inequalities between countries in their equipment with productive agents are reduced by international capital movements, the need for an international division of labour created by this unequal factor equipment is also reduced.

Against this tendency towards a decrease in the future commodity trade should be weighed another working in the opposite direction: the general tendency of an increase in the total national income to call forth a greater demand for foreign as well as for domestic goods and services. As international capital flows tend to increase the combined social product of the debtor and creditor country, their foreign trade is likely to increase. Which of these two tendencies will be the stronger, it is impossible to decide a priori. But one would be tempted to conclude that even though the *absolute* volume of foreign trade might increase with the general increase in wealth, it would decline *relatively* to production and domestic trade.

<sup>1</sup> This problem has been exhaustively treated by Ohlin (*Interregional and international trade*, pp. 170 et seq.). The account given here contains little more than a summary of his analysis.

Experience shows, however, that large movements of capital and labour have often increased the volume of foreign commerce, both absolutely and relatively. Great export trades have sprung up in countries previously carrying on a self-contained economy. The reason has already been suggested: these countries possessed rich natural resources which could not be utilised properly, if at all, as long as only very scanty supplies of capital and labour were available. One might say that these resources are economically non-existent until the necessary inflow of capital and labour has taken place, and that in making them available, the migration rather increases than decreases the inequalities of factor supply.<sup>1</sup> In such cases of utilisation of large-scale economies in a wide sense, there is no tendency towards international equalisation of relative factor prices and, consequently, no diminution of trade on that account.

But then a different counteracting tendency may be at work. With the growth of the total national income of a given country, i.e. with an increase in its domestic market, it may be possible to operate a greater number of industries on a remunerative scale without having resort to foreign markets. That is to say: the expansion of the internal market may lessen the need for international division of labour created by the desire of obtaining the economies of large scale production in the usual sense. But these large-scale economies are not of equal importance to all industries; if they benefit the export industries more than the industries competing with imports, the result may well be increased foreign trade.

The result becomes further complicated, however, when it is taken into account that the volume of foreign trade depends, not only on the total world income, but also on the distribution of this income between the trading countries, and that this distribution is affected by international capital movements. If all the productive agents were concentrated in one single country to which, consequently, the whole world income accrued, there would obviously be no foreign trade at all. And the more this limiting case is approached, the less the volume of foreign trade will be. Conversely, trade will tend to increase in the cases referred to above, where capital and labour move to new countries in which the total national income has hitherto been very small; these were the cases in which the two price-equalising tendencies acted cumulatively.

<sup>1</sup> Cf. Barrett Whale, *International trade*, p. 241 and *supra*, pp. 159—60.

Finally, international capital movements may alter the direction of demand through their influence on the internal distribution of incomes. If foreign goods become in greater demand, international trade will tend to increase; if a greater part of the demand turns to domestic goods, the volume of foreign trade will tend to decrease.

Without going into further details these considerations show that it is quite impossible to determine a priori whether an international transfer of capital will increase or decrease the volume of foreign trade. A number of conflicting tendencies are at work. In the repeated discussions, particularly among German economists during the last generation, of the problem: "Agrarstaat oder Industriestaat" reference has frequently been made to what has been called "das Gesetz der fallenden Exportquote".<sup>1</sup> The content of this law is that historically the volume of foreign trade, though increasing in absolute terms, tends to constitute a declining proportion of the total social product, or that, in other words, the volume of production will grow faster, as a general rule, than the volume of international trade. A number of different considerations have been advanced in support of this law, but not till quite recently has it been suggested<sup>2</sup> that the explanation of this development might be found, partly at least, in the increasing international mobility of the productive agents. But, to repeat, it is impossible to reach definite conclusions at this point on a priori grounds, and recent statistical investigations seem to refute the existence of a necessary functional relationship between the size of the national income and the volume of foreign trade.<sup>3</sup>

## 6. REACTIONS OF DOMESTIC FACTOR SUPPLY.

It is generally agreed that there is a certain interdependence between the height of the rate of interest and the supply of

<sup>1</sup> Cf. particularly the writings of Werner Sombart (*Entwickeln wir uns zum Exportindustriestaate?* Soziale Praxis, 1898—99, col. 633 et seq.; *Export und Kultur*, *ibid.*, col. 834 et seq.; *Die deutsche Volkswirtschaft im neunzehnten Jahrhundert*, Berlin 1903; *Die Wandlungen des Kapitalismus*, *Weltw. Archiv*, 1928 II, pp. 243 et seq.; *Die Zukunft des Kapitalismus*, Berlin 1932).

<sup>2</sup> Cf. Ernst Wagemann, *Struktur und Rhythmus der Weltwirtschaft*, Berlin 1931, p. 362.

<sup>3</sup> Cf. Wagemann, *loc. cit.*, p. 140 et seq. and Max Victor, *Das sogenannte Gesetz der abnehmenden Aussenhandelsbedeutung*, *Weltw. Arch.*, 1932 II, p. 68.

capital, but very little is known so far as to the exact nature of this functional relationship and, besides, it is usually admitted that the amount of saving is more intimately connected with many other circumstances than with prospective return on investment. It is hardly worth while, therefore, to reproduce the familiar, very general considerations which abound in economic text-books in this connection regarding the factors influencing the willingness and capacity to save.<sup>1</sup>

Since different groups of people react differently to a changing interest rate—some will increase their savings, others reduce them—the *net* effect on the supply of capital will depend, of course, upon the relative importance of these different groups. And *it need not be the same groups which predominate in all countries*. In old and rich countries the number of persons and organizations dependent upon invested wealth for some or all of their needs increases. So does the number of those who will not spend any of their principal, partly because many bequests impose this condition, partly because this simple rule for maintaining family prestige gradually becomes a tradition. These are the groups which will save more with rising interest rates. In younger societies, on the other hand, where more people are "on the make", the types which save less when interest rises are more likely to outnumber the others. It is conceivable, therefore, that a transfer of capital which increases the interest rate in an old creditor country and lowers it in a young debtor country may result in a *greater* domestic capital supply in *both* countries.<sup>2</sup>

But on the whole, the supply curve is probably positively inclined in most countries, so that a rise in the rate of interest tends to increase savings, and a fall to reduce them. This holds good, at all events, when the rise or fall is considerable. In the case of more moderate changes in the neighbourhood of the usual level, the result is more doubtful; here the supply is probably rather inelastic, and it is even conceivable that the curve "turns backward" so that a fall in the rate of interest will increase the supply.

These, however, are the *long-run* effects on the *total* supply of capital disposal in a given market. When short-run effects

<sup>1</sup> Cf. e.g. Zeuthen, *Den økonomiske Fordeling*, pp. 346 et seq.

<sup>2</sup> Though not directly mentioned by him this possibility is suggested by some remarks of A. E. Monroe (*Investment and saving*, Quart. Journ. of Ec. 1929, pp. 600—01).

are considered, it seems less open to doubt that higher interest rates mean greater savings and vice versa, simply because of the large extent to which the capacity to save is dependent upon the height of the incomes from capital. And when the supply of a particular "kind" of capital disposal is studied, it also seems fairly certain that it has a comparatively elastic, positively inclined supply curve owing to the possibilities for substitution to which attention has already been called; if the margin between the returns of risky and safe investments is widened by an increased demand for the former, more capital will probably flow into hazardous enterprises though the elasticity of supply need not, of course, be the same in all groups.

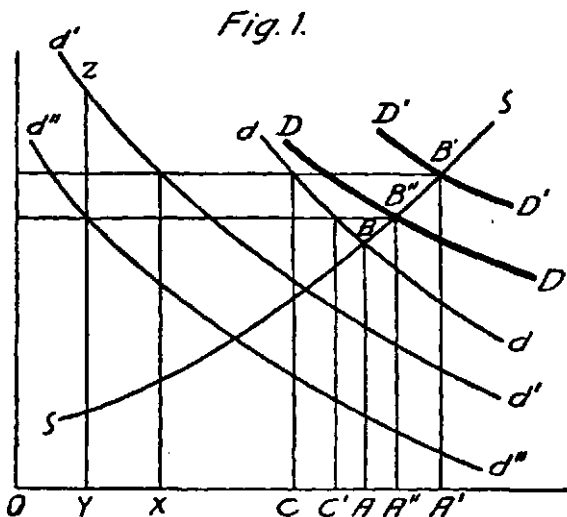
With regard to the possible reaction of the total supply of *labour* to a change in the general level of real wages, it is even more difficult to lay down any general propositions. The joint result of its effects on the number of labourers, on the length of their working day, and on their willingness and capacity to work is quite incalculable.<sup>1</sup> But here again a change in the relative return to a particular kind of labour is likely to influence supply in the same direction.

As soon as it is admitted that the domestic supply of capital and labour is influenced by changes in interest and wage rates, it is evident that both foreign trade in commodities and international movements of the productive factors may affect the supply of the latter by influencing their relative scarcity.

The immediate effect of an international capital movement is that the savers in the capital-exporting country, where the supply of capital is abundant, are partly delivered of the depressing influence of their large savings on the rate of interest; consequently, their savings will probably be further stimulated, whereas in the borrowing country accumulation may be checked by the lower interest rates which the capital import makes possible. Thus the tendency towards equalisation of the relative scarcity of capital is counteracted, whereas it would be fortified if lower interest rates meant increased savings, and vice versa.

<sup>1</sup> Cf. e.g. Gösta Bagge, *Arbetslönens reglering genom sammanslutningar*, Stockh. 1917, ch. VII §§ 2—3, and Zeuthen, *loc. cit.*, pp. 181 et seq.

Assuming that the supply curve is positively inclined throughout, the effects of the combined foreign and domestic demand for capital on the interest rates and capital supply of a particular country are illustrated by the following diagram (figure 1):



The supply of domestic capital at different rates of interest is SS, the domestic demand for capital is dd, and the foreign demand  $d'd'$ . Owing to the bias against foreign investments this curve  $d'd'$  must be reduced by the "cost of capital transfer" to  $d''d''$ . The total effective demand for capital is, consequently:  $dd + d''d'' = DD$ , whereas in the absence of transfer costs it would be  $dd + d'd' = D'D'$ . If there were no export of capital, the interest rate would be AB and the supply of capital OA. If there were no bias against foreign investments, the interest rate on all investments would be A'B' and the total capital supply OA', of which OC would be invested at home and OX (or CA') abroad. With the bias existing, the interest rate will be A''B'' on home investments and YZ on foreign investments; the total supply of capital will be OA'' of which OC' will be invested at home and OY (or C'A'') abroad.



From this figure it is easily seen how a reduction in the costs of capital transfer will stimulate its outflow, and how this will be partly offset by an increase in the total domestic capital supply. Similarly, an increase in either domestic or foreign demand will change both the total supply and the way in which this supply is divided between home and foreign investments.

In the long run, however, when the secondary effects mentioned in sections 2—4 make themselves felt, the reactions of domestic capital supply upon international movements of capital are less certain. By stimulating the general economic development it will probably tend ultimately to increase savings, not only in the lending, but also in the borrowing country. Here as elsewhere the "reflex influence of supply" varies with the length of the period under consideration.

This shows the limited value of a cross-section analysis of a given situation in which the actual supply of the productive factors in different countries is included among the data of the mutual interdependence system of prices. To get to the root of the matter it is not the actual factor supply, but rather the conditions governing this supply which must be taken as a given element. It must be realised to what enormous extent present capital flows and present commodity trade are affected by past movements of capital and commodities.<sup>1</sup>

## 7. EFFECTS ON OUTSIDE COUNTRIES.

In the preceding sections the reasoning has, on the whole, been confined to the effects of a capital flow in the two countries between which the capital moves. It is evident, however, that capital movements will also affect outside countries with which the capital-exporting and capital-importing countries have trading connections.

Owing to the mutual interdependence of their price systems *all* countries will feel the changed relative scarcity of the productive factors and the changed relative prices of different commodities; all countries may profit by the increase in real income which follows from a more efficient combination of the productive agents. But here again the effects in a particular outside country will depend on the character of

<sup>1</sup> Cf. John H. Williams, *The theory of international trade re-considered*, Ec. Journ. 1929.

the productive adjustments to which the capital movement gives rise abroad; here again the expanding industries in other countries may be either cooperative or competitive.

#### 8. GOVERNMENT CONTROL OF INTERNATIONAL CAPITAL MOVEMENTS.

The purpose of the analysis made above has been to ascertain the main effects to be expected when capital flows between countries. Whether these consequences are to be regarded as desirable or undesirable is a question which lies outside the scope of economic science.<sup>1</sup> In order to decide about that, certain general criteria of economic justification are necessary. Similarly, there is nothing in scientific economics which warrants us in passing judgment on the efforts of governments to promote or restrict international capital movements. Everything depends on the ends which the government has in view, and, here as elsewhere, economics is neutral as between ends. If it is assumed that the end of public policy is to secure that individual demands, as reflected in the price system, are satisfied as amply as possible under given conditions, it can be maintained that, save in very special circumstances, an interference with the free flow of capital is uneconomical in the sense that such interference, just like a tariff or a restriction of migration, will impose obstacles to the achievement of this end. But if the government has other ends in view a regulation of international capital movements may well be the most economical way of achieving these ends. That is: the word economic or economical ought always to be referred, not to the ends, but to the means with which they are pursued. The general system of mutual interdependence enables us to understand how—given the wants and desires of the individuals and the facts of their legal and technical environment—resources must be employed in order to satisfy the demands of the individuals most adequately. But that does not prove that these assumed conditions are desirable. "There is no penumbra of approbation round the theory of equilibrium. Equilibrium is just equilibrium."<sup>2</sup>

It is not the aim of this section, therefore, to undertake

<sup>1</sup> For recent presentations of this view that economic science must be "wertfrei" see Lionel Robbins, *An essay on the nature and significance of economic science*, London 1932 and Gunnar Myrdal, *Vetenskap och politik i nationalekonomien*, Stockh. 1930.

<sup>2</sup> Cf. Robbins, *loc. cit.*, p. 127.

a valuation of governmental influence on international capital movements. It is only intended to supplement the preceding analysis by pointing to some of the probable effects of such interference. On the whole, these effects have already been outlined. We have seen how commodity prices, incomes, and factor supplies are likely to be affected by variations in the international mobility of capital.

Cassel has laid great stress upon the fact that it is far from certain that capital retained at home by government interference will in fact be conserved to the country.<sup>1</sup> There are several great risks that it will vanish altogether. (1) An artificial superfluity of capital may stimulate unsound prospectus-making and wild speculation with the result that the capital is given an uneconomic use or completely lost. Besides, (2) the capital owners may prefer to consume rather than accumulate:

"To lay a severe control on the use of savings while consumption is left free to take any direction it likes, and particularly while the spending of money for a luxurious life abroad is not subject to any restrictions, is certainly a very curious attitude of state legislation."

And finally, (3) state and municipal expenditures may be unduly expanded when the domestic supply of capital is artificially kept up.

One of the most serious defects of public restrictions on the free international flow of capital is that they are extremely *difficult to enforce*. In certain Central and South American states where the United States has been the sole or the principal available source of foreign capital, and where it has been possible to bring all forms of capital export likely to be utilised under the embargo, its effectiveness has been great. But where these two conditions of virtual monopoly and comprehensive scope cannot be met, the situation becomes different. In such cases an embargo may impose losses on the issuing houses of the capital-exporting country without preventing its capital from reaching the banned investments by indirect routes. It is extremely difficult to block all the channels through which capital can move between countries. Usually the government embargoes are confined to the public flotation of foreign bonds within the capital-exporting country, i.e. to the form of foreign investments which generally

<sup>1</sup> *Foreign investments*, Chicago 1928, pp. 50 et seq.

entails the *smallest* risk. When this form of capital export is prohibited, the result may be that resort is had to other forms giving less security: the purchase of bonds floated abroad, or private bonds or shares issued in the capital-exporting country. In such cases the capital moves in spite of the embargo; it merely moves along more "roundabout", more uneconomical routes. At all events, official investigation in each individual case of capital export is likely to cause a delay which may mean that the business is lost to foreign competitors.

A further condition of the efficiency and success of public regulation in this sphere is that the principles on which it is based, are *adhered to consistently* in all other departments of the government's economic policy. And here serious disharmonies are likely to occur; here again we meet the logical contradictions to which Cassel has called attention.<sup>1</sup> It is seldom realised that control of international capital movements necessarily implies also a certain influence over the volume and direction of foreign commodity trade. Nor is it generally understood that tariff policy and regulation of capital movements may be mutually contradictory. The recent protectionism in the United States e.g. has placed greater and greater obstacles in the way of the receipt of interest and amortisation from those foreign investments which the government itself was so eager to promote. Moreover, by insisting on the payment of the interallied war debts, the United States compelled the debtors to put pressure on Germany; and in order to pay, Germany in turn was forced to go through a rapid and costly process of productive reorganization effected partly by means of capital borrowed abroad. Thus the uncompromising war-debt policy of the United States indirectly made necessary a further increase in the vast American capital export to Europe, with the interest payments on which its tariff sharply interferes. It is equally self-contradictory, when the press in a leading creditor country like Great Britain advocates the desirability of an even balance of trade between any two countries. Combined with the embargo which prevents Great Britain's foreign debtors from further borrowing, this policy, if logically carried through, would prevent the debtor countries from making any interest and amortisation payments to England. For, barring additional capital ex-

<sup>1</sup> Cf. *supra*, p. 44, note 2.

port from England, the only way in which she can possibly get such payments is through surplus import of commodities or services. This import surplus represents the income, the enjoyment accruing to England as a fruit of her large foreign investments in the past. It is this fruit which she deliberately refuses to receive when she will not allow her debtors to export more to England than they buy from England.<sup>1</sup>

Besides, public control of international capital movements gives the government a certain moral responsibility for the soundness of the investments, which it is seldom capable of carrying. The criticism often heard in connection with banking laws, that they create an *unwarranted feeling of security*, may be advanced here, too.

As mentioned in chapter II state policy may influence international capital movements in a number of indirect ways. A higher level of taxation or a more onerous system of labour regulation existing in a particular country, may create a tendency for its capital or labour or business ability to flow out. If they all left the country in equal proportions the chief effect would be a reduction in the general scale of the country's industry and in the relative scarcity of land. Its national income would perhaps not fall as much as production, because capitalists might still remain in the country and receive their income there though employing their capital elsewhere. Since, however, capital is more mobile than labour, the presumption is that capital will leave in a somewhat larger proportion than labour and that, therefore, the earnings per labourer will tend to fall. And this injury cannot be prevented by setting up a tariff against imports from countries where taxes are lower or labour legislation less advanced. On the contrary, such a tariff, by interfering with the normal distribution of the country's resources among different occupations would, in general, make the national dividend smaller, and the damage worse.<sup>2</sup>

A particularly strong case in favour of restricting capital exports is generally supposed to be afforded by an impending *capital flight*. It has already been explained, however, that if a flight of capital assumes dangerous proportions, it is usually due to the support it receives from the central bank.

<sup>1</sup> Cf. *supra*, p. 55.

<sup>2</sup> Cf. Pigou, *Economics of welfare*, pp. 762—63.

Otherwise it will be automatically checked by the difficulties of raising the sufficient amount of free capital disposal. This goes to show that most of the measures usually taken to combat a flight of capital are superfluous or even injurious inasmuch as they will often strengthen rather than weaken the motives that lie behind the capital flight. And more than that: all such regulations, as well as the efforts to evade them, mean that the ordinary course of trade and business is hampered and charged with additional costs; they tend, therefore, to reduce profits and thus to dry up one of the most important sources of savings.

Finally, a word should be said in this connection of the complications that may arise in case of divergencies between what Pigou calls the marginal private and marginal social net products.<sup>1</sup> The immediate "cause" of an international capital movement will normally be the existence of a sufficiently large difference in the value of its marginal private net product in two countries. But the "effects" of the capital flow obviously depend on its influence on marginal social net products. Pigou points out<sup>2</sup> that when the indirect effect of a certain foreign investment, or of the diplomatic manoeuvres by which it is preceded, is an actual war or preparations to guard against war, the cost of these things should be deducted from the interest yielded by the investment in order to ascertain its net contribution to the national dividend. Similarly, the lending country may lose in consequence of the general world impoverishment, if it finances a war between foreign countries. In such cases the marginal social net product may well be negative, even if the return to the private investors has been very high; consequently, the tendency towards equalisation of marginal private net products may cause increased differences between marginal social net products; and conversely, restrictions which maintain the differences between marginal private net products may *improve* the true mobility of capital in the sense that they tend to equalise marginal social net products.

<sup>1</sup> For the meaning of these terms cf. *Economics of welfare*, pp. 136 and 176 et seq.

<sup>2</sup> *Loc. cit.*, pp. 188—89.

**PART II**

**MECHANISM**

**OF**

**INTERNATIONAL CAPITAL MOVEMENTS**





**A**  
**THEORIES**



## INTRODUCTORY REMARKS

Having dealt in the previous three chapters with the general nature of international capital movements, we are now going to consider the *mechanism* through which capital disposal is actually transferred from one country to another.

This discussion is relevant, not only to international loans and interest payments, but also to reparation payments and other unilateral transactions such as remittances by immigrants. In the sequel we shall speak indiscriminately of a borrowing and a capital-importing country (and of a lending and a capital-exporting country), though the two terms are not strictly identical. In *part II A* the contributions of a number of older and younger economists towards the *deductive analysis* of this problem will be critically reviewed. In *part II B* certain important *statistical investigations* bearing upon the question will be examined. And finally, an attempt will be made in *part II C* to unite and extend the knowledge thus obtained into a *more comprehensive explanation*, or at any rate to sum up what parts of this mechanism may be regarded as adequately explained through these deductive or inductive studies, and concerning what parts of it we are still left in doubt.

As explained in chapter I, capital can only be definitely transferred from country to country in the form of commodities or services.<sup>1</sup> But in the first instance an international movement of capital consists merely in a transfer of disposal over monetary buying power from persons in one country to persons in another; the first step, in other words, is that *titles or claims* to goods or services are transferred from residents in one country to residents in another; when a loan is contracted in a foreign money market or when a tribute is recovered from a foreign government, it means that a

<sup>1</sup> *Supra*, pp. 44 et seq.

corresponding amount of general buying power in the lending or paying country is placed at the disposal of private people or the government in the borrowing or receiving country. The problem now before us is how this immediate transfer of monetary buying power leads to the ultimate transfer of *commodities and services*, by what mechanism the claims are exercised and the goods obtained by the borrowers or receivers.

It goes without saying that the character of this mechanism is dependent upon the *monetary systems* of the countries between which the capital movements take place. In chapters IV—VII it will be assumed that all the countries involved maintain a gold or a gold-exchange standard, whereas the doctrines regarding the mechanism of capital flows between paper-standard countries will be taken up in chapter VIII.

It will appear that the doctrines set forth to explain this problem of how an international transfer of capital is actually effected, can be referred to two main groups. One of these trends of reasoning is generally known as the *classical theory*; for brevity's sake the alternative explanation which has come very much to the fore in recent years will be referred to in the sequel as the *modern theory*, although historically this "modern" viewpoint may be traced at least as far back as the "classical" analysis. In chapter IV the first clear-cut formulations of these two trends of reasoning will be reviewed. Chapter V will contain a brief sketch of the forerunners of the two doctrines, while chapters VI—VII will deal with later additions to and refinements of the two sets of doctrines.

The justification for including this rather lengthy "Dogmengeschichte" in the present study must be sought in the deplorable fact that both the participants in the ardent discussions of the transfer mechanism during the last decade and the economists who have attempted to outline a history of doctrine in this field, seem to have been more or less one-sided in their preference of either one or the other of the two schools mentioned above; and a complete explanation of the transfer mechanism can hardly be given, unless the true kernels of *both* these groups of doctrines are merged into a more comprehensive theory.

## CHAPTER IV

### TWO ALTERNATIVE EXPLANATIONS

#### 1. THE CLASSICAL THEORY.

On this point as on so many others *John Stuart Mill* was the first to give a simple and clear exposition of the "classical" doctrine.

In his chapter on the foreign exchanges<sup>1</sup> Mill analyses how international payments are adjusted. He distinguishes between such variations in the exchange rates, which are self-adjusting, and those, which can only be rectified through prices. The first sort of variations are due to some merely accidental and temporary disturbance in the ordinary course of trade, and if the resulting uncovered deficit or surplus in the balance of payments is not too large, it will be balanced through the influence which higher or lower rates of exchange exercise to encourage or discourage imports or exports, or simply through the fact that "the length of credit allowed generally permits, on the part of some of the debtors, a postponement of payment" until the balance of payments again turns the other way.<sup>2</sup> In those cases, on the other hand, where the movement of the exchange rates arises from permanent causes, Mill asserts that "what disturbed the equilibrium must have been the state of prices, and it can only be restored by acting on prices." And as a convinced adherent of the quantity theory he concludes, of course, that the disturbances "cannot be corrected without the subtraction of actual money from the circulation of one of the countries, or an annihilation of credit equivalent to it."

<sup>1</sup> *Principles of political economy*, bk. III, ch. XX.

<sup>2</sup> *Loc. cit.* (Ashley ed.), p. 618. The last words of the quotation appear to be the first attempt in orthodox classical economics to link

How this correction actually takes place is explained in greater detail in the following chapter, where a comparison is made between the mode of adjustment in a barter system and in a money system. In the first case—Mill maintains—a country which wants more imports than its exports will pay for, has but one way of creating the demand for its exports necessary to re-establish the equilibrium: it must offer its exports at a cheaper rate. When money is used—he continues—the country seems to do a thing totally different. It takes the additional imports at the same price as before, and since it exports no equivalent, the balance of payments turns against it; the exchange rate becomes "unfavourable," and the difference has to be paid in money. But, in substance and effect, the operation is the same in the two cases. By the transmission of the precious metals the quantity of currency is diminished in the paying country and increased in the receiving country. Sooner or later this must act on prices and on commodity imports and exports.

After these general remarks, Mill finally turns to a direct analysis of the mechanism through which capital is transferred from one country to another.<sup>1</sup> His account of this deserves to be reproduced in full:

"To begin with the case of barter. The supposed annual remittances being made in commodities, and being exports for which there is to be no return, it is no longer requisite that the imports and exports should pay for one another: on the contrary, there must be an annual excess of exports over imports, equal to the value of the remittance. If, before the country became liable to the annual payment, foreign commerce was in its natural state of equilibrium, it will now be necessary for the purpose of effecting the remittance, that foreign countries should be induced to take a greater quantity of exports than before: which can only be done by offering those exports on cheaper terms, or, in other words, by paying dearer for foreign commodities. The international values will so adjust themselves that either by greater exports, or smaller imports, or both, the requisite excess on the side of exports will be brought about; and this excess will become the permanent state. The result

international trade directly with the state of credit, that is of credit taken as a separate element, whereas all previous writers had regarded gold flows as the only means of correcting permanent disequilibria. Cf. Angell, *The theory of international prices*, p. 87.

<sup>1</sup> Explicitly Mill deals only with a tribute, but exactly similar reasoning is applicable, of course, to investments which are expected to yield a return in the form of interest.

is that a country which makes regular payments to foreign countries, besides losing what it pays, loses also something more, by the less advantageous terms on which it is forced to exchange its productions for foreign commodities.

The same results follow on the supposition of money. Commerce being supposed to be in a state of equilibrium when the obligatory remittances begin, the first remittance is necessarily made in money. This lowers prices in the remitting country, and raises them in the receiving. The natural effect is that more commodities are exported than before, and fewer imported, and that, on the score of commerce alone, a balance of money will be constantly due from the receiving to the paying country. When the debt thus annually due to the tributary country becomes equal to the annual tribute or other regular payment due from it, no further transmission of money takes place; the equilibrium of exports and imports will no longer exist, but that of payments will; the exchange will be at par, the two debts will be set off against one another, and the tribute or remittance will be virtually paid in goods. The result to the interest of the two countries will be as already pointed out: the paying country will give a higher price for all that it buys from the receiving country, while the latter, besides receiving the tribute, obtains the exportable produce of the tributary country at a lower price".<sup>1</sup>

Thus Mill's starting point is a state of stable equilibrium; when that is disturbed by an export of capital which continues year by year at an even and steady rate, he would imagine the process of adjustment to take place through the following stages:

(1) In the capital-exporting country the *price of bills* on the capital-importing country will rise to the gold-export point; in the capital-importing country the rate of exchange on the capital-exporting country will fall to the gold-import point.

(2) *Gold* will flow from the capital-exporting to the capital-importing country.

(3) The relation between the *price levels* in the two countries will shift, prices falling in the capital-exporting country, rising in the capital-importing country.

(4) The *volume of imports and exports in the two countries* will change so as to give the capital-exporting country an excess of exports and the capital-importing country an excess of imports in their balances of trade (current transactions).

(5) When this adjustment of trade balances has created a deficit and a surplus equal in amount to the capital transfer,

<sup>1</sup> *Loc. cit.* (Ashley ed.), pp. 627—28.

the exchange rates return to par, the gold flow ceases, and the relative prices become stabilized at their new levels.

Thus the turn in the balances of trade is accompanied according to Mill's analysis by (a) a permanent change in the distribution of monetary gold stocks, and (b) a permanent change in the barter terms of trade, i.e. the price of imports in terms of exports,<sup>1</sup> to the advantage of the capital-importing country.<sup>2</sup>

## 2. THE MODERN THEORY.

The alternative point of view from which an attempt has been made to analyse the mechanism of international capital movements, the view-point which we have called the "modern" transfer theory, was clearly and explicitly stated for the first time by C. F. Bastable in an article written in 1889.<sup>3</sup>

He starts from the analysis in Mill's Principles, quoted in the preceding section, which seemed to him

"along with an element of truth to suggest an erroneous interpretation of the actual effects of international indebtedness,—the result probably of not carefully examining the various steps of the process by which the relations of countries are adjusted."

Bastable follows Mill in distinguishing between the mode of adjustment in a barter and in a money system, though incidentally he makes the pertinent remark that in the case of barter the tribute must be supposed to be paid in one or more definite commodities; to suppose, as Mill evidently does, that it is paid in "goods in general", is equal to an implicit assumption of a measure of value. This is probably just what economists are apt to do when they try to abstract from money and "think in commodities"; they virtually assume an economic system exactly equal to the one existing at present, only that they do not mention the word money.

Bastable's contribution, the analysis of that step in the mechanism of adjustment which he found insufficiently studied by Mill, he formulates as follows:

<sup>1</sup> Cf. on this concept p. 337, *infra*.

<sup>2</sup> Certain logical difficulties involved in Mill's train of reasoning are discussed by Walther Hahn, "*Der Erkenntniswert des Kettenschlusses in der Aussenhandels-theorie*," *Weltw. Arch.* 1934 I, pp. 80—93.

<sup>3</sup> *On some applications of the theory of international trade*, *Quart. Journ. of Ec.* 1890, pp. 1—17.



"Suppose that A owes B £. 1,000,000 annually. This debt is a claim in the hands of B, which increases her purchasing power, being added to the amount of that power otherwise derived."

While Mill's theory evidently assumes the demand of either country for the commodities of the other to remain unchanged, Bastable points out explicitly that the transfer of capital of itself means a transfer of buying power from one country to the other, which cannot fail to raise the demand for commodities in the receiving country and to lower it in the remitting country. From this point of view Bastable finds that it is

"doubtful whether in case of interest payments or repayments of previous loans Mill is correct in asserting that the quantity of money will be increased in the creditor and reduced in the debtor country. The sum of money incomes will no doubt be higher in the creditor than in the debtor country. The inhabitants of the former, having larger money incomes will purchase more *at the same price*, and thus bring about the necessary excess of imports over exports."

The accomplishment of this result is greatly facilitated under a modern money economy, because the capital-importing country then has the possibility, not only of spreading its demand to a great number of commodities within the capital-exporting country itself, but also of buying from any other country which then in turn receives its payment from the capital-exporting country.

Thus Bastable doubts whether Mill is right, when he maintains that a country exporting capital or making other regular payments abroad necessarily suffers a loss *apart* from the payments themselves through an unfavourable shift in its terms of trade with other countries. The "sum of incomes" in the receiving country being higher, she will be more able to buy,

"and she may wish to take from A [the remitting country] new goods *beyond* that excess of A's exports over imports represented by the payment. In so far as this happens the terms of exchange will be against B and A's loss will be counteracted."

To use modern terminology, Bastable's contention is that the barter terms of trade may move either way, as they depend on the shifts to which the capital transfer gives occasion in the demands of the two countries for the products of each other.

What made Bastable doubt the correctness of Mill's analysis was its apparent contradiction to what he called "Ricardo's greatest contribution to the theory of international trade", i.e. his well-known principle that

"gold and silver, having been chosen for the general medium of circulation, ... are, by the competition of commerce, distributed in such proportions amongst the different countries of the world as to accommodate themselves to the natural traffic which would take place if no such metals existed, and the trade between countries were purely a trade of barter."<sup>1</sup>

When Bastable so strongly emphasized that in the case of barter an international loan had to be made in certain definite commodities and transferred from the lender to the borrower directly in this form, it was just because he inferred from this that *in a barter system* no shift in the terms of trade was necessary; here the very fact that the borrowing country was willing to take a loan in those particular commodities seemed to show that even at the existing terms of trade it had a sufficiently urgent demand for them. And if Mill's theory assumed, on the other hand, that under a *money system* such shifts in the terms of trade should take place, Bastable concluded that either it must have been wrong when Ricardo, and Mill after him, claimed that the conditions of international trade were identical under a barter and under a money system, or else he—Bastable—must be right in denying Mill's contention as to the necessity of gold flows and shifts in relative prices in order to restore an equilibrium disturbed by a transfer of capital.

An attempt to unite Ricardo's doctrine with Mill's theory on this point has been made recently by Viner. He maintains that a change in the "reciprocal demand" of the two countries and, consequently, in the terms of trade will also be necessary under barter. In this case, it is true, the loan will move into the borrowing country directly and without need of preliminary changes in the rates of exchange between *the very goods of which the loan consists* and the goods of the borrowing country. But, says Viner, the inflow of the borrowed goods will disturb the even equilibrium between the *remaining* items in the balance of trade. The increase in the

<sup>1</sup> *Principles*, ch. VII.

supply of the lending country's goods in the borrowing country will make the latter unwilling to continue its purchases from the lending country in the volume and at the rates of exchange current prior to the beginning of the inflow of the borrowed goods.

On the assumption that the demand schedules remain unchanged in both countries, Viner's reasoning is unassailable, but it is exactly *the adequacy of this premise* which Bastable questions. According to him the increased supply in the borrowing country of the lending country's goods is counter-balanced by an increase in the total amount of buying power available in the borrowing country. Similarly, he would argue that the transfer of buying power reduces its total amount in the lending country and, consequently, lessens the demand in this latter country for the borrowing country's goods, whereas, according to Viner

"there will have been no reason why the lending country's demand for the borrowing country's goods should have fallen, or at least why it should have fallen to an extent which would exactly offset the fall in the demand of the borrowing country for its own goods."

According to Viner, the result is, therefore, that the loan under barter just as well as under a money system will cause a shift in favour of the borrowing country in the reciprocal demand of the two countries for each other's goods. In the one case as well as in the other, the necessary equilibrium between exports and imports other than those representing the transfer of borrowed goods from lender to borrower, will be re-established only if the lending country accepts smaller quantities of the borrowing country's goods in exchange for each unit of its own exports. The only difference, then, would be that under barter the transfer of the loan to the borrowing country in the form of goods comes first and is the cause, and not the effect, of the shift in the terms of international exchange whereas, under money exchange, this shift in the terms of trade is the necessary preliminary to the inflow of the loan in the form of goods.<sup>1</sup>

It should be added, in conclusion, that peculiarly enough Bastable did not use his original view-points, so much at

<sup>1</sup> Jacob Viner, *Canada's balance of international indebtedness 1900—1913*, pp. 296—97. Viner's whole position will be examined infra pp. 229 et seq.

variance with the classical line of analysis, in his main work, "Theory of international trade";<sup>1</sup> there he seemed to accept the traditional classical explanation as a matter of course.<sup>2</sup> On the whole, he did not have much to say in this book about the mechanism through which international capital movements take place. He adds "a needed modification" to the statement that the equation of international demand, if broken, could be restored only by an alteration of prices produced by the passage of money.<sup>3</sup>

"We are now in a position to understand that a foreign loan may maintain the equation of indebtedness, and may obviate the inconvenience of a sudden change in prices, which may not, on the whole and taking a long period into account, be needed. This function of securities is most useful, since it gives stability to prices which would otherwise fluctuate unduly, and further relieves countries from what might be the cause of much inconvenience and loss, viz. the sudden drain of a large amount of money-material . . . a country at times can create an immaterial export by means of its securities, which export it has to meet at a future date by sending out an actual export of equal value—interest, of course, being paid in the meantime."

It is obvious, however, that what Bastable has in mind here is only the short-term borrowing—the equalising capital movements—which may arise as a result of an adverse shift in the balance of current transactions.

### 3. COMPARISON.

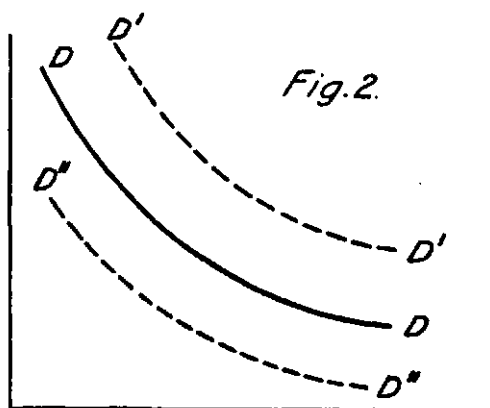
As already suggested, the main difference between the views of Mill and Bastable is to be found in their *different starting-points regarding demand conditions* in the countries between which capital is flowing. Mill tacitly assumes the conditions of international demand in both countries to remain unaltered in spite of the capital transfer, whereas Bastable explicitly argues that it is the very nature of an international movement of capital to alter the conditions of reciprocal demand.

<sup>1</sup> First edition was published in 1887, two years before the epoch-making article in the *Quart. Journ. of Ec.*; second edition did not appear till 1897.

<sup>2</sup> This can probably be explained only as a result of the tendency to "compartment thinking" which in so many fields has prevented an understanding of the interdependence between economic phenomena. Cf. Angell, *The theory of international prices*, p. 102 and my review of this book in *Nationalek. Tidsskr.* 1928, p. 235.

<sup>3</sup> *Loc. cit.*, pp. 77–78.

A preliminary idea of the difference between the two points of view is perhaps most easily obtained by means of the familiar elementary curve apparatus (fig. 2). Mill appears to



start from given, negatively inclined, monetary demand curves of the usual sort ( $DD$ ), indicating for either country the prices at which its inhabitants are willing to buy successive quantities of the other country's goods. His reasoning implies that an increase or decrease in the imports and exports of either country must be accompanied by *movements in their prices along these given demand curves*. And as an international capital movement means a change in the relation between exports and imports (or other current credit and debit items) in both countries, the conclusion drawn by Mill that it must also be accompanied by a shift in their relative price levels, seems inevitable; to create the necessary export surplus the new lending country is forced to offer its goods at cheaper terms. Bastable's argument is, on the other hand, that a capital movement will cause a *shift upwards or downwards in the demand curves* (from  $DD$  to  $D'D'$  or  $D''D''$ ), and on this assumption a greater or smaller quantity than before may be sold at an unchanged price. Using this later terminology Bastable might have argued that demand does not depend solely on wants and desires—as Mill's reasoning would seem to assume; it is also affected by the volume of buying power which people have at their disposal. And as a capital transfer means that the lender puts part of his buying power at the

disposal of the borrower, it seems equally clear that it must be accompanied by shifts in the position of the curves of international demand.

Whether this diagrammatic illustration gives an adequate explanation of the contrast between the two transfer theories briefly outlined above, will be discussed at length in subsequent chapters. At this stage it may serve to give a provisional description of the two main headings under which the different transfer explanations will be grouped. Attention will be called later to other differences between these two points of view. In particular, it will appear how the the classical transfer explanation, like the classical theory of international trade in general, is built upon the assumption of *constant cost*, whereas the modern explanation admits the possibility of *varying costs* because it takes account, in harmony with the modern interdependence theory of value, of the different proportions in which the factors of production are combined in different commodities. On the classical premise, the transfer of buying power must increase the prices of *all* productive factors in the borrowing country and lower *all* of them in the lending, and on that assumption the change in the barter terms of trade follows as a necessary consequence. The modern reasoning, on the other hand, leads towards an analysis in terms of "*sectional price levels*" (i.e. price levels computed separately for import, export, and home-market goods); it stresses the divergent movements in the prices of home-market goods in the two countries, whereas it admits that the relation between the prices of their import and export goods (i.e. the barter terms of trade) may not be appreciably affected, and that such movements as do appear in these terms may be either way. The essential difference between the two lines of reasoning is, therefore, that the doctrine which Mill's authority made "classical" postulates a permanent shift in the relative price levels of the two countries (for commodities in general, including international goods) in favour of the borrowing country as *a necessary part of the transfer mechanism*, whereas the "modern" theory first expounded by Bastable denies the necessity of this turn in the barter terms of trade; instead it finds the *causa efficiens* in the transfer mechanism to be *the very transmission of buying power* and its influence on demand conditions in both countries.

## CHAPTER V

### THE FORERUNNERS

#### 1. THORNTON.

It is not the intention of the present study to give an exhaustive account of the development through which the two alternative explanations outlined above were gradually crystallized in the form they received at the hands of Mill and Bastable.<sup>1</sup> Only a few phases in this development need be briefly touched upon.

The theory which we have associated with J. S. Mill's name has often been called, not only the classical, but also the *Ricardian* doctrine, and it is hardly to be doubted that Mill himself would have given his admired predecessor the entire credit for its formulation. Viner's interesting investigations<sup>2</sup> have shown, however, that this is due to a misapprehension; in fact, it was *Henry Thornton* who first formulated the "classical" solution of this problem, whereas Ricardo held opinions which, if further developed, would have led him towards a standpoint more similar to that of Bastable.

The point from which both Thornton and Ricardo started is to be found in *David Hume's* famous "Essay of the balance of trade," which destroyed at a single stroke the whole mercantilist balance-of-trade theory by demonstrating how automatic gold flows and the resulting price changes were the means by which the equilibrium of the balance of trade was re-established when disturbances occurred. The illuminat-

<sup>1</sup> Such accounts are to be found in the books by Angell and Viner from which a considerable part of the material reviewed here has been drawn.

<sup>2</sup> *Loc. cit.*, pp. 191 et seq., and the essay: *Die Theorie des auswärtigen Handels*, *Die Wirtschaftstheorie der Gegenwart*, Wien 1928, III, pp. 106 et seq.

ing passage so often quoted deserves to be reproduced once more:

"Suppose four-fifths of all the money in Great Britain to be annihilated in one night . . . what would be the consequence? Must not the price of all labour and commodities sink in proportion . . .? What nation could then dispute with us in any foreign market, or pretend to navigate or to sell manufactures at the same price, which to us would afford sufficient profit? In how little time, therefore, must this bring back the money which we had lost and raise us to the level of all the neighbouring nations? Where, after we have arrived, we immediately lose the advantage of the cheapness of labour and commodities; and the farther flowing in of money is stopped by our fulness and repletion . . . It is evident that the same causes which would correct these exorbitant inequalities, . . . must prevent their happening in the common course of nature, and must forever, in all neighbouring nations, preserve money nearly proportionable to the art and industry of each nation."<sup>1</sup>

It should be noted that Hume's analysis refers directly to a disturbance on the money side only. This raises the question whether it was applicable *only* to such monetary disturbances or whether it could *also* be used as an explanation of the adjustment to disturbances originating on the commodity side. It was in their answers to this question that Thornton and Ricardo parted company.

For the new idea introduced by Thornton was precisely his application of Hume's reasoning to such disturbances of the equilibrium in the balance of trade as might arise from the commodity side. The case he used to illustrate his argument was that of a failure of the harvest in a grain-exporting country leading to an unfavourable balance of trade, but it is easily seen that the problem of adjustment raised by this situation bears a close analogy to that presented by international capital movements. In the case of a harvest failure it must be explained how the exports of other commodities than grain are increased, or how imports are decreased to such an extent that imports and exports are brought to balance again, in spite of the cessation or diminution of the grain export or its conversion into grain import. In an exactly similar way, in the case of foreign borrowing, the question is how exports are increased relatively to imports by an amount equal to the volume of the

<sup>1</sup> David Hume, *Essays, moral, political, and literary*, ed. by Sir J. Lubbock, London 1894, pp. 185—86.



loans. In both instances, the fundamental problem is to explain the mechanism by which the relative demands of the two countries for each other's products change in response to the new factor in the situation. Thornton gives the following explanation:<sup>1</sup>

"At the time of a very unfavourable balance (produced, for example, through a failure of the harvest), a country has occasion for large supplies of corn from abroad: but either it has not the means of supplying at the instant a sufficient quantity of goods in return, or, ... the goods which the country having the unfavourable balance is able to furnish as means of cancelling its debt, are not in such demand abroad as to afford the prospect of a tempting or even of a tolerable price .... The country, therefore, which has the favourable balance, being, to a certain degree, eager for payment, but not in immediate want of all that supply of goods which would be necessary to pay the balance, prefers gold as part, at least, of the payment; for gold can always be turned to a more beneficial use than a very great overplus of any other commodity. In order, then, to induce the country having the favourable balance to take all its payments in goods, and no part of it in gold, it would be requisite not only to prevent goods from being very dear, but even to render them *excessively cheap* ... For this reason it may be the true policy and duty of the bank to permit, for a time, and to a certain extent, the continuance of that unfavourable exchange, which causes gold to leave the country, and to be drawn out of its own coffers ..."

Here, evidently, the following stages in the process of adjustment are distinguished: (1) the disturbance (failure of the harvest; export of capital) occurs and makes the rates of foreign exchange unfavourable in the (grain- or capital-) exporting country, (2) gold is exported, (3) prices decline, (4) the exports of commodities are increased, the imports decreased, until (5) equilibrium is re-established. It is easily recognized that these stages are exactly similar to those enumerated above in chapter IV in the review of Mill's formulation of the theory. According to this explanation the export of gold appears to be the consequence of a balance of trade made unfavourable by other causes; the "redundancy of currency"

<sup>1</sup> Henry Thornton, *An enquiry into the nature and effects of the paper credit of Great Britain*, London 1802 (Reprinted in J. R. Mc. Culloch's *Collection of tracts on paper currency and banking*, London 1857, pp. 720-21. Here quoted from Viner, *loc. cit.*, p. 192). In an exactly similar way the mechanism is described by S. de Sismondi, *De la richesse commerciale*, Paris 1803, vol. I ch. V.

is the *effect* of and not—as in Hume's analysis—the *cause* of the unfavourable balance of trade.

Thornton's standpoint was shared by *Malthus*.<sup>1</sup> He stressed that the decisive question must be whether a country which, for instance, had received subsidies would demand immediately for that reason a greater quantity of the goods of the subsidy-granting country than it used to buy. To his notion this would not be the case; like Thornton he holds that a capital-exporting country must place its goods on foreign markets at lower prices than before, tacitly assuming that demand conditions remain unchanged, and that, consequently, a greater volume of commodities cannot be disposed of except at lower prices. That is to say: the granting of subsidies or loans normally leads, in the beginning, to a loss of gold, as it is only through the resulting changes in relative prices in the gold-exporting and in the gold-importing country that the necessary excess of exports is created. He admits, however, that the higher rates of foreign exchange in the country granting the subsidy or loan will operate in themselves to increase the demand for the latter country's products, but he feels sure that if the subsidies or loans are considerable, bills on the debtor country will soon reach the gold-export point.

## 2. RICARDO.

*Ricardo*, on the other hand, in his famous essay "The high price of bullion" turned against Thornton's standpoint in the following passage:<sup>2</sup>

"Mr. Thornton has not explained to us why any unwillingness should exist in the foreign country to receive our goods in exchange for their corn; and it would be necessary for him to show, that if such an unwillingness were to exist, we should agree to indulge it so far as to consent to part with our coin."

But no more did Ricardo explain why such an unwillingness can *not* be expected to exist. He merely adds that

"if we consent to give coin in exchange for goods, it must be from choice, not necessity. We should not import more goods than we

<sup>1</sup> In a review of Ricardo's work "The high price of bullion" in *Edinburgh Rev.*, Febr. 1811, pp. 342—45.

<sup>2</sup> *Mc. Culloch ed.*, London 1846, p. 268.

export, unless we had a redundancy of currency, which it therefore suits us to make a part of our exports. The exportation of the coin is caused by its cheapness, and is not the effect, but the cause of an unfavourable balance."

It thus appears that Thornton and Ricardo agreed that gold would be exported only if it were "redundant," but disagreed as to whether the export of gold, besides being the cause of an unfavourable balance of trade, might also be an effect thereof. This, as we have seen, was affirmed by Thornton, but denied by Ricardo. The latter explicitly confined Hume's analysis to cover only the cases directly mentioned by Hume, the monetary disturbances,<sup>1</sup> whereas Thornton, as already stated, would apply it to commodity disturbances as well.

How Ricardo would explain the re-establishment of equilibrium of international trade in these latter cases—e.g. in case of an international transfer of capital—can only be surmised. At first he appears completely to deny that movements in exchange rates and gold flows, and what might be traced back to them, have anything to do with the question. This seems to imply that he conceived that the disturbance itself—e.g. the export of capital—*immediately and automatically* would bring about a proportionate change in the reciprocal demands of the countries for each other's products, but this, of course, presupposes in its turn that, consciously or unconsciously, he has based his reasoning upon the idea that a transfer of capital means *eo ipso* a transfer of an equal amount of buying power, or, in other words, upon the theory which we have called the modern, and not upon the classical approach to the problem.

But as time went on Ricardo modified his original standpoint in several respects. First he admitted<sup>2</sup> that the mechanism of adjustment which he had in view would work out perfectly only in a society without *friction*, where everybody knew and recklessly pursued his own interest, and that, consequently, the readjustment might look somewhat different in the actual world.—Next he conceded to Malthus that the rates of exchange did play a rôle in the process of adjustment.

<sup>1</sup> He even went so far as to maintain that "the temptation to export money in exchange for goods, or what is termed an unfavourable balance of trade, never arises but from a redundant currency." *Loc. cit.*, p. 267.

<sup>2</sup> Bonar, *Letters of Ricardo to Malthus*, Oxford 1887 pp. 18—19.

In one letter he maintains that when the subsidies had been paid, "the exchange would again accurately express the value of the currency,"<sup>1</sup> i.e. would return to par, which implies, of course, that there may be oscillations *while the payments are going on*.—But in a subsequent letter he goes even further, contending that the unfavourable rate of exchange resulting from the payment of subsidies may persist *long after the subsidies have been fully transferred*.<sup>2</sup> For he holds that if the fall in the exchange of the subsidy-granting country is not of itself sufficient to create the necessary increase in the exports of this country, and gold is therefore exported, the amount of gold exported will necessarily be a smaller proportion of the total stock of gold in the country than the proportion of the commodity exports sent in payment of the subsidy to the total stock of commodities in the country, and that, consequently, prices in the subsidy-granting country will be higher after the payment of the subsidies than before. *Why* this should necessarily be so, he does not say, however.—Lastly, Ricardo conceded to Thornton<sup>3</sup> that a harvest failure might create of itself a "redundancy of currency" and thus call forth an export of gold. He says:

"If the circulating medium of England consisted wholly of the precious metals, and were a fiftieth part of the value of the commodities which it circulated... [and if] England, in consequence of a bad harvest, would come under the case mentioned of a country having been deprived of a part of its commodities, and therefore requiring a diminished amount of circulating medium, [the] currency, which was before equal to her payments, would now become superabundant, and relatively cheap, in the proportion of one fiftieth part of her diminished production; the exportation of this sum, therefore, would restore the value of her currency to the value of the currencies of other countries."

But Viner is right, of course, when he points out<sup>4</sup> that this is a sort of gold movement entirely different from that postulated by Thornton and Malthus. Here the purpose of the gold flow is to *maintain unaltered* the original relation between the price

<sup>1</sup> *Loc. cit.*, p. 15.

<sup>2</sup> *Ibid.*, pp. 20—21.

<sup>3</sup> In an Appendix to the fourth edition of "*The high price of bullion*" (Works, pp. 291 et seq.).

<sup>4</sup> *Loc. cit.*, p. 195.

levels whereas, according to Thornton's theory, the gold shipments should serve to alter this very relation. Applied to subsidies or loans Ricardo's concession apparently would lead to the contention that the gold export would set in *after* the subsidy had begun to move out in the form of commodities, in order to maintain partially, if not entirely, the old relation between the price levels of the countries, whereas Thornton and Malthus would maintain that, on the whole, the export of gold would *precede* the movement of commodities, and that it should be of sufficient amount, not only to maintain the original relation of price levels, but in addition to depress still further the prices of the paying country, in order to prepare the way for its export of commodities.

With all his concessions, therefore, Ricardo stuck to his original position that it was not to shifts in relative prices that one should look for an explanation of the re-establishment of equilibrium in international trade following upon disturbances on the commodity side.—Viner devotes several pages to explaining how Ricardo may have reached this—to Viner's mind—erroneous or, at best, extremely abstract and unrealistic standpoint.<sup>1</sup> Granting the "classical" assumption that demand conditions in the two countries, between which a capital transfer takes place, remain unchanged, it seems self-evident that Viner is right, but he fails to see that Ricardo's position may be interpreted as the equally natural and logical consequence of the assumption that a capital movement *eo ipso* brings about a shift in demand conditions.—Unlike Viner, Angell does not seem to attach much importance to the difference of opinion between Thornton and Ricardo; he dismisses the two alternative explanations in a footnote with the remark that

"polemics aside, however, the two seem to come to much the same thing so far as the balance of international payments is concerned, except quantitatively."<sup>2</sup>

But against this "cavalier dismissal" Viner properly remarks<sup>3</sup> that if this view of the divergence between Thornton and Ricardo be correct Angell's whole presentation of his own

<sup>1</sup> *Loc. cit.*, pp. 198—200.

<sup>2</sup> *Loc. cit.*, p. 57.

<sup>3</sup> *Journ. of Pol. Ec.* 1926, p. 611.

position with respect to mechanism is a waste of effort, since the differences between Ricardo's doctrine and that of his critics are incomparably greater in extent and significance than those between Angell's doctrine and the doctrines which it attempts to correct.<sup>1</sup>

Angell points out,<sup>2</sup> however, that the position to which we have seen Ricardo stick in spite of all concessions is apparently contradicted by his "Principles." For in the "Principles" Ricardo maintains<sup>3</sup> that a rise in the rates of foreign exchange, which is itself the consequence of the current balance of payments, will alter the balance of *trade* and lead to an export of specie. It is comparatively easy, however, to reconcile these two views by supposing, as Angell himself suggests, that the state of relative prices which led to a deficit in the balance of payments in one of the countries is itself symptomatic of a "redundancy of currency" so that, here too, this is the ultimate cause of the deficit in the balance of trade and of the export of gold. But this leaves us with still another contradiction, for which a solution cannot be found so easily. For in the "Principles" it is pointed out explicitly that

"when each country has precisely the quantity of money which it ought to have, money will not indeed be of the same value in each, for with respect to many commodities it may differ 5, 10, or even 20 per cent."

And this doctrine of permanent price differences is extended even to commodities "which are common to most countries," i.e. what we would now call international goods. And on this assumption it does not seem possible to get any criterion of the often mentioned "redundancy of currency" or, in general, any tenable explanation of the determinants of the automatic gold movements, as these are usually accounted for just by assuming an effective tendency towards equalisation of the prices of international goods. Here too, Angell thinks it possible, it is true, as an exercise in logic to conceive of a situation in which the commodity-price structures of the various countries are largely independent, and in which the precious

<sup>1</sup> Cf. *infra*, pp. 236—38.

<sup>2</sup> *Loc. cit.*, pp. 69—71.

<sup>3</sup> Ch. VII.

metals are distributed through the attractive or repellent effects of slight variations in the market prices of these metals from the ratios between the mint pars. A favourable interpretation might assume that this was the situation which Ricardo had in mind when he declared that "redundancy" was always the cause of an export of gold, and that this again was always the cause—and never the effect—of an unfavourable balance of trade; for in this situation the distribution of gold between the different countries would presumably take place, not according to differences in its market price in terms of commodities, but according to differences in its price in terms of the respective currency units.<sup>1</sup> But, as Angell points out himself, such an explanation would be tenable only on the assumption that gold was the only commodity actively traded between countries. If, as is actually the case, there is in addition a number of other international commodities it seems inevitable that comparisons should also be made between the value of gold in terms of *them* in different countries, and that such comparisons would also affect the world movements of gold. The consequence must be that the prices of the international commodities will tend to be equalised, and that with respect to them the doctrine of permanent price differences breaks down.

<sup>1</sup> In "*The high price of bullion*" Ricardo explicitly says (p. 6): "The currency of any one country can never be much more valuable as far as equal quantities of the precious metals are concerned, than that of another."

## CHAPTER VI

### LATER REFINEMENTS

#### 1. THE CLASSICAL THEORY.

Though the clear and simple explanation of the mechanism of international capital movements given by J. S. Mill like so many other parts of his doctrines was generally accepted and soon became "classical," this does not mean that his theory was not further elaborated. On the contrary, a number of English economists during the latter half of the 19th century, in their attempts to clear up the short-run connection between the quantity of money and the level of prices, made several contributions to the solution of the transfer problem. While the older writers from Hume to Mill had confined themselves, on the whole, to a study of the direct connection between quantity of gold and height of prices, it was now realised that the connection was mainly *indirect* and established only with bank reserves and discount rates as intermediaries.

Among the first to develop this new line of reasoning were Tooke and Fullarton,<sup>1</sup> and in the following period it appears more or less explicitly in the writings of Macleod,<sup>2</sup> Goschen,<sup>3</sup>

<sup>1</sup> T. Tooke, *An inquiry into the currency principle*, London 1844; H. Fullarton, *On the regulation of currencies*, London 1844. As mentioned by H. E. Miller (*Earlier theories of crises and cycles in the United States*, *Quart. Journ. of Ec.* 1924) several quite remarkable anticipations of the so-called Marshallian doctrine were also presented between 1840 and 1860 by American writers such as Raguét and C. F. Adams. Similarly, Angell (*The theory of international prices*, pp. 234—35 and 275—78) mentions Émile de Laveleye and Clément Juglar as French forerunners of Marshall.

<sup>2</sup> *The theory and practice of banking*, London 1855—56.

<sup>3</sup> *Foreign exchanges*, London 1861.



Bagehot,<sup>1</sup> Sidgwick,<sup>2</sup> Giffen,<sup>3</sup> and Nicholson,<sup>4</sup> finally receiving its "classical" form, so to speak, at the hands of Alfred Marshall in his famous testimony before the Gold and Silver Commission. The influence of these considerations on the explanation of the mechanism of adjustment in international trade, was particularly stressed by Goschen.

Like his predecessors, *Goschen* mentions the change in foreign exchange rates as the first effect of an international capital transfer.<sup>5</sup> He points out that if the country which has secured a loan owes a balance on its general mercantile transactions and is in want of remittances to cover it, the extra supply of foreign bills will at once relieve the situation; and when he continues that in the contrary case where no balance is requiring settlement, a loan will generally be taken in specie, he probably only means that when the borrowing has reached a certain amount, the rates of exchange will pass the specie points and *gold* begin to flow towards the borrowing country. He seems to think, however, that gold shipments will be necessary only in case of very sudden and severe turns in the balance of payments; for he remarks in another connection<sup>6</sup> that a gold flow towards a debtor country is something "unnatural and artificial;" it is "lending your debtor more instead of exacting payment."

What led Goschen to minimize the importance of gold flows was his analysis of the *short-term credit transactions* to which international differences between discount rates might give rise. In the case e.g. of seasonal fluctuations in the balance of trade, a country can, like an individual with a prospective income, by offering a high rate of interest, raise a loan to carry it over the interval and thus perhaps evade a "double transmission of bullion."

Of the way in which these equalising short-term transactions actually take place Goschen speaks in chapter IV:

"There is in the hands of bankers and exchange dealers a large amount of bills on various countries, held partly for the purpose of

<sup>1</sup> *Lombard Street*, London 1873.

<sup>2</sup> *Principles of political economy*, London 1883.

<sup>3</sup> *Essays in finance II*, London 1886.

<sup>4</sup> *A treatise on money*, London 1888 and *Principles of political economy II*, London 1897.

<sup>5</sup> *Loc. cit.* 3. ed., 1906, p. 27.

<sup>6</sup> *Loc. cit.*, pp. 94—95.

speculating on a rise or fall in the price of bills, but, to a very large extent, solely for the sake of the interest which is to be made on them. . . . The debt, it will be remembered, which is embodied in the bills in question, and without which they could not exist, must be paid sooner or later; but the time when it must be liquidated will, within certain limits, depend upon the rate of interest."

Obviously this stress on changes in discount rates as the most powerful corrective of a drain of gold involves an important modification of the classical doctrine; it makes the maintenance or re-establishment of equilibrium in the balance of payments dependent primarily on operations in the money market, so that an influencing of the commodity market becomes necessary only in extreme cases.<sup>1</sup>

Marshall's classical analysis of the "indirect" chain of effects that connects money and prices is so familiar that a cursory review of his main ideas will suffice.<sup>2</sup> An increase in the quantity of money (it is not stated from where it is supposed to come) will lead in the first instance to increased bank reserves, lower discount rate, and increased "speculation." The term speculation is used by Marshall in a very wide sense so as to include all different sorts of transactions taking place in the short-run money market. This increased "speculation" raises prices; as a consequence, more money is needed for cash transactions, and thus the initial increase in the quantity of money is ultimately divided between the banks and hand-to-hand circulation. But as is often the case in Marshall's writings, the qualifications are no less important than the doctrine itself. He is very careful to stress that this analysis of the connection between money and prices by way of bank reserves and discount rates must assume a number of other things to be equal, changes in which are "very often, perhaps generally, more important than the changes in the volumes of the precious metals."<sup>3</sup> Consequently, he regards these changes

<sup>1</sup> Cf. M. Ansiaux, *Principes de la politique régulatrice des changes*, Bruxelles and Paris 1910, pp. 48 et seq. and Axel Nielsen, *Bankpolitik II*, Kbhvn. 1930, p. 119 cf. pp. 82 and 221.

<sup>2</sup> Cf. Marshall's famous *Evidence before the Gold and Silver Commission*, 1887-88 (particularly the earlier part of it) and his *Evidence before the Indian Currency Committee*, 1899 (Reprinted in *Official papers by Alfred Marshall*, London 1926). Cf. also the somewhat modified presentation of his monetary theory which he finally gave in *Money, credit and commerce*, London 1923.

<sup>3</sup> Gold and silver Commission, *Minutes of Evidence*. Qu. 9629; *Official Papers*, pp. 34-35.

in the quantity of currency only as one of a great variety of factors which jointly determine prices.

But while Marshall is thus well aware that within any one country the effects of gold flows on prices are more indirect and less certain than the older classical theory would assume, he sticks to the traditional gold-flow-price mechanism when he comes to discuss prices as between countries. He does not give any detailed analysis of the mechanism set in motion by the floating of foreign loans, but it is hardly to be doubted that he would have described it in much the same way as J. S. Mill.<sup>1</sup> And he has nothing but some very general remarks to offer here on the "part played by variations in the rate of discount charged in a country's money market in maintaining the equilibrium of her commercial obligations."<sup>2</sup>

As is well known, one of Marshall's most important contributions to the theory of international trade is the introduction of a peculiar diagrammatic method of analysis.<sup>3</sup> This method has two essential characteristics: (1) instead of picturing the relation between quantity demanded and price offered per unit, Marshall's demand curves describe the relation between quantity demanded and *total outlay* offered in return for it; (2) this total outlay is expressed, not in money, but in *another commodity*, so that each demand curve is at the same time from another point of view a supply curve.<sup>4</sup>

<sup>1</sup> Cf. *Money, credit and commerce*, p. 144: "If then the claims for immediate payment held in Belgium or France, on account of goods sold, *money borrowed*, remittances due, etc., were equal to the total claims held in France against Belgium . . . exchanges would be at par." But if they were greater in one country than in the other, the exchanges would move to the gold point and a gold flow set in which would then in a *short time* correct prices.

<sup>2</sup> *Ibid.*, pp. 147—49.

<sup>3</sup> These diagrams first appeared in the two famous chapters privately printed and circulated among economists in 1879 (Reprinted as No. 1 in *Series of Scarce Tracts in Economics and Political Science*, London School of Economics and Political Science, 1930. Cf. *Money, credit and commerce*, p. 330, note 1 and Keynes in *Memorials of Alfred Marshall*, London 1925, pp. 23—26). On the relation between Marshall's curves and the ordinary demand and supply curves cf. Theodore O. Yntema, *A mathematical reformulation of the general theory of international trade*, pp. 47 et seq.

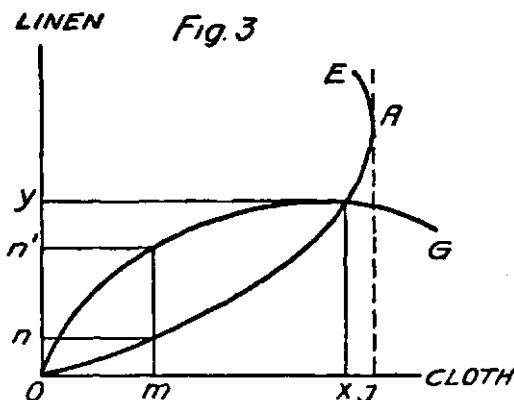
<sup>4</sup> Let England export cloth and Germany linen. Then England's demand for German linen (in terms of cloth) may be expressed by the curve OE, (fig. 3) while Germany's demand for English cloth (in

By means of such curves of real demand-and-supply Marshall elegantly demonstrated the effects of duties, changes in tastes, etc. under different conditions as to the elasticities of demand.<sup>1</sup> He also made an attempt<sup>2</sup> to demonstrate the effects of one-sided payments on the behaviour of these curves (fig. 4).

Assuming that England had to deliver annually an amount represented by OL to Germany as interest on previous German investments in England, Marshall shifted the English demand curve to the right by the distance OL, while leaving the shapes of both curves unchanged. To prove his con-

terms of linen) may be OG.

These curves show that if England shall buy  $n$  units of German linen, she will offer  $m$  units of English cloth in return, and that if Germany shall buy  $m$  units of English cloth she will offer  $n'$  units of German linen in return. It is obvious that the more linen England has already got, the fewer units of cloth she will give for an additional import of linen; consequently, the English demand curve becomes steeper as it proceeds, and for a similar

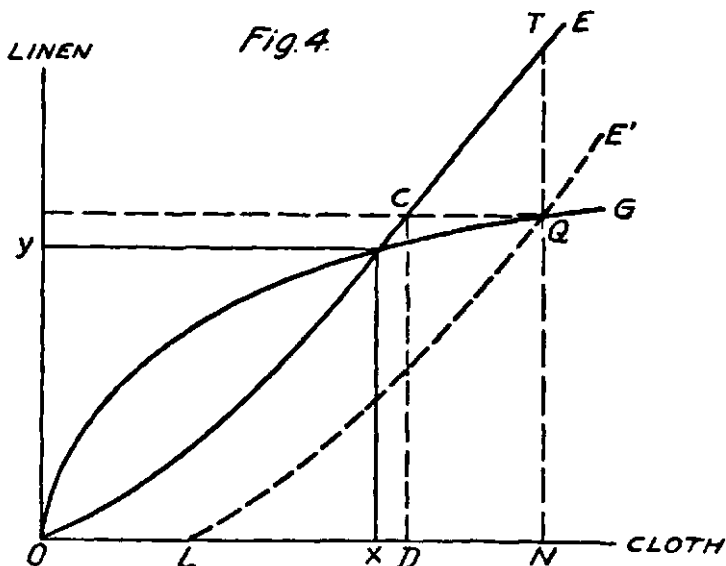


reason the German demand curve grows flatter. Equilibrium is reached when  $x$  units of English cloth are exchanged for  $y$  units of German linen. In the treatise of 1923 Marshall operates instead with "bales of goods"; on the difficulties inherent in this procedure cf. F. D. Graham, *The theory of international values*, Quart. Journ. of Ec. 1932, p. 583, and *infra*, pp. 490—92.

<sup>1</sup> *Money, credit and commerce*, Appendix J. Remembering that an elasticity of demand equal to one (or unity) means that the total outlay remains constant in spite of variations in the quantity demanded, we realise that unitary elasticity must be expressed in the Marshallian system by curves parallel to the axis representing quantity demanded. The English demand curve above (fig. 3) shows an elasticity greater than one up to the point A and after that point an elasticity smaller than unity; until that point an increasing total quantity of cloth is offered for increased quantities of linen, while after that point less cloth will be given for a greater than for a smaller quantity of linen.

<sup>2</sup> *Loc. cit.*, pp. 349—50.

clusion that  $Q$  would be the new equilibrium point Marshall reasoned as follows: because  $Q$  is a point on  $OG$ , we know that  $ON$  units of English cloth<sup>1</sup> can be sold in the German market for  $QN$  units of German linen. And because  $C$  is a point on  $OE$ , we know that these  $QN (= CD)$  units of German linen can be sold in England for  $OD$  units of cloth. That



is to say: for  $OD$  units of cloth the English receive  $CD$  units of linen, while for the remaining  $DN$  units of exported cloth they get merely receipts for the interest payments. Had it not been for this obligation England would only have parted with  $ON$  units of cloth for  $NT$  units of linen.

This construction is quite clearly untenable. It exhibits the paradoxical result that with elasticities greater than unity the interest-paying country will *increase* its consumption of foreign goods and that the terms of trade are inevitably turned *in its favour*. A more acceptable solution has been suggested by Pigou and D. H. Robertson.<sup>2</sup> Both curves must be shifted to a new common starting-point, and there is a general probability that both must be, not only shifted, but *distorted* in-

<sup>1</sup> By a misprint Marshall says  $QN$  (p. 350).

<sup>2</sup> Cf. Pigou and Robertson, *Economic essays and addresses*, London 1931, pp. 179-81.

wards towards one another. This represents the probability that the English, when obliged to part with some of their goods on interest account, will not be willing to trade away a given quantity of English goods on such easy terms as before; while the Germans, receiving these interest payments, will not be willing to offer so many of their own goods as before for a given quantity of English goods. But exactly how elastic the demand for foreign commodities will be in each country before and after the introduction of the interest payments, is an extremely complex problem,<sup>1</sup> too complex, as we shall find later, to be adequately described by the simple Marshallian curves.<sup>2</sup>

When it is realised that the location of the new point of equilibrium will depend on the relative degree of distortion of the two curves, one is apt to conclude that the barter terms of trade may *equally well* move either way or remain completely unaltered. We shall find, however, that considerations have been advanced to prove that though it is not impossible for the terms of trade to move in favour of the paying country there is a certain presumption *against* their movement in that direction.<sup>3</sup>

As will appear from the next chapter it is mainly the discussion of the German reparation problem that has been the cause of the renewed ardour with which the mechanism of international capital movements has been studied during the last decade. There is one group of present-day economists, however, whose general interest in these problems is of earlier origin and wider range, and whose contributions towards their solution are, therefore, most naturally treated at this point, although some of them have been further elaborated in writings dealing with the reparations and war debts.

The leader of this group is *Taussig*, one of the greatest authorities among living economists on problems of international trade. In chapter II of his "International trade" *Taussig* describes the effects of a tribute in words exactly similar to those of J. S. Mill. Exchange on the tribute-receiving country rises to a premium in the country remitting

<sup>1</sup> Cf. Th. O. Yntema, *loc. cit.*, ch. 4—5 and G. Haberler, *Der internationale Handel*, ch. 12.

<sup>2</sup> Cf. *infra*, ch. XII 4.

<sup>3</sup> *Infra*, pp. 290—91 and 293.

the tribute; specie flows from the latter to the former country; prices and money wages fall in the latter country, rise in the former; the exports of the latter country to the former are increased, its imports therefrom decreased. These changes will go on until a new equilibrium is reached in which the demand for bills is again just met by the supply. Then the situation has become less favourable to the tribute-remitting country in two ways; it must not only part with a considerable volume of tangible goods in order to make the required payment, but in order to carry out this transaction, and at the same time pay for its imports, it has to barter its exports for imports on less advantageous terms. This is all familiar matter.<sup>1</sup>

In the following chapter, however, this hard and fast statement is considerably modified. Here Taussig deals, not with a tribute, but with ordinary loans made by the people of one country to those of another, and here the mechanism is described in much less unequivocal terms:<sup>2</sup>

"Such loans... must result in a flow of specie.... "Must result"—this puts the case too strongly. The flow will not necessarily take place; possibly there will be none at all. And such flow as does take place is not likely to be equal in volume, either in the very first stage

<sup>1</sup> The arithmetical example of an American tribute to Germany which Taussig has elaborated is criticized by Roland Wilson. Taussig considers only two cases: (a) one, in which German import demand is inelastic and American import demand elastic, and (b) one, in which both German and American demand for imports is elastic. But obviously, there are two other possibilities: (c) elastic German demand and inelastic American demand, and (d) inelastic import demand in both countries. Of these cases it is generally admitted that the last is highly improbable, but in the third case there is nothing inherently more improbable than in the two considered by Taussig. Moreover, Wilson points out as a weakness in Taussig's reasoning that he does not consider the demand for the same commodity in both countries. He speaks only of the demand for wheat in Germany and of the demand for linen in the United States. Doubtful of the validity of the two-commodity analysis Wilson regards this problem as too complex to be handled satisfactorily in arithmetical examples of the type selected by Taussig. (*Capital imports and the terms of trade*, Melbourne 1931, pp. 56—62).

<sup>2</sup> *International trade*, pp. 123 et seq. This analysis was first published—in much the same words—as the introductory part of a paper on "*International trade under depreciated paper. A contribution to theory.*" *Quart. Journ. of Ec.* 1917, pp. 380—403. The criticisms offered against it by Wickcell and Hollander when it first appeared will be dealt with infra pp. 245 et seq.

or later, to the amount of the loan. And yet it can be said almost with certainty that some specie movement there will be."<sup>1</sup>

The case recognized by Taussig as "possible but improbable," in which there will be no movement of specie at all, is found when the borrowers use the entire amount of the loans for buying commodities in the lenders' country, and these purchases are additional to what would have been bought in any event. Here

"the effect of the borrowing on the substantive course of international trade becomes direct. The merchandise movements and the merchandise balance of trade are affected at once... there is no disturbance of foreign exchange, no flow of specie, nothing to modify the level of prices or wages either in the lending or in the borrowing country."

In this special case, Taussig is aware how the granting of a loan means that a corresponding amount of buying power in the lending country is put at the disposal of persons in the borrowing country, and he seems to admit that under these special assumptions a transfer of buying power brings about automatically the required turn in the balance of trade. But as soon as all or part of the borrowed funds are used in the first instance for domestic expenditures in the borrowing country, Taussig sticks to the traditional analysis.<sup>2</sup> At the same time, however, he develops the suggestion first made by Cairnes that it was necessary to extend the analysis beyond a consideration of the "general level of prices" and distinguish between the price trends for import, export, and home-market goods. But he never seems to realise that this analysis in terms of "sectional price levels" is out of gear with the reasoning he had taken over from J. S. Mill.<sup>3</sup>

A crucial question in this connection is *how quickly* the

<sup>1</sup> In the original article Taussig adds the qualification that neither of the countries should be supposed to produce gold. "If one of them had considerable gold mines, the effect would more probably be not an actual inflow of the metal, but the cessation of exports of it that would otherwise have taken place." *Loc. cit.*, p. 391, note 1.

<sup>2</sup> *International trade*, pp. 126—27. In the original article Taussig mentions that if part of the capital for a certain undertaking is raised at home and only the residue abroad, it is conceivable that the funds raised at home might be used for domestic expenditures, and the proceeds of the foreign loans entirely for purchases abroad. But, of course, he finds it most improbable that an exact balance of this sort will be struck. *Loc. cit.*, p. 394.

<sup>3</sup> *Infra*, pp. 233, 289 and 479—80.



necessary readjustments may be expected to take place. Both in "International trade" and in the original article Taussig points out that it takes much more time than assumed by the older economists to bring about a rise of prices by means of a greater supply of money; but in "International trade" he finds, nevertheless, that merchandise movements are adjusted to shifts in the balance of payments with surprising speed and exactness.<sup>1</sup>

"The process which our theory contemplates... can hardly be expected to take place smoothly and quickly. Yet no signs of disturbance are to be observed such as the theoretic analysis previsions."<sup>2</sup>

But this astonishment never seems to have created a suspicion that it might be the traditional way of explaining these phenomena, which is too roundabout and complex.

"I find it *impossible to see*"—Taussig says—"how there can be a complete skipping of the intermediate stage—anything in the nature of an automatic connection. There is, of course, the case... where those who make loans happen to stipulate also that the proceeds shall be used to buy specified goods of their own or of their associates. But in the "normal" case... purchases of goods are not thus tied to the loans; and it would then seem to be *only some sort of roundabout process*, some disturbance of readjustment of monetary and price conditions, that could lead to the movement of goods. Being roundabout, one would suppose that it would take time. And yet it appears to require practically none."<sup>3</sup>

Taussig's only attempt at an explanation is to emphasize that the accruing interest charges facilitate the adjustments, since it is only the net balance of capital and interest items, of course, which has to be transferred in the form of commodities or services.<sup>4</sup>

For some countries—Great Britain e.g.—the explanation of the speedy adjustment might be sought in the sensitiveness of their monetary systems. But Taussig must admit that an equally quick and close adjustment appears to exist in other countries with less sensitive monetary systems. He feels tempted to say that

"the sensitive industrial organism always and everywhere shrinks from the loss of its life blood, the vital circulating medium... But

<sup>1</sup> Cf. *supra*, p. 60.

<sup>2</sup> *International trade*, p. 239.

<sup>3</sup> *Ibid.*, p. 261.

<sup>4</sup> Cf. *supra*, pp. 37 and 59.

this is no more than a metaphor; *it may suggest in what direction an answer should be sought, but gives no answer.*"<sup>1</sup>

It seems strange, indeed, that this metaphor has not turned Taussig's own mind in the direction of the transfer of buying power as the actuating force in the process of adjustment.

The "classical" character of Taussig's analysis is perhaps most clearly seen in his comparison between the effects of international capital movements and of primary changes in demand on prices and barter terms of trade.<sup>2</sup> In this connection "demand" is apparently taken to depend exclusively on the "state of mind," on tastes and wants. It is strange that his own distinction between "marginal utility" and "marginal vendibility"<sup>3</sup> does not occur to Taussig in this connection, suggesting that the demand schedules depend also on the amounts of buying power at the disposal of the people of each country.

Taussig fails to see, therefore, that the demand schedules are shifted *both* in the case of primary changes in wants and desires *and* in the case of international capital movements. The essential difference between the two cases is found at another point: an increase e.g. in the English demand for American wheat is not automatically counterbalanced by a corresponding change in the American demand for some English commodity; in this case, therefore, specie flows and price changes seem necessary to re-establish the equilibrium. But in the case of tributes and international loans the paying or lending country (barring inflation) is necessarily deprived of the amount of buying power which is put at the disposal of the other country. It is conceivable, perhaps even probable, that the distribution of the purchasing power between domestic and international goods and the elasticity of demand for these groups of commodities is different in the two countries, but apart from such complications which will be dealt with in due order below, the smooth and semi-automatic adjustment which puzzles Taussig so much would seem to find its natural explanation precisely through this simultaneous working of opposite shifts in the demand schedules in the two countries.

Taussig shares the Marshallian view, of course, of the con-

<sup>1</sup> *International trade*, p. 262.

<sup>2</sup> *Quart. Journ. of Ec.* 1917, pp. 395—96 and *ibid.* 1918, pp. 691—92.

<sup>3</sup> Cf. Taussig, *Principles of economics*, 3. ed., New York 1923, I p. 123.

nection between prices and specie movements, stressing the importance of the discount policy of the banks as the connecting link. He distinguishes between the *immediate sensitiveness* of prices to specie inflow and outflow and the *ultimate domination* of prices by these movements; that such domination exists in the long run, he does not doubt, but he finds marked differences between countries, such as England or Canada, where an inflow or outflow of specie may be expected to bring quick response in the banking and currency situation, and others, such as France and most of the other continental countries of Europe before the War, where the response is slow and uncertain.<sup>1</sup> But even in the deposit-using countries Taussig recognizes<sup>2</sup> that the

“looseness of the connection between bank reserves and bank deposits leads not infrequently to a chronological order different from that assumed in the Ricardian reasoning. An inflow of specie may follow, not precede, an enlargement of the circulating medium and a rise in prices.”<sup>3</sup>

On the whole, Taussig's analysis of this problem adds little to J. S. Mill's, but here as elsewhere he deserves credit for his careful and precise statement of the classical view. Besides, it is his great merit to have pointed persistently to the desirability of inductive verification of the problems of international trade theory; he has done excellent work himself in this direction and has stimulated several of his most capable students to work along the same lines.

The most important of these studies from the present point of view is *Jacob Viner's* analysis of Canada's foreign borrowing 1900—1913,<sup>4</sup> characterised later by Taussig as a model monograph of its kind; for in his interpretation of the statistical material which he has brought together,<sup>5</sup> Viner makes some interesting contributions also to the a priori theory of the subject. His explanation of the mechanism of international capital movements is avowedly “classical”, but it con-

<sup>1</sup> He points out, however, that where specie was less abundant, as for example in Italy and Austria, there was greater sensitiveness to gold movements. *Loc. cit.*, p. 212.

<sup>2</sup> *Ibid.*, pp. 207 et seq.

<sup>3</sup> Cf. *infra*, pp. 235—36, 388—91 and 517.

<sup>4</sup> *Canada's balance of international indebtedness 1900—1913*.

<sup>5</sup> This material will be considered in chapter X, *infra*.

tains modifications which appear on closer scrutiny to contradict the traditional trend of reasoning and point towards the "modern" view-point.

The cardinal question is what rôle changes in price levels and barter terms of trade are assumed to play in the transfer mechanism. Unlike Taussig, Viner admits that even if the money borrowed abroad is used immediately for domestic expenditures it will operate just as much as purchases directly made in the lender's country to adjust the balance of trade (viz. by reducing the amount of commodities available for export in the borrowing country).<sup>1</sup> Yet he maintains that in spite of this correction the classical reasoning still holds that without gold movements and changes in price levels and barter terms of trade, there is no visible mechanism whereby increased purchases by the borrowers of foreign commodities and of those domestic commodities which otherwise would be exported, will exactly equal the amount of the borrowings.<sup>2</sup>

If stress is laid on the word *exactly*, this may be true; for the distribution of buying power between international and domestic goods and the elasticities of demand for these groups of goods may be different in the two countries. But the context clearly shows that this is *not* what Viner has in mind, for he explains in great detail that in the absence of such "special circumstances" we are entitled to assume that the proceeds of a foreign loan will be spent in the first instance on the different groups of commodities *in the same proportions* in which these were bought prior to the loan. This is elaborated in a numerical example, and then it is concluded that

"in the absence of price changes there is *no reason* why borrowings abroad should disturb the proportion in which the total purchasing power in the borrowing country, including that derived from the loan, is used in buying domestic and foreign commodities."

Against this statement two objections must be made: (1) there is *every* reason to believe that these proportions will be *directly and immediately* disturbed. An individual who

<sup>1</sup> *Loc. cit.*, p. 205. This was pointed out against Taussig by Wicksell, cf. p. 245 *infra*.

<sup>2</sup> Viner's attempt to demonstrate that a change in the terms of trade is necessary also in case of direct barter has already been reviewed. Cf. *supra*, pp. 204-05.

obtains a loan from one of his countrymen will certainly not spend the additional buying power over which he gets command in the same proportions on all different commodities as he has spent his original income. And the case is similar when we consider all the individuals in a country which have received loans from abroad. They have borrowed as a rule for some specific purpose, and that will decide the direction of their additional demand.<sup>1</sup> (2) Even if the borrowers happened to use the money *in the first instance* in the way indicated by Viner, he overlooks that the buying power spent on domestic goods has an *indirect* effect on the demand for international goods. He admits that an international loan increases the "total purchasing power" in the borrowing country and reduces it in the lending country, but he fails to see the secondary effects of the transfer of buying power.

To show that the greater rise in Canadian than in world prices was due, not—as maintained by the Canadian Dominion statistician, R. H. Coats<sup>2</sup>—to the rapid industrial expansion

<sup>1</sup> This point is stressed by Harry D. White (*The French international accounts*, pp. 20–21), who points out that countries which borrow abroad are often predominantly agricultural. Besides, they usually borrow for the extension of public works, or for the expansion of industry. In either case large portions of the loans will be spent directly on imported equipment and material, even though imports may constitute a small percentage of the *total* domestic expenditures. It is thus reasonable to expect a borrowing country to spend a *much larger* proportion of the loan directly on imports than that indicated by the ratio of total domestic expenditures to total imports prior to the loan.

<sup>2</sup> *Cost of Living Report: Synopsis of Exhibit by the Statistical Branch, Department of Labour, Canada, 1915* pp. 15 et seq. Coats' view is shared by Robert M. Carr: "This industrialization made great demands upon labour and certain local commodities. Higher wages and prices had to be offered to tap marginal supplies. The higher wages and prices paid by the more lucrative industries raised the costs of production generally, and consequently prices. The products and services of some domestic industries, on the other hand, such as railroads and public utilities, industries of decreasing costs, declined in price as a result of industrial expansion. Nevertheless, the keenness with which these industries bid for labor and supplies contributed to cost increases in others, particularly those operating under conditions of increasing costs. And so Canada's industrial development raised the prices, not only of many domestic goods for which it created a greater demand, but also of many domestic goods for which the demand had not changed, or, conceivably, for which the demand had even slackened." (*The rôle of price in the international trade mechanism*, Quart. Journ. of Ec. 1931, p. 717).

per se, but to the borrowings from abroad which were the necessary prerequisite of this expansion, Viner makes use for a moment of a reasoning in terms of "*totals of purchasing power*". He admits<sup>1</sup> that if the expansion were financed from domestic savings, it would simply mean that those having purchasing power were voluntarily *shifting their demand* from consumers' goods to producers' goods. What might be expected to happen would be that producers' goods would rise and consumers' goods would fall in price, *but the general price level should not be affected by this change in the character of the demand*. If the expansion were financed, on the other hand, by borrowings from abroad, there would still be available the normal supply of consumers' goods, the extra supply of goods and labour necessary for the industrial development being provided directly or indirectly by the lending country.

To this account the protagonists of the modern point of view would have no objections. They would go on to point out that this latter case is exactly analogous to the former; here too, the total amount of buying power in the two countries taken together remains the same; only its distribution between them is changed. And they would conclude that here too, it is exactly this transfer of buying power from the lending to the borrowing country which sets in motion the mechanism through which the "extra supply of goods and labour" is provided by the lending country, so that here too, one might expect that the price level, at least as far as international goods were concerned, should not be affected by this change in the character of the demand.<sup>2</sup>

But no such conclusions are drawn by Viner; this whole train of reasoning is lost sight of as suddenly as it appears, and instead the contention is made that in the case of expansion based on foreign borrowing a rise in prices is a necessary part of the mechanism of transfer.

<sup>1</sup> *Loc. cit.*, p. 249.

<sup>2</sup> Besides, one may argue, of course, that Viner's reasoning seems to ignore the importance of the credit mechanism in modern society. Its implication is that the amount of purchasing power at any moment is limited by present income; it makes no allowance for the additional purchasing power which the credit mechanism makes available. By means of a credit expansion producers' goods might rise in prices without any depression of the prices of consumers' goods. Cf. Carr, *loc. cit.*, pp. 717—18.

The most interesting aspect of Viner's analysis, however, is his discussion of the trends of *sectional price levels*. As already mentioned this term signifies the special price levels of export, import, and home-market goods. The first result of borrowing—he says<sup>1</sup>—is an increase in bank deposits, which in turn will cause a rise in the prices of *domestic commodities* and services. The prices of *import commodities* will not be appreciably influenced, since they are governed mainly by conditions in the "world market". The relative rise in the prices of domestic commodities may lead to a substitution of imported goods for home-market goods, thus shifting these commodities from the domestic to the import class. At the same time exports will decrease. The increase in purchasing power in the borrowing country unaccompanied by an immediate increase in production will *of itself* result in the consumption at home of a greater proportion of the commodities previously exported. Besides, labour will be drawn from the export industries to the development of the enterprises for which the foreign capital was borrowed. And finally, the changes in sectional price levels will operate as a further check on exports; for the rise in the prices of home-market goods means higher money costs of production in the export industries, whereas the *prices of export goods* are determined by world-wide relations between supply and demand, and cannot, therefore, be raised correspondingly without a diminution or complete cessation of the export.

Here again the defender of the modern point of view finds little to which he cannot readily subscribe. The question is, therefore, whether this "restatement" is not so fundamental as to overthrow the orthodox classical theory altogether. In this revised analysis the important change evidently is the rise in the prices of *home-market goods* whereas the prices of international goods may remain more or less unaltered. In the traditional classical explanation, on the other hand, the postulated change in the barter terms of trade (i.e. the relation between the prices of import and export goods) clearly implies that the *prices of international goods* are equally affected.

In the Canadian case some change did occur in the prices of international goods, export prices rising somewhat more than import prices and, naturally, this is offered by

<sup>1</sup> *Loc. cit.*, pp. 227—28.

Viner as an inductive verification of the classical proposition as to changes in the terms of trade.<sup>1</sup> Yet he seems to feel the necessity of explaining why this rise in export prices considered in relation to import prices was not greater than it was. He points to the high degree of elasticity of the foreign demand for Canadian products partly due to the fact that Canada is the predominant source of world supply for only two or three mineral products, and he admits that Canada's export would have been more seriously checked, had it not been for the operation of special circumstances—discoveries and improvements of various sorts—which caused the cost of production of a few important products to resist the general upward trend.<sup>2</sup>

Another modification introduced by Viner in the classical reasoning<sup>3</sup> is that the necessary initial rise in prices in the borrowing country *need not be maintained indefinitely and undiminished*; on the contrary, he suggests that in the course of time it will be *more than sufficient* to bring about the necessary excess of imports over exports:

"Before a change in relative prices can exert its full influence on trade, information as to the price changes must first become widespread, old commitments must be liquidated, new merchandising and credit connections must be established, inertia must be overcome, habits and tastes must be trained to find new forms and styles of commodities acceptable, industry must be adapted to the exploitation of raw materials having perhaps slightly different chemical or physical properties or graded according to hitherto unfamiliar standards."<sup>4</sup>

It does not appear, however, that Viner has gauged the full implication of this modification. It suggests that the rôle of price changes is primarily to get the mechanism started. To what extent they will be permanent, must depend upon the way in which costs are affected. But on this aspect of the problem Viner has surprisingly little to say; at least he does not seem aware of the conflict between the usual classical assumption of constant cost, and the divergent trends of domestic and international prices. On the classical premise one must conclude that *all* productive factors become more scarce in

<sup>1</sup> *Loc. cit.*, pp. 295 et seq. and *infra*, pp. 396 et seq.

<sup>2</sup> *Ibid.*, pp. 261 et seq.

<sup>3</sup> *Ibid.*, pp. 213 et seq.

<sup>4</sup> A somewhat different explanation of this phenomenon is offered by Frank D. Graham (in a criticism of Viner's book, *Am. Ec. Rev.* 1925, p. 108). Cf. Viner's answer in *Die Wirtschaftstheorie der Gegenwart*, IV, p. 113.



the borrowing and less scarce in the lending country; a "unit of productive power" gets a higher return than before in the former country, a lower return in the latter. But *relative costs* remain constant within each country; export prices move in harmony with home-market prices. On this assumption the necessity of a shift in barter terms of trade in favour of the borrowing country is obvious. The interdependence theory of value, on the other hand, would lead one to consider the changes within both countries in the *relative* factor scarcity which may result from international capital movements, and then a more satisfactory explanation may be given, as we shall see later on, of the shifts in sectional price levels.

Like Taussig, Viner points out<sup>1</sup> that, in deposit-using countries such as Canada, the gold movements may be governed immediately by the reserve requirements of the banks, and not as the orthodox theory would assume, by the state of the balance of payments; in other words, the expansion of deposits and notes may *precede rather than follow the enlargement of reserves*. Moreover, Viner explains that in the case of Canada this peculiarity of the situation is accentuated by the use made by the banks of a system of secondary "outside reserves" consisting mainly of funds lent on call in New York. Thus the financial operations involved in the transfer of British loans were usually triangular; instead of being effected directly between London and Montreal, they were effected through New York. As soon as a loan was negotiated in London, the funds put at the disposal of Canadian borrowers were sold to Canadian banks, which in turn extended accommodation to their clients at home. The Canadian banks transferred the funds to their outside reserve employed in the New York call-loan market, but gradually as the increase in their loans and deposits made their cash reserves insufficient, they would draw on their New York correspondents for remittances of specie. The Canadian banks might even enter upon the financing of the general economic expansion of the country in anticipation of the foreign loans, which came to their rescue, so to speak, when their reserves threatened to be depleted. Thus the movements in Canadian bank deposits appeared to be the cause and not the effect of the gold flows. But—says Viner—when the outside reserves are regarded as

<sup>1</sup> *Loc. cit.*, p. 174.

equivalent to gold in Canada, the mechanism does not differ materially from that assumed by the classical economists, though it probably brought about a steadier and smoother adjustment of prices and trade balances than would have been possible with automatic gold movements.<sup>1</sup> Here again Viner seems to underestimate the implications of his restatement, which clearly suggests a *direct* connection between foreign loans and volume of purchasing power.<sup>2</sup>

From the preceding review it will appear that both Taussig and Viner have attempted to unite two distinctly different trains of reasoning. Viner apparently attaches most importance to the analysis of the divergent movements of sectional price levels, a point of view which is easily harmonised with the "modern" explanation, but at the same time one finds in his book—lingering in the background—the traditional classical contention that the terms of trade *must* change in favour of the borrowing country, as the lending country is forced to increase its exports by offering them for sale at cheaper prices. Taussig, on the other hand, clearly started from the unqualified reasoning of J. S. Mill taking over with the rest of it this postulate of a necessary change in barter terms of trade, and he does not seem to realise that his introduction of sectional price levels in the argument may lead to conflicting results.

A somewhat different account of the mechanism of adjustment has been presented by another of Taussig's former pupils, James W. Angell, in his comprehensive volume on the theory of international prices. Though Angell uses every occasion to stress the difference between his formulation and the classical doctrines, his explanation of the mechanism of international capital movements must be characterised as a modified classical theory; at some points it comes rather close to the "modern" explanation, but in the end it rejoins the classical analysis in terms of general price changes.

Angell points out<sup>3</sup> that there is a *direct connection between changes in the banks' holdings of bills of foreign ex-*

<sup>1</sup> *Loc. cit.*, pp. 181—82, cf. *Am. Ec. Rev. Suppl.* 1926, pp. 92—93.

<sup>2</sup> Cf. Angell's review of Viner's book in *Pol. Sc. Quart.* 1925, p. 322, and Herbert Feis, *The mechanism of adjustment of international trade balances*, *Am. Ec. Rev.* 1926, pp. 597—99.

<sup>3</sup> *The theory of international prices*, p. 403.

*change and the total volume of purchasing power in circulation.* When the banks discount such bills for exporters or others, both their exchange holdings and their deposits are increased, and conversely, their sales of such bills to importers or others, reduce both their bill holdings and the volume of purchasing power in circulation. Assuming that a foreign loan is contracted in the currency of the capital-exporting country, and that all the exchange transactions take place through the banks of that country, Angell explains how the buying power put at the disposal of the foreign borrower will be used by him to buy up from the banks in the lending country bills on his own country. The increased demand for such bills depletes the banks' holdings, and at the same time the cash or bank deposits, with which the bills are bought, go out of circulation:

"The decline in purchasing power is in the first instance made at the expense of those who buy the new foreign securities. *In virtue of their investments they have less purchasing power left available for domestic purposes, and will buy less.*"<sup>1</sup>

This sounds very much like the modern explanation. But instead of turning to the counterbalancing increase in the volume of buying power at the disposal of the borrowing country, Angell goes on to show that the effects of the declining purchasing power in the capital-exporting country will spread and exert a marked *depressing influence on general prices*, since "there has been no corresponding decrease in the quantity of things offered for sale."

In the further analysis of this decline of prices Angell sides with Viner, however: *import prices*, fixed primarily in the world markets, will react comparatively little, if at all; *domestic prices*, on the other hand, largely free from this influence, will feel the full effect of the depressing influence; *export prices*, finally, occupy a middle position, the exports being sold in foreign markets, where prices have presumably not fallen, but manufactured from domestic materials, of which the costs are going down. Thus the modern point of view is approached once more, but not completely adopted. For when the adjustment of the commodity balance of trade is discussed, no word intimates that the transfer of buying power will tend of itself to create the necessary export surplus; all reliance is

<sup>1</sup> *Loc. cit.*, p. 407.

placed on the influence, "in ways long familiar," of the changes in prices.<sup>1</sup>

The adequacy of Angell's analysis, as far as it goes, would probably be admitted by the protagonists of the modern theory. But they would attach only a more subsidiary significance to the price movements and regard the transfer of buying power per se as the primary force in the process of adjustment. In his doctrinal history Angell rejects Ricardo's analysis as "incomplete and unconvincing",<sup>2</sup> while he admits<sup>3</sup> that Bastable's argument is "more significant than might appear at first glance" and regrets that Bastable did not make fuller use of the concept of *aggregates of income*. It appears from the preceding devious that a similar reproach may be raised against Angell's own analysis.

Among Danish economists no one but *Axel Nielsen* has made valuable contributions to our understanding of the mechanism of capital transfer under an international gold standard. On the main question—the rôle played by price movements—he confines himself to brief statements according to which lasting flows of capital must cause permanent shifts in price levels, raising the level of prices in the borrowing country relatively to that of the lending country.<sup>4</sup> Thus his sympathy appears to be with the classical rather than with the modern theory. But regarding a number of details in the mechanism his treatise on money and banking contains illuminating suggestions.

An interesting analysis is given of the functions of the short-term movements of capital.<sup>5</sup> Pointing out how greatly the adoption of the international gold standard has facilitated such movements, Axel Nielsen demonstrates how they *serve to maintain equilibrium in the pace at which credit is expanded* in different countries. Within a single country the money market serves to equalise the liquidity of the individual banks. And just as one of the banks within a single country which has expanded its credit more rapidly than the others and has to meet an adverse balance in the inter-bank clearing, may be

<sup>1</sup> *Loc. cit.*, pp. 408—09.

<sup>2</sup> *Ibid.*, pp. 57 and 399, note 1.

<sup>3</sup> *Ibid.*, pp. 101—02.

<sup>4</sup> *Bankpolitik II*, pp. 222, 229 and 238.

<sup>5</sup> *Loc. cit.*, pp. 279 et seq. and 347.

relieved by borrowing from one of these other banks, a country which has expanded its credit more rapidly than its neighbours and is in danger of losing gold, may meet the adverse balance of payments by short-term foreign borrowing. Considering these flows of short-term funds from country to country, Axel Nielsen raises the problem whether the situation on the money market of a given country may still be said to be the outcome of the conditions in that particular country, or whether the different national money markets are *merely integral parts of an international money market*. To this question no definite answer is given, but Axel Nielsen warns against exaggerating the mobility of short-term capital; the size and importance of the "international loan fund" has grown since the War, but still it is only a fraction of the short-term funds that is truly "cosmopolitan";<sup>1</sup> the international money market is regarded, therefore, merely as *a more or less powerful corrective* to the development on the individual national markets.

In general, it is only interest differentials that are expected to last for some time which will release international capital flows. Besides, the element of friction is more important in debtor than in creditor countries. In the creditor countries there is an open money market the rates of which will automatically tend downwards when a boom develops abroad; in the debtor countries, on the other hand, the initiative to attract foreign capital must originate with particular banking houses or business concerns.<sup>2</sup> Similarly, the effects of discount changes on capital movements will be different in creditor and debtor countries.<sup>3</sup> On the stock exchange of a creditor country both domestic and foreign securities will usually be quoted; by a rise in the rate of discount the latter are depressed less than the former; consequently, investors turn to domestic values, and the foreign bonds tend to flow towards other markets; this outflow is particularly easy in cases where the bonds are quoted in these other markets, but even bonds that are not officially listed elsewhere will tend to return to the country of their origin. In the debtor countries, on the other hand, the outflow of securities, when the rate of discount is

<sup>1</sup> Cf. Bagehot's opinion quoted *supra*, p. 102.

<sup>2</sup> *Loc. cit.* p. 271, cf. *Bankpolitik* I, pp. 198 and 228.

<sup>3</sup> *Bankpolitik* II, pp. 344—46.

raised, is much less automatic; if investors in a debtor country hold securities issued both in domestic and foreign currency, some of these may be exported at once, of course, but otherwise a personal initiative is required, here too, in order to introduce the debtor country's bonds on foreign capital markets; there will also be an increased tendency to float new loans abroad rather than at home, but here again the number of borrowers whose standing enables them to seek loans abroad will usually be limited. In this connection it is also pointed out that the efficacy of the discount rate of a particular country in influencing capital movements will obviously depend upon the way in which the country's foreign trade is financed; if this trade is financed abroad, the size and length of the credits granted will be independent of the height of the domestic rate of discount; the direct effects of changes in this rate are then limited to the home-market industries.

But in spite of all the elements of friction Axel Nielsen insists that the growing importance of short-term capital movements between countries has *increased the difficulties with which central banks have had to struggle* in the last decades.<sup>1</sup> Large banks and business concerns which are able to attract funds from abroad may play at cross purposes with the central bank; by allowing their cash reserves to be temporarily depleted, the large private banks may cause an outflow of capital from a particular country which is not justified by its basic economic conditions.

It is also pointed out that "real" movements of long-term capital may cause *disequilibrium between short-term and long-term interest rates*. If the flow of capital is continuous, there need not be any such disturbances, but when a capital import takes place in the form of large security issues at considerable intervals,<sup>2</sup> the case is different; then one of two things will happen: (1) the debtor may temporarily leave part of the borrowed funds abroad, in which case the foreign money market will have a temporary abundance of funds, or (2) the whole proceeds of the loan are converted at once into domestic money, in which case the money market of the borrowing

<sup>1</sup> *Loc. cit.*, pp. 328—30. Cf. also his article *Den internationale Kreditkrise og Guldfoden*, *Nationaløk. Tidsskr.* 1931, pp. 290—93.

<sup>2</sup> This has been the case in Denmark, where the state and the municipalities have been the main borrowers on the international market.

country will be unusually easy. Quite clearly, a temporary abundance of this sort should not be allowed to affect the discount policy of the central bank.

Just as a continuous real capital movement may take place without disturbing the equilibrium between short-term and long-term interest rates, it may also proceed year by year without upsetting the *foreign exchange market*. But here again Axel Nielsen points out that disturbances are likely to occur, because the capital flow usually goes on by fits and starts. In a borrowing country the rate of economic development is comparatively high; consequently, the central bank will have constant difficulties in maintaining the value of the currency, difficulties which are reflected in exchange-rate fluctuations in the neighbourhood of the gold-export point. From time to time the stress is then relieved by the floating of a foreign loan. In the lending countries, on the other hand, the speed of the economic development is somewhat slower; the opportunity of exporting capital tends to raise interest rates and keep back the domestic demand for capital, so that savings constantly tend to run ahead of investments.

What happens, in other words, in the case of international capital movements is, from the monetary point of view, that *the banks in one country get cash from the banks of another*. To the world at large this means that the surplus cash accumulates in the leading creditor countries. To them the new gold from the mines will flow in the first instance, while the gold holdings of the debtor countries will seldom exceed the requirements for note cover. In this connection it is pointed out, however, that the import of gold into a borrowing country often takes place, although the rates of exchange are above the gold-import point, i.e. that the central bank deliberately pays part of the expenses of importing gold in order to prevent large fluctuations in the exchange rates.

Dealing with the gold-exchange standard<sup>1</sup> Axel Nielsen dismisses the objection sometimes made that debtor countries with a scanty supply of capital cannot afford to maintain large cash reserves in foreign markets, or rather that it would be more advantageous for them to employ these funds at home. What this reasoning overlooks is that the foreign exchange reserve is an alternative to domestic gold holdings which would

<sup>1</sup> *Loc. cit.*, p. 298.

deprive domestic production of a similar amount of capital, and which, moreover, would yield no interest.

Finally, the question is raised,<sup>1</sup> in connection with the so-called "gold-premium policy," whether the advantages which may result from increasing the margin between the buying and selling prices of gold are not offset by greater unwillingness of other countries to invest their short-term funds in countries adopting this gold-premium policy. It is interesting to compare this suggestion with J. M. Keynes' recent proposition of widening the difference between the obligatory buying and selling prices of gold with the explicit purpose of damping down the purely temporary flows of short-term capital between the different money markets.<sup>2</sup> Keynes admits that this expedient, adequate enough for a country which is not a depository of part of the international short-loan fund, is against the interests of a financial centre which aspires to be an important holder of such funds. It is a question of how high a price in the shape of domestic instability it is worth while to pay in order to secure international banking business. From the standpoint of the latter the ideal would be to narrow down the interval between the gold points until they became identical. It is a matter of finding a fair and advantageous compromise between these competing interests.

The special difficulties of a debtor country during a period of falling prices are discussed by Axel Nielsen in a recent paper.<sup>3</sup> Starting from a state of equilibrium between two countries, in which no new capital movements take place, and in which the debtor country has no difficulties in discharging its interest obligations by means of an excess of exports, Axel Nielsen assumes that a fall in wholesale prices sets in, while the money costs of production (above all the level of money wages) are rigidly fixed by monopolistic organizations. If the creditor country is unwilling to grant new loans, the debtor country is forced to increase its export surplus in order to cover the nominally unchanged interest payments. Assuming that the gold standard is maintained, the fall of prices must lead to a crisis in both countries, increasing unemploy-

<sup>1</sup> *Loc. cit.*, p. 306.

<sup>2</sup> *A treatise on money*, II, London 1930, pp. 319—31.

<sup>3</sup> *Kreditorland — Debitorland under skiftende Prisniveau*, "Til Harald Westergaard 19. April 1933", *Nationaløk. Tidsskr., Tillægshæfte*, 1933.



ment and reducing the volume of output. For a time the export industries of the debtor country may go on producing and exporting at a loss, but if the fall of prices continues, they must stop sooner or later, and at that moment the debtor country has no alternative but sending gold abroad, and as its gold reserves are usually restricted, it may be forced off the gold standard. The only way out, then, is a devaluation of the currency of the debtor country which enables the export industries to continue providing commodities so as to liquidate the increased real burden represented by the interest payments.

## 2. THE MODERN THEORY.

Having reviewed in the last section the refinements added to the classical theory since the days of Mill, we will turn now to a brief description of the development of the modern point of view since it left Bastable's hands.

Its first supporter was *J. S. Nicholson*.<sup>1</sup> Though he agrees with Marshall as to the connection between gold flows and discount rates,<sup>2</sup> his description of the mechanism of capital transfers comes very near to Bastable's. He starts from Mill's account of the remittance of a tribute, to which he makes the following pertinent remarks:

"In this solution of the problem it will be observed that only two countries are considered, that the rise and the fall of prices in the two countries respectively are supposed to follow from the actual increase and decrease in the volume of their currencies and no account is taken of banking or credit.

Even in this simple hypothetical case, however, the solution given, though possible, is not the only one or the most probable. The government of the paying country must levy taxes to the amount of the annual tribute, and thereby will *diminish the consuming power* of the people by so much. Assume that, in the first place, actual money is taken from the pockets of the people. We may suppose that in consequence there will be partly a lessened demand for imports and partly

<sup>1</sup> *Principles of political economy*, II, London 1897, ch. XXVI § 12.

<sup>2</sup> *Loc. cit.*, p. 287: "It follows then that the ordinary fluctuations of the foreign exchanges about the gold par only affect foreign trade indirectly; that is to say, through the bank reserves and the rate of discount." In his earlier book, *A treatise on money*, of which the first edition appeared in 1888, he presented both the "direct" and the "indirect" line of connection: changes in quantity of currency in circulation and changes in bank loans and reserves, declaring the former to be "the more fundamental method of reducing prices."

an excess of home commodities available for export. At the same time the receiving country—when the money is sent to it—will *have so much more to spend* and can take more imports and also consume things formerly exported. In this way an excess of exports from the paying country equivalent to the tribute can be brought about without any change in general prices.”

Nicholson admits that “*on the occasion of the first remittance*” the paying government will compete for bills; but he holds that “*at the same time,*” owing to the changes in the consuming power of the two nations, there will be an excess of bills sufficient to meet this extra demand. He is also well aware that the articles at first withdrawn from consumption in the paying country may not be suitable for export, but then—he points out—the means of production can be transferred to others, and, similarly, if the articles formerly exported from the receiving country are not suitable for home consumption others can be produced in their place.

What Nicholson demonstrates is, in other words, that *the final result* of a loan operation need not involve the change in relative price levels assumed by the classical writers. But as has already been intimated this does not necessarily exclude the occurrence of certain price changes *while the operation is going on*. Here the salient point is *how quickly* the necessary readjustments can be brought about, and how readily, consequently, the supply of bills adapts itself to the extra demand for them. Nicholson evidently is of the opinion that it responds rather quickly, for he adds that there is no need to assume that money (i.e. gold) is actually sent from one country to the other to bring about this result. He mentions two facts to support this belief: (1) the existence of outside countries, and (2) the existence of credit and banking.

After Nicholson's revival the modern explanation seems to have been consigned to oblivion for another twenty years<sup>1</sup> until the article by Taussig, which has already been mentioned,<sup>2</sup>

<sup>1</sup> To judge from comments by Angell (*Loc. cit.*, p. 314) and Palyi (in an appendix to his German translation of Taussig's *International trade*, Leipzig 1929, p. 370) the Italian economist *Del Vecchio* appears to have developed the modern transfer theory in two articles in *Giornale degli Economisti* (*Teoria dell' esportazione del capitale*, 1910 and *Contributi alle dottrine della circolazione*, 1914).

<sup>2</sup> *International trade under depreciated paper, a contribution to theory*, Quart. Journ. of Ec. 1917. Cf. supra, pp. 225 et seq.

stirred Knut Wicksell and Jacob H. Hollander to criticism along similar lines.

*Wicksell*<sup>1</sup> draws a new factor into the discussion by calling attention to the importance of the height of the cost of *transportation*. He contrasts the situation of two countries divided only by a land boundary and that of two countries separated by the ocean. In the former case he proposes to disregard costs of transportation entirely:

"If these countries were both living under a specie régime there could not possibly exist different prices of the same commodity on both sides of the frontier; and if we suppose, which of course is not exactly true, that the level of prices in the interior of each country is materially the same as in the boundary districts, there could be no difference of prices at all between them."

Then he goes on to analyse the influence of foreign borrowing in the way with which we are familiar from the reasoning of Bastable and Nicholson. The stimulus to increased imports and decreased exports in the borrowing country

"is not to be found in a difference of prices in the two countries, which would be theoretically impossible and practically confined within very narrow limits; the increased *demand* for commodities in one country, the diminished demand in the other, would in the main be sufficient to call forth the changes alluded to."

And as already mentioned<sup>2</sup> *Wicksell* points out explicitly that it makes no difference in this respect whether the increased buying power in the borrowing country is directed, in the first instance, towards home-market commodities or towards import commodities. He admits, on the other hand, that—other things being equal—the larger circulation of merchandise in the borrowing country might "require" a somewhat greater amount of money to put it in motion, and that very likely, therefore, a certain quantity of gold would pass automatically from the lending to the borrowing country in the initial stage of a capital movement of long duration; it would not serve to increase prices in the borrowing country, but merely to maintain them at their original level. This—it will be recognized—is exactly the view taken by Ricardo when

<sup>1</sup> *International freights and prices*, Quart. Journ. of Ec. 1918, pp. 404—10. *Rejoinder* by Taussig, *ibid.*, pp. 410—14.

<sup>2</sup> *Supra*, p. 230.

he finally admitted that gold movements played a certain part in the mechanism of adjustment.<sup>1</sup>

Turning next to countries between which the costs of transportation are considerable, countries separated by the ocean, Wicksell reminds us first of the obvious fact that in this case "there will hardly be the same price for any commodity" in the two countries, since prices must differ by an amount sufficient to cover the charge for freight and insurance. It is not the mere existence of these freight charges and price differences, however, which complicates the situation; if they remained unaltered by the borrowing operation this case would be as simple as the one treated above. But very clearly Wicksell demonstrates that *they will not remain unaltered*, and in this circumstance he finds "the real source of explanation of the phenomena."

He starts from the initial assumption that the freight charges in both directions are of equal amount—from which incidentally he concludes, that the average level of prices in both countries will be about the same—and goes on to show the consequences of a loan contracted by America in England, giving America an excess of imports, England an excess of exports:

"The increased number of ships going from England to America with full load and bound to go back in ballast or with insufficient cargo, must needs increase the transport charges on goods going one way and diminish the cost of sending goods the other way ... the difference of prices in the two countries shown by the goods carried from England to America will be greater than before, whereas the goods going the opposite way will show a smaller difference of prices than before. Both the imported and the exported commodities, therefore, will have a tendency to rise in America and to fall in England ... Consequently the general level of prices will have been raised in America and lowered in England."

Here again, a gold flow from England to America is likely at the beginning of the borrowing period, but "this influx would be the *effect*, not the cause of the rise of American prices."

In his reply *Taussig* was not slow in discovering the weak point in Wicksell's reasoning. He had his doubts whether the difference between the two cases mentioned by Wicksell was in fact of great importance, transportation by water being so much cheaper than by land, and whether, with an abundance

<sup>1</sup> Cf. *supra*, pp. 214—15.

of tramp steamers and triangular or still more indirect voyages, the changes in ocean freight rates were likely to be considerable under ordinary conditions of foreign trade. But above all, he took sharp exception to the assumption underlying Wicksell's whole argument that, if transportation costs were negligible, prices would be identical throughout the countries for all commodities.

"By no means"—Taussig replies—"between such countries the prices of international commodities will doubtless be the same; but the prices of domestic commodities and, above all the rates of money incomes may be substantially different."

Wicksell might stick to his argument, of course, by saying that on his supposition all commodities and services would be international, but in the world of reality Taussig is right, when he points out that a statement about the prices of international commodities is by no means valid also for prices in general:

"Changes in transportation charges would affect directly, not the general level of prices, but the prices of international commodities only. Imported commodities would indeed be higher in the borrowing country, if sent thither from the lending country. But it does not at all follow that this factor in itself would cause a great rise of prices in the borrowing country ... *But at the same time domestic prices and money incomes ... may have remained stationary.*"

The addition of the last sentence is rather unfortunate. For, as we have seen already, the analysis in terms of sectional price levels, which Taussig himself has urged, leads to the diametrically opposite result: a *greater* change in domestic than in international prices.

Taussig also takes exception to the wording of Wicksell's analysis of the relation between prices and the movements of gold; but even if the word "*require*"<sup>1</sup> was not a happy one in this connection the conversant reader to whom Taussig himself appeals will scarcely misunderstand the meaning.

And at all events, the essential part of Wicksell's account of the mechanism of international capital movements, his adoption of the modern view-point, is unaffected by Taussig's criticism. Taussig finds it difficult to understand how "the increased demand for commodities in one country, the diminished demand in the other" will call forth the necessary

<sup>1</sup> Cf. *supra*, p. 245.

changes—among which unconsciously he includes the price changes which form an integral part of his theory, apparently without remembering that their necessity is explicitly denied by Wicksell.

“If there be more goods and no more gold, and *if this is the sole change that takes place*, prices will fall.”

Yes, of course, Wicksell would answer, *but it is not the sole change*. The international borrowing operation means, not only an ultimate transfer of commodities, *but also, and immediately, a transfer of monetary buying power*.

Coming finally to *Hollander's* criticism<sup>1</sup> it is interesting to note that neither he nor Taussig at first realised the difference between J. S. Mill and Ricardo on this point.<sup>2</sup> Taussig clearly wrote his original article under the impression that Mill's explanation of the adjustments of trade balances to foreign loans was identical with Ricardo's, and when Hollander in rebuttal set up Ricardo's explanation he seemed equally convinced that this was the generally accepted doctrine.

Hollander's main contention is that a borrowing transaction need not disturb the equation of international demand and bring about a movement of gold; commodities will move from the lending to the borrowing country at once without a preceding flow of specie.

The argument put forward both by Taussig and Viner<sup>3</sup>—that fluctuations of the exchanges within the narrow limits of the gold points will have little or no direct effect on commodity exports and imports—does not squarely meet this proposition. For it is obviously not on these direct effects of exchange-rate fluctuations on commodity movements alone that Hollander relies, but on the direct and indirect effects of the transfer of buying power, although the phrases in which he describes the transactions in the foreign exchange market may be open to misinterpretation and criticism. On

<sup>1</sup> J. H. Hollander, *International trade under depreciated paper: a criticism*, and F. W. Taussig, *A rejoinder*, *Quart. Journ. of Ec.* 1918, pp. 674—694.

<sup>2</sup> Cf. Viner, *Canada's balance of international indebtedness 1900—1913*, p. 203.

<sup>3</sup> *Loc. cit.*, pp. 150—152.

the traditional tacit assumption that "demand conditions" remain unchanged in spite of the loan, Viner shows that Hollander's position can only be maintained if the demand in the borrowing country for the goods of the lending country is elastic, or the demand in the lending country for the commodities of the borrowing country is inelastic to an extent beyond all expectation. But Hollander simply does not accept the assumption of unchanged demand conditions and thus escapes the dangerously unrealistic conclusion.

It may be true, as Viner says,<sup>1</sup> that, immediately, demand is increased in the lending country for bills on the borrowing country without a proportionate increase in the supply thereof, but the decisive question is how quickly by *direct and indirect* routes the supply is thus proportionately increased. And it is precisely on this point that Hollander, like Wicksell, Nicholson, and Bastable, parts company with Taussig and Viner.

Along the lines of Ricardo's later reasoning Hollander contends further that the *later* effect of a borrowing transaction may be a movement of gold from the lending to the borrowing country, and curiously enough, the same word that was used by Wicksell runs naturally from his pen:

"The lending country having been deprived by exports of a part of its commodities would thereafter *require* a reduced amount of circulating medium."

But he insists, of course, that this is a very different phenomenon from the direct and immediate efflux of specie which figures in Taussig's argument.

Before we enter upon a review of the discussion of the transfer mechanism created by the German reparation problem, it should be mentioned that among the participants in this discussion *Bertil Ohlin* had presented an outline of the modern transfer theory in his general treatise on the theory of international trade as early as 1924.<sup>2</sup> His views are more conveniently treated in a later connection, however.<sup>3</sup> But there are two other interesting contributions to the transfer theory of more recent date which are most na-

<sup>1</sup> *Loc. cit.*, p. 204.

<sup>2</sup> *Handelns teori*, Stockh. 1924, pp. 78 et seq.

<sup>3</sup> *Infra*, pp. 278 et seq.

turally dealt with in the present chapter. They are both due to former pupils of Viner, namely Roland Wilson and Theodore Otte Yntema.

Wilson<sup>1</sup> begins by questioning the *necessity* of a shift in the barter terms of trade in favour of the borrowing country. He admits that some changes in sectional price levels will probably be necessary in order to induce the required alteration of the volumes of imports and exports, but he argues along the lines of the modern theory that the "real cause" which creates the excess of exports or imports is not the relative shifts in the import- and export-price levels, but their shifts in relation to the price level of "other" (i.e. domestic) commodities. Assuming for convenience that the price level of these "other" goods is kept unaltered, Wilson distinguishes the following eight possibilities of changes in the relative price levels of import and export goods due to an arbitrary shift of the demand schedules to the right or to the left:<sup>2</sup>

	Movement of prices		Movement of imports and exports		
Case 1.	Export	+	Exports	+	
	Import	+	Imports	-	
Net effect is increase of exports .....					++
Case 2.	Export	+	Exports	+	
	Import	++	Imports	--	
Net effect is <i>greater</i> increase of exports .....					+++
Case 3.	Export	++	Exports	++	
	Import	+	Imports	-	
Net effect is <i>greater</i> increase of exports .....					+++
Case 4.	Export	-	Exports	-	
	Import	-	Imports	+	
Net effect is increase of imports .....					--
Case 5.	Export	-	Exports	-	
	Import	--	Imports	++	
Net effect is <i>greater</i> increase of imports .....					----
Case 6.	Export	--	Exports	--	
	Import	-	Imports	+	
Net effect is <i>greater</i> increase of imports .....					----
Case 7.	Export	+	Exports	+	
	Import	-	Imports	+	
Net effect is nil .....					0
Case 8.	Export	-	Exports	-	
	Import	+	Imports	-	
Net effect is nil .....					0

<sup>1</sup> *Capital imports and the terms of trade*, Melbourne 1931, pp. 62—81.

<sup>2</sup> Elasticities of demand are assumed to remain greater than unity.



These cases serve to demonstrate that *irrespective of whether import or export goods have the greater relative rise compared with other prices there will be a greater increase in the export surplus than in the case of a parallel rise in import and export prices (cases 2 and 3 compared with case 1). Conversely, it appears from cases 5 and 6 compared with case 4 that a greater import surplus will ensue, irrespective of whether import or export prices have the greater relative fall as compared with other prices. The conclusion is, of course, that a shift in trade terms in favour of the borrowing country is not a necessary condition of the real transfer.*

In the trade between any two countries, however, these relative shifts in the import- and export-price levels have only a *tendency* to affect the net trade balance, since the import- and export-price levels in one country are the export- and import-price levels of the other country. At any particular moment case 2 may illustrate the position for country X. For country Y the corresponding position would then be illustrated by case 5. The relative tendencies could be shown thus:

<i>Country X.</i>		<i>Country Y.</i>	
Exports .....	+	Exports .....	-
Imports .....	- -	Imports .....	+ +
Net excess of exports..	+ + +	Net excess of imports..	- - -

The net effects, it will be observed, are of identical degrees of effectiveness — X is ready to make greater *net* exports (+ + +) and Y to receive greater *net* imports (— — —) — but X would prefer to arrange the transfer by decreasing her imports rather than by increasing her exports, whereas Y would prefer to effect it by increasing her imports rather than by decreasing her exports. Actually, there will be a balancing of forces and mutual adjustment until equilibrium is reached at some intermediate settling point.

Next, Wilson analyses a number of examples in which he varies the proportions in which both the lending and the borrowing country distribute their buying power between import goods, export goods, and domestic goods. He makes four preliminary simplifying assumptions. (a) On the average, import goods, export goods, and domestic goods are produced under conditions of *constant cost*. (b) In each country an in-

crease or decrease in total spendable resources, unaccompanied by changes in sectional price levels, will increase or decrease demand for the several classes of goods in such a manner as to *preserve the same relative proportions* as those existing before the change in buying power occurred. (c) The *elasticities of demand* are assumed to be similar for the several classes of goods. (d) The *short-term supply curves* for the different classes of goods are assumed to have similar shape. The last two assumptions may perhaps be granted. The two first are relaxed in the sequel.

The simplest case is, of course, to ignore completely the existence of purely domestic goods and assume (1) that total resources in either country are spent on goods which *could be* exported or on goods which *are* imported, and (2) that both countries spend *similar* proportions of their resources on these two classes of goods. In that case the real transfer is brought about automatically and without any price changes.

Secondly, Wilson assumes that the proportion of buying power which the lending country spends on exportable goods is greater than the proportion spent in the borrowing country on these goods. On this premise the transfer means a *changed direction of demand*. For the exportable goods of the lending country the *total demand of the two countries* falls off, for those of the borrowing country it is increased; the former tend to fall in price, the latter to rise. *Then* it will pay the lending country to divert a little of its demand from the export goods of the borrowing country to its own exportable goods; and conversely, it will pay the borrowing country to divert part of its demand from its own exportable goods to imports from the lending country. Equilibrium will sooner or later be reached by a process of changes in the relative proportions in which each country spends its altered total resources. But Wilson points out that if the total spendable resources are large relatively to the loan, a *slight shift* in the original proportions of total resources will suffice. And he stresses particularly that this shift in prices as between import and export goods *has no effect in inducing the borrowing country to accept the loan in goods, or the lending country to give up the goods*. It merely alters their views as to the desirability of bringing the transfer about by a diminution in

exports or an increase in imports on the part of the borrowing country. The latter is induced to import a little more and export a little more than at first seemed desirable, and the lending country to export a little less and import a little less than appeared desirable to it before the change in prices.

In the converse case, in which the transfer of buying power diverts demand from the goods of the borrowing country to those of the lending country, the former will tend to fall and the latter to rise. Here the terms of trade move in favour of the lending country, but here again, it is not this shift which is the prime cause of the real transfer.

The next step in Wilson's analysis is to introduce the existence of domestic goods in each country. For these goods the demand will obviously decrease in the lending and increase in the borrowing country, *without these tendencies being able to offset one another*. A considerable fall and rise of domestic prices may be expected, therefore, in the two countries. But regarding international goods, the decisive factor, in this case just as in the preceding, is the changes in the *total* demand arising in both countries for each class of goods, not merely the demand in one country. No matter how the total demand is originally distributed between the two countries, the relation between the prices of their exports will turn in favour of the country supplying those exports for which the borrowing country has the greater relative demand as compared with the lending country. But here again, the effect of price changes as between the two countries' exports is merely to shift the proportions in which these classes of goods are bought in both countries. Both will divert their expenditures to the relatively cheaper goods, but this change will have very little, if any, effect upon the excess of exports or imports. The fall and rise in domestic prices, on the other hand, represent *new forces* which will tend to induce the lending country to give up a larger net amount of international goods and the borrowing country to accept a larger net amount of such goods. From these initial price movements certain changes in production will follow. In the lending country productive effort will be transferred from domestic to export industries, in the borrowing country the tendency will go in the opposite direction.

Subject to his preliminary assumptions Wilson summarises his conclusions as follows:<sup>1</sup>

"A. As regards the initial effect on the relation of import and export price-levels, that class of goods for which the borrowing country has the greater relative demand as compared with the lending country will rise in price relatively to the other class.

B. A relative change in the price-levels of import and export goods has no direct effect in inducing the lending country to give up the whole rather than a part of the loan in the form of goods, or the borrowing country to accept the whole rather than a part in goods. Such a change may be necessary, however, in order to alter their respective views as to the proportion it is desirable to maintain between the borrowing country's increase of imports and decrease of exports, as a means of effecting the transfer in goods.

C. In general, without a change in the relation of domestic to import and export price-levels, the whole amount of the loan cannot be transferred in the form of goods. Transfers of purchasing-power, aided by changes in the relation of import and export price-levels, will in general allow part of the loan to be shifted in goods. Transfer of the balance is dependent on a change in the relation of domestic to import and export price-levels in each country; and this will be brought about by the differential effects of changes in demand on the price-level of each class of goods."

Wilson is the first to admit that these conclusions do not take us very far. Indeed, he regards it as the chief object of his monograph to emphasize the difficulties of the transfer problem, even when it is simplified by arbitrary assumptions as to many of the factors involved. And he goes on to show how much less ground is left for definite conclusions when these arbitrary assumptions are relaxed.

He points out that the abandonment of the assumption of *constant cost* reveals a new class of commodities which he calls "importable goods;" all increasing-cost goods may, of course, *at the same time be imported and produced at home*. The importance of this class of goods appears more fully when it is realised that the lending and the borrowing country are not isolated from the rest of the world, but that each of them trades with the whole group of outside countries. For this means that many of the outside countries are likely to have some production of the commodities exported by a particular country, and that, consequently, the proportion of its total buying power which the whole outside world spends

<sup>1</sup> *Loc. cit.*, pp. 75-76.

on the imports e.g. from a single borrowing country, will normally be very small; conversely, the total production of exportable goods in outside countries will in general be large in relation to the total amount of such goods purchased by or produced in the borrowing country. Unless the borrowing country is the main source of supply for the goods which it exports, or the main source of demand for the goods which it imports, altered conditions of supply or demand in the borrowing country cannot change the prices of international goods very much. That is to say, the elasticity of world supply to a single country and of world demand from a single country is great.<sup>1</sup>

A further consequence of abandoning the assumption of constant cost is that the *shape of the supply curves* for the several classes of goods may show significant differences. As a result, the validity of the foregoing conclusions is restricted to a comparatively short period following the grant of the postulated loan. Over a short period the probable effect of a decrease in demand for each class of goods would be a reduction in their prices, but if one or more of the groups are subject to decreasing costs the outcome may be reversed in the long run.

The assumption that a transfer of buying power will not disturb *the proportions of total buying power spent on the different classes of goods* in either country is in consonance with Viner's standpoint.<sup>2</sup> Wilson finds ample ground, however, for disputing its correctness, and he informs us that it has later been abandoned by Viner himself, who now recognizes that the transferred buying power may be spent by the borrowers in an infinite number of ways. The greater the proportion of the loan which the borrowing countries use immediately on international goods, the smaller will be the rise in the domestic goods, but the smaller will also be the need for this change in relative price levels. As between import and export goods a disproportionate distribution of the added purchasing power will also modify Wilson's tentative conclusions regarding the relation of import- and export-price levels. But

<sup>1</sup> This does not, of course, affect the validity of the very reasonable assumption made by Wilson that there is a general similarity in the elasticities of demand for the different classes of goods. The statement above has no reference to the elasticity of the *total* world supply or of the *total* world demand for the two groups of commodities.

<sup>2</sup> Cf. *supra*, p. 230.

here again, it must be noted that the great elasticities just mentioned must tend to restrict the influence which a single country can exercise on the prices of international goods. In general, the outside world is in the happy position of being able to refrain from buying goods in any particular country, if it cannot get them on reasonable terms, and from pressing its own commodities unduly on any single country in the face of declining demand from that country.

The final result of Wilson's reasoning is, therefore, that no very definite theoretical conclusions can be formulated regarding the effects on sectional price levels of international movements of capital. In all probability, domestic prices will rise relatively to import and export prices in the borrowing and fall in relation to them in the lending country. The barter terms of trade, on the other hand, may move in either direction according to the particular circumstances of time and place; but they are not likely to be shifted much.

Yntema<sup>1</sup> admits that the most obvious method of investigating the effects of an indemnity or an international loan would be to write and solve the system of simultaneous equations before and after the disturbance, and then compare the results. But unfortunately, "the solution of such non-linear equations even in a relatively simple case is difficult and, in the general case, not feasible." Yntema sets out, therefore, to find a simpler technique for handling the problem. His method is an extension of a device employed by Cournot: the use of the Taylor expansion in studying the effects of small disturbances on an equilibrium situation.<sup>2</sup> This technique is applied first to a general case comprising  $m$  countries and  $n$  commodities and next, more intensely, to the familiar two-country, two-commodity case.

The assumptions from which Yntema starts are very rigid. He regards it as given a priori which commodities are imported into or exported from each country, so that shifts of commodities between the import, export, and home-market group are ruled out. For each commodity definite demand and supply schedules are given, and in case of a transfer of buying power

<sup>1</sup> *A mathematical reformulation of the general theory of international trade*, Chicago 1932.

<sup>2</sup> Cf. Irving Fisher's edition of N. T. Bacon's translation of Cournot, *Researches into the mathematical principles of the theory of wealth*, New York 1927, pp. XV and 57.

all these schedules are supposed to shift up or down in a uniform ratio. Later this last assumption is relaxed to some extent,<sup>1</sup> but in no case is the disturbance allowed to alter the *shape* of the demand and supply curves. That this precludes a consideration of important aspects of the process of adjustment is obvious; neither the changes in the direction of demand nor the alterations in the relative scarcity of the agents of production are allowed to exercise their full effects.

Yntema considers first the "normal" case in which every import demand is elastic and every supply curve positively inclined. In this case he finds that import and export prices will rise less than domestic prices in the receiving country and fall less than domestic prices in the paying country. Regarding import and export prices he finds it quite conceivable that an almost unchanged relation may be maintained, particularly if the two countries are of approximately equal size.

Dealing with only two countries and two commodities Yntema concludes from an examination of twelve typical cases that with positively inclined supply curves the prices of international goods will rise *less* in the receiving country than the prices of domestic goods. Their absolute rise or fall will depend on the various elasticities and on all the monetary elements governing inflation and deflation. If an export good has a horizontal supply curve, the money price at which it is supplied varies, of course, proportionately with the domestic-price level of the country exporting it. If the country receiving the indemnity or loan has a negatively shaped export supply curve, the prices of its exports will rise relatively above the height of the domestic-price level. If the paying country supplies a decreasing-cost commodity, they will fall relatively below the domestic-price level, which has in turn suffered an absolute decline. These last cases have a decided theoretical interest, but Yntema admits that they are of very much less practical importance than the normal case.

Finally, Yntema considers the terms of trade. In the normal case he finds that they will move in favour of the receiving country, *if* the product of the two export supply elasticities is *larger* than the product of the two import demand elasticities. And he believes that the product of the supply elasticities is *rather likely* to exceed the product of the demand elasticities.

<sup>1</sup> *Loc. cit.*, p. 73.

This belief is based on the following, somewhat uncertain grounds: (1) the alternative sources of imports are apt to be more restricted than the possible markets for exports; (2) elasticities of domestic supply probably tend, on the average, to exceed elasticities of domestic demand. In the cases where the export commodities of either country or both countries are produced under constant cost, the commodity terms of trade *must* necessarily turn in favour of the receiving country. And if either or both export supply curves are negatively inclined, the turn in favour of the receiving country is still further reinforced.

The sum total of Yntema's investigations is, then, that

"although the usual statements regarding the effects of tributes or loans on the commodity terms of trade are thus probably correct for the majority of cases, they have a much less adequate foundation in the normal case than is generally supposed."

As far as they go, these results are in complete agreement with the modern point of view.



## CHAPTER VII

### THE REPARATION DISCUSSION

#### 1. INTRODUCTORY REMARKS.

In the post-war period the mechanism of international capital movements has been discussed as never before. In the immense literature dealing with the problems of reparations and inter-allied debts, the transfer question occupies a central position.<sup>1</sup> On the whole, the intellectual standard of this world-wide discussion has been inferior to that of the polemics on related matters between the classical economists in the early part of the 19th century. The vast majority of the contributions have been of a purely political character without attempting to penetrate into the theoretical groundwork of their conclusions; and even among those authors who have aimed at a theoretical analysis of the problem, the majority quite clearly has been insufficiently familiar with the trends of reasoning outlined in the preceding chapters. Consequently, old mistakes were made over and over again, and much effort was wasted in rediscovering truths long familiar. Nevertheless, the long-drawn disputes of the last decade have served to throw into strong relief both the differences and the points of contact between the two alternative explanations of the transfer mechanism; the vast scale of the operations contemplated has uncovered the merits and defects of both points of view; that the payment of such huge sums as the German reparations would mean a transfer

<sup>1</sup> Extensive bibliographies are given by Hermann Curth, *Bibliographie zum wirtschaftlichen Problem der deutschen Reparationen*, Weltw. Archiv, 1926 I, p. 25\*\* and Hans Sveistrup, *Die Schuldenlast des Weltkrieges*, Quellen- und Literaturnachweis zu den interalliierten Kriegsschulden, den Reparationen und dem Dawesplan, 1918 bis 1928, Berlin 1930; continued in Hans Sveistrup, *Bündnisschulden und Kriegstribute. Vom Dawesplan bis Youngplan, 1928—1930*. Berlin 1931.

of buying power could hardly be disregarded, but at the same time the size of the payments stressed the difficulties in the way of an automatic readjustment of production to the changed local distribution of demand.

The present chapter intends to bring together such contributions to the reparation discussion as have served in one way or another to deepen our general understanding of the transfer mechanism. For this purpose it will be convenient to divide the discussion into three phases. *The period 1919—24* brought the first attempts, mainly by English and American economists, to apply the traditional doctrines to the new problem of the day. *In the next five years* a host of German writings on the subject appeared, containing illuminating details, but very few essentially new ideas. Finally, a more fertile re-examination of the alternative points of view has been undertaken in *the years after 1929*, mostly, however, by non-German economists.

A distinction was soon made between two different sides of the reparation question: (1) the raising of the money in the paying country (*Aufbringungsproblem*), and (2) the transmission of the funds to the receiving countries (*Übertragungsproblem*).<sup>1</sup> It is only the latter problem which is of direct interest in the present connection, but though it may be convenient to treat the two problems separately they are obviously dependent on one another; according to the "modern" explanation of the mechanism it is the solution of the budget problem which sets the transfer in motion, and conversely, transfer difficulties may react on the possibilities of solving the budget problem.

Apart from the lacking counterflow of interest and annuity payments the analogy between indemnities and foreign lending and borrowing would seem to be complete as far as the mechanism of transfer is concerned, and authors like Lautenbach<sup>2</sup> and Palyi<sup>3</sup> are undoubtedly justified in pointing out,

<sup>1</sup> This method of treatment seems to have been introduced by Franz Gutmann, *Grundsätzliches zum Reparationsplan*, Jena 1921, p. 15. It was adopted by the Dawes Committee 1924 (*Die Sachverständigen-Gutachten*. Einzige autorisierte Ausgabe des Auswärtigen Amts, Berlin 1924, part I section VIII d).

<sup>2</sup> W. Lautenbach, *Reparation und Volkswirtschaft*, Zeitschr. f. d. ges. Staatsw. 1925, pp. 258 et seq.

<sup>3</sup> Melchior Palyi, *Der Zahlungsbilanzausgleich bei einseitigen Wertübertragungen*, Arch. f. Sozialw. u. Sozialp. 1926, p. 308.

as a weakness in much of the German literature on this subject, its imperfect, or completely lacking, understanding of the similarity between these different forms of capital movements. Yet, as already suggested, there is a difference; ordinary lending and borrowing operations develop as the natural outcome of the whole price situation in the different countries, whereas war debts and reparation claims may be established almost overnight and on a scale wholly unrelated to the basic elements of the price structures of the countries in question.<sup>1</sup>

## 2. PRELIMINARY ATTEMPTS; 1919—24.

Among the first to apply the "classical" reasoning to the German reparation problem were Keynes and Taussig. As early as 1919 Keynes pointed out that an annual surplus for home investment could only be converted into a surplus available for export abroad by a *radical change* in the kind of work performed. Labour, while it might be available and efficient for domestic services in Germany, might not be able to find an outlet in foreign trade, and, at all events, it could only be diverted into new channels with loss of efficiency and a large expenditure of capital.<sup>2</sup>

Regarding the monetary mechanism Keynes argued along classical lines that the only way in which Germany could create the necessary export surplus was by offering goods at a

<sup>1</sup> Cf. *supra*, p. 59. Besides, or rather as a consequence of their disproportionate size, indemnity payments are likely to be accompanied by currency upheavals.

<sup>2</sup> *The economic consequences of the peace*, London 1919, p. 193. This idea was further elaborated in *A revision of the treaty*, London 1922, pp. 165—66: "The equilibrium of international trade is based on a complicated balance between the agriculture and the industries of the different countries of the world, and on a specialisation by each in the employment of its labour and its capital. If one country is required to transfer to another without payment great quantities of goods for which this equilibrium does not allow, the balance is destroyed. Since capital and labour are fixed and organised in certain employments and cannot flow freely into others, the disturbance of the balance is destructive to the utility of the capital and labour thus fixed. The organization, on which the wealth of the modern world so largely depends, suffers injury... Moreover, since the losses will be concentrated on the capital and labour employed in particular industries, they will provoke an outcry out of proportion to the injury inflicted on the community as a whole."

lower price than that at which other countries cared to offer them; putting herself in a position to offer them cheap, partly by the German working classes lowering their standard of life without reducing their efficiency in the same degree, and partly by German export industries being subsidized, directly or indirectly, at the expense of the rest of the community.<sup>1</sup>

In the same year *Taussig* attacked the reparation problem from the classical point of view.<sup>2</sup> His sense of realism made him a little doubtful, however, as to its applicability in this case. He suggested that if the German government started purchasing bills of exchange in the market and allowed specie to flow out, Germany's circulating medium might be completely drained in a few months, at most in a year. To such overwhelming changes, exports and imports could not possibly accommodate themselves with sufficient rapidity:

"One might indeed indulge in the intellectual exercise of imagining the problem to work itself out to the bitter end. It could be doubtless argued that eventually there must come a readjustment in accord with the fundamentals of theory. But such drastic adjustment could be reached only after a period of monetary revolution and credit collapse. . . . It would be idle to speculate on possibilities of this sort."

*Taussig* felt sure, therefore, that the German government, instead of relying on automatic trade adjustments, would have to search for ways of deliberately stimulating exports and checking imports in order to procure the enormous supply of foreign exchange necessary for reparation payments. And as the German imports of indispensable raw materials and food supplies could obviously be restricted only within narrow limits, he recommended bounties, tax reductions, preferential transport rates, and other means of stimulating exports.

About a decade later *Taussig* was even more doubtful and cautious.<sup>3</sup> Then he seemed to think that the conscious and deliberate government interference might obstruct rather than promote the process of adjustment:

<sup>1</sup> *A revision of the treaty*, p. 157.

<sup>2</sup> *German reparation payments*, a paper read before the annual meeting of the American Economic Association in December 1919 (*Am. Ec. Rev.*, Suppl. 1920, pp. 33—49); discussion with contributions of John H. Williams and Ditlev M. Frederiksen (pp. 50—57). Here again *Taussig* speaks of the orthodox or *Ricardian* theory.

<sup>3</sup> *Deutschlands internationaler Handel und das Reparationsproblem*, *Arch. f. Sozialw. u. Sozialp.* 1928, pp. 232—33.

“Die schwere Hand des Staates oder irgendeiner aufgezwungenen Kontrolle hemmt die Beweglichkeit und erschwert die Anpassung. Ich singe der Privatindustrie keine Lobgesänge und habe keine Vorurteile gegen staatliche Aktivität und Überwachung, aber die Langsamkeit und Unelastizität, die Unfähigkeit des staatlichen Apparates, neue Situationen rasch und mit Erfolg zu beherrschen, muss offen eingestanden werden.”

But in any case, the process of depressing German prices, which Taussig still held unavoidable, would cause wage struggles, strikes, business failures, etc. which all would have adverse effects upon the body economic.<sup>1</sup>

To Keynes' detailed reconsideration of the transfer question in 1929 we shall return in a later connection.<sup>2</sup>

The first economist who brought the “modern” point of view to bear on the post-war reparation payments seems to be *B. M. Anderson*. He explains the transfer process in the following way:<sup>3</sup>

“If the country which has the payment to make will tax its people in such a way as to create a fiscal surplus, this *automatically* reduces the ability of the people in that country to consume as much as they produce. A surplus of goods available for export is thus created. The producers of these goods find their prices falling, since the buying power of the people is reduced by taxation. On the other hand, the country which is receiving the payment, lightening the burden of taxation for its own people, leaves its people with increased spending power. Prices in the country receiving the payment thus tend to rise. The goods are then automatically drawn from the low-priced paying country into the high-priced receiving country. As the process goes on, prices rise in the paying country and fall in the receiving country until they come into equilibrium again.”

The author does not shut his eyes to the serious difficulties that accompany the necessary readjustments of industrial organization. He points out explicitly<sup>4</sup> that any sudden and violent change in the course of international payments can disturb the economic equilibrium and bring about disorder. It is important, therefore, that changes of this sort are brought about gradually. Likewise, he is well aware that a sudden

<sup>1</sup> *Ibid.*, p. 236.

<sup>2</sup> *Infra*, p. 278 et seq.

<sup>3</sup> *Chase Ec. Bull.*, I, 4., New York 1921.

<sup>4</sup> *Chase Ec. Bull.*, II, 5 New York 1922.

cessation of payments from Germany to the outside world might easily constitute a catastrophe.

But while B. M. Anderson thus admits that price movements may be necessary to *get the process of adjustment started*, particularly in the case of sudden changes in the direction or scale of capital transfers, it is the essence of his doctrine that no *permanent* changes in relative price levels are necessary.<sup>1</sup>

### 3. THE GERMAN CONTRIBUTIONS; 1924—29.

In the German literature on the reparation problem published prior to the report of the Dawes committee hardly anything of permanent theoretical value is to be found. German economists seemed to be paralyzed by the general political and economic pessimism, but when the stabilisation of the mark had proved a success they soon began to share the growing belief that the future was not completely hopeless and that something might be gained by grappling with its problems.<sup>2</sup> And then the two alternative lines of approach appeared here too, of course. It is neither necessary nor practicable, however, to follow up the details of the discussion in Germany; the most convenient compendium of the different opinions can perhaps be found in the transactions and documents of a conference held at Pyrmont in Juni 1928 under the auspices of the Friedrich List Gesellschaft with the specific object of investigating the transfer question.<sup>3</sup> At this meeting, in which

<sup>1</sup> In a very vague form the "modern" argument may perhaps be said to appear in an article by *Hartley Withers* (*Reparation fears and fancies*, *Sperling's Journal*, July 1921), and similar ideas were probably also in *Edwin Cannan's* mind when he wrote his contribution to the symposium on Germany's capacity to pay in *The Manchester Guardian Commercial* (*Reconstruction in Europe*, Sept. 1922). But a clear-cut application of the modern reasoning was first made in England by *C. W. Guillebaud* (*The economics of the Dawes report and the London agreement*, *Ec. Journ.* 1924). Another very clear formulation of the modern transfer theory was given about the same time by the Swedish economist *Sven Helander* (*Zur Theorie der Transferierung*, *Weltw. Arch.* 1924).

<sup>2</sup> Among the first—not very successful—attempts to analyse the theoretical problems raised by the reparation question may be mentioned *Günther-Erfrid Heinecke*, *Die wirtschaftliche Erfüllbarkeit der Reparationsverpflichtungen*, *Sozialw. Forsch.* Abt. I, Heft. 2, Berlin and Leipzig 1924.

<sup>3</sup> *Das Reparationsproblem*, Teil I. Verhandlungen und Gutachten der Konferenz von Pyrmont. Herausgegeben von Edgar Salin, Berlin

more than 60 distinguished German economists, politicians, government officials, bankers, and other business leaders took part, the problem was dealt with under two main headings: (1) putting aside counterflows of foreign capital into Germany it was asked what *readjustments of production, consumption, and foreign trade* would be necessitated by the reparation transfer; (2) afterwards, the connection between reparation payments and *rates of foreign exchange, credit policy, and capital movements* was taken up. In his "Schlusswort" the president of the conference, Bernhard Harms<sup>1</sup> admitted that the conference had revealed once more a difference of opinion as to the fundamental nature of the mechanism of transfer without being able to remove it. Yet he claimed that the conference had caused an advancement of knowledge by forcing the representatives of both "schools" to revise their opinions:

"Die Theorie von der mehr oder weniger reibungslosen automatischen Übertragung von Kaufkraft, die allerdings auf unserer Konferenz nicht so einseitig vertreten worden ist wie gewisse kämpferische Äusserungen von Gegnern dieser Theorie vermuten lassen, hat gewiss einen richtigen Kern, doch bedarf gerade sie gründlicher Abwandlung, je mehr sie Wirklichkeitsnähe erreicht. Je künstlicher die deutsche Ausfuhr gefördert wird, desto schärfer werden die Abwehrmassnahmen sein, die auf dem Gebiet der Zollpolitik und des administrativen Protektionismus zu erwarten sind."

It thus appears that this interesting attempt to bring theorists and practical politicians and business leaders together, was fairly successful, in spite of certain initial difficulties and misunderstandings.<sup>2</sup>

1929. A second conference was held in Berlin in November 1928 dealing with the commercializing of the reparation payments (*Das Reparationsproblem*, Teil II, Berlin 1929).

<sup>1</sup> *Loc. cit.*, p. 289.

<sup>2</sup> Reviewing the documents and transactions of the conference Wilhelm Röpke writes: "Auf welcher Seite der Gewinn der Pyramonte und Berliner Konferenz liegt, wird schwer zu entscheiden sein, sicher aber ist, dass bei dem Hauptthema beider Konferenzen, dem Transferproblem, die Position der Theoretiker nicht durch Argumente, die der Praktiker *qua* Praktiker vorzubringen hatte, erschüttert werden konnte, so dass hier die Theoretiker im wesentlichen der gebende Teil waren, was nicht ausschliesst, dass sie Belehrungen über von ihnen nicht genügend berücksichtigte politische und privatwirtschaftliche Verwickelungen dankbar entgegengenommen haben" (*Zeitschr. f. Nationalök.* 1930, p. 105).

One of the most competent German defenders of the classical position has been *Walter Eucken*. Against the popular belief that the transfer of the reparation payments had to wait until the German balance of trade had developed of itself the necessary export surplus, he pointed out<sup>1</sup> that this excess of export had to be created by *deliberate action*. And since the stability of the exchanges had to be maintained this action could only take the form of a *deflationary pressure* on German prices. To show in detail how this mechanism works Eucken distinguished between two periods: the period of sinking prices, and the period of their stabilisation at the lower level.

The first period would last as long as the annual payments—or the obstacles to the receipt of German goods abroad—were increased. In the second period a reaction would set in:

“Ist der Ueberschussexport in einem bestimmten Betrage durch Verbilligung erst einmal erzwungen, so findet eine Umstellung auch auf den Auslandsmärkten statt. Deutschland verteilt seinen Ueberschussexport über die ganze Welt und hat hiermit ausländische Unternehmern aus manchen Märkten verdrängt. *Dafür entwickeln die Länder, die die Kriegsschädigung empfangen, eine grössere Nachfrage auf einer Reihe von Märkten, auf denen die Preise anziehen müssen.* Die ausländische Produktion, die zunächst der deutschen Mehrausfuhr weichen musste, wird sich bei solcher Preislage auf diese Märkte umstellen. Wenn der gewaltige Umstellungsprozess des Weltmarktes sich so vollzogen hat, werden die deutschen Exporteure mit ihren Offerten ohne Gefahr des Absatzverlustes etwas heraufgehen können ... In der zweiten Periode braucht also zur Aufrechterhaltung der Uebertragung der Druck auf das deutsche Preisniveau nicht mehr so stark zu sein wie in der ersten, *aber er muss vorhanden bleiben, sonst würde der Mehrexport verschwinden.*”

This quotation reveals the same dualism as we have found in the writings of Taussig and Viner. Like these authors, Eucken is aware that the movements of the various sectional price levels will be different, but he does not see the conflict between this analysis, with its particular stress on changes in the prices of *domestic* goods, and his main contention that Germany must be made a better market, which

<sup>1</sup> *Das Uebertragungsproblem, ein Beitrag zur Theorie des internationalen Handels*, Jahrb. f. Nationalök. und Stat. 1924, pp. 145—164; cf. *Die deutsche Währungs politik und das Sachverständigen-Gutachten*, Bankarchiv 1924, pp. 233 et seq.



means, of course, that the relative prices of *international* goods must change. And his suggestion that the reparation payments create a greater demand for German goods turns out eventually to be nothing more than the observation that

“wenn ein Auslandsmarkt in irgendeinem Gewerbe-*zweig* erst einmal neu erobert ist, brauchen die Unterbietungen der Preise der bisherigen Lieferanten nicht mehr so stark zu sein.”<sup>1</sup>

To demonstrate the working of the mechanism Eucken contrasts two simplified examples. In the first case he assumes that Germany raises a certain amount (500 mill. marks) by additional taxation and uses it for additional public expenditures within Germany, and he draws the obvious conclusion that this will be without influence on the German level of prices and export surplus. “Der Steuerdruck allein kann keine Uebertragung erzwingen.” In the second example the additional German tax income is handed over as reparation payment to the French government who wants to spend the money in France. As the gold parity of the mark must be maintained France cannot dispose of its entire supply of marks at once.

“Sie hält also das Geld zurück. In Deutschland *fehlt die Nachfrage der 500 Mill.*, die Warenpreise sinken und ein Ueberschussexport setzt ein. Dann wird es der französischen Regierung möglich, mit den Markbeträgen ohne Störung des deutschen Wechselkurses Devisen zu kaufen oder sie kauft auch die billigeren deutschen Waren unmittelbar.”

It is most extraordinary that an author who is so keenly aware of the effects of the reduced demand in Germany, seems to leave out of account entirely that an exactly corresponding increase in demand in the receiving countries—the existence of which he admits—may have an effect on prices.

An attempt to clarify the distinction between “Kaufkraftentziehung” and “Kaufkraftverschiebung” was made later by *Walter Sulzbach*.<sup>2</sup> Like Eucken, he assumes first that a tax is imposed to provide funds for additional domestic expenditures (e.g. for the army). This, obviously, is a case of “Kaufkraftverschiebung”; but if the demand of the army is different from that of the tax-payers, a readjustment of pro-

<sup>1</sup> As will be remembered the same observation was made by Viner; cf. *supra* p. 234.

<sup>2</sup> *Zur Transferfrage*, Zeitschrift f. d. ges. Staatsw. 1927, p. 130.

duction becomes necessary.<sup>1</sup> Next, Sulzbach supposes that a tax is levied for reparation payments, and that the receiving country reinvests the money at once within the tribute-paying country. This too—Sulzbach argues—is a case of “Kaufkraftverschiebung”<sup>2</sup>, and he concludes that a genuine “Kaufkraftentziehung” will take place only if the money paid as tribute is hoarded by the receiving country, and then, of course, its necessary consequence is a deflation in the paying country.<sup>3</sup>

This argument evidently runs parallel to that presented by Eucken. It is inconclusive, however, because in the second case an *additional* assumption is made: reinvestment of the reparation payments in the paying country. It is true that in this situation the “Kaufkraftverschiebung” will not lead to a transfer of commodities or a turn in the balance of trade. For these movements have been made superfluous by the second assumption: the reinvestment of the funds. What takes place in this case, therefore, is not a single one-sided “Kaufkraftverschiebung”, but a double “Kaufkraftverschiebung” in opposite directions: first a monetary transfer of buying power from tax-payers to the reparation account, next a counterflow of buying power from that account to the borrowers of the funds.

In a memorandum submitted to the Pyrmont Conference<sup>4</sup> Eucken summarises a modified classical theory in the following illuminating schedule:

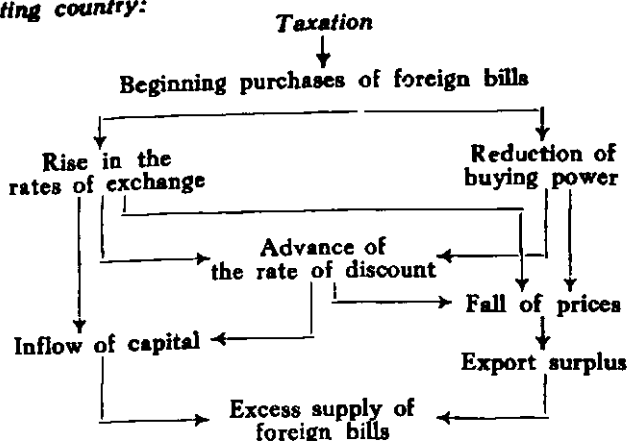
<sup>1</sup> “Was eine Gruppe Deutscher (den Steuerzahlern) an Nachfragekraft genommen wird, fließt einer anderen (der Armee) zu. Die Tatsache des Unterhalts der Armee bewirkt also erstens Preisveränderungen und zweitens Umstellungen der Produktion die beide zurückgehen auf die erzwungene Kaufkraftverschiebung.”

<sup>2</sup> “Nur eine Kapitalverschiebung hat stattgefunden: die gleichen Summen, die der Schuldner ursprünglich selbst besass, werden ihm jetzt vom Ausland mit der Verpflichtung der Rückzahlung in Reichsmark geliehen. Es besteht kein Druck auf den deutschen Export.”

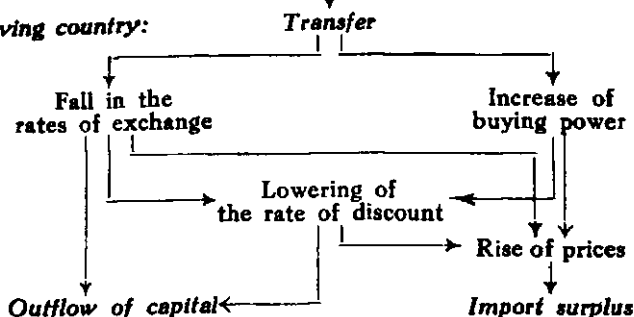
<sup>3</sup> “Die Anpassung bringt Störungen mit sich, die aber diesmal nicht die Folge dessen sind, dass eine Kaufkraftverschiebung stattgefunden hat—denn der Empfänger der Kaufkraft macht ja, nach unserer Annahme, keinen Gebrauch von ihr—sondern die diesmal wirklich in Konsequenz einer Kaufkraftentziehung auftreten.”

<sup>4</sup> Der grundsätzliche Zusammenhang zwischen Aufbringung und Uebertragung von Reparationszahlungen, *loc. cit.*, pp. 315—28.

Remitting country:



Receiving country:



Another interesting analysis of the transfer problem from the classical point of view is given by *Albert v. Mühlentfels*.<sup>1</sup> Like Eucken, he refers occasionally to the reduction of buying power in Germany and though he does not completely disregard the corresponding increase in buying power in the receiving countries he gives a very inadequate account of its effects. He argues that the German export surplus must be sold to the other countries *before* their buying power is increased by the transfer of the reparations:<sup>2</sup>

“Erst wenn auf Grund des deutschen Ausfuhrüberschusses die Uebertragung der Reparationssummen erfolgt und diese im Gläubiger-

<sup>1</sup> *Transfer, Betrachtungen über Technik und Grenzen der Reparationsübertragung*, Jena 1926.

<sup>2</sup> *Loc. cit.*, pp. 72 et seq., cf. p. 14.

lande etwa zu Steuerermässigungen, zu Anleiherückzahlungen oder zu Staatsaufträgen verwendet werden, steht die zur Aufnahme weiterer Ausführüberschüsse von gleicher Höhe erforderliche Kaufkraft im Gläubigerlande zur Verfügung."

Had he distinguished more clearly between the monetary transfer and the real transfer, v. Mühlentfels could hardly have argued that an antecedent German export surplus was required in order that the Allied countries might direct the increased monetary buying power over which they had got command towards domestic commodities or commodities from other countries than Germany. Then he might have realised that it is this very application of the transferred buying power for the purchase of both German and other goods which creates, directly or indirectly, the necessary excess of export and thus brings about the real transfer.<sup>1</sup>

The difference between the classical and the modern point of view is brought out very clearly by v. Mühlentfels' distinction between a quantitative and a qualitative reception problem. In principle, the modern explanation admits only the existence of the latter problem, and occasionally v. Mühlentfels seems to agree that the problem of reception is ultimately a "Problem der Umstellung"<sup>2</sup>. But at the same time he insists that a certain permanent fall in the German price level relatively to prices elsewhere is necessary.<sup>3</sup>

In the memorandum already referred to, Eucken likewise admits that the transfer question is at bottom an "Umstellungsproblem" which would not exist in case the demand of the Allied countries were directed towards the same goods of which consumption is reduced in Germany. Eucken's main objection to the modern theory is, therefore, that it does not treat the problem dynamically; it assumes too lightly that one state of equilibrium is superseded by another without friction.<sup>4</sup>

The first advocates of the modern view among German

<sup>1</sup> Cf. the criticism by H. Neisser, *Der Tauschwert des Geldes*, Jena 1928, p. 186.

<sup>2</sup> *Loc. cit.*, p. 81.

<sup>3</sup> *Ibid.* pp. 73 et seq. Even in the case of deliveries in kind he stresses the necessity of changes in relative price levels, (p. 86).

<sup>4</sup> The classical theory is also in the main the foundation of Paul Momberts essay *Bevölkerungsproblem und Bevölkerungstheorie im*

economists were Lansburgh,<sup>1</sup> Röpke<sup>2</sup> and Lautenbach.<sup>3</sup> Röpke clearly explained that a problem of transfer did not exist in the sense generally assumed in popular discussion that one had to wait for the development of an active balance of trade before the transfer could begin; the active trade balance is *not the first, but the last link in the chain of causation*; the first link—both in the case of a private individual who has to remit interest on previously acquired loans and in the case of a government that has to pay reparations—is that incomes are reduced in the paying country, and this necessarily makes the trade balance active. Röpke admits that

“geraume Zeit verstreichen kann, ehe sich das geliehene “Geld” in Warensendungen aufgelöst hat und dass es zumeist erst eines gewissen Deflationsdruckes bedarf um den Prozess zur vollen Durchsetzung zu bringen.”

As a quantitative statical problem the transfer question does not exist. But temporarily, until the new state of equilibrium is reached, the barter terms of trade may move against Germany; that is to say, Röpke admits the existence of a qualitative dynamical transfer problem:<sup>4</sup>

“Es ist möglich, dass der Reparationsexport zunächst weitgehend aus Waren besteht, nach denen die Gläubigerländer keine grössere Nach-

*Lichte des Weltkrieges.* (Festgabe für Lujo Brentano zum 80. Geburtstag; die Wirtschaftswissenschaft nach dem Kriege, München and Leipzig 1925, II p. 412, note 1. Cf. *Ueberbevölkerungserscheinungen in Westeuropa*, Schr. des Ver. f. Sozialp., vol. 172, p. 176) and of Willi Prion's essay *Der deutsche Geld- und Kapitalmarkt seit der Stabilisierung*, Strukturwandlungen der deutschen Volkswirtschaft II, Berlin 1928, pp. 327 et seq.

<sup>1</sup> *Die Kautiwährung*, Die Bank 1924, pp. 303 et seq.; cf. his later article *Transfer*, Die Bank 1927, pp. 733 et seq.

<sup>2</sup> *Zum Reparationsproblem*, Jahrb. f. Natök. u. Stat. 1924, pp. 527—36; cf. his later article *Die ökonomische Bedeutung der internationalen Verschuldung*, Der deutsche Gedanke 1925, pp. 717 et seq.

<sup>3</sup> *Reparation und Volkswirtschaft*, Zeitschr. f. d. ges. Staatsw. 1925, pp. 258 et seq.

<sup>4</sup> Cf. his memorandum to the Pyrmont Conference: *Welchen Hemmungen kann eine für die Reparationsübertragung etwa erforderliche Umstellung in den internationalen Handelsbeziehungen begegnen? Wie würden diese Hemmungen auf den Transfer einwirken?* *Loc. cit.*, pp. 329—64.

frage entfalten, so dass hier ein den Markt erschütternder und beide Teile schädigender Preisdruck entstehen kann... Wie im Falle einer volkswirtschaftlichen Krise kann auch hier der Anschein erweckt werden, als ob nicht bloss eine qualitative Disharmonie von Angebot und Nachfrage, sondern ein quantitatives Nachfragedefizit im ganzen vorliegt. Wenn das, wie man aus der Kontroverse über das Theorem der allgemeinen Überproduktion weiss, auch nur scheinbar so ist, so können die Folgen für die Beteiligten doch unangenehm genug sein."

How serious these difficulties of adjustment will be, depends upon the character of the productive apparatus in the countries in question. The greater the variety of goods produced by the debtor country, the easier it will be to find an outlet for its excess of exports. The difficulties will be greater if both the remitting and the receiving country are agricultural countries than if both are industrial countries or—better still—if the paying country is an industrial and the receiving an agricultural country; an agricultural country having large payments to make abroad will usually be in a worse position than an industrial country with similar obligations, since the elasticity of the foreign demand is smaller for agricultural than for industrial products.<sup>1</sup> These observations are merely the application to the reparation situation of the well-known fact that the industrial country is the natural lender, the agricultural country the natural borrower on international account.

In this connection Röpke points out that an export surplus can be developed not only by increasing exports, but also by curtailing imports. The extent to which imports can be curtailed will depend on (1) the possible reduction of domestic consumption of imported goods, and (2) the possible substitution of home-made for imported goods.<sup>2</sup> The reduction of consumption will depend on the elasticity of the domestic demand for imports, while the possibilities of substitution depend on the relation between costs at home and abroad,

<sup>1</sup> Against the contention of Sir Josiah Stamp, v. Mühlensfels and others that the foreign demand is rather inelastic for the specialized finished goods in the production of which Germany excels, Röpke points out that Germany's position would have been much more unfavourable, if her exports had consisted mainly of agricultural products.

<sup>2</sup> To this Fritz Beckmann in the discussion of the memorandum added (3) improvements in the utilisation of home-produced goods, (*Loc. cit.*, p. 106).

i.e. on the elasticities of supply at home and abroad. The possibilities of increasing exports depend on (1) reduction of German consumption of export goods, (2) conditions of production in Germany, and (3) possibilities for increased sales abroad, i.e. on the elasticities of demand at home and abroad and on the elasticity of supply at home.

Röpke properly maintains that a distinction must be made between the *general* elasticity of demand for a given commodity and the *particular* elasticity of demand for the *German* output of this commodity. But he is not justified in adding that

“diese spezifische Nachfrageelastizität ist in der Tat für die deutsche Mehrausfuhr nicht so günstig wie die allgemeine, da es sich durchweg um Güter handelt, in denen Deutschland kein irgendwie geartetes Monopol besitzt, die vielmehr auf dem Weltmarkt einer heftigen Konkurrenz ausgesetzt sind, so dass die Nachfrage leicht vom deutschen Angebot auf das Angebot anderer Länder überspringen kann.”

Two different trains of reasoning seem to have been mixed up here. If German producers possessed a monopolistic power of which they had not already made the full use, the reparation payments might occasion the utilisation of such monopolies. In that case a reduction of the exported quantity might result in so much higher prices that the burdens of the reparation payments were shifted, wholly or partially, to the foreign consumers. It is quite true that if similar attempts were made under competitive conditions the foreign demand would soon turn towards other sources of supply outside of Germany. But it is equally clear that a slight reduction of price will then suffice to turn a much larger part of the total world demand towards the German producers than if the total world supply was already in the hands of a German monopoly. Röpke speaks of

“Güter mit grösserer spezifischer Nachfrageelastizität oder—was dasselbe ist—geringerer Unterwerfung unter die Konkurrenz des Weltmarktes.”

Quite the contrary. Competitive goods will have a greater specific elasticity of demand than monopoly goods; if Germany has already satisfied the whole world demand for a certain commodity at a given price, a reduction of that price will increase sales *less* than if a demand hitherto satisfied

from other sources can now be turned towards the German supply.<sup>1</sup>

Against the attempts made by Moulton, McGuire, and others to measure Germany's capacity to pay by means of an analysis of her balance of trade before and after the War, Lautenbach maintains that the surplus invested abroad before the War is no indication of how much Germany *could possibly* have transferred, but merely a sign of how large a part of her savings she found it *more profitable* to employ abroad than at home.

Besides, he points out the inconclusiveness of the argument that an increase in exports must necessarily increase imports also. Its main fault is that it tacitly assumes that reparation payments mean an increase in the total volume of production. But this is not the case; if production is expanded, it is not on account of, but rather in spite of, the reparation payments. For such payments will always take place in the form either of goods that would have been produced in any case or of commodities produced instead of those which would have been made in the absence of reparations. Thus reparation payments mean either a mere "Absatzumstellung" or a "Produktionsumstellung". In the former case it is obvious that no extra imports are called for, and in the latter an extra import is necessary only if the new export goods contain more foreign raw material than the commodities previously made for home consumption. And as is also pointed out by Röpke

<sup>1</sup> It may be true, of course, as H. v. Beckerath points out that producers abroad will reduce prices and ask for protection to meet this competition (*Loc. cit.*, p. 32).—Another curious misapplication of the elasticity concept may be mentioned in the same connection. Melchior Palyi remarks (*Das Reparationsproblem* I, p. 389) that the only weighty objection which can be made against the classical theory is that it places too much importance on the elasticity of the foreign demand for the commodities of the paying country, and that if this elasticity becomes less than one, "so bedeutet dies, dass jede weitere Preissenkung ... keine Steigerung, wo möglich sogar eine Senkung der nachgefragten Menge mit sich bringt, mit dem Erfolg, dass der Exporterlös gleich bliebe oder gar sinken würde." What he has in mind is, obviously, not the quantity demanded, but the total amount of money given in return. However, even Taussig makes a similar slip (*International Trade*, p. 116, note 2) saying that "an elastic demand means that at a lower price a greater quantity of units will be taken, and conversely, at a higher price a less quantity."



there will be a tendency towards increasing particularly the export of those commodities in which the "value added by manufacture" in Germany is great.<sup>1</sup>

In all this there is nothing essentially new, however, and on the whole the German reparation literature has added little to our understanding of the fundamental nature of the transfer mechanism. But as already suggested it has brought certain aspects of the process into clearer relief. This is particularly true of the relation between reparation payments and ordinary capital movements, one of the main topics of the Pymont conference. As already mentioned<sup>2</sup> the 10,000 mill. marks paid by Germany on reparation account between the adoption of the Dawes plan and the suspension of the Young plan had their counterpart in German borrowings abroad to an amount about twice as large.

This huge inflow of capital caused considerable anxiety in wide circles. It was very clearly demonstrated by *Melchior Palyi*,<sup>3</sup> however, that this inflow of capital served, not only to compensate the excess of exports which would otherwise have been necessary, but also to pave the way for the "normal" liquidation of the reparation claims through commodity export:

<sup>1</sup> The modern point of view also permeates the reasonings of Albert Hahn (cf. *Schr. des Ver. f. Sozialp.*, vol. 172, 1926 pp. 256 et seq.), Ludwig Reisse (*Die Verwendung der in Deutschland angesammelten Reparationsgelder in ihrer Wirkung auf dem deutschen Geld- und Kapitalmarkt*, Egeln 1926), Rudolf Dalberg (*Auslandsanleihen und Reparationen*, Leipzig 1928) and Fr. Eulenburg (*Aussenhandel und Aussenhandelspolitik*, Grundriss VIII, Tübingen 1929, pp. 43—47).

<sup>2</sup> *Supra* p. 41.

<sup>3</sup> Cf. his memorandum to the Pymont Conference: *Die Finanzierung der Reparation durch Auslandsanleihen*, *Loc. cit.*, pp. 365—93. Incidentally, Palyi points to this compensating borrowing as the explanation of the amazingly rapid, apparently almost instantaneous, adjustment of the balance of payments to large capital outflows. He suggests that Ricardo "ist ja wahrscheinlich auch aus dieser Erfahrung heraus und nicht nur aus doktrinären Erwägungen zeitweilig zu der Überzeugung gelangt dass der Zahlungsbilanzausgleich gar nicht der Goldbewegung bedürfe, sondern irgendwie automatisch und plötzlich erfolge. All das klärt sich auf, wenn man sich das Dazwischentreten der Zinsarbitrage vor Augen hält. Sie ist es, die nahezu "instantan" erfolgt und mithin bei kleineren Störungen des internationalen Gleichgewichts die Wiederanpassung fast ohne Zeitverlust herbeiführt."

"In beiden Hinsichten erfüllen sie eine Funktion, die man kurz kaum anders als mit "Streckung" charakterisieren kann: zeitliche Streckung eines sich sonst in relativ kurzer Zeit abspielenden Vorganges ... Sie vertagen zunächst die Umstellung; und wenn sie schliesslich eintritt, dann geschieht das—dank z.T. derselben Auslandskredite—schrittweise, graduell und nach beträchtlicher Vorbereitung "im stillen". Es dauert dadurch eine gute Weile, bis es überhaupt zur Konjunkturwende kommt, diese wird in dem Masse eintreten, als die neuen Kredite durch die fällig werdenden Zahlungen nach und nach kompensiert und überkompensiert werden."<sup>1</sup>

Arthur Feiler,<sup>2</sup> on the other hand, was cautious about the conclusion that a compensation of the German reparation payments by foreign borrowing would necessarily mean that two streams of commodities were "set off against one another." They might consist largely of different kinds of goods, with the result that both imports and exports were swollen.<sup>3</sup>

What Feiler has in mind is, probably, that *within* Germany both the collection of reparation taxes and the contraction of foreign loans may give rise to changes in the direction of

<sup>1</sup> In this connection Palyi points out that the payment of the French indemnity in 1871 by means of French holdings of foreign securities (cf. supra, pp. 150—51) meant that the payment "zeitlich "rückwärts" gestreckt wurde: die vorangehende Generation, die die fremden Effekten gesammelt hat, hat diesen an das Ausland gewährten Kredit nunmehr liquidiert." Besides, he remarks that the danger to which Soetbeer and Bamberger called attention—that the sudden inflow of capital into Germany might produce an unhealthy "Gründerperiode"—would have been much more serious, "wenn der Erlös nicht für lange Zeit, etwa ein Jahrzehnt teilweise im Ausland geblieben, bzw. reinvestiert worden wäre. Die deutsche Regierung hat einen guten Teil des Erlöses in fremden Wertpapieren, Guthaben bei ausländischen Banken, Devisen usw. angelegt und erst schrittweise nach Deutschland geholt."

<sup>2</sup> Cf. his memorandum to the Pyrmont Conference: Warenausfuhr und Kapitalwanderung im Reparations-Transfer, *Loc. cit.*, pp. 394—404.

<sup>3</sup> "Und zwar deshalb nicht, weil die Warennachfrage in dem die Anleihe gewährenden Gläubigerlande sich in grossem Umfange auf ganz andere Waren richten kann als auf diejenigen, für deren Export zwecks Zahlung der Reparation das Schuldnerland sich umgestellt hat. Mit anderen Worten: wenn die Reparationszahlung an sich eine Umstellung des Schuldnerlandes für vermehrten Warenexport und des Gläubigerlandes für vermehrten Import notwendig macht, so kann auch bei Kapitalübertragungen in der umgekehrten Richtung dieser Umstellungszwang in grossem Umfange weiter bestehen bleiben, nur mit der Ergänzung, dass gleichzeitig, daneben, auch ein vergrößerter Warenstrom in der umgekehrten Richtung läuft — dass also in beiden Ländern durch Reparationszahlungen und Kapitalwanderung eine Vergrößerung des Aussenhandels sowohl bei der Import- wie bei der Exportseite sich ergibt."

demand, because some people have their buying power reduced, while others get command over additional buying power. Between individual commodities this may well necessitate a more far-reaching readjustment of production. But between the export group and the home-market group as a whole the two developments do tend largely to compensate each other. The tendency of the reparation taxes to depress home-market production and divert productive factors to the export industries, is met by the tendency of foreign borrowing to expand home-market industries at the expense of production for export. The borrowers who want to spend the capital at home, sell their foreign exchange to the central bank, from which it is bought by the government for the proceeds of the reparation taxes. It is only the excess amount which has to be transferred in commodities or services, but as already explained the transfer of this excess may well affect the total volume of trade.<sup>1</sup>

In the discussion in Pymont, Lautenbach sided with Palyi in the explanation of the rôle played by compensating capital movements. He refuted the popular notion that temporary payment of reparations out of foreign loans would render the future turn of the trade balance *more violent* because interest and amortisation payments had then to be added to the reparation charges. On the contrary, he argued that an inflow of capital might facilitate the process of adjustment by making the turn *gradual instead of sudden*.<sup>2</sup>

<sup>1</sup> *Supra*, pp. 63 et seq.

<sup>2</sup> "Nehmen wir an, dass ein paar Jahre lang durchschnittlich 5 Milld. nach Deutschland hereinströmen ... Im Anfang überdeckt dieser Betrag von 5 Milld. die Reparationsverpflichtung im Normaljahr um 2½ Milld. Dem würde eine Passivität der Handelsbilanz in Höhe von 2½ Milld. entsprechen. Hält dieser Zustand in gleicher Stärke mehrere Jahre an, so ergibt sich folgendes: In jedem Jahre steigt die Zinsverpflichtung um den Betrag der Zinsen der im Vorjahre neu genommenen privaten Anleihen, und während im Ausgangsjahr eine Passivität der Handelsbilanz von 2½ Milld. nötig und möglich gewesen wäre, wird in jedem folgenden Jahre der Passivsaldo um den Betrag der Zinsen auf die im Vorjahre genommenen Anleihen geringer sein müssen ... Nach einer bestimmten Frist, die man sich aus dem Zinssatz berechnen kann, sind die Fälligkeiten aus Reparationen und inzwischen eingetretener Verschuldung genau diesem Betrage des Kapitalzuflusses von 5 Milld. gleich. Dann wird die Handelsbilanz ausgeglichen sein, und im weiteren Verlauf werden dann die Fälligkeiten höher als dieser Betrag, die Handelsbilanz bekommt einen entsprechenden Aktivsaldo ....

Der Kapitalzustrom vom Auslande tendiert dahin, die heute passive

Against this argument v. Mühlentfels pointed to the danger that many investments which were profitable as long as the amount of buying power was maintained by the compensating capital movement, might prove to be failures at the moment when the inflow of capital stopped.<sup>1</sup> This is quite true; any sudden change will cause capital losses. But what Palyi and Lautenbach had contended was merely that it was unwarranted to believe that the inflow of capital *in itself* involved the danger of a sudden future "Umschlag". They would agree that if—for political or other reasons—the compensating capital movements were obstructed, this sudden and costly readjustment would be inevitable.

#### 4. LATER POLEMICS; 1929—34.

It is not only among German economists, of course, that the reparation controversy has been continued. In particular, a discussion between Keynes, Ohlin, and several other economists in 1929 and the following years is instructive.

When Keynes took up the transfer question again in greater detail he explicitly contrasted the classical and the modern view.<sup>2</sup> The modern argument is adequately described in the following passage:

"The German people receives its income in return for its current output of goods and services. If an appropriate part of this income is sequestrated, there will be no buyers for a corresponding amount of goods, which will therefore be available (in addition to what would be available otherwise) to expand exports or in diminution of imports. Since not all the consumption of goods and services, which the German people are compelled to forego, is suitable for export, there will have to be a certain amount of change-over in the character of production."

Concerning this "amount of change-over", Keynes points out that there are two extremes: (1) in case German fac-

Handelsbilanz ganz allmählich in eine aktive übergehen zu lassen und reduziert damit die Umstellungsrisiken und Verluste." (*Loc. cit.*, pp. 255—56). As is easily seen this is merely an application of Cairnes' time-honoured analysis.

<sup>1</sup> *Loc. cit.*, pp. 257—59.

<sup>2</sup> *The German transfer problem*, *Ec. Journ.* 1929, pp. 1 et seq.

tors of production produced nothing but exports and consumed nothing but imports, there would be no transfer problem at all (or rather, the transfer problem would turn into a problem between the recipients of reparations and the countries from which Germany previously drew her imports), whereas (2) in case Germany is unable to produce an additional quantity of exportable goods of any sort, the transfer problem is insoluble.<sup>1</sup>

But when he comes to the *mechanism* through which the necessary change-over is effected, Keynes has nothing more to say about the possible influence of the transfer of buying power. Then he relies exclusively on a reduction of German gold-costs of production relatively to such costs elsewhere. Three possible ways of bringing this about are suggested: (1) a greater increase in industrial efficiency in Germany than elsewhere; (2) a lowering of interest rates in Germany compared with elsewhere; (3) a reduction of efficiency wages in Germany compared with elsewhere. But of these three ways Keynes believes that practically only the last one is open to Germany. Moreover, he points to a number of special circumstances that may aggravate the German case: (a) a fall in wages may reduce efficiency, (b) Germany's foreign competitors may reduce their wage rates *pari passu*, or (c) raise their tariffs. On the other hand, it is admitted that the reduction of money wages in Germany does not mean a corresponding fall in real wages, since the prices of home-market goods will also go down.

But the fact remains, according to Keynes, that the expenditure of the German people must be reduced, *not only* by the amount of reparation taxes which they must pay out of their earnings, but also by a reduction in the real value of these earnings as far as they are spent on foreign goods. That is to say, the barter terms of trade will move against Germany. *How much* they will move, depends on the elasticity of the foreign demand for German products. Keynes states explicitly that if this elasticity of demand is less than unity, a greater export quantity will bring in a less aggregate

<sup>1</sup> Obviously, this conclusion is valid only if it is assumed that German imports are also already at their absolute minimum; otherwise the adjustment would take place solely by a diminution of imports.

sum of money than a smaller quantity;<sup>1</sup> besides, he points to the obvious, but not always sufficiently recognized, fact that even if a price reduction of 10 per cent stimulates the volume of exports by 20 per cent, this will only increase the *value* of exports by 8 per cent.<sup>2</sup>

What made Keynes overlook the influence of the transfer of buying power from Germany to the Allied countries was probably the simultaneous counterflow of foreign capital into Germany. For when he argued that the German balance of trade had already had the benefit of the reduction of German consumption consequent upon the reparation taxation, he forgot that it had also had the disadvantage of a—larger—movement in the opposite direction: an increase in buying power in Germany tending to promote imports and reduce exports.<sup>3</sup>

This point was brought out against Keynes by *Ohlin*.<sup>4</sup> In his opinion the surprising thing was that practically nothing had been heard about difficulties of transferring capital *into* Germany in the period 1924—29, and he pointed to this fact as a strong evidence in favour of the modern point of view.<sup>5</sup>

<sup>1</sup> In this case a restriction of the volume of export might yield an excess of export value. But this cannot be effected, of course, under free competition.

<sup>2</sup> For  $0.90 \times 1.20 = 1.08$ . Cf. *supra*, p. 274, note 1.

<sup>3</sup> In this inflow of foreign capital the answer is found to Keynes' question: "What prevents Germany from having a greater volume of exports at the present time?" But Keynes himself saw only two possibilities: that adequate supplies of labour were not available for the export industries at the present level of remuneration, or that it was impossible for Germany to sell an increased output at a profit unless costs of production were first reduced, and on the implicit assumption that a *tertium non datur* he concluded, of course, that the second alternative was the real explanation.

To Keynes' contention that foreign loans cannot increase German incomes or earnings (*Ec. Journ.* 1929, p. 179) the obvious answer is that they do increase outlays or spending in Germany.

<sup>4</sup> *The Reparation problem: a discussion; transfer difficulties, real and imagined*, *Ec. Journ.* 1929, pp. 172—178. Ohlin's views on the reparation question, and more particularly on the transfer problem, were first expounded in two articles: "*The reparation problem*," *Index Nos.* 28—29, March-April 1928, edited by Svenska Handelsbanken, Stockholm.

<sup>5</sup> Besides, Ohlin suggested that the reorganization of German production by means of the imported capital had not had time to show its full effects on German exports. And, in general, he remarked that even regardless of changes in demand conditions a country's volume

In his rejoinder to Ohlin,<sup>1</sup> Keynes admits that, in so far as Germany can pay reparations without loans, these payments will react on the levels of incomes abroad, causing them to move slightly upwards;<sup>2</sup> but he points out that incomes abroad will not necessarily be increased by the full amount of the reparations, as the German exports may be partly at the expense of unemployment amongst her competitors and of less effective utilisation of their resources. And he still maintains that this possible increase in buying power abroad has *already* been used up in buying those German exports, the sale of which has made the reparation payments possible. In his eyes, Ohlin's argument, therefore, only amounts to saying that if Germany is paying reparations, this proves that she *can*.

To this rather superficial *reductio ad absurdum* of his argument Ohlin's plain and simple answer<sup>3</sup> is that

"surely it is easier to sell many goods to a man who has got increased purchasing power, even though after buying them he has no longer greater buying power than he used to have!"

Meanwhile, Ohlin's criticism was supported by Jacques Rueff<sup>4</sup> who enunciated what he called the *principle of the conservation of purchasing power*. This principle simply states that one man's loss is another man's gain; applied to the reparation question it means that the purchasing power of which the paying country is deprived is transferred to the countries which receive the reparations. Thus the total

of exports is not a function solely of its export prices relatively to prices abroad; more or less capital and labour may be used for the building up and support of marketing organizations with corresponding effects on sales abroad.

<sup>1</sup> *Ibid.*, pp. 181—82.

<sup>2</sup> "It is true, of course, that everything in the economic world sets up a repercussion—which it is, as a rule, very difficult to follow up quantitatively or qualitatively. Thus if Germany succeeds in making reparation payments, this will set up a new situation with a repercussion which *may* indirectly benefit Germany. But I see no reason to suppose that this repercussion would be large. For it would be scattered all over the world; so that, even if there was a repercussion, Germany would, surely, be very lucky to get so much as 10 per cent of the benefit of it, if any."

<sup>3</sup> *Ibid.*, pp. 400—404.

<sup>4</sup> Mr. Keynes' views on the transfer problem. *Ec. Journ.* 1929, pp. 388—399, cf. also his pamphlet *Une erreur économique, l'organisation des transferts*, Doin 1928.

amount of purchasing power remains unchanged, and no changes in relative price levels are necessary. Moreover, Rueff seems explicitly to deny the adequacy of the analysis based on relative changes in "sectional price levels," and to maintain that *all* prices are equally affected in case of disturbances in the balance of payments, although in support of this startling statement he merely says that under a paper standard it is "evident", while "in the case of metallic circulation the proof is more complicated."<sup>1</sup>

Keynes' answer, on the other hand, is no less curious. He stresses that it is the essence of his argument that the prices of all commodities within Germany should *not* be affected equally, but that, on the contrary, the prices of home-produced goods in Germany should fall relatively to the prices of imports. But he does not make it quite clear whether by "home-produced goods in Germany" he means German home-market goods or German export goods or both, and he does not seem to be aware that according to the sectional-price-level analysis it is the former group that must fall most in price, while a fall in the latter group is necessary to bring about the unfavourable change in the terms of interchange between imports and exports which he deems inevitable.

The main argument, however, which Rueff put forward was directed against Keynes' pessimistic belief that the "stuff" of which our economic reality is made is "if not a solid, at least a sticky mass" with strong internal resistance, and against Keynes' peculiar idea that it is the balance of payments which must adapt itself to the balance of trade, and not vice versa. But this phase of their discussion has already been reviewed.<sup>2</sup>

In an address delivered at the "Wiener Nationalökonomische Gesellschaft" *Gottfried Haberler* tried to weigh Ohlin's

<sup>1</sup> Assuming that in the adjustment which restores equilibrium to the balance of payments all prices vary in the same proportion as wages, real wages are not modified, of course, but if this were generally true with regard to all incomes it is difficult to see how the movement of prices, which Rueff admits to take place, could have any effect in correcting the deficit in the balance of trade arising e.g. in the case of a harvest failure. Rueff offers no explanation; he merely begs the question, saying that as this movement of prices is entirely spontaneous, we consider that it can be altogether ignored.

<sup>2</sup> Cf. *supra*, pp. 67 et seq.



and Keynes' views against one another.<sup>1</sup> He properly maintained that the main question at issue was the rôle played by price movements in the mechanism of transfer. But he was wrong in asserting that the difference of opinion referred *only* to the degree in which relative price levels would change under certain actual conditions.<sup>2</sup> As abundantly demonstrated above, there is a *qualitative and not only a quantitative difference* between the views of Keynes and Ohlin; it is not only their estimates of the facts of a concrete case, but the principles underlying their explanations which are different. It is probably this misapprehension of the character of their dispute which explains why Haberler *says* that he gives preference to the Thornton-Mill analysis, although *the contents of his article show* that, on the whole, his views are more in harmony with the modern theory.

Haberler summarised his position in the statement that situations are *conceivable* in which such violent price changes were necessary as to create grave transfer difficulties or to make transfer entirely impossible, but that, in the concrete case of Germany, Keynes greatly overrated the difficulties. In general,

“die Übertragung wird gelingen oder im Grenzfall auch nicht, sie kann sich mit oder ohne Preisbewegung vollziehen und das reale Austauschverhältnis kann sich zugunsten oder zuungunsten des zahlenden Landes verschieben.”

This is all quite true. But unfortunately, Haberler added that one might say, therefore, that Keynes was right in theory, but that his opponents were right in practice. Not at all. Whatever be the facts of the German case, the difference of opinion between Keynes and his opponents would remain; for it is a contrast between two different “theories” regarding the prime mover of the transfer mechanism. The modern point of view does not deny, as Haberler seems to think, that changes in relative price levels may occur under certain conditions; like Haberler himself it merely keeps aloof from the classical contention that a fall of prices in the paying country is *always* a *necessary* part of the mechanism; and like Haberler himself

<sup>1</sup> *Transfer und Preisbewegung*, Zeitschr. f. Nationalök. 1930, pp. 546—54.

<sup>2</sup> Cf. Ohlin's reply, *ibid.*, pp. 762—63.

it admits that the relation between price levels may be shifted either way, if the transfer of buying power does not, of itself, bring about a sufficient turn in the balance of trade.

The details of Haberler's analysis are very instructive, however. Like several of his predecessors he starts from the case in which the increased monetary demand abroad is directed towards exactly the same goods that would have been bought by the paying country in the absence of reparations. In this case there is no transfer problem whatever; all prices may remain unchanged.<sup>1</sup> *But in all other cases there must be some variations of prices, though not necessarily of the levels of prices.*<sup>2</sup> The character of these price changes will depend on the way in which expenditures are expanded in the receiving countries and contracted in the paying country:

“Durch die Geldzahlungen werden nämlich die Nachfragekurven verschoben und können dabei auch ihre Form verändern, so dass die Elastizitätsanalyse, die notwendig unter der Voraussetzung *ceteris paribus* steht, nicht mehr anwendbar ist. . . . Wenn wir annehmen, dass

<sup>1</sup> That this ideal case is less removed from reality than Haberler seems to think is argued by *Fritz Machlup*: “Es ist nicht so unglaublich, dass die “mindestwichtigen” Bedürfnisse, auf deren Befriedigung der im Einkommen Geschmälerzte verzichten muss, und jene, deren Befriedigung sich der im Einkommen Gestärkte nunmehr leisten kann, derselben Gattung angehören.” (*Transfer und Preisbewegung*, Zeitschr. f. Nationalök. 1930, p. 556; cf. an article by the same author *Währung und Auslandsverschuldung*, Mitteilungen des Verbandes österr. Banken u. Bankiers, Wien 1928, pp. 194 et seq.).

<sup>2</sup> Cf. Haberler's reply to *Ohlin*, Zeitschr. f. Nationalök. 1931, pp. 100—101: “Welche Verschiebungen nun zu erwarten sind, darüber gehen die Ansichten auseinander. Keynes (und mit ihm Pigou, Taussig und viele andere) glauben, dass es einfach eine Verschiebung der relativen Preisniveaus der beiden Länder ist, in dem Sinn, dass ein Preisgefälle vom empfangenden zum zahlenden Land entsteht . . . . *Ohlin* erwidert darauf, dass diese Argumentation die Nachfrageseite vernachlässige; es braucht keine Verschiebung der Preisniveaus zu entstehen, denn dadurch, dass die Nachfrage im empfangenden Land gestärkt wird, wird dieses in den Stand gesetzt, auch bei gleichen Preisen mehr Güter des zahlenden Landes zu kaufen und durch die Beschränkung der Nachfrage im zahlenden Land wird dieses gezwungen, weniger Güter des empfangenden Landes einzuführen . . . . Wenn der Nachfrageausfall im zahlenden Land inländische Güter betrifft, so werden die betreffenden Produktionszweige eingeschränkt und es werden Produktionsmittel für die Exportindustrien frei . . . . Darauf kann man nur erwidern, dass das Endresultat zweifellos in einer Ausdehnung der Exportindustrien im zahlenden Land bestehen muss, weil der Ausfuhrüberschuss anders nicht zu beschaffen ist; die entscheidende Frage ist jedoch, unter welchen Preisverschiebungen diese Produktionsumstellung vollzogen wird.”

nur eine parallele Verschiebung aller oder gewisser Nachfragekurven erfolgt, .... so stellt sich die Sachlage so dar: Es ist möglich, dass diese Verschiebung der Nachfragekurven (im zahlenden Land nach links, im empfangenden Land nach rechts) genügt, die Adjustierung der Handelsbilanz herbeizuführen, d. h. den Ausfuhrüberschuss ohne Preisbewegung zu bewirken. Wenn das aber nicht der Fall ist, weil nicht die "richtigen" Kurven verschoben wurden, dann muss sich der Gleichgewichtspunkt auf der als unverändert angenommenen Angebotskurve bewegen und wie sich daher der Preis ändert, hängt dann auch von der Elastizität der neuen (verschobenen und vielleicht deformierten) Nachfragekurve ab."

This, however, is merely the short-run result, the "impact price" to use Robertson's appropriate phrase. In the long run the reactions of supply will dominate the situation. If constant costs are assumed throughout, all prices will revert to their former positions;<sup>1</sup> in case of increasing costs the initial price movements will be somewhat reduced, and in case of decreasing costs their direction may even be reversed.<sup>2</sup>

The concrete way in which the short-run effects work themselves out is described in the familiar way. If the transfer of buying power does not suffice to bring about the necessary turn in the balance of trade, the gold reserve of the central bank will decline; a restriction of credit will follow which reduces prices and wages. But Haberler argues that *prima facie* a movement in the opposite direction is just as likely to happen. If the increased demand in the receiving countries is directed primarily toward the export goods of the paying country, the barter terms of trade will turn in favour of the latter. But here too, of course, the conditions of supply will

<sup>1</sup> In this connection Haberler points out that "dabei ist Ricardo, der ja im allgemeinen mit konstanten Kosten rechnet, nur konsequent, wenn er von jeder Preisverschiebung absieht."

<sup>2</sup> Cf. Haberler's first article, p. 553, note 1: "Die relative Bewegung der verschiedenen Teilpreisniveaus (Export- und Importpreise beider Länder) wird abgeschwächt. In ihr Gegenteil könnte sie aber nur dann verkehrt werden, wenn in vielen Produktionszweigen das Gesetz des steigenden Ertrags oder der sinkenden Kosten herrschen würde, was aber nur dann möglich ist, ohne zum Monopol zu führen, wenn das Sinken der Kosten auf die sogenannten "external economies" zurückzuführen ist, deren ausgiebiges und regelmässiges Vorkommen aber sehr unwahrscheinlich ist. Nicht ausgeschlossen ist es jedoch, dass die Preisverschiebung im "long run" wieder verschwindet, wie Röpke meint; nämlich dann, wenn konstante Kosten innerhalb weiter Grenzen vorherrschen, so wie es die modernste Theorie (Pigou, Knight), zur Ansicht der Klassiker zurückkehrend, für wahrscheinlich hält."

determine whether this position will be maintained in the long run or not.

As a limiting case Haberler assumes a country which has only one export article:

“Wenn dieses Land nun Zahlungen im Ausland zu leisten hat und sich die Einfuhr nicht mehr einschränken lässt, muss es offenbar die Ausfuhr dieses einen Artikels forcieren. Da kann es nun vorkommen, dass die Elastizität der Nachfrage nach diesem Gut 1 oder kleiner als 1 ist, d. h. dass der Absatz nur im gleichen oder gar im schwächeren Verhältniss zunimmt als der Preis abnimmt. Unter dieser Annahme ist offenbar die Transferierung unmöglich.”

Against this statement three points must be stressed: (1) even here a certain shift may take place in the foreign demand curve for this single export good, though it may obviously be insufficient to bring about the transfer. (2) The assumption that imports have reached their minimum begs the question. For this means that shifts in the demand curve in the paying country for foreign goods are ruled out beforehand.<sup>1</sup> (3) The assumption that the transfer of buying power (or the subsequent price movements) are unable to increase the number of export goods also begs the question. For this is hardly conceivable unless the remitting country explicitly decides that it will pay only in a particular commodity, say caviare.<sup>2</sup>

Against Rueff's argumentation Haberler justly points out that

“das Prinzip der Erhaltung der Kaufkraft ebensowenig beweist und ebenso inhaltslos ist wie das Energieprinzip der Mechanik, dem es offenbar nachgebildet ist. Wenn das reale Austauschverhältnis sich noch

<sup>1</sup> Cf. Ohlin's reply: “Die Besteuerung für Zwecke der Reparationen muss die allgemeine Warennachfrage verringern, und das kann nicht verfehlen, direkt oder indirekt die Einfuhr zu vermindern. Und wenn die Ausfuhrpreise fallen, so auch die Einkommen und dadurch die Einfuhr.” (*Loc. cit.*, p. 764).

<sup>2</sup> Cf. Fritz Machlup, *Transfer und Preisbewegung*, Zeitschr. f. Nationalök. 1930, pp. 555—56: “Dieses Land müsste aber noch einige wohl ausgeklügelte Eigenschaften besitzen. Einer Ware ist die Exportfähigkeit nicht “angeboren”; mangelt sie ihr heute, kan sie ihr morgen schon gegeben sein. Der Grenzfall darf das nicht zulassen: er muss entweder vollkommene Konsumtionsverschiedenheit zwischen der Bevölkerung des Landes und den sonstigen Erdbewohnern voraussetzen oder, etwas einfacher, ein vollständiges Ausfuhrverbot für alle Güter mit Ausnahme des privilegierten Exportartikels mit der unglücklichen Elastizität statuieren. Zum Ausfuhrverbot muss natürlich noch ein Einreiseverbot für Ausländer kommen, um eine unsichtbare Ausfuhr auszuschliessen.”

so sehr zuungunsten des zahlenden Landes verschiebt und dieses noch so sehr darunter leidet, bleibt das Prinzip der Erhaltung der Kaufkraft, besser: des Geldes, doch gewahrt; es ist daher vollständig nichtsagend. Weder Rueffs noch Ohlins Ausführungen schaffen die Schwierigkeit aus der Welt, dass niemand dafür bürgt, dass die Empfänger der übertragenen Kaufkraft ihre Nachfrage auf Ausfuhrartikel des zahlenden Landes richten werden, oder dass sie durch verhältnismässig schwache Preisermässigung veranlasst werden können, es zu tun."

In his reply Ohlin also rejected Rueff's principle of the conservation of purchasing power, admitting that measures of credit policy may be necessary to bring about an auxiliary "secondary" change in buying power.

Another attempt to divide the sun between the combatants was made in an illuminating essay by *August Lösch*.<sup>1</sup> Like Haberler, he demonstrates that it is impossible to say a priori how the barter terms of trade will be affected by reparation payments; "es kommt drauf an!" He distinguishes five typical possibilities:

(1) If the transfer of buying power does not automatically create a sufficiently large excess of exports from Germany, and if both the German elasticity of demand for foreign goods and the foreign elasticity of demand for German goods are less than one, the transfer must break down.<sup>2</sup>

(2) If the transfer of buying power does not automatically call forth a sufficient German export surplus, but the elasticities of demand are greater than one, the barter terms of trade will move against Germany<sup>3</sup> and cause an extra transfer burden, but the transfer will not break down, unless this extra burden exceeds Germany's capacity to pay.<sup>4</sup>

<sup>1</sup> *Eine Auseinandersetzung über das Transferproblem*, Schmollers Jahrb. 1930.

<sup>2</sup> "Ein genügendes *Nominaltransfer* ist in diesem Fall unmöglich. Gold fliesst ab. Das Preisniveau sinkt derart, dass schliesslich die Aufbringung selbst nicht mehr gelingt. Die *Realreparationen* werden immer grösser, schliesslich unerträglich gross, und genügen immer noch nicht."

<sup>3</sup> The greater the elasticities, the smaller will be the necessary shifts in price levels.

<sup>4</sup> Besides, though a foreign elasticity of demand greater than one means that the total German export value is increased when prices are lowered, there is no guaranty that an export surplus of x million can be created in this way. That is to say, it is not only the elasticity, but also the absolute volume of demand which counts.

(3) If the transfer of buying power just suffices to alter the balance of trade in the necessary degree; if, in other words, the other countries simply consume the goods relinquished by the Germans, relative price levels and barter terms of trade will remain unchanged.

(4) If the increased buying power abroad is spent predominantly on German export goods, while the German reduction of consumption is primarily at the expense of imported goods, and if the elasticities of demand are greater than one, the German export surplus will tend to exceed the reparation payments with the result that the barter terms of trade move in favour of Germany.

(5) If the transfer of buying power creates a too large German export surplus, but the elasticities of demand are less than one, the transfer must break down.<sup>1</sup>

The difference of opinion between the adherents to the "classical" and the "modern" theories according to Lösch relates to three different aspects of the movements of relative price levels:

(1) The *function* of the price movements. While Keynes contended that price movements were *indispensable*, Ohlin would only admit that in certain circumstances they might be required to *facilitate* the transfer. Both these views are one-sided according to Lösch. For *both* the transfer of buying power *and* the shifts of prices may be necessary as prime movers.

(2) The *extent* of the price movements. The failure to see the direct effects of the transfer of buying power leads the exponents of the classical theory to exaggerate the necessary movements of prices, while they are under-estimated by some of the advocates of the modern view.

(3) The *character* of the price movements. While the classical theory stresses the divergent movements of import and export prices, the modern point of view takes more interest in the relation between international and domestic prices within each country.

There is a *fourth difference*, however, between the classical and the truly modern expositions of the transfer mechanism.

<sup>1</sup> "Das Transfer ruiniert auf die Dauer die ausländische Wirtschaft, welche eine schwere Deflationskrise durchmacht."

which seldom receives the attention it deserves, and which apparently has escaped Lösch's notice. On the whole, the classical theory is built explicitly or implicitly on the assumption of constant cost, whereas a doctrine based on the mutual interdependence theory of value naturally leads to a consideration of the effects of the diversion of demand on the *relative* scarcity of the different productive agents within each country. Expressing costs in terms of "units of productive power" and similar concepts, one cannot, of course, push the analysis beyond a demonstration that this unit, i. e. productive factors *as a whole* becomes more scarce in the capital-importing country, less scarce in the capital-exporting country. And on this premise it is inevitable that the terms of trade will move against the latter country. But this solution is obviously inadequate; for, as already demonstrated, the chief effect of a movement of capital is to *reduce* its relative scarcity in the capital-importing country, and to increase it in the capital-exporting country.<sup>1</sup>

A third interesting comment upon the controversy between Keynes and Ohlin has been offered recently by *Harry D. White*.<sup>2</sup> In his opinion they "are not meeting on the issue." He quotes from Keynes that "if Germany was in a position to export large quantities of gold, or if foreign balances in Germany were acceptable to Central Banks as a substitute for gold in their reserves, then it would be a different matter", and concludes that *under these conditions* — Germany being unable to export gold in sufficient quantities to have an appreciable effect on world prices, and foreign banks being unwilling to accept balances in German banks in exchange for their own currency (balances which would have to be kept in Germany until she developed a sufficient export surplus) — Keynes is justified in regarding as irrelevant a discussion of the effects of changes in demand consequent upon transfers of buying power. For under the conditions mentioned this initial transfer of buying power simply cannot take place. Ohlin's argument is, on the other hand, according to White, that central banks in the reparation-receiving countries *ought* to make the transfers of buying power possible by buying bills on Germany. Then

<sup>1</sup> Cf. Ohlin, *Interregional and international trade*, p. 452, note and *infra* pp. 479 et seq. and *infra* p. 480.

<sup>2</sup> *The French international accounts 1880—1913*, pp. 29—30.

the mechanism of adjustment (through changes in demand schedules) would begin to operate and create the export surplus from which would ensue a supply of bills allowing the foreign balances to be withdrawn from Germany.

Thus, Keynes' argument is that transfers of purchasing power in significant quantities *cannot* be made, *if* foreign banks *will not* cooperate, while Ohlin maintains that the necessary transfers *can* be made, *if* the foreign banks *will* cooperate as they ought to do. This is probably true; without equalising short-term credits a sudden turn in the balances of payments of the dimensions here contemplated could not be effected.

The Keynes-Ohlin dispute finally occasioned some very interesting reflections on the part of *D. H. Robertson*.<sup>1</sup> He points out that it is not always clear whether the disputants are discussing the methods by which adjustment is brought about when reparations begin to be paid, or whether they are discussing the features of the new state of equilibrium which prevails while they are being continuously paid. Another source of mutual misapprehension Robertson finds in the fact that the classical reasoning is based explicitly or implicitly on the Marshallian curves of *real* demand-and-supply, while their opponents think entirely in terms of *monetary* demand curves; he questions the adequacy of *both* the classical result—that the pressure to remit reparations *must* turn the terms of trade in the disfavour of the paying country (by an amount which may be great or small in accordance with the respective elasticities of real demand, but cannot be less than zero)—and the extreme modern contention—that because the position and perhaps the shape of the monetary demand curves will change, the "elasticity analysis" is completely lacking validity.

Robertson agrees with the modern theory, of course, that when the reparation-money is raised by taxation in the paying country and used for remission of taxation in the receiving country, the net annual flow of money devoted to the purchase of goods will be less in the former country and greater in the latter under the new conditions than under the old. But he maintains that this transfer of buying power is compatible with

<sup>1</sup> *The transfer problem* in Pigou and Robertson, *Economic essays and addresses*, London 1931.



a movement in *either direction* in the barter terms of trade. In *all probability*, however, they will move *against* the paying country and for the following reason: German goods are likely to have more closely the character of money (which can be surrendered or gained without leading to a change in its marginal utility) to Germans than they have to Englishmen; and English goods have more closely the character of money to Englishmen than they have to Germans. Consequently, the transfer of a given quantity of German goods to England on reparation account is likely to reduce the willingness of Englishmen to trade more than it reduces the willingness of Germans to do so; and then, of course, the terms of trade will move against Germany.

Robertson admits that the degree of change in the terms of trade cannot be expressed in terms of the elasticities of the original curves, but he claims that it can be expressed in terms of the utility and disutility schedules from which those curves are built up<sup>1</sup>. He admits the possibility that the terms of trade may shift in favour of Germany, but he points out that this requires *either* an abnormally elastic desire for imports in one or both countries to start with, or a deliberate manipulation of these desire-schedules for foreign goods<sup>2</sup>.

In this connection it is natural also to mention *Pigou's* views on the mechanism of reparation payments; they have undergone a considerable development during the last decade. Starting in 1922 from the orthodox classical reasoning he ends in 1932 by expounding views which, in some respects at least, resemble the modern theory.

In 1922 *Pigou* argued<sup>3</sup> in the traditional fashion that in order to pay reparations a country would have to push its exports, and that it could do so only by accepting worse terms:

"The character of the debtor country's demand for imports being given, the extent to which the real ratio is affected by a given scale of indemnity payments depends on how urgent — in technical terms how

<sup>1</sup> Cf. *infra*, pp. 490 et seq.

<sup>2</sup> The reparation payments might be accompanied by organized attempts to create a collective desire in the receiving countries for public works using German materials, but the counter-influence in the form of organized distaste for buying the goods of the defeated enemy might well be stronger.

<sup>3</sup> "*The real ratio of international exchange*" in *The Manchester Guardian Reconstruction Supplement*, December 1922; reprinted in *Essays in applied economics*, London 1923, pp. 149—155.

inelastic — the demand of foreigners is for the exports of the debtor country”.

Ten years later<sup>1</sup> the classical explanation of the transfer mechanism is said to involve a misunderstanding, and it is maintained that there is nothing in the mechanism to prevent the real ratio from moving either way or perhaps remaining completely unchanged. In order to prove this Pigou makes a number of highly abstract assumptions. The most notable among them are that conditions of constant return prevail throughout,<sup>2</sup> and that each country produces only one sort of goods, partly for home consumption, partly for export.<sup>3</sup> This obviously rules out a priori some of the most important aspects of the problem: (1) no change in the *relative scarcity* of the productive factors in either country is allowed to take place, and (2) there are no *home-market goods*. Under these assumptions the only conceivable effect of a capital transfer would seem to be an alteration of the direction of demand which may favour either of the two goods. Pigou's subtle analysis shows nothing but the fairly obvious fact that the outcome in this respect will depend upon the different elasticities of demand. His final conclusion is that the condition for the terms of trade being turned against Germany<sup>4</sup> is that the product of the elasticities of a representative Englishman's and a representative German's desires for foreign goods shall be smaller than the product of the elasticities of their desires for domestic goods.

In this connection Pigou points out the importance of the fact that “England”, i.e. the rest of the world, will usually spend a large amount of its productive force in securing its own goods and only a small part in securing German goods. If we

<sup>1</sup> *The effects of reparations on the ratio of international interchange*, Ec. Journ. 1932, pp. 532—43.

<sup>2</sup> Shifts in these constant-cost curves caused by changes in productive technique are also ruled out.

<sup>3</sup> Moreover, it is assumed (1) that tastes remain unaltered, (2) that there are no differences in taste and situation between individuals, and (3) that for each representative individual the utility which he derives from a given quantity of home-produced goods is independent of the quantity of foreign goods which he has, and vice versa.

<sup>4</sup> Pigou contrasts only the reparation-paying country (Germany) and another (England) which is to represent, not the receiving countries, but “the rest of the world”. It will be pointed out later that it is very important to take account of the existence of “neutral” outside countries, but they must be treated separately, of course, and not mixed up with one of the countries directly affected by the capital movement

conceive of English labour and capital as divided up into  $n$  sections of equal size, of which  $(n-1)$  are devoted to producing goods for English use directly and one to producing them indirectly by exchange abroad, and if the utility curves, representing the output of satisfaction from each of these sections, are similar, it follows that the curve proper to the sum of the  $(n-1)$  sections will be much less steep than the curve proper to the single section. This is obviously the same consideration which Robertson expressed by saying that English goods have more nearly the character of money to Englishmen than they have to Germans, and vice versa. And on this basis Pigou, like Robertson, still believes that apart from particular cases in which the desire for imported goods is abnormally elastic in either or both countries, the imposition of a reparation obligation on a single country is *most likely* to move the barter terms of trade *against* the paying country.

On an earlier occasion<sup>1</sup> Pigou made an interesting study of the limits to the reparation payments which can be exacted from a single country. Under *barter conditions* a country might be obliged to hand over to another either a definite quantity of its own products — say linen — or a definite quantity of the other country's products — say cloth; in the former case (which, of course, is simply that of "deliveries in kind") there is no transfer problem; the obligation can or cannot be fulfilled according as the government can or cannot raise annually from its citizens the required amount of linen;<sup>2</sup> in the latter case the question is whether the government can or cannot raise enough linen to purchase in the market the required quantity of cloth, and this depends partly on how much linen the government can raise — as before, a purely internal matter — and partly on how much cloth a unit of linen will purchase.

The maximum quantity of linen which it is feasible for the government to raise annually from its citizens for reparation

<sup>1</sup> *Disturbances of equilibrium in international trade*, Ec. Journ. 1929, pp. 344—56. Reprinted in Pigou and Robertson, *Economic essays and addresses*, London 1931.

<sup>2</sup> If there is some trade between the two countries apart from the reparation payment, Pigou admits that the determination of the maximum linen levy is not a purely internal question, for increased duties abroad may turn the barter terms of trade against the paying country, thereby diminishing its real income and the possible maximum levy in linen; and from Pigou's later article it follows that even apart from such duties the imposition of reparations will usually turn the barter terms of trade against the paying country.

purposes obviously depends on the size and distribution of the national real income, on the efficiency of the tax technique, on the attitude of mind of the potential tax-payers, both generally and in relation to the justice of the reparation claims, and finally, on the amount of other government expenditures. Let this maximum amount be  $M$ , while  $c_1$  is the quantity of cloth which 1 units of linen will buy in the foreign market. Then Pigou sets out the possibilities for payment of reparations as follows: if the stipulated annuity is  $L$  units of linen, it can be paid provided that  $M > L$ . If the annuity is  $C$  units of cloth, it can be paid provided that there is any value of 1 between  $M$  and 0 in respect of which  $c_1 > C$ .

This is quite correct. But the question remains, of course, how the terms of exchange between cloth and linen will be affected by the reparation payment; or, in other words, how the Marshallian real demand-and-supply curves will be distorted. This is the problem dealt with in the later article<sup>1</sup>.

Under a *money economy* the reparation annuity will be expressed, not in real terms, but in money terms, either as so much domestic money (marks) or as so much foreign money (sterling). Plainly, an obligation expressed in either of these forms may have different real meanings according to what the purchasing power of marks in terms of linen, or of sterling in terms of cloth, may be. Now Pigou assumes the purchasing power of sterling in terms of cloth to remain constant<sup>2</sup>. Then annuities expressed in sterling are always equivalent to annuities in cloth whatever happens to the German prices and exchange rates. Annuities expressed in marks will be equivalent (1) to annuities in linen, if Germany is obliged to keep the mark at a constant value in terms of linen, and (2) to annuities in cloth, if she is obliged to keep the mark at a constant value in sterling<sup>3</sup>. Then Pigou's contention was that reparations

<sup>1</sup> In 1929 Pigou was apparently still of the opinion that the terms would necessarily turn against Germany, and even the 1932 article is a little ambiguous on this point, cf. p. 533.

<sup>2</sup> In the Dawes plan the fact that this assumption might fail in practice was recognized in a provision which allowed for adjustment in the size of Germany's gold annuity in case the value of gold in terms of commodities should change substantially.

<sup>3</sup> This arrangement, of course, is precisely equal to a sterling debt. It is also clear that reparations in marks would have no real meaning without one of the conditions mentioned as to the value of the mark, since Germany could render such reparations worthless at will.

equivalent to linen and cloth annuities, respectively, would break down precisely where reparation terms embracing actual linen and cloth annuities would break down.

This also seems adequate, but again we must recall that the imposition of reparation payments may alter the barter terms of trade in either direction or leave them unchanged, irrespective of their being expressed in linen or in cloth.

With reparation annuities expressed in linen it is conceivable that the foreign country is willing to take the additional wealth to which the reparations entitle it exclusively in the form of linen, and that the reduction of consumption in the paying country also falls exclusively on linen. But it is equally conceivable that with reparations expressed in cloth the receiving and the paying country are both willing to increase and reduce their consumption of cloth in the necessary degree. In the former case the export surplus from the paying country would be the result of *increased exports*, in the latter case it would result from *decreased imports*. Usually, however, the reparation payments will lead to an increased consumption of both linen and cloth in the receiving country, and to a reduced consumption of both commodities in the paying country. But these changes may not exactly outweigh one another in such a way that the terms of trade remain the same. The outcome in this respect depends, among other things, on the elasticities of demand as explained in Pigou's later article.

Both Keynes, Ohlin, and Haberler come back, in their recently published general treatises on money and international trade, to the question of the transfer mechanism.

Haberler devotes one of the largest chapters in his book on international trade<sup>1</sup> to the transfer problem. Without materially changing his position he now recognizes that Ohlin is "undoubtedly right" when he charges Keynes with overlooking the shifts in demand curves. It is now argued that both points of view are one-sided and give only a partial solution.

Ohlin gives an even more extensive treatment of the mechanism of international capital movements in his "Inter-

<sup>1</sup> *Der internationale Handel*, ch. 9, pp. 56—93.

regional and international trade,"<sup>1</sup> also, however, without essential alterations of his earlier standpoint. Curiously enough, he now describes his theory as a *modification* of the "Harvard theory:"

"The following reasoning is in several ways similar to the theory of international capital movements which has been worked out by the Harvard School of economists — on the basis of the Thornton-Mill theory — under the leadership of Professor Taussig... In certain important respects it differs from Taussig's theory. I am not certain whether there is any important difference in principle between the analysis below and that presented by Professor Viner."<sup>2</sup>

Keynes<sup>3</sup> still maintains that the "foreign balance", i.e. the excess or deficit in the balance of current payments (B), is a function of relative price levels at home and abroad, and that it is *not directly* a function of the amount of foreign lending (L).<sup>4</sup> The mere fact that the latter amount is increasing does not influence the foreign demand for the lending country's goods at a given price level. On the contrary,

"approximate equality between L and B is preserved, not by an increase of L directly stimulating an increase of B, but because an excess of L over B brings about either the threat or the fact of a movement of gold ... leading to appropriate changes in relative prices at home and abroad."

This view Keynes describes as the "traditional *Ricardian* doctrine", contrasting it with "another traditional doctrine", widely held in Great Britain, mainly on empirical grounds, during the 19th century, but recently "supported by argument also, notably by Professor Ohlin."

But the detailed analysis of international capital movements which follows, reveals *important modifications* of the classical theory. Starting from a situation in which there is equality between the market rate, the international rate, and the natural rate of interest in each of two countries A and B,<sup>5</sup> Keynes

<sup>1</sup> Chs. XIX—XXII, pp. 397—472.

<sup>2</sup> *Loc. cit.*, p. 410, note 2.

<sup>3</sup> *Treatise on money*, vol. I, ch. 21, pp. 326—63. In his discussion with Ohlin, Keynes suggested that possible obscurities in his treatment might be "due in part to the fact that my theoretical background in approaching these problems is as yet unpublished."

<sup>4</sup> *Loc. cit.*, p. 329, cf. pp. 131—32.

<sup>5</sup> This equality means (1) that there are no gold movements between the countries, and (2) that savings and investments are equal to one another in each country. The rate of interest will not be the *same* in the two countries, of course, unless the mobility of capital is complete.

assumes that the attractiveness of investment is increased in country A, but not in country B; then two questions arise: (1) what the new position of equilibrium will be, and (2) how the transition from the old equilibrium to the new will take place.

In the new position of equilibrium the market rate, the international rate, and the natural rate of interest must return to equality, of course, but at a somewhat higher level, reflecting the increased marginal attractiveness of investment in both countries taken together.<sup>1</sup> Besides, there will be a displacement of investment, which was previously taking place in B, in favour of increased investment in country A;<sup>2</sup> a greater part than before of the flow of "free" capital in B will move towards country A. The question is what will be the effect of this displacement on the levels of money earnings in the two countries. There will have to be a change-over on the part of the factors of production, which were previously producing new investments in country B, to produce something else which facilitates new investments in country A.<sup>3</sup> If this change-over in the character of production can be effected without a loss of efficiency, there is no reason why rates of money earnings in the two countries should be any different in the new position of equilibrium from what they were in the old. If country B is especially efficient in the direct production of materials for the new investment goods required for use in A, there may well be, not only no loss of efficiency as compared with producing these goods in A, but actually a gain of efficiency; and in this case money earnings in B, far from falling relatively to those in A, might actually rise as a result of the increased attractiveness of kinds of investment in A, which can only be efficiently supplied by factors of production in B.<sup>4</sup>

<sup>1</sup> Keynes deliberately neglects the effects on the rate of saving.

<sup>2</sup> How much investments will be increased in A and reduced in B will depend on the elasticity of demand for loans on the part of home borrowers (cf. p. 346).

<sup>3</sup> This may come about (1) by the factors in B producing goods previously imported from A, thus releasing factors in A to produce for investment in A, (2) by factors in B producing goods for export to A which were previously produced in A, thus releasing factors in A to produce for investment, or (3) by factors in B producing goods for export to A which can be directly utilised for the additional new investments.

<sup>4</sup> The empirical ground on which Keynes believes the "modern" standpoint to be built, is precisely the very small alteration in the terms

The next question is how these changes in money earnings are reflected in *relative commodity prices*. Here Keynes points out that only in so far as there is full internal mobility of the factors of production within each country, the changes in the rates of money earnings will be reflected in a proportionate change in the terms of trade; for otherwise, the rates of remuneration need not be the same in domestic-trade industries and international-trade industries. But it is repeated that such changes in the terms of trade as do occur depend on non-monetary factors — on physical facts and capacities, on the elasticities of demand for commodities in each country, and on the elasticity of demand for loans in terms of the rate of interest on the part of borrowers in the capital-exporting country. If the demand for home investments is elastic and the foreign trade situation is inelastic the difficulties of the change-over may be very great<sup>1</sup>.

Two things stand out in this analysis: (1) it is admitted that the barter terms of trade may move *either way* as the final result of an international capital movement; (2) attention is called to the *divergent movements of sectional price levels* within each of the two countries due primarily to the changed relative costs of production.<sup>2</sup> But there is no explicit admission that the transfer of buying power is the prime mover of the mechanism.

of trade "when Great Britain made loans for railway developments abroad during the nineteenth century, and was herself the only efficient producer of much of the materials required for these new investments." (*Loc. cit.*, p. 335). — If, on the other hand, the new investment goods in A have to be produced by factors of production released from producing goods hitherto exported to B or henceforward imported from B, then the presumption is the other way round; for it is unlikely that A would have previously exported the goods in question to B or refrained from importing them, unless there was some gain in doing so. Thus, generally speaking, Keynes finds it most likely that money earnings will fall in B relatively to A.

<sup>1</sup> In this connection Keynes points to the difficulties of Great Britain in 1929—30, which were due to "the combination of a tendency for foreign lending to increase for long-period external reasons over which we had little control, with a tendency for the foreign balance to decrease as a short-period result of our Post-War monetary-policy," (pp. 348—49). In vol. II, pp. 184 et seq. the case of Great Britain is considered directly. For criticism see W. H. Beveridge and others, *Tariffs, the case examined*, London 1931, pp. 82 et seq.

<sup>2</sup> But as Ohlin has pointed out, Keynes puts much more stress on these changes in relative costs and prices in his analysis of a credit inflation of domestic origin (*Loc. cit.*, p. 425, note).



On the contrary, the analysis of the *transition* from the old equilibrium to the new runs entirely along classical lines.<sup>1</sup> A rise in the rate of interest abroad leading to increased foreign lending will cause an outflow of gold which must be stopped by raising the bank rate. This retards both home investment and foreign lending so that savings exceed total investment and prices fall, causing losses to entrepreneurs and attempts on their part to reduce the rates of money earnings which they offer to the factors of production. The fall in prices will increase the "foreign balance" until once more L and B become equal, and gold ceases to flow out. And it is explicitly pointed out that

"the necessary increase in B can *only* come about as a result of a fall in the price of foreign-trade goods produced at home."

For the rest, Keynes confines himself to a discussion of how the two countries will share the burdens of the necessary relative changes in money earnings. And now he interprets Ohlin's argument as referring, not to the amount of change which would be required, but merely to the subsequent question whether this change would be brought about mainly by an absolute fall in the rate of money wages in Germany, or mainly by an absolute rise in the rate of money wages elsewhere. Keynes concludes that

"if the payment of Reparations involves a substantial change in the terms of trade . . . , then it will probably be necessary to force down the rate of money-earnings in Germany by means of a painful (and perhaps impracticable) process of deflation."

This would probably be admitted by Ohlin,<sup>1</sup> but he would add, of course, that the point at issue was *whether* any substantial change in the terms of trade would be necessary.

Thus both Keynes and Haberler fail to realise fully the difference in principle between the classical and the modern doctrine. But at the same time Keynes' treatment suggests that this whole analysis must be pushed one step further back. In general, the exponents of both the classical and the modern theory start from the assumption that a capital movement has occurred, asking what price movements are necessary to adjust the movement of goods to this situation. Keynes, on

<sup>1</sup> *Loc. cit.* 327—29.

<sup>2</sup> Cf. *Interregional and international trade*, pp. 415—17.

the other hand, goes back to the cause of the capital movement: the change in the international relation between interest rates, pointing out that such interest changes must always affect the levels of prices. His own explanation of this influence, as we have now seen, displays the defects and one-sidedness of the classical theory, but it suggests that it may be equally one-sided when the modern theory contends that international capital movements may take place without any changes in price levels.

It might be argued, of course, that a change in the natural rate of interest will only affect the level of prices in case the rate of loan interest is not properly adjusted to the new situation. But then we are reminded by Keynes in another connection that

"if we are dealing with a closed system, so that there is only the condition of internal equilibrium to fulfil, an appropriate banking policy is always capable of preventing any serious disturbance to the status quo from developing at all ... But when the condition of external equilibrium must also be fulfilled, then there will be no banking policy capable of avoiding disturbance to the internal system ... Even where a change in Bank-rate is only required as a temporary corrective to the rate of foreign lending so as to preserve external equilibrium, it cannot be prevented from reacting on the rate of home lending, and, therefore, ... on the volume of output and employment."

This inevitability of international price-level disequilibria is insufficiently brought out in the modern doctrine of "automatic" adjustment of production to the transfer of buying power.

## CHAPTER VIII

### THE MECHANISM UNDER A PAPER STANDARD

#### 1. THE CLASSICAL THEORY.

The explanations of the mechanism of international capital movements outlined in the preceding chapters are all based on the assumption that a gold or gold-exchange standard is maintained in all trading countries. The essential point in this connection is, of course, that under a gold standard the rates of foreign exchange are kept stable within the narrow limits of the gold points. The problem with which all these theories are faced, is exactly: how can the short-run, day-to-day equilibrium be maintained in the foreign exchange market at almost fixed rates *in spite of* international capital movements, which create a temporary deficit or surplus of foreign bills, and what long-run adjustments will be set in motion by international capital flows under this condition that the rates of exchange are to remain unaltered?<sup>1</sup>

Whether it is a gold standard proper or a gold-exchange standard or other similar arrangements which guarantee the stability of the exchange rates, is of minor importance to the mechanism of international capital movements.<sup>2</sup> True, the banking laws or practices in gold-standard countries generally require that variations in the volume of credit must be accompanied by more or less proportionate changes in the size of their gold reserves, but as already intimated this merely means that part of the foreign exchange reserves of the central bank are converted into gold and drawn home; some-

<sup>1</sup> Cf. Ohlin, *Interregional and international trade*, p. 381.

<sup>2</sup> Cf. the interesting discussion by Keynes, *Treatise on money*, I, pp. 351 et. seq.

times the gold may even remain abroad, changing ownership merely by being "earmarked."

But when we come to paper-standard countries with variable foreign exchange rates, the mechanism of adjustment to international capital flows will presumably be different. Curiously enough, this question has attracted very little interest among economists until quite recently. Much has been written, of course, on the influence upon international trade of a depreciating or appreciating currency, and on the effects of changes in the price of silver on the commercial relations between gold-using and silver-using countries. But it is as if the study of this particular sort of disturbance—currency upheavals of one sort or another—has absorbed the whole attention of the economists. Other possible disturbances of a given state of equilibrium in the international trade between paper-standard countries are hardly dealt with at all by the classical writers. It seems never to have occurred to them to inquire what would happen if, under paper conditions, a status quo is disturbed by *something else* than inflation or deflation; they never attempted to analyse the machinery through which the effects of a changed demand in one country for the products of another, an international capital transfer, or other similar alterations of the basic data would work themselves out in paper-standard countries.

Taussig attributes this strange piece of neglect on the part of the classical school to its ardour in getting behind the "veil of money";<sup>1</sup> but this tallies badly with its elaborate treatment of the mechanism of specie flows and price changes. But whatever be the reason, Taussig is, in fact, among the first to give a detailed account of the mechanism of adjustment to non-monetary disturbances under a paper régime.<sup>2</sup> He starts from a state of equilibrium between two paper-standard

<sup>1</sup> *International trade*, p. 339.

<sup>2</sup> *International trade under depreciated paper. A contribution to theory*, Quart. Journ. of Ec. 1917, and *International trade*, part III. The incidental and rather summary treatment of the trade between paper-standard countries presented in various general treatises on economic theory or international trade need not engage us here. Angell undertook a more extensive analysis of the mechanism of international trade under paper conditions in 1922 (*International trade under inconvertible paper*, Quart. Journ. of Ec. 1922) following the lines of Hawtrey's more compact treatment of these problems in *Currency and credit* (London 1919, 2. ed. 1923, pp. 61 et seq.).

countries, the monetary situations of which are "stable."<sup>1</sup> Within each country he assumes the value of money and the level of prices to be determined *throughout* in accordance with the quantity theory,<sup>2</sup> and between the countries the rate of exchange is assumed to reflect *at the outset* the relative purchasing power of the two currencies in accordance with the purchasing-power-parity doctrine. As a further simplification it is assumed, as a starting point, that there are only merchandise transactions between the two countries, and that the balance of commodity trade is at equilibrium, the value of imports and exports at the established normal rate of exchange exactly offsetting one another. Finally, all commodities are supposed to be produced at constant cost.

The cardinal point in Taussig's analysis is that between paper-standard countries *no money of either can enter the circulating medium of the other*. No change in the balance of payments can cause a flow of money; goods *alone* can move; if gold is imported or exported it is merely as a commodity like tin or copper.<sup>3</sup>

Now Taussig introduces a sudden international movement of capital in his simplified picture. His example is a heavy borrowing by the United States in Great Britain which begins abruptly, but then goes on at the same rate for a long time, increasing the annual remittances from London to New York by, say, 25 per cent. This obviously means either a greater supply of sterling in New York, or a greater demand for dol-

<sup>1</sup> The exact content of this assumption will be discussed in a moment. Taussig uses the following expressions for describing it: there is neither inflation nor deflation going on; the possible price variations are not the consequences of changes in the volume of money; each country has settled down to a fixed monetary supply.

<sup>2</sup> But it is immaterial for the argument—he informs us—whether this be the quantity doctrine in its most uncompromising form or a more carefully qualified version of it. The only proposition necessary is that an increase or decrease in the supply of money *tends* to be followed by *some* rise or fall in prices.

<sup>3</sup> The case is similar, of course, if one of the countries has a gold standard and the other a paper standard. As a matter of fact, it happens in paper-standard countries that paper is not their sole medium of exchange, gold remaining in use for certain payments. Then gold may pass in and out, not merely as a commodity, but also, to some extent, as a monetary medium. Such cases give rise to some special complications, cf. what will be said in ch. XI, *infra* on the peculiar organization of the foreign exchange market in the Argentine between 1885 and 1899.

lars in London, or both. The price of sterling exchange falls in New York; the price of dollar exchange rises in London. For convenience Taussig assumes all the transactions to take place in New York. Then his reasoning runs as follows:

"25 per cent more of sterling exchange is offered in New York. There is *no more demand for sterling exchange than before; no more purchases of British goods are made than before, and no larger remittances have to be made to London*".

Here again we find the assumption underlying the whole classical reasoning regarding the transfer mechanism: that the granting of a loan does not *of itself* create a greater demand for the lending country's goods. Taussig continues:

"The situation is of a kind not unfamiliar in economic analysis, that in which two fixed quantities meet... there is in the foreign exchange market *a given supply of sterling exchange, a given quantity offered for sterling*... The essential point is that the price of foreign exchange, the purchasing power of one currency in terms of the other, depends at any given time on the respective volumes of remittances. It results from the *impact* of two forces that meet. The outcome is simply such as to equalize the remittances; such that the money value of the two, expressed in the currency of either country, is the same".

Taussig concludes, in other words, that the immediate effect will be a fall in the sterling rate in New York *exactly in proportion to the increased quantity of sterling offered*. If the number of pounds and the number of dollars are given, this is obviously the only possible way in which their values can be equalised.

The next stage in Taussig's reasoning refers to the effects on *commodity trade*. Assuming all transactions to take place in the currency of the importing country, the movement of goods from the remitting country will tend to be stimulated. English exporters receive more for the dollar exchange which they have obtained in payment for their goods; there is something like a bounty on British exports. The extent and the duration of this bounty will depend on the conditions of supply and demand in the remitting country. In case certain goods are produced solely or primarily for export and no other goods can enter the export group<sup>1</sup> (Brazil with its cof-

<sup>1</sup> Such shifts are explicitly ruled out by Taussig. (*International trade*, p. 349, note 1).

fee), the bounty may be large and last for a considerable time; for in this case, exports cannot be increased until capital and labour have been attracted from other occupations or countries. If, on the other hand, the leading export commodities are also consumed at home in large quantities, an additional export quantity can be provided more readily, by a shift in sales from the domestic to the foreign market; how easily this shift is brought about will depend upon the elasticity of domestic demand.—Conversely, the movement of goods from the receiving country will be checked. American exporters get less than before for the sterling exchange which they have obtained in payment for their goods; there will be the reverse of a bounty on American exports, a handicap, a penalty the extent and duration of which will be determined by the degree in which the export industries are dependent on the foreign market.

The next question is how *prices* will be affected by these shifts in commodity trade. At first sight it might be inferred that since the monetary conditions in each country are assumed to remain constant, their price levels must also remain unaltered, and this, in fact, is Taussig's main contention, though he admits it to be "subject to a minor correction." For here as elsewhere, Taussig's analysis runs in terms of sectional price levels, i.e. he distinguishes between the prices of import, export, and domestic goods:

(1) The prices of *domestic commodities* will remain constant in both countries. This is taken to follow directly from the fact that the quantity of money is kept constant. This, in other words, is what Taussig has in mind, when he rules out inflation or deflation: a constant level of domestic prices. The stability of domestic prices is regarded as a result of the "fixity of the total money income of the population," of the fact that "total spending power" and the way in which it is exercised remain the same throughout. The constancy of the level of domestic prices is therefore *contained in Taussig's initial assumption*. And it is at this point, according to Taussig, that the situation under paper differs most radically from that under gold-standard conditions. With an effective gold standard in both countries the foreign exchanges are kept stable within the narrow limits of the gold points, while the

total money income of the population in each country will increase or decrease with the movements of specie and affect its level of domestic prices in a corresponding way. Under paper, on the other hand, a new and different foreign exchange rate will be established, whereas money incomes and domestic prices in each country will remain as they were before.<sup>1</sup>

(2) The prices of *import commodities* will vary, of course, in accordance with the rates of foreign exchange. They become cheaper than before in the United States, dearer than before in Great Britain.

(3) The prices of *export commodities* (in terms of the currency of the exporting country) will show a *temporary* fall in the United States and a *temporary* rise in Great Britain. In the long run, however, the prices of these articles will follow the course of domestic goods; indeed, they *are* domestic articles as regards conditions of supply and long-period price. But during the stage of readjustment, during the lag, export commodities will obtain a somewhat lower price in the United States and a somewhat higher price in England.<sup>2</sup>

During the period of transition there may also be some *repercussions in the prices of domestic commodities*. If the elasticity of demand for import or export commodities is more or less than unity, there will be some transfer of buying power between international and domestic commodities and, consequently, a temporary effect on the prices of the latter, until the necessary readjustment of production has taken place through transfer of the productive agents. But assuming constant costs throughout, so that no individual commodity is affected in price by an increase or decrease in its supply, the only permanent change in both countries will be in the prices of imported commodities, while the prices both

<sup>1</sup> In the original article from 1917 (pp. 397—98) Taussig held that the prices of domestic commodities would fall in the United States, and rise in Great Britain, since there were more commodities in the former country, less in the latter to be exchanged for an unaltered quantity of money. On further reflection Taussig has discovered, however, that this result contradicted his initial assumption (*International trade*, p. 354, note 1). The constancy of the total money income means constancy in money wages and in all other money expenses of production.

<sup>2</sup> This reasoning will be further criticised *infra*, pp. 479—80.



of exported and of domestic goods will return to their former level. Instead, the proportions of the total money income which are spent on domestic and international goods will change according to the elasticities of demand.

This result—that in the long run import commodities are affected while export commodities are not—may seem a paradox, since, assuming only two countries, the exports of one of them are the imports of the other. But it must be observed that these goods, though dearer *in the importing country*, are unchanged in price *in the exporting country*. The price of import commodities in both countries are altered solely because of the new rate of foreign exchange; the unchanged prices in the exporting country are translated into the currency of the importing country on the basis of a new quotation of foreign exchange.

This brings us to the last link in Taussig's reasoning: what will be *the new final equilibrium rate in the foreign exchange market*? Or, what comes to the same thing, how will the *barter terms of trade* shape themselves under paper conditions? Immediately, the value of sterling fell by 25 per cent; but will this fall be definite, or may we expect a rebound, perhaps even a higher value of sterling than before the disturbance? Reasoning along classical lines Taussig concludes that *some fall* in the value of sterling, i.e. a certain shift in the barter terms of trade unfavourable to England, is inevitable. The export from Great Britain is stimulated, it is true, while the American export is checked, but since it is *only* by offering their exports at cheaper prices (in terms of dollars) that the English are able to sell larger quantities in the American market, the barter terms of trade *must* turn against Great Britain, and since domestic prices remain unaltered in both countries, these altered trade terms *must* express themselves in a lower price of sterling in terms of dollars. *How much* the sterling rate must, in the long run, be lowered will depend on reciprocal demand; for, as already explained, it is the elasticity of the English demand for American commodities which determines how much American exports must be contracted, and conversely, it is the elasticity of the American demand for English commodities which

determines how much English exports will be expanded.<sup>1</sup> *How long* it will last before the exchange rate reaches its new definite level will depend on technical conditions (the mobility of the productive factors).

Taussig realises, of course, that this conclusion is at variance with the purchasing-power-parity doctrine in its more rigid form. Well aware that it is a mere truism that the prices of international goods tend to fluctuate in accordance with the rates of foreign exchange, he points out that the real problem lies in the movements of domestic prices and money incomes, and that between these and the exchange rates there are not only temporary discordances, but permanent divergencies as well. To be sure, if not only the monetary conditions are kept constant, but if *all other things* are also equal, the rate of exchange can only be what it is. The purchasing-power-parity doctrine justly holds that, *ceteris paribus*, there must be accordance between changes in the volume of paper currency and the rates of paper exchange, but it errs in *disregarding all other forces affecting the foreign exchanges*. In the case of international capital movements e.g., the rate of foreign exchange is definitely altered regardless of the fact that monetary conditions in the two countries are unchanged. It is not as a result of price changes that the rate of exchange shifts to a new position; on the contrary, it is itself the cause of such changes as ensue in the prices of goods.

<sup>1</sup> In an appendix to chapter 26 of his *International trade*, Taussig works out a numerical example, from which he concludes, among other things, (p. 362) that assuming the British demand to be inelastic and the American to be elastic, the terms of trade will change only to a slight degree. This is obviously wrong. The terms of trade will move *more* against England, if her demand for foreign goods is inelastic than if it is elastic (cf. D. H. Robertson in *Ec. Journ.* 1928, p. 280).—In this example, as elsewhere in Taussig's reasoning on capital movements, the future interest payments running in the opposite direction are left out of account, although the example professes to work out the definite equilibrium which will establish itself in case of a capital inflow continued year after year.—Moreover, the influence of the import of capital on the total national product and its distribution seems completely neglected. Taussig may well set up the premise that nothing happens as regards "the general effectiveness of labour," i.e. he may assume constant technical knowledge, but in the face of a large and continuous inflow of capital he cannot very well assume that nothing happens as regards the output of goods or the relative scarcity of the factors of production.—In other words: Taussig treats capital borrowed abroad as a free gift which is consumed at once.

Considering the effects of these price changes on an index number of the usual kind, made up from prices of both domestic and international goods. Taussig finally points out (1) that *under paper* an index of this sort will register a fall of prices in the United States and a rise of prices in Great Britain (larger in the beginning, more moderate later on when the export prices have returned to their original level), and (2) that *under gold* precisely the opposite result may be expected: a fall of prices in Great Britain and a rise in the United States.<sup>1</sup>

Taussig is eager to point out, however, that though the *mechanism* is different under a paper and under a specie régime, the *substantial outcome* as regards the welfare of the two countries remains essentially the same. In the case chosen for illustration he sums up the result as follows: under the gold standard the British consumer is worse off, because he has to buy dearer imported goods with lower money incomes; under paper he is worse off, because he has to pay still higher prices for imported goods out of an unchanged money income. The only difference is that money incomes are stationary under paper and vary inversely in the two countries under specie. But whatever be the concrete way in which it is experienced, the gain or loss from international trade will always at bottom take the form that the country gets either more or less import commodities than before in exchange for a given quantity of exports. Both under specie and under paper, international trade is in essentials one of barter, but this fundamental nature of foreign trade is more conspicuous under paper conditions. Here it is import prices only which vary in the long run, and it is their variation alone which leads to alterations in the general price level and the purchasing power of the stable money income.

A standpoint similar to Taussig's has been advocated recently by Pigou.<sup>2</sup> With indisputable logic he argues that *if* prices in "Otherland" remain constant, and *if* the real ratio of interchange between "England's and Otherland's stuff" is altered, it is impossible for *both* the rate of exchange *and* the

<sup>1</sup> Cf. Keynes, *A treatise on money*, I, pp. 357—58.

<sup>2</sup> In the article in *Ec. Journ.* 1929, pp. 344—56.

English price level to be unaltered; the English price level can only be unaltered if the rate of exchange is altered in the same proportion as the real ratio of interchange, whereas, if the rate of exchange is unaltered, the English price level will be altered in the same proportion as the real ratio of interchange. From this he infers that if an influence is introduced, which, left to itself, would move the real ratio of interchange against a country, that country's price level can be prevented from falling if, and only if, either (1) a contrary influence is invoked to prevent the real ratio of interchange from falling, or (2) the rate of exchange falls in the same proportion as the real ratio of interchange.

If we follow Pigou in *supposing from the start* that an international capital flow *must* move the real rate of interchange all his consequences obviously follow, but it is exactly this supposition the adequacy of which should be proved.

On the whole, Taussig's views are also shared by *Angell*,<sup>1</sup> but like the early classical authors he puts most stress on the fact that, generally, paper currencies have been, not only inconvertible, but also more or less *violently fluctuating in value*.<sup>2</sup> He points out that under gold a disequilibrium between the total credit and debit items in the balance of payments must lead either to an actual transfer of additional media of payment or a destruction of the excess claims (barring the small changes in exchange rates within the gold points). Under paper, on the other hand, the existence of disequilibrium may shift the current exchange rate, and the resulting adjustment in the values of the totals of international debits or credits, in terms of one currency or the other, "may well go so far that it restores the payment-equilibrium by itself alone."

This is shown by means of a numerical example exactly like those worked out by Taussig. It is admitted that this example is arbitrary and neglects "the inevitable subsequent changes in prices in one or both countries." But, nevertheless, Angell believes that his reasoning finds some confirmation in the effects of Germany's attempts to transfer reparation payments

<sup>1</sup> *The theory of international prices*, p. 402.

<sup>2</sup> Cf. *loc. cit.*, pp. 424 et seq. and 444.

in 1920 and 1921. Yet, this seems rather doubtful; in this case two different disturbances, the capital transfer and currency inflation, were so inextricably interwoven that nothing can be inferred as to the processes really involved. Even in the absence of reparation payments one could not expect an exact correspondence in the short run between the movements of the foreign exchanges and the domestic price level. According to circumstances one or the other might show a considerable lag. It would be necessary to demonstrate, therefore, that the reparation payments made the divergence between the exchange movement and the price movement *different from what it would otherwise have been*, and this is clearly impossible.<sup>1</sup>

Angell's main contribution to this discussion<sup>2</sup> is to follow up a suggestion given by *Allyn A. Young* and arrange the principal media of international payments in a *hierarchy* according to the sensitivity of their movements in response to changes in exchange rates.<sup>3</sup> The most sensitive media are usually cable transfers, bankers' drafts, and trade bills; then come short-time borrowings between banks (finance bills, etc.); next come all those short- and long-time securities of which the international movements respond quickly to variations in discount and exchange rates; and, finally, the various commodities for which an open international market exists. Of this last class, gold is the most obvious representative, but the group also includes all those other commodities which are so near the "margin of doubt" that comparatively small exchange fluctuations may materially affect the volume, or even the direction, of their international movements. Clearly, this analysis does not attribute great direct significance to specie flows. The

<sup>1</sup> Cf. *infra*, pp. 432 and 444.

<sup>2</sup> In his article on *International trade under inconvertible paper*, Angell explicitly refrains from a detailed analysis of the phenomena of international capital movements, mostly on the ground that foreign borrowing will only be a dominant or determinant factor in international trade "in the case of new countries financing their economic development abroad." Yet, in the course of his argument he uses repeatedly a large foreign loan as an example of a disturbance of equilibrium in the exchange market.

<sup>3</sup> *Quart. Journ. of Ec.* 1917, p. 368 and *The theory of international prices*, p. 401.

wider and more lasting the fluctuations of the exchange rates, the farther into this series of media of payment will their disturbing effects tend to penetrate, but the groups are by no means rigid and mutually exclusive; drains may begin from one class long before the possibilities of the preceding class have been exhausted.

## 2. THE MODERN THEORY.

After examining in the preceding section how the classical transfer theory has been applied to paper conditions, an attempt will now be made to outline how the mechanism of adjustment may be conceived from the point of view previously designated as the "modern" transfer theory.

It has been repeatedly pointed out in earlier chapters that the characteristic feature of the modern transfer theory is that it concentrates attention on the manner in which *buying power is actually transferred* between countries and on the *direct* effects of such transfers upon commodity trade, whereas the classical doctrine is mostly concerned with the *indirect* connection between capital and merchandise movements established through price changes.

There was one point, however, at which even the most ardent protagonists of the classical tradition were forced to make concessions. It was generally admitted that capital movements and commodity movements might be *directly* linked together, and that if they were, the whole series of indirect effects contemplated by the classical theory would not be set in motion. Obviously, this admission is just as inevitable in the case of paper-standard countries.<sup>1</sup> Here too, capital may be borrowed with the express object of buying goods in the lending country. In this case, the funds put at the borrower's disposal are expended *within* the lending country; no monetary buying power is transferred; no foreign exchange transactions are involved; the goods move at once without initially

<sup>1</sup> It is not especially mentioned by Taussig in the course of his deductive reasoning in *International trade*, ch. 26, but he makes the admission on pp. 399 and 406-07.

disturbing the equilibrium of supply and demand in the foreign exchange market.<sup>1</sup>

But under a paper régime no less than between gold-standard countries the chief interest centres, of course, round the part of the loans *not* used for direct purchases in the lending country. A large part of the funds borrowed abroad are wanted by the borrowers for expenditures at home; in some way or other these funds must be transferred. As will be remembered there were two media by which a transfer of monetary buying power from one gold-standard country to another could be effected: (1) *gold shipments*, and (2) granting of *short-term credits* by the country which is to receive the buying power to the country from which it is remitted. These were the means by which the immediate, day-to-day equilibrium in the foreign exchange market was maintained in the face of disturbances upsetting a previous equilibrium in the balance of payments, and the review in the preceding chapters of the doctrinal development on this point shows that the tendency was decidedly towards relying primarily on the second of these methods for transfer of monetary buying power: the release of a short-term, equalising capital movement in the opposite direction. Several authors went so far as to contend that the mechanism of adjustment might remain substantially the same even if gold movements were entirely ruled out.<sup>2</sup>

Now, this is exactly what a paper régime does. Between paper-standard countries gold moves, *not as money, but as a commodity*. Here gold movements are part, not of the immediate transfer of monetary buying power, but of the ultimate transfer of capital in the form of commodities or services. In gold-standard countries specie-flows serve to explain how this ultimate transfer is brought about; in paper-standard countries gold-flows, like other commodity movements, are the object requiring explanation, and the question remains as to

<sup>1</sup> If such purchases are really additional and would not have been made unless the loan was granted, the immediate adjustment is complete. In other cases, such as reparation payments in kind, subsequent disturbances may occur, because the demand for foreign goods obtained by ordinary purchase is altered by the reparation payments.

<sup>2</sup> Cf. R. G. Hawtrey, *Currency and credit*, 2. ed. London 1923, p. 67.

how the shift in commodity trade (including gold) is brought about.

According to Taussig, a change in the rates of exchange appears to be the only alternative in paper countries to the specie flows between gold countries. He assumes that the volume of payments to be effected between two countries is determined beforehand, independent of one country's granting of a long-term loan to the other. But this means that Taussig's discussion of the means of transferring buying power between paper countries rules out, not only gold flows, *but also those short-term equalising credits*, the important, if not dominating rôle of which is generally admitted in the case of gold-standard countries.<sup>1</sup> The first cardinal point on which the classical transfer theory must be criticised is, therefore, that by regarding the exchange rate between paper-standard countries as proximately determined by an impact of two given quantities, *the possibility of equalising short-term capital movements is left completely out of account.*<sup>2</sup>

It might perhaps be argued that such equalising capital flows are less readily called forth under a paper than under a gold standard, but surely they play an important rôle, here too. And then it does not follow that the supply of and demand for foreign exchange arising out of the long-term capital movements and the other independent "normal" transactions must balance from day to day.

It may also be said, of course, that under a paper régime short-term capital movements may cease to be the servant, and become the master, of the situation. Or, in other words, that instead of being of the equalising sort, *they* may provide the initial disturbance in the balance of payments. And in such cases the only means of adjustment is to be found in a shift in exchange rates.<sup>3</sup>

But though it must be admitted that the exchange movements *may* acquire a self-inflammatory character dictated by the bears or bulls in the exchange market, this is by no means

<sup>1</sup> *Loc. cit.*, pp. 215 et seq.

<sup>2</sup> Cf Axel Nielsen, *Bankpolitik*, II, p. 339.

<sup>3</sup> Incidentally, it may be noted that such rapid movements of short-term capital into and out of a given country leading to violent fluctuations in exchange rates and in the prices of imports and exports may have a depressing influence on economic activity in general. Cf. *supra*, p. 60.



an inevitable outcome, but rather an incidence of the inflationary or deflationary policies to which paper-standard countries have generally been exposed. Whatever be the exact meaning of the assumption of "stable" money, it obviously removes one of the most important causes of the uncertainty regarding the future to which a "flight of capital" is usually due. On this premise, therefore, it would seem more reasonable to assume that speculative dealings in foreign exchange exercise a stabilizing influence on the rates, tending to steady them at the point which, in the view of the speculators, will equate the prospective non-speculative supply and demand.

The chief difference between gold and paper conditions, as far as the immediate mechanism is concerned, is rather that the *order* in which the different means of adjustment begin to operate is different. Under paper a disturbance in the exchange market upsetting the previously existing equality of total money payments in both directions, will lead to (1) creation of short-term bankers' loans, (2) shipments of such securities, both short- and long-term as have an international market, and (3) shipments of commodities, notably gold. Under the gold standard, on the other hand, gold would begin to flow at a much earlier stage, perhaps before any large movements of securities had developed.

It is only in case it becomes impossible to maintain an approximate day-to-day equilibrium between all the different sorts of "media of international payments" that the exchange rate must necessarily move in order to restore equilibrium. And as soon as the exchange rates begin to move in a certain direction this will cause a change in the volume of the demand for and supply of finance bills and other short-term borrowings, both directly and through the influence which a movement of the exchange quotations will usually have on the rate of discount and other interest rates.

To be sure, the rate of exchange between paper-standard countries is merely the numerical ratio between the total money value, in the currency of either country, of all the media of payment entering the market, i. e. between the total amount paid in one country for the right to receive certain sums in the other, and the total sum which the holders of these rights are entitled to receive. But it must be remembered that

both prices and quantities enter into the determination of this ratio, not prices alone.

It may seem paradoxical to refer to equalising capital movements as a means of transferring monetary buying power. What they amount to is that a capital movement in one direction is, for the time being, *offset* by a capital movement in the opposite direction. At first sight, one might infer that this must mean that no transfer has taken place in either direction. But this would be a confusion of the *ultimate* transfer of capital in the form of commodities and the *immediate* transfer of monetary buying power. What the equalising capital movement serves to postpone is the ultimate commodity transfer. As far as that is concerned the two currents do cancel each other. How monetary buying power can nevertheless be transferred will appear on a moment's reflection. The long-term borrowers who want to expend at home the funds put at their disposal in a foreign money market can do so only by *selling* these funds, i. e. by exchanging them for domestic currency. The question is, therefore, whether somebody can be called into the market, who is either already in possession of domestic currency, or able to create such currency at will, and who wants to invest this domestic currency temporarily in foreign funds.

The classical reasoning answers this question in the negative. Assuming that the loan represents an additional supply of foreign exchange appearing in a market previously in equilibrium, and that *this leaves the demand for foreign exchange unaffected*, the rate of exchange must, of course, result from the impact of these two given quantities. In that case, the disposal over domestic currency which the borrowers obtain is gained, in the first instance, exclusively at the expense of the exporters of the borrowing country. Be it remembered, how, in Taussig's example, an English loan to the United States, amounting to 25 per cent. of the previous export value of either country, immediately reduced the dollar receipts of American exporters for sales contracted in sterling by 25 per cent. In England, on the other hand, the exporters would get the immediate command over the whole amount of buying power lent to the Americans and spent by them at home; the English exporter would get 25 per cent.

more sterling than expected for his sales contracted in dollars.

What the modern theory questions is the assumption that the demand for foreign exchange is *completely inelastic*. It argues that long before bills on the lending country have fallen to anything like the extent indicated by the classical theory, an additional demand for them will be called forth in the borrowing country from people wishing to acquire the foreign funds in exchange for domestic currency, i.e. wanting to grant a short-term loan to the lending country. Thus, it is this grant of a short-term loan by the borrowing country which enables the transfer to the borrowing country of the monetary buying power arising out of the original long-term loan.

But the question remains, of course, *at what price* the exchange between domestic and foreign currency will take place. Between gold-standard countries exchange rates can vary only within the narrow limits set by the gold points. In the case of a paper-standard country there is no similar guaranty. *Some* reduction in the price of bills on the lending country will probably be necessary to induce prospective importers, bankers, or professional speculators, to buy them, but when the short-term equalising credit operations are taken into account there is no reason to expect the *exact numerical relation* which the rigid classical reasoning assumes between the size of the loans and the shifts in the exchanges.

Whether the shift in the rate of exchange between the currencies of the lending and of the borrowing countries be large or small, it will have a tendency to affect commodity trade. But whether this effect will always be *in the direction* indicated by the classical theory is another question. This obviously assumes that the elasticities of the demands for foreign products are greater than unity. Regarding the long-run situation, and with reference to gradual changes in price per unit, this assumption is probably in accordance with facts in most cases; one can think of a country such as Brazil, which is faced with an inelastic demand for its exports, and one can also conceive of a manufacturing country importing highly necessary foodstuffs and raw materials, which has an inelastic demand for its imports, but in such cases there is likely to

be a sufficiently elastic demand for imports and for exports respectively to allow the adjustment to take place on that side. It is doubtful, therefore, if there is any country which in the long run has an inelastic demand for both exports and imports. But the case may well be different if we are considering, not a moderate and gradual change in price, but the *vast and sudden price movements* which may result from violent fluctuations in the rates of foreign exchange. In such cases we may not be sure that the immediate change in the quantities purchased will be great enough to outweigh the change in the price per unit. And if it is not great enough, the result is the opposite of that pointed out by the classical theory; in such cases the temporary effects of the commodity movements called forth is to *aggravate* the disequilibrium between demand and supply in the foreign exchange market. This unfortunate contingency is most likely to occur in the case of a country in which the adjustment depends mainly on the elasticity of the foreign demand for its exports. However attractive the terms on which such a country offers its goods to foreign purchasers, new trade connections take time to establish.<sup>1</sup>

In this connection it is also misleading that Taussig confines his attention exclusively to the effects of the changing exchange rate on current commodity transactions, and arbitrarily assumes that they are always settled in the currency of the importing country. Clearly, a variation in exchange rates will also affect the value of *all other payments* in either direction, due under contracts previously made, and there is no reason to believe that the debit and credit items will all be defined in terms of the same currency or will be defined in different currencies in the same proportions. Consequently, a change in the exchange rates is likely to alter the relation between the existing debit and credit items in the balance of payments, and it is impossible to say in which direction the balance will be altered by a given variation in the foreign exchanges. On the assumption that all debits are in terms of domestic currency, while all credits are expressed in foreign currency, it is obvious that, however large the additional supply which appears in the exchange

<sup>1</sup> Cf. Barrett Whale, *International trade*, pp. 88—89.

market, the disequilibrium in the balance of payments can always be wiped out by a fall in the value of the currency, provided it goes far enough. But if we take a country which has previously incurred liabilities *in foreign currencies*, whereas its previously acquired assets abroad are *in its own currency*, it is equally clear that an attempt to make further remittances by offering exchange at lower rates will aggravate the disequilibrium in the balance of payments.<sup>1</sup>

Reversing Taussig's example, let us assume that all commodity sales are contracted in the currency of the exporting country; American exporters have sold goods quoted in dollars, English exporters have sold goods quoted in sterling. In that case there is a demand from American importers for a fixed number of pounds, no more and no less. The English importers, on the other hand, though they have *contracted* their imports in dollars, must, of course, *pay* for them in sterling; they must offer for sale, therefore, as many pounds as are necessary to bring in the fixed number of dollars for which they are indebted. Suppose now that England grants a loan to the United States and attempts to dispose of the additional number of pounds in the foreign exchange market. As in the previous case, sterling falls in terms of dollars. But this means that the English importers have to offer still more pounds for sale in order to meet their fixed dollar liability; thus the disequilibrium in the exchange market increases, and sterling falls still further, but every new decline will only make the situation worse, unless new buyers of sterling are eventually attracted by the bargain rates.<sup>2</sup>

The granting of a loan from England to the United States means that for the moment the American claims on England exceed the English claims on America. In Taussig's case the depreciation of sterling serves to diminish the dollar value of the larger American claims, and to increase the smaller English claims until equilibrium is reached; but under the terms just considered the larger American claims are aug-

<sup>1</sup> Cf. Whale, *loc. cit.*, p. 91.

<sup>2</sup> It is also conceivable that a heavy fall in the exchange value may frighten away such purchasers as would otherwise be disposed to buy, and induce "*bear sales*," but it is to be observed that quite apart from any such speculative influence the exchange movements will be "*self-inflamatory*" under the conditions assumed.

mented while the smaller English claims suffer a further decline.<sup>1</sup>

But these are minor points. Leaving them on one side and supposing that the immediate shift in the rate of exchange does affect commodity trade in the direction contemplated by the classical theory, its second cardinal error is to assume that *this is the only equilibrating force at work*. Here, as in the case of gold-standard countries, the classical authors lose sight of the indirect effects of the changes in the local distribution of buying power between the two countries, although it ought to be fairly obvious that it must affect the demand both for imports and for exportable goods. It is symptomatic that in explaining what the assumption of "stable" money really involves Taussig speaks alternatively of "fixity of the total money income" and of unchanged "total spending power," apparently without realising that the very essence of a foreign loan is that for the moment it makes the total spending power *greater* than the total income in the borrowing country, *smaller* in the lending country.

True, the indirect effects on the volume of imports and exports of a transfer of buying power do not appear at once. An interval of time must elapse between the moment when the borrowers get command over domestic buying power and the moment when this additional buying power calls forth an import surplus. In the meantime, somebody must hold the foreign exchange, i.e. equalising credit operations of one sort or another must be arranged. What these arrangements will be, will depend upon the monetary policy pursued by the countries in question, and until definite assumptions are made in this respect it is obviously impossible to indicate anything regarding the absolute heights of prices. If no considerations independent of the capital transfer influenced the monetary authorities towards either inflation or deflation, an inflow of capital would probably of itself lead to a certain credit expansion. Whether it be the banks themselves or their customers (prospective importers and professional exchange

<sup>1</sup> In its general aspects this problem is discussed by Frank D. Graham in an article *Self-limiting and self-inflamatory movements in exchange rates*. *Quart. Journ. of Ec.* 1929. With reference to the German reparation question it is touched upon by Pigou (cf. *supra*, pp. 293 et seq.).

speculators) that buy the foreign exchange from the borrowers, it is hardly likely that credits granted for other purposes will be contracted to the same extent as bank credit is now temporarily tied up in the holding of foreign funds. Moreover, the mutual interrelationship suggested in an earlier chapter between capital imports and upward movements in business, makes it still more probable that periods of heavy foreign borrowing will also be periods of rapid credit expansion. But it is clearly impossible to indicate any *necessary* connection between credit policy and capital movements. The monetary authorities have a free hand, and their decisions may be determined by other motives in any number. What must be stressed is merely that they *must do something*, and that, however unintentionally, their policy will determine the result.<sup>1</sup> It is hardly necessary, therefore, to enter in this connection upon a discussion of the intricate question of what should be understood by "neutral" money. The important things to bear in mind are that it is meaningless to discuss the mechanism of international capital movements without reference to *some definite* monetary policy, and that whatever one would regard as the "natural" credit policy in the absence of capital flows, this policy is likely to be *modified* by the movements of capital.

The sharp line of distinction drawn by Taussig between gold and paper conditions rests probably on the apprehension that the gold standard is completely "automatic." As soon as it is admitted that a gold standard is also, to some extent, a "managed" currency, there would seem to be at most a difference of degree between the two cases; then it is the credit policy of the banks which governs the situation both under gold and under paper.<sup>2</sup>

Recent experience shows that the adjustment of price and income structures necessary to maintain equilibrium between gold-standard countries does not always proceed as smoothly and quickly as the classical reasoning implies. Price and income structures in a modern industrial society are rigid rather than plastic. Particularly when the adjustment involves a lowering of prices or incomes, powerful resistance meets the

<sup>1</sup> Cf. R. F. Harrod, *International economics*, p. 139.

<sup>2</sup> Cf. Haberler, *Der internationale Handel*, pp. 47—48.

deflation with its immediate prospect of depression and unemployment.<sup>1</sup> For a while, and perhaps for a considerable period, equilibrium may be maintained by means of short-term loans from other countries, and it may be argued that the confidence created by the adherence to the gold standard will facilitate such credit operations. Yet, this development cannot go on indefinitely, and the larger the short-term debts have grown, the more serious the crisis may be when for any reason they are suddenly called in. It may even be impossible for the debtor countries to remain on the gold standard.<sup>2</sup> Besides has been emphasized<sup>3</sup> as one of the most serious drawbacks of an international gold standard that in times of trouble the mere possibility of exchanging a currency for gold may lead to a general desire to hoard gold which, of course, is bound to result in an appreciation of the gold and an exposal of the various currencies to a possibly disastrous process of deflation. If, under a paper standard, people start hoarding notes or bank deposits in a particular currency, the supply of media of payment can be adjusted by a suitable banking policy without involving the difficulties which may arise when the monetary system is based on a material the supply of which is physically limited.

Moreover, we encounter the fatal paradox that although the successful working of an international monetary standard presupposes a relative freedom of international commodity and capital movements,<sup>4</sup> the gold standard has shown a marked tendency in recent years to encourage protective measures of various sorts. Practically all gold-standard countries have been anxious to "protect their balances of trade." One nation after another raises the claim that each foreign country shall buy from it at least as much as it sells to it. In part at least,

<sup>1</sup> Keynes suggests that the line of least resistance might be to use the foreign-exchange method, where a deflation would otherwise be necessary, and the bank-rate method only in those cases where this involves inflation. The result would be a constantly rising long-period trend of prices (*A treatise on money*, I, pp. 358—59).

<sup>2</sup> Cf. Axel Nielsen, *Kreditorland — Debitorland under skiftende Prisniveau*, *Nationaløk. Tidsskr.* 1933, Tillægshäfte, Festskrift til Harald Westergaard, and *Den internationale Kreditkrise og Guldfoden*, *Nationaløk. Tidsskr.* 1931. Cf. also Barrett Whale, *loc. cit.*, pp. 96—99 and Haberler, *loc. cit.*, pp. 70—72.

<sup>3</sup> By Gustav Cassel in the *Quarterly reports* of Skandinaviska Kreditaktiebolaget, Oct. 1933 and July 1934.

<sup>4</sup> Cf. Axel Nielsen, *Nationaløk. Tidsskr.* 1931, p. 295.



this claim may be explained by the fear of losing gold. Restrictions on the export of capital are imposed for a similar reason. Thus the attempts to maintain an *international* standard have generated tendencies to break up the world into self-contained *national* economic units.

Similar views have, indeed, been entertained also in England and other countries that have abandoned the gold standard. But, in the eyes of the opponents of the gold standard, this is because these countries have not at the same time abandoned the old gold mentality. Cassel points out e.g. that if England always buys and sells in pounds, a so-called "adverse balance" merely means that foreign countries accumulate sterling holdings. As long as England was on the gold standard, the foreign countries could withdraw these holdings in the form of gold. But under paper this is out of the question. Then the foreign countries have no use for their sterling holdings unless they spend them on the purchase of British goods and services. Should they—says Cassel—commit the deadly commercial sin of neglecting to do so, this would merely signify that they were placing capital at England's disposal, perhaps without interest or, at all events, at a very low rate of interest. Should the foreign countries continue eternally to abstain from using their pounds to buy what England can sell, this would mean that they had made a present to England of their export surplus. Cassel must admit, of course, that when such foreign sterling holdings are put on the market this may have the temporary effect of somewhat depressing the rates of exchange for the pound. But he argues that this fall can never proceed very far before additional buyers of British goods and services appear in the market. Indeed, this is the very essence of his celebrated purchasing-power-parity doctrine.

As just pointed out equalising capital movements can serve only for a time to relieve the pressure on the exchange rates. Speculation will tend to stabilize the exchanges at a level which will equate the prospective non-speculative supply and demand. The fundamental question is, therefore, whether this *prospective* non speculative supply and demand in the foreign exchange market is affected by an international capital movement. That it is so affected, is the main contention of the

modern transfer theory. The function of the equalising capital movement is exactly to bridge over the interval of time, until these prospective effects make themselves felt. Their general nature has been indicated in earlier chapters. Suffice it to say, therefore, that the modern explanation does not by any means deny that shifts between the prices of domestic and international goods are part of the mechanism of adjustment. Nor does it dismiss the possibility that shifts in the relation between import and export prices may occur, but here, as between gold-standard countries, it rejects the conclusion that a movement in the barter terms of trade in favour of the borrowing country is a necessary consequence of an international capital movement.

So far, the analysis has been confined to two countries. It is often assumed that no complications arise when the number of countries is greater. It is worth pointing out, however, that it is not enough to contrast trade between a number of countries *all* on the gold standard and trade between a number of countries *all* on the paper standard. Account must also be taken of the *mixed case* in which *some* of the trading countries use gold and others paper.

With few exceptions<sup>1</sup> economists regard the fluctuations of exchange rates within the narrow limits of the gold points as insufficient to bring about any material shifts in merchandise movements. In the case of paper-standard countries, on the other hand, variations in the rates of exchange do, of course, exercise direct influence on commodity trade; as we have just seen, the classical transfer theory regards shifts in exchange rates as the only means of adjusting the balance of trade in paper countries to international capital movements.

In actual life, however, every important country trades both with gold-standard and with paper- or silver-standard countries. And whenever a significant portion of a gold-standard country's exports or imports goes to or comes from countries not on the gold standard, the adjustment of eventual disequilibria is aided by movements of those exchange rates which may fluctuate within limits more widely separated than the gold points.<sup>2</sup>

<sup>1</sup> Hollander, e.g. Cf. *supra*, p. 248.

<sup>2</sup> Cf. Harry D. White, *The French international accounts 1880—1913*, pp. 164—65 and 306—07.

**B**  
**FACTS**



## INTRODUCTORY REMARKS

### 1. DEDUCTION AND INDUCTION.

In the preceding five chapters we have reviewed in detail the a priori theories by means of which economists have attempted to explain the mechanism of international capital movements. Two main lines of thought have been distinguished, relying on essentially different and apparently alternative processes of adjustment: the "specie-flow-price mechanism" and the "changes-in-demand-schedules mechanism". In order to discover whether these two explanations are, in fact, alternative and conflicting, and which of them is then to be preferred, or whether both points of view may be merged in a more comprehensive theory, it would seem natural, or indeed necessary, to turn from deductive reasoning to *inductive investigation* of concrete instances of international capital flows and ask how the mechanism has actually worked out in practice.

It is no easy matter, however, to produce conclusive evidence in this field. In the first instance, there are but few cases in which *the relevant figures* are readily at hand. To ascertain the volume of capital moving into or out of a country year by year is in itself a difficult task, involving the computation of annual balances of payments, which must be based, in large measure, on rough estimates or sheer guesswork. And no smaller difficulties encounter the compilation of monetary and banking statistics or of price and wage data for periods short enough to give reliable information as to the exact time sequence of the phenomena observed; in many cases only annual averages are available, where an exhaustive analysis of the short-run mechanism would require monthly or even weekly data.

But even if all the facts pertaining to the subject could be completely and accurately measured and recorded, the chief

difficulty would remain: *the complexity of economic situations*, the incalculable number of forces at work at the same time. As already mentioned,<sup>1</sup> the multiplicity of relations existing between all the different economic phenomena will often prevent deductive reasoning from going much beyond an enumeration of the more important among the cooperating or conflicting tendencies simultaneously in operation. And it obviously represents an even greater obstacle to inductive verification of the tentative conclusions reached a priori. It has frequently been observed that experimenting under conditions adequately controlled is hardly ever feasible in economics. The international movements of capital are, of course, never the only force affecting the economic life of the countries between which the capital flows. Usually, they will be subject during the same period of time to such a vast number of other dynamic changes that it becomes utterly impossible to isolate the effects of this particular influence; especially the long-run effects of an international capital transfer will practically always be hopelessly intermingled with the effects of all the other factors which shape the development of the countries concerned. Only in exceptional cases may the flow of capital dominate the whole economic situation to such extent that the method of concomitant variations can be applied with any hope of success.

Thus inductive verification of the transfer explanations meets very great difficulties regarding both short-run and long-run phenomena. Yet, a number of such inductive studies have been made in recent years. As already mentioned<sup>2</sup> credit is due to *Taussig* more than to anybody else for eliciting statistical material in this particular field. In his lectures on international trade theory *Taussig* has never wearied of repeating that "until we test and verify the hypotheses, we have no theory of international trade; we have no more than prolegomena to a theory";<sup>3</sup> and both he and a number of younger economists trained in Harvard University have undertaken a careful examination of a number of episodes in which capital has been exported or imported on a large scale, and in which conditions have, on the whole,

<sup>1</sup> Cf. *supra*, p. 16.

<sup>2</sup> Cf. *supra*, p. 229.

<sup>3</sup> *International trade*, p. 152.

been thought favourable to the application of the inductive method. The explicit object of these studies was, of course, to verify what has here been called the "classical" transfer explanation, the "specie-flow-price mechanism," and in the majority of cases the investigators claim that the facts and figures presented give the desired confirmation of the traditional a priori theory. The three chapters to follow will be devoted to a critical review of these studies.

It may be said at once, however, that in large part the conclusions gained in these chapters will be *negative*. For reasons which will appear later<sup>1</sup> it is practically impossible to establish statistical proof of the correctness of the "modern" transfer theory, and grounds will also be given for doubting whether the alleged verification of the classical point of view is always as conclusive as its adherents are inclined to believe.

This does not mean that the statistical inquiries referred to are without value. They may be of importance, of course, as contributions to economic history. But they may also serve in several ways to further our understanding of the transfer mechanism, even though they do not yield the all-round verification hoped for. If the inconclusiveness is due merely to lack of adequate material, this will stimulate other investigations in which the requisite figures may be procured in proper shape, or at least induce the collection of pertinent data in the future. Moreover, the very admittance—and even Taussig admits it to a certain extent—that the facts are not always as easily reconcilable with the generalisations of the classical theory as sometimes supposed, may create dissatisfaction with the "intellectual neatness and apparent conclusiveness of the deduced conclusions," which so pleased the older classical writers. In this way the search for a more comprehensive and thorough explanation may be given a new impetus. And in numerous details the data may throw light upon the process of adjustment and suggest the points at which further elaboration and emendation of doctrine is particularly required. Even if the transfer theory is likely to remain what Edgeworth called "an unverified probability," it may be hoped that a more refined and accurate ex-

<sup>1</sup> Cf. particularly p. 359.

planation of the mechanism involved will eventually emerge from the cooperation between deduction and induction so strongly advocated by Taussig and his school.

## 2. DEVELOPMENT AND EXTENT OF INTERNATIONAL CAPITAL MOVEMENTS.

It falls outside the scope of the present study to give a detailed account of the historical development of international capital movements. But before we pass on to the examination of the special episodes in which the transfer mechanism is supposed to stand out with particular clearness, a few brief remarks may serve to indicate the *order of magnitude* of the movements concerned in the field of foreign investments.<sup>1</sup> As just intimated reliable information regarding their volume is rather difficult to obtain even for recent periods, and still more caution is required, of course, in interpreting the scanty figures available relating to the development of foreign investments in past centuries.

Prior to the nineteenth century the economic importance of international capital migrations was slight. In the sixteenth, seventeenth and eighteenth centuries it was the *military operations* of kings and princes which furnished the most important occasions for the movements of capital between countries, whether in the form of loans or as subsidies or tributes. The intimate relations between the Habsburgs and the Fuggers may be mentioned as a typical instance.<sup>2</sup> Intermittent at first, this type of financing ripened in the second half of the eighteenth century into a conti-

<sup>1</sup> In addition to the special sources quoted in the sequel, reference must be made to the summary accounts contained in the League of Nations publications on *Balances of payments* and in the special report prepared by Ohlin on *The course and phases of the world economic depression*, Geneva 1931, pp. 28 et seq., in C. K. Hobson's article *Export of capital*, Encyclopædia Britannica, 14th ed., London and New York 1929, IV pp. 799 et seq., M. Palyi's article *Foreign investment* in Encyclopædia of the Social Sciences, New York 1932, VI pp. 364 et seq. and Franz Gutmann's article *Internationale Kapitalbewegungen*, Handwörterbuch der Staatswissenschaften, 4. Aufl., Ergänzungsbd., Jena 1929, pp. 628 et seq. For the sketchy remarks above the writer is much indebted to these authors. Cf. also Herbert Feis, *Europe, the world's banker, 1870—1914*.

<sup>2</sup> Cf. Richard Ehrenberg, *Das Zeitalter der Fugger*, 3. Aufl., Jena 1922.



nuous activity, mostly in the hands of Dutch bankers. *Antwerp* and *Amsterdam* were then the leading capital markets where, for instance, even a large share of British government loans was raised.<sup>1</sup> After the Napoleonic wars the supremacy in international finance passed to Great Britain which is still the leading creditor country of the world.<sup>2</sup>

The rapid development of foreign investments during the century preceding the World War, and particularly during the latter half of it, served for the most part the purposes of *industrial and commercial expansion*. From western Europe an unintermittent flow of long-term capital was spread over the rest of the world. Great fluctuations in the rate of this flow occurred from one year to another in connection with the cyclical changes in business conditions, but the trend was continuously upward. The creation of modern systems of transportation and the development of agriculture, mining, and manufacturing industries in most of the new countries of the world took place largely with the help of European capital.

By far the most important among the capital-exporting countries was *Great Britain*. At the end of 1913, Sir George Paish<sup>3</sup> estimates the amount of capital publicly invested by British citizens in the colonies and in foreign countries at over £ 3.700 mill. Adding the large amounts invested privately, the total is probably brought to about £ 4.000 mill. or approximately one-fourth of the national wealth of Great Britain.

Several other European countries emerged as exporters of capital during the nineteenth century, notably France, Germany, Belgium and Switzerland,<sup>4</sup> while Holland maintained

<sup>1</sup> Cf. Blok, *History of the people of the Netherlands*, New York 1912, V pp. 64 et seq. and 186 et seq. and Werner Sombart, *Der moderne Kapitalismus*, 4. Aufl., München and Leipzig 1921, III pp. 953 et seq. and 979 et seq. Also an interesting article on *The early history of Dutch foreign investments* in the *Economist* 1913, I pp. 333 et seq.

<sup>2</sup> Cf. C. K. Hobson, *The export of capital*, chs. IV—VI and Leland H. Jenks, *The migration of British capital to 1875*, New York 1927.

<sup>3</sup> *The export of capital and the cost of living*, Transactions of the Manchester Stat. Soc. 1914, pp. 84—85; cf. also his articles *Great Britain's capital investments in other lands* and *Great Britain's capital investments in individual colonial and foreign countries*, Journ. of the Royal Stat. Soc. 1909 and 1911.

<sup>4</sup> Julius Landmann maintains that the organized export of capital from Switzerland is older than the Dutch capital export. He estimates

her position, earlier established.<sup>1</sup> In absolute amounts it was, of course, the French and German capital which was of greatest importance. The *French* capital export began in the middle of the century, and increased rapidly, interrupted only by a slight recession due perhaps to the payment of the war indemnity in the early Seventies. By 1880 the net foreign investments are estimated at 9.000 mill. francs, increasing to 39.000 mill. or about 15 per cent of the national wealth in 1913; in this period France invested between one-third and one-half of her total savings abroad.<sup>2</sup> Export of capital from *Germany* did not begin till the Eighties; the amount of her foreign investments prior to the War was variously estimated at between 20.000 and 30.000 mill. marks or some 8 to 12 per cent of the national wealth.<sup>3</sup>

The position, then, before the World War was that Great Britain and to a smaller extent France, Germany, and some other European countries had built up substantial external investments, and added to them year by year either through a net export of fresh capital or—and mainly—through the re-investment of the annual interest payments.

Apart from these, no other countries exported capital on balance, though some capital-importing countries were also exporters of capital.<sup>4</sup> Among these countries were Russia, Austria, Hungary, Canada, and particularly the *United States* which during the two decades before the War invested considerable sums in the development of industry in Canada, Mexico, and Cuba, and to a smaller extent in South America and China. By 1914 European holdings of American securities were estimated at some 3000 mill. francs (*Der schweizerische Kapitalexport*, Bern 1916, reprint from *Zeitschr. für schw. Stat. u. Volksw. Cf.* also Walder-Heene, *Die schweizerischen Kapitalinteressen im In- und Auslande*, St. Gallen 1918 and Kurt Höweler, *Der Geld- und Kapitalmarkt der Schweiz*, Berlin 1927).

<sup>1</sup> Dutch foreign investments in 1913 are estimated at 3.500 mill. gulden or 17.5 per cent of the national wealth. Cf. Gerard van der Heyden, *Der ausländische Zahlungsverkehr in Holland*, Frankfurt a. M. 1918.

<sup>2</sup> Harry D. White, *The French international accounts 1880—1913*, where all available data are critically examined. Cf. *infra*, pp. 343 et seq.

<sup>3</sup> A number of different estimates are brought together in H. G. Moulton, *Germany's capacity to pay*, p. 260. Cf. Fr. Lenz, *Wesen und Struktur des deutschen Kapitalexports vor 1914*, *Weltw. Arch.* 1922.

<sup>4</sup> Cf. *supra*, pp. 112—13.

ties amounted to something like 5,000—6,000 mill. dollars. At the same time the total foreign assets of the United States were estimated at 1,500—2,500 mill. dollars, so that the net debit was something like 3,500 mill. dollars.<sup>1</sup>

So far, however, we have dealt only with long-term foreign investments. Short-term movements of capital were different in character. There was no regular flow from western Europe to the rest of the world. On the contrary, these movements went back and forth, as conditions changed. They served to finance international trade, particularly from *London*, the monetary centre of the pre-war world. And they acted, in the way already described, as "equalisers" in international economic relations. But the total capital employed in this way, though by no means inconsiderable, was small compared with the amounts involved in the long-term movements.

The *World War* brought enormous changes in the sphere of international indebtedness. The initial shock to the credit system at the outbreak of the War caused an immediate stoppage in the normal flow of capital from lending to borrowing countries and placed several of the large debtor countries in a very difficult position, when they were suddenly cut off from meeting interest charges and repayments by new loans. Later the financing of the purchases abroad of the belligerent countries gave rise to vast international capital transactions. The details of this unique development need not engage us in this connection; it will suffice to summarise the net result of the War in relation to foreign investments.

Europe sold most of its American securities back to the United States and contracted new loans there on a huge scale. At the same time Great Britain made large advances to her European Allies and some of the Dominions. The state bankruptcies of Russia, Turkey, and Austria-Hungary caused great losses particularly to France. Property and enterprises domiciled in the territory of hostile countries were sequestered both by the Allies and by the Central Powers. Heavy reparation payments were imposed on Germany. As a consequence of these and other developments both the magnitude

<sup>1</sup> Cf. Theodore H. Boggs, *The international trade balance in theory and practice*, New York 1922, p. 60.

of foreign investments and more particularly their distribution between creditor and debtor countries were radically changed. Apart from reparations and interallied debts, the total volume of capital invested abroad was considerably reduced owing to repudiation, failure of the debtors, liquidation of alien property, currency depreciation, and—repayments.

The most spectacular change was the transition of the United States from the position of a borrower to that of a lender. In 1920 the net foreign assets of the United States were estimated at about 6,000 mill. dollars, and in the following years the States rapidly developed into a great creditor country, even challenging the British supremacy in the international capital market. At the end of 1930 the amount of American private long-term investments abroad was estimated at 14,900—15,400 mill. dollars,<sup>1</sup> while the net short-term indebtedness on banking account amounted to 1,000 mill. dollars.<sup>2</sup> As will appear later the American capital export showed exceptionally large fluctuations in these years.<sup>3</sup>

Germany, on the other hand, was turned by the war and post-war development from a creditor into a large debtor country. According to the bankers' committee on the credit situation of Germany, which met in Basle in July 1931 (Wiggin Committee) foreign investments in Germany amounted to 23,000 mill. marks, of which 8,000 mill. represented short-term credits, and German investments abroad to 8,500 mill. marks, of which 3,500 mill. were short-term investments. After the publication of these figures, however, a special inquiry into the amount of foreign capital invested in Germany as on July 28th, 1931, was undertaken by the German government. The result of this inquiry, which was presented to the Young Plan Advisory Committee, gave the foreign investments in Germany at 28,500—30,000 mill. marks (16,500—18,000 mill. on long term and 12,000 mill. on short term), or about 6,000 mill. more than indicated in the Wiggin report.—

<sup>1</sup> Trade Information Bulletin no. 731, *American direct investments in foreign countries*; and no. 767, *A new estimate of American investments abroad*. Cf. also National Industrial Conference Board, *The international financial position of the United States*, New York, 1929.

<sup>2</sup> Calculated on a 4 per cent compound interest basis the value of the payments to be received on the interallied debts was 7,740 mill. dollars on June 30th, 1930.

<sup>3</sup> Cf. *infra*, p. 370.

In France the net foreign investments were reduced to between one-half and two-thirds of their pre-war volume, owing both to large-scale French borrowing abroad and to the enormous French losses in Russia and Turkey. The export of capital was resumed in 1921, but developed rather slowly; until 1929 it was checked by special taxation of foreign issues on the Paris bourse, and after that time the world depression and the general political and economic uncertainty kept the cautious French investor away from foreign securities. For a time the "flight from the franc" brought a considerable outflow of short-term funds, placed primarily in the English and American money markets; but after the stabilisation they were partly repatriated, and during the world depression further large withdrawals took place.—Nominally, the advances made by Great Britain to her Allies exceeded the amounts raised abroad by borrowing and sales of foreign securities, but judged as a commercial asset these advances could not be regarded as equivalent to Great Britain's own commitments. It has been estimated that her foreign assets were reduced by one-fourth as a result of the War. Very quickly she resumed her position as an international lender, but on the average, the outflow of capital has only been about half as large as in the last pre-war years.<sup>1</sup>

Among the debtor countries Russia has dropped out almost completely, and investments in China have also been very slight. On the other hand, large amounts of capital have flowed into Germany, Canada, Australia, the Latin American states, and Japan.

On the whole, the movements of long-term capital have probably been on a somewhat smaller scale after the War. In the years immediately before the War the net export of long-term capital amounted to about 2,000—2,500 mill. dollars annually, whereas the corresponding average for the period 1924—30 can scarcely have exceeded 1,500 mill. dollars. Besides, the movements were much less steady; numerous

<sup>1</sup> Cf. official estimates of the "credit balance" published by the Board of Trade, the Midland Bank statistics of new overseas issues on the London market, and the annual surveys of British overseas investments prepared by Sir Robert Kindersley and appearing in the *Ec. Journ.* Also Konrad Zweig, *Die internationalen Kapitalwanderungen vor und nach dem Kriege I, Strukturwandlungen des englischen Kapitalexports*, *Weltw. Arch.* 1928 II.

cross-currents occurred complicating the mechanism of adjustment and resulting in an abnormal distribution of the world's gold. But in large measure this decline in long-term investments was compensated by an increase in the volume of short-term credit movements. As already intimated, both these tendencies are due to the same economic and political causes, above all to the general feeling of uncertainty regarding the future.

One of the most recent attempts to appreciate the total amount of international indebtedness has been made by Julius Hirsch.<sup>1</sup> His starting point is an appraisal given by the German "Institut für Konjunkturforschung" according to which the gross amount of the world's political foreign debts should be 54,600 mill. marks by the end of 1932 (table 6)<sup>2</sup>. To

TABLE 6.  
The world's political debts ult. 1931.  
(Million marks)

Debtor countries	Creditor countries				Total
	U. S. A.	Great Britain	France	Other countries	
Great Britain .....	14,482	—	412	151	15,045
France .....	8,778	3,613	—	—	12,391
Italy .....	2,284	1,260	4	—	3,548
Belgium .....	960	129	—	42	1,131
Poland .....	564	66	658	51	1,339
Czecko-Slovakia ....	366	7	80	44	497
Other countries .....	1,814	17,125	1,611	79	20,629
<b>Total ...</b>	<b>29,248</b>	<b>22,200</b>	<b>2,765</b>	<b>367</b>	<b>54,580</b>

this Hirsch adds the private debts (table 7), and thus he reaches for medio 1932 a total of 307,000 mill. marks exclusive of reparations, but including the interallied debts. By the middle of 1931, the Bank for International Settlements had estimated the short-term foreign indebtedness at 40,000 mill. marks, of which 20,000 mill. were to be paid back within

<sup>1</sup> In an article *Der wirtschaftliche Weltwille; die Krisis und die Weltwirtschaftskonferenz*, *Weltw. Arch.* 1933 I.

<sup>2</sup> *Wochenbericht des Institutes für Konjunkturforschung* V, 1931—32, p. 164.

the next year. Hirsch considers the remaining 20.000 million to be an under-estimate and puts the figure at 35.000 mill. medio 1932. In the long-term debt he attempts to include, not only holdings of foreign bonds and shares, but also direct investments in foreign enterprises, land, buildings, etc. As far as

TABLE 7.  
*The world's private debts, medio 1932.*

(Million marks)

Debtor countries	Creditor countries							Total
	U. S. A.	Great Britain	France <sup>1</sup>	Nether-lands	Switzer-land	Scandi-navia	Other countries	
Germany.....	8.102	2.100	956	2.900	2.000	382	2.142	18.582
Rest of Europe	19.942	8.000	35.000	12.000	12.000	5.000	—	91.942
All other countries .....	45.104	62.000	—	—	—	—	35.000	142.104
Total ...	73.148	72.100	35.956	14.900	14.000	5.382	37.142	252.628

possible only the balances are entered in these cases, i.e. the claims after deduction of the debts with which they are encumbered. A certain corroboration of his figures Hirsch finds in the estimates of the League of Nations publication on balances of payments 1930, according to which interest payments amount to 15—16.000 mill. marks.

### 3. BARTER TERMS OF TRADE.

Among the intellectual tools which have come into general use in the analysis of international capital movements, the concept of *barter terms of trade* plays such a prominent rôle that it may be appropriate to add a few remarks regarding the exact meaning and importance of this concept. The phrase "barter terms of trade" was coined by Taussig,<sup>2</sup> whereas Eng-

<sup>1</sup> Except the Russian debts.

<sup>2</sup> *International trade*, pp. 8 et seq.

lish economists speak of the "real ratio of international exchange"<sup>1</sup> or simply of the "terms of trade."<sup>2</sup> Pigou defines the concept as the amount of foreign goods that a country can get for a given quantity of its exports, when the sale of the exports and the purchase of the imports take place simultaneously. Or we may simply say that the barter terms of trade indicate the quantitative relation between the physical amounts of goods exported and imported.

This definition bears an obvious resemblance to John Stuart Mill's famous yards of cloth and linen, representing the products of two trading countries. Marshall, on the other hand, goes a step further back when he defines the concept, supposing either country to make up its exports into "bales," representing uniform aggregate investments of its labour (of various qualities) and of its capital. Remembering that changes in the terms of trade have been used, above all, for determining the distribution of the gain from foreign commerce between the trading countries, it is obvious that it may make a very important difference, at least when longer periods are considered, whether we speak of the command over import *commodities* exerted by a given quantity of export *commodities*, or the command over foreign *factors* exerted by a given quantity of home *factors*. A distinction has been suggested, therefore, between "*commodity terms of trade*" and "*factoral terms of trade*,"<sup>3</sup> serving to bring out that even if the "*commodity terms*" move against a certain country, it may well get its imports at more favourable "*factoral terms*," i.e. at a lower real cost (owing to a greater increase in productive efficiency there than in other countries). This is not the place for discussing the difficulties involved in measuring the gain from international trade; it can only be pointed out in passing that the concept of "*factoral terms of trade*" raises the inextricable question of how to measure and add together different productive agents combined in varying proportions.

<sup>1</sup> Pigou, *Essays in applied economics*, London 1923, pp. 149 et seq.

<sup>2</sup> Marshall, *Money, credit and commerce*, bk. III ch. VI.

<sup>3</sup> Cf. Viner's article *International trade—theory* in *Encycl. of the Soc. Sc.* VIII, New York and London 1932 and Roland Wilson, *Capital import and the terms of trade*, pp. 49—50. Yntema speaks of "resources terms of trade." *A mathematical reformulation of the general theory of international trade*, p. 20.



In another direction, Taussig goes a step further, introducing a distinction between "net barter terms of trade" and "gross barter terms of trade."<sup>1</sup> As previously suggested international capital movements confront the classical theory of international trade with a peculiar paradox. Its general reasoning rests on the assumption of complete international immobility of capital, and it treats international trade in commodities as a virtual process of barter in the sense that the demand for imports is also the supply of exports.<sup>2</sup> But when the monetary mechanism of foreign trade is analysed the existence of capital movements is admitted, and then the barter analysis obviously breaks down. It is probably to avoid this inconsistency that Taussig distinguishes between net and gross terms. If a country's transactions with foreign countries include no items other than the imports and exports of merchandise, we have the simple and uncomplicated "net barter terms of trade." Service items involve no qualification in principle, provided the services are to be paid for at once, but in practice lack of adequate information often makes it necessary to leave services out of account.<sup>3</sup> The theoretical difficulty arises only with regard to one-sided payments, such as tributes or foreign loans. Here Taussig introduces the "gross barter terms of trade," to indicate the relation between the total physical quantities of merchandise exported and imported as a result of all transactions, visible or invisible, two-sided or one-sided, whereas the net barter terms of trade still refer to the pure merchandise transactions, i.e. to the ratio of exchange between such parts of the total quantities of exports and imports as exchange *for each other*, and whose total values, in consequence, are equal.

It may facilitate the understanding of these two concepts to indicate how changes in both ratios are computed. In the abstract reasoning, dealing with only two countries and two commodities, the concept of barter terms of trade is unequivocal: a ratio between quantities of cloth and quantities of linen. But as soon as more commodities are involved, a common measure becomes necessary, and all the difficulties

<sup>1</sup> *The change in Great Britain's foreign trade terms after 1900*, Ec. Journ. 1925, cf. *International trade*, p. 113.

<sup>2</sup> Cf. Marshall's and Edgeworth's diagrams referred to *supra*, p. 302.

<sup>3</sup> Cf. Taussig, *loc. cit.* p. 254.

connected with the use of index numbers are raised.<sup>1</sup> Changes in gross barter terms of trade between two years may be indicated thus:

$$\frac{EQ_1}{IQ_1} : \frac{EQ_2}{IQ_2}$$

in which  $EQ_1$  and  $EQ_2$  indicate the quantities exported and  $IQ_1$  and  $IQ_2$  the quantities imported in the two years. If there are no one-sided transactions, i.e. if the values of imports and exports are equal in each year, the same formula applies to the net terms, for on that assumption the two are identical. In these cases the change in the trade terms can be computed directly from quantity indices.<sup>2</sup> But whenever imports and exports differ in money value, a different method is necessary for measuring net terms.<sup>3</sup> Separating those exports and imports which pay for each other we know, of course, *with regard to them* that their total values are equal:

$$EQ \cdot EP = IQ \cdot IP,$$

in which  $EP$  and  $IP$  indicate the price levels for exports and imports. We have, therefore,

$$\frac{EQ}{IQ} = \frac{IP}{EP};$$

and since  $IP$  and  $EP$ , the import and export price indices, can usually be measured,<sup>4</sup> we are also able, indirectly, to measure the change in the ratio between the quantities. Changes in net terms are then indicated thus:

$$\frac{IP_1}{EP_1} : \frac{IP_2}{EP_2}$$

<sup>1</sup> Cf. Pigou, *loc. cit.*, p. 150 and Gottfried Harberler, *Der Sinn der Indexzahlen*, Tübingen 1927.

<sup>2</sup> It is impossible, of course, simply to take the total weight of exports and imports. For even if a relative increase or decrease in the total weight of exports were found, this might obviously be due to changes in the make-up of either imports or exports, to a greater preponderance of lighter or heavier classes of goods.

<sup>3</sup> This method was suggested by Bowley as early as 1893 (*A short account of England's foreign trade in the nineteenth century, its economic and social results*, London 1893, revised edition 1905, pp. 20—21) and more fully described in a note in *Ec. Journ.* 1897, pp. 274—78 (*Import and Export index numbers*).

<sup>4</sup> A further difficulty arises, however, because changes in the terms of trade will often alter the composition of the three classes of goods: import, export, and domestic commodities.

Very often price indices are also used for computation of changes in gross terms, EQ and IQ being obtained simply by dividing the total value of exports and imports (EQ·EP and IQ·IP) by the export and import price indices respectively.

Discussing the significance of these two concepts Tausig argues that the net terms rest on suppositions contrary to fact—that the money values of imports and exports are equal, or that they maintain constant proportions. The gross terms, on the other hand, represent what is actually happening; they show the drift of the changes which are actually taking place. He concludes, therefore, that it is the trend of gross terms which counts if we want to ascertain whether “the foreign trade...tends year by year to become more or less advantageous.”

When it is understood that capital is always exported in the form of commodities, it is self-evident that an export of capital must *ipso facto* swell exports relatively to imports. What we want to know is, not this obvious fact that the capital-exporting country parts with a certain portion of her exports without an immediate return, but whether this transaction leads incidentally to a change in the terms on which all *other* transactions are carried out. Fluctuations in the gross barter terms of trade reveal only the *composite* effects of variations in net terms of trade and changes in the amount of capital and interest transactions affecting the absolute and relative size of the excess of either exports or imports. As Wilson pertinently remarks, this omnibus character of the concept is hardly conducive to clarity of analysis.<sup>1</sup>

It is to the net terms we must look, then, in the study of the transfer mechanism. But here too, we must be on our guard. They are influenced by *many other factors* besides international capital movements. As already mentioned changes in commodity terms of trade may be due to shifts in real costs. But even if it were possible to compute the factorial terms, and thus to isolate the effects of changes in reciprocal demand, such changes may also occur, of course,

<sup>1</sup> *Loc. cit.*, p. 55. Cf. also Gottfried Haberler, *Der internationale Handel*, pp. 124—25. Note that a variation in the volume of goods which are exchanged directly for goods may alter the degree of divergence between net and gross terms, even though the absolute amount of the import or export surplus due to capital transactions remains the same.

independent of capital transfers. In deductive reasoning we may perhaps get around these difficulties by assuming other things to remain equal, but dealing with the complex phenomena of an actual historical development this assumption can only be made in exceptional cases.

## CHAPTER IX

### CREDITOR COUNTRIES

#### 1. FRANCE.

For the most comprehensive study of the transfer mechanism regarded from the point of view of the capital-exporting countries, credit is due to *Harry D. White*, who has examined the French foreign investments between 1880 and 1913.<sup>1</sup> The fact that France invested during the generation preceding the World War between one-third and one-half of her total savings abroad was a source of considerable controversy among French politicians and economists. Naturally, this controversy called forth a large number of monographs on French foreign investments, but, on the whole, the quality of this literature is deplorably low. At any rate, it gives no clues whatever to the understanding of the problems with which we are here concerned. We may turn at once, therefore, to White's study.

In order to avoid the confusion caused by the wars of 1870 and 1914 as well as the complications of bimetallism White confined his analysis to the period 1880—1913. He found the French statistical material much poorer than expected and expressly warns his readers that the probable error in many of his estimates and statistical series is greater than in similar material collected in England, U.S.A., and Canada. Nevertheless, he succeeded in constructing annual balances of payments, the most important items of which appear to be, on the whole, trustworthy. His main results relevant to the problem of foreign investments are tabulated below (table 8):

<sup>1</sup> *The French international accounts 1880—1913.*

TABLE 8.

Million francs	New French capital invested abroad	New foreign capital invested in France	Estimated net capital export	Interest and dividends due abroad	Interest and dividends due to France	Net revenue due to France	Net credit balance	Transfer balance on capital account
	(1)	(2)	(3) ✓	(4)	(5)	(6)	(7)	(8)
1880	170	50	120	200	710	510	-210	-390
81	770	50	720	205	725	520	-122	200
82	360	10	350	205	765	560	0	-210
83	255	20	235	205	785	580	55	-345
84	255	20	235	205	800	595	104	-360
85	450	30	420	205	820	615	158	-195
86	545	40	505	210	845	635	298	-130
87	740	40	700	210	835	625	734	75
88	845	40	805	215	875	660	609	145
89	725	40	685	215	920	705	831	-20
1890	620	30	590	220	910	690	943	-100
91	410	20	390	220	940	720	186	-330
92	510	20	490	220	960	740	489	-250
93	705	10	695	220	935	715	563	-20
94	495	10	485	220	970	750	367	-265
95	690	10	680	225	940	715	1080	-35
96	885	20	865	225	970	745	1159	120
97	575	30	545	225	900	675	846	-130
98	970	40	930	225	925	700	580	230
89	860	50	810	230	960	730	1125	80
1900	1050	50	1000	230	1000	770	869	230
01	1340	60	1280	235	1040	805	1090	475
02	1130	50	1080	235	1095	860	1368	220
03	1315	20	1295	240	1135	895	1065	400
04	1500	60	1440	240	1265	1025	1476	415
05	1690	70	1620	245	1325	1080	1503	540
06	1870	80	1790	245	1400	1155	1748	635
07	1250	30	1220	250	1480	1230	1369	-10
08	1540	50	1490	250	1530	1280	843	210
09	1520	60	1460	255	1600	1345	1972	115
1910	1900	70	1830	260	1760	1500	1960	330
11	1080	50	1030	260	1850	1590	785	-560
12	1370	30	1340	265	1895	1630	1372	-290
13	1155	40	1115	265	2065	1800	1149	-685
Total	31,545	1,300	30,245	7,780	37,930	30,150	28,364	95

With the aid of numerous scattered sources of information *direct* annual estimates of the capital movements into and out of France are made (columns 1—3). From these figures the annual interest and dividend payments due to and from France are computed on the basis of certain estimated rates of return (cols. 4—6). These sums, in turn, form the final link in the international balance sheet; when they are taken into account, it becomes possible to compute the "net credit balance" (col. 7), i.e. the net export of capital measured by the *indirect* method.<sup>1</sup> For the period as a whole the two estimates correspond fairly well, as, indeed, they ought to do, measuring as they do the same phenomenon. The annual figures, on the other hand, show several large discrepancies (1881, 1896, 1908, and 1909) in explanation of which White points to the probability that a time lag of varying length may exist between the transfer of titles to goods and services (as measured by the direct estimate) and the transfer of the goods and services themselves (as revealed by the indirect estimate). This problem, however, has already been dealt with in earlier connections.<sup>2</sup>

It may first be noted that contrary to common belief the *total* net revenue due to France in this period from her foreign investments was no greater than her *total* exports of capital in the same period; in other words, France had not yet become a "mature" lending country. For the period taken as a whole the total of net revenue—30.150 mill. francs—is approximately equal to the total of the estimated net capital exports—the direct and indirect estimates being 30.335 mill. francs and 28.365 mill. francs respectively.<sup>3</sup> That is to say, during this period France exported practically no domestic savings; she merely reinvested abroad her interest and dividend receipts from abroad. If this equality between investments and revenue had been present also year by year, no transfer problem at all would have existed. For, obviously, it is only the difference between these amounts which represents the sum to be transmitted on capital account (col. 8).

<sup>1</sup> It has already been pointed out (*supra*, p. 42) that these two methods are not wholly independent. But since no direct information exists regarding interest and dividend payments this is unavoidable.

<sup>2</sup> Cf. *supra*, pp. 43, 45, and 197—98.

<sup>3</sup> Some errors of calculation in White's figures have been corrected above. Cf. my *Review* of his book in *Nationalök. Tidskr.* 1934, p. 205.

In the absence of a balance of this sort the flow of gold, goods, and services would not have been affected; the transactions would be entirely confined to the foreign exchange market in which the demand for and supply of foreign bills would have been increased in the same degree.<sup>1</sup> But the *annual* net revenue was *not* equal to the annual net export of capital. As would be expected, the interest and dividend payments show a slow, but fairly steady growth, whilst the net investments abroad are subject to considerable fluctuations. Col. 8 shows that in the periods 1882—86, 1889—95 and 1911—13 interest receipts exceeded capital export, while during most of the remaining years the opposite was true. But in both cases the problem of the mechanism of transfer presents itself with regard to these amounts.

In attempting to trace this mechanism White carefully analyses all the possible means through which capital exports may influence, or be influenced by, merchandise movements.<sup>2</sup> He mentions three possibilities, none of which wholly excludes the others:

A. The export of capital is the cause of the movements of merchandise. This causal connection may be brought about in four ways:

1. Movements of the exchange rates.
2. Direct linking of capital export and commodity export.
3. Changes in price levels.
4. Shifts in demand schedules.

B. The movements of merchandise cause the export of capital. Here again four possibilities are mentioned:

1. Movements of the exchange rates. Increased imports may raise the rates of foreign exchange, thereby making foreign investments more expensive to the French investor.
2. Direct linking of commodity export and capital export.
3. Changes in discount rates. Increased imports may lead to a loss of gold which causes discount rates to go up, and this again may make domestic securities more attractive to the French investor.
4. Serious crop failures may curtail the rate of savings and thus affect capital exports, while bumper crops may serve to increase both food and capital exports.

<sup>1</sup> Cf. *supra*, p. 45.

<sup>2</sup> *Loc. cit.*, pp. 143 et seq., 214 et seq., and 302 et seq.



C. Both the export of capital and the movements of merchandise may be concomitant effects of the cyclical fluctuations in business activity.

Summarising his investigations of the relative importance of these different vehicles of adjustment in the case of France, White concludes that no single force was instrumental in maintaining the equilibrium of the French balance of payments, and he ventures the opinion that it seems very doubtful whether any one force is *ever alone* responsible for effecting a balance. Many forces making for adjustment are always involved, and each operates with a varying degree of effectiveness according to the particular situation.

Regarding the last possibility (C) White is unable to demonstrate any correlation between phases of business activity and volume of capital exports, and in the choice between the two first possibilities (A and B) he sides with Rueff rather than with Keynes.<sup>1</sup> The only exception worth mentioning is his admission that a crop failure may curtail domestic savings and thus decrease the export (or increase the import) of capital (B. 4). The other three cases (under B) are briefly dismissed. It was not possible to demonstrate any close correlation between discount rates and long-term interest rates as expressed in the prices of stocks and bonds, and the French merchandise and gold movements gave no indication of the sequence here suggested: increased commodity imports, loss of gold, rising discount rate (B. 3).<sup>2</sup> The nature of the majority of the French foreign investments also ruled out that they were the direct result of export, e. g. in the form of an extension of book credit granted to facilitate additional sales (B. 2). And since French foreign holdings consisted in large part of securities issued in France and kept in France, it could not be the slight changes in foreign bond prices caused by rising foreign exchange rates which were instrumental in bringing about the capital export (B. 1).

Similarly, White demonstrates that in spite of the pressure

<sup>1</sup> Cf. *supra*, pp. 67 et seq.

<sup>2</sup> The sudden increases in imports which occurred in 1891, 1894, 1898, 1903, and 1911 because of poor domestic crops were not accompanied by a decrease of gold imports save in two instances, in neither of which the discount rate was raised.

exercised by the French government, particularly during the last decade before the War, the requirements that the borrowed funds should be spent directly in France by the borrowers (A. 2) had only negligible effects on the balance of trade.<sup>1</sup> The same — he believes — was true of the movements of exchange rates (A. 1) within the gold points; French importers which he interviewed on the question claimed that they were not influenced in their decisions as to quantity or place of buying by changes in the rates of exchange. But in the French trade with countries not on the gold standard White admits, of course, that fluctuations in exchange rates may have been a more potent factor; and many of the heavy borrowers of French capital were in this class. France exported little to such countries, but she received more than one-fourth of her imports from them. White cannot, however, determine just how important the fluctuating exchange rates were as a means towards adjusting merchandise movements to capital exports, for that would require separate price and quantity indices for the imports from each of these countries; but his belief is that their influence was considerable.

Only two alternatives then remain — the "*specie-flow-price mechanism*" (A. 3) and the "*changes-in-demand-schedules mechanism*" (A. 4), or, in other words, the "classical" and the "modern" transfer explanations. To evaluate their relative importance in the case of France is the main concern of White's analysis. He spends most of his efforts in attempting to verify *the orthodox theory*, but, on the whole, with a negative result.

First White considers the relation between net *gold flows* and the movements of capital exports and merchandise balances.<sup>2</sup> No correlation is revealed by the annual figures. In years of increased capital exports, gold imports were sometimes high and sometimes low, and a similar irregularity was displayed, though to a lesser extent, in the relation between gold and merchandise movements. In the years 1904—05, for example, capital and merchandise exports increased greatly,

<sup>1</sup> Cf. *supra*, p. 87.

<sup>2</sup> *Loc. cit.*, pp. 147—48.

but gold imports also increased, so that, apparently, gold movements could not be a link in the mechanism of adjustment.<sup>1</sup>

To test in greater detail the neo-classical "gold-reserve — discount-rate — volume-of-credit sequence", White examines the French banking and money market statistics.<sup>2</sup> The most important of his figures are reproduced in table 9. He finds that between 1880 and 1901 there is a close correspondence between specie imports<sup>3</sup> and the increase in the *specie reserve of the Banque de France* (cols. 1—2); within a year or less the gold found its way into the bank to remain there permanently. In the years 1901—13 a large spread between the two movements appeared — the gold reserve of the bank increased by only 400 million, while the excess of specie imports totalled 4,000 million — but their *fluctuations* continued to be parallel.<sup>4</sup> And since the Banque de France is virtually the sole depository of

<sup>1</sup> For capital and merchandise movements monthly or quarterly figures do not exist. But after an examination of the monthly gold movements White suggests that if such figures had existed they might have shown the inverse correlation required by the classical theory. In 1904, for example, the large gold imports were received in two spring months. It may well be that the foreign borrowings of that year were not withdrawn till later, and that their transfer was accompanied, during the summer and autumn, by a great reduction in gold imports. In 1905, again, gold imports virtually ceased both in the spring and in the autumn, and it is possible that these were exactly the periods in which the capital exports were transferred. The same may have happened in other years, for monthly movements of gold were very irregular, and we know that capital exports were also subject to wide fluctuations within the calendar year. The possibility exists, therefore, that a comparison of monthly figures would reveal an inverse correlation although a comparison of annual figures shows the opposite.

<sup>2</sup> *Loc. cit.*, chs. VIII—IX.

<sup>3</sup> White constantly excludes silver bullion which was not freely coined after 1878 and could not serve, therefore, as reserve against note issue.

<sup>4</sup> To account for the difference between the two periods in this respect White points to the following factors: in the Eighties and Nineties the declining general price level reduced the need for circulating media; but at the same time the use of cheques and bank deposits increased, and the growing prestige of the Banque de France gave its notes a wider circulation than before. By 1900 this substitution of notes for coin had gone as far as was possible when the smallest denomination of notes was 50 francs; with the increase in prices and business activity a greater volume of coin was needed; notes also increased, but at a slower rate, because their substitution by cheques and book transfers continued. It would seem, then, that the increased gold circulation after 1900 was due neither to hoarding, nor to a radical change in money habits, but simply to a growing need for small units of currency.

TABLE 9.

	Excess of specie imports	Increase of Banque de France reserves	Index of note cir- culation 1900=100	Ratio of reserves to note circular- tion	Bank rate annual average	Market rate annual average
	(1)	(2)	(3)	(4)	(5)	(6)
1880	-181	-141	57	85	2.81	2.7
81	28	-150	63	71	3.84	3.6
82	51	122	67	74	3.80	3.5
83	- 89	- 18	72	69	3.08	2.5
84	90	7	72	69	3	2.5
85	133	141	70	76	3	2.5
86	100	247	69	86	3	2.2
87	-135	- 62	67	87	3	2.4
88	- 43	- 60	66	85	3.10	2.7
89	210	87	71	83	3.16	2.6
1890	-111	115	75	82	3	2.6
91	146	21	76	82	3	2.6
92	296	282	78	89	2.70	1.7
93	214	130	85	85	2.50	2.2
94	316	128	86	88	2.50	1.6
95	33	208	87	93	2.10	1.6
96	78	- 70	89	89	2	1.8
97	87	- 37	91	86	2	1.9
98	-132	- 85	91	84	2.20	2.1
99	88	- 38	94	80	3.06	2.9
1900	223	175	100	80	3.25	3.1
01	213	279	102	85	3	2.4
02	269	143	103	83	3	2.4
03	182	- 57	106	83	3	2.7
04	481	76	106	85	3	2.1
05	620	278	109	88	3	2.1
06	216	- 24	116	84	3	2.7
07	245	-258	119	76	3.45	3.4
08	920	273	120	81	3.04	2.2
09	165	567	126	89	3	1.7
1910	- 30	-263	128	82	3	2.4
11	126	-225	130	77	3.13	2.6
12	165	- 9	132	75	3.37	3.1
13	610	- 55	140	70	4	3.8

the specie reserves of all the French banks, these fluctuations in central bank reserves would seem to form the only connecting link between gold imports and the total volume of credit. It appears, however, that they had practically no influence on the expansion or contraction of credit on the part of the central bank (col. 3). Allowing for a setback in the period 1884—1888 the *note circulation* displays a continuous growth without marked fluctuations in the annual average. Consequently, most of the fluctuations in the ratio of reserves to notes (col. 4) were due to changes in the specie reserve.

As long as the gold was going into internal circulation the bank apparently regarded the fluctuations in its reserve rate with equanimity. Not so, however, when the gold threatened to go abroad. Notwithstanding its large gold reserves<sup>1</sup> the bank did not permit any large drain of specie to take place without attempting to check it. But of the two methods used for this purpose — the gold premium policy and the *discount policy* — it is only the latter which is relevant to the mechanism here contemplated, and the official discount rate was changed so seldom and within so narrow limits (col. 5) that it cannot possibly have served as an important instrument in this process of adjustment.<sup>2</sup> Increases both in gold premium<sup>3</sup> and bank rate were used to counteract short-term capital flows caused by the attractiveness of increased discount rates abroad, but not to curtail credit at home. During the entire 34 year period the discount rate was increased only three times because of declining specie reserves, and twice the cause apparently was hoarding, not an expansion of credit.

This confirms the general impression that it was the deliberate policy of the Banque de France to interfere as little as possible with the domestic price of short-term credit, and it

<sup>1</sup> Only once during the 25 years 1886—1910 did the reserve rate drop below 80 per cent.

<sup>2</sup> Between 1880 and 1913 there were only 30 changes in the Banque de France rate against 116 in the Reichsbank and 194 in the Bank of England rate.

<sup>3</sup> Obviously, the gold premium policy imposes only a *temporary* check on gold exports. If the pressure on the exchanges is due to more permanent causes, the imposition of a gold premium can only *postpone* the loss of gold. Yet White suggests that to some extent the postponement is equivalent to a permanent check, since the gold which, in the absence of the premium, would have left the country *and later flowed back*, may not move at all.

was enabled to carry through this policy, not only by its large and growing specie reserves, but also the relatively small development of deposit banking and, last but not least, by the sluggishness of French industrial life.<sup>1</sup> But the consequence of this maintenance of a stable rate of discount for periods as long as 3 to 5 years was, of course, that it became a *purely passive factor in the control of credit*. This is clearly seen when the movements of the discounts at the Banque de France are compared with the fluctuations of specie imports. They show an inverse correlation in almost every year except the few in which the bank rate was increased.<sup>2</sup> With discounts in the commercial banks increasing from year to year this inverse correlation signifies that a decrease in specie imports, by reducing the supply of available funds, forced the banks to turn to the Banque de France for some of the means necessary to satisfy the constantly growing demand.

So far, attention has been confined to the activities of the Banque de France. Turning to the movements of the *market rate*, i. e. the discount rate at which the large commercial banks bought in the open market in Paris certain kinds of prime bills (col. 6), White finds closer agreement with gold flows. In practically all years, except those in which the bank rate changed, specie imports and the market rate of discount moved in opposite directions; large specie imports coincided with relatively low market rates, and vice versa. This is the correlate to the inverse relation just mentioned between the discounts of the Banque de France and specie movements; naturally, the market rate increased in the years in which the commercial banks were forced to augment their rediscounts. Thus the fluctuations in the market rate appears to be strongly influenced by specie movements.

But here again the decisive question is, of course, whether the fluctuations in the market rate influenced the *volume of credit*. Allowing for the upward trend in the use of credit in order to discern the annual fluctuations in portfolios which may have been induced by movements in the market rate, White was unable to reveal any close relationship prior to

<sup>1</sup> Had the industrial expansion of France kept pace with that of Germany, England, and the United States, White reasonably doubts whether the discount rate would have shown such stability.

<sup>2</sup> Cf. the diagram on p. 198 in White's book.

1900 — if anything, there is a positive correlation between 1890 and 1896 — but from 1900 on, the movements of portfolios and of market rates are inversely correlated. He points out, however, that the increase in commercial portfolios which accompanies low market rates does not always represent an addition to the *total* quantity of bills discounted; in some years the increase was wholly or partly at the expense of the portfolio of the Banque de France.

On the whole — White concludes — the evidence of an inverse movement of the market rates and discounts is *not sufficient* to remove doubt as to their relationship. He admits the possibility that after 1900, when the volume of commercial discounts became more important than in the earlier decades, the market rate *may* have been “an important link in the chain connecting capital exports with merchandise movements”. If so, the only peculiarity of the French situation would have been that the “classical” specie-flow mechanism operated through the market rate rather than through the bank rate. But in spite of the apparent correlation after 1900 White finds it difficult to believe that the market rate actually *was* the chief instrument of adjustment. Market rates applied only to a small part of the discounts — the bulk of the discounting was done at the bank rate, or at rates slightly above or below it — and the spread between the bank rate and the rate available to any but the very large business houses was ordinarily so slight that it seems unlikely that business activity could have been sufficiently sensitive to respond to its movements.

It seems fairly certain, then, that in the case of France in this period gold flows did not affect prices through their influence on bank reserves, discount rates, and volume of credit in the way presupposed by the orthodox theory. White suggests, however, that gold movements may have influenced French prices in a more *direct* way *without the aid of changes in discount rates or volume of credit*, simply because coin played such a great rôle in hand-to-hand circulation. To test this possibility he attempts to determine the fluctuations in the total amount of money in circulation in France.<sup>1</sup> Com-

<sup>1</sup> For the year 1885 White's figure differs about 1.000 mill. francs from closely agreeing estimates made by Rist, Soetbeer, Haupt, and de Foville, and on this large discrepancy the author has no other comment than the audacious remark that it is “puzzling and there appears to be no reasonable explanation for it.”

paring the deviations from trends of the total volume of notes and coin and of the export price index he finds periods of several years — 1898 to 1902; 1904 to 1908 — when they move together; but there are other years — 1897, 1912 and 1913 — when the movements are in opposite directions. For a period of 8 years — 1882—1890 — the two series move together with prices lagging one or two years behind the quantity of money, but during the next 5 years money lags behind prices. Thus no clear evidence on this direct relationship between prices and money in circulation is revealed.

Up to this point White's results are entirely negative — and perfectly convincing. No substantiation of the classical explanation of the transfer mechanism seems obtainable from the French figures. But although White is thus unable to trace the connecting link, it appears to him that the movements of capital exports compared with the fluctuations in sectional price levels correspond so closely with the postulates of the classical theory that somehow there *must* exist a causal connection. At this point, however, White's results become more debatable.

At first he appears to give his approval to Taussig's distinction between gross and net barter terms of trade, spending almost a whole chapter (pp. 226—38) on ascertaining the gross barter terms. Yet, finally, he comes to the conclusion that the gross terms show nothing which is not more correctly indicated by the net terms. In order to compute these, White has constructed separate series of prices for imports and exports (table 10).<sup>1</sup>

The correlation which White finds when comparing fluctuations in capital exports and changes in net barter terms of trade is *not very high*. In order to explain that the terms of trade grew more favourable in the middle of the Nineties, in spite of increasing capital exports, he refers to the imposition of the Meline tariff in 1892 which helped to curtail imports and develop the necessary export surplus:

"This caused specie imports to increase greatly in 1892, 1893, and 1894. Thus the *transfer of purchasing power abroad* brought about by increased foreign investments was to a certain extent offset by an increase in purchasing power in France due to heavy gold imports and to a concomitant increase in the domestic demand for domestic goods, caused by the considerably increased cost of imports."<sup>2</sup>

<sup>1</sup> *Loc. cit.*, pp. 242—49.

<sup>2</sup> *Ibid.*, pp. 257—58.



TABLE 10.

1900 = 100	Import prices	Export prices	Net barter terms of trade	Estimated net capital export
	(1)	(2)	(3)	(4)
1880	122	126	97	120
81	114	122	93	720
82	112	120	93	350
83	106	116	91	235
84	101	108	93	235
85	96	104	92	420
86	94	103	91	505
87	97	99	98	700
88	99	99	100	805
89	103	102	101	685
1890	106	105	101	590
91	102	102	100	390
92	95	100	95	490
93	94	102	92	695
94	85	94	90	485
95	83	90	92	680
96	81	90	90	865
97	82	90	91	545
98	86	92	93	930
99	93	97	96	810
1900	100	100	100	1000
01	91	97	94	1280
02	92	96	96	1080
03	96	97	99	1295
04	100	96	104	1440
05	102	98	104	1620
06	112	102	110	1790
07	114	111	103	1220
08	102	105	97	1490
09	108	108	100	1460
1910	119	113	105	1830
11	118	115	103	1030
12	120	116	103	1340
13	122	116	105	1115

Curiously enough, White mentions the transfer of buying power in this connection, apparently without realising that this transfer may render superfluous those very changes in barter terms of trade which he is discussing. For the lack of correlation in some of the other years, particularly noticeable in 1901 and 1908, White frankly admits that he can offer *no explanation*,<sup>1</sup> and, in any case, he concedes that the correlations observed offer no proof that the price movements *were caused* by capital exports.<sup>2</sup> Without direct application of the concept of "factoral terms of trade", White suggests<sup>3</sup> that a shift in net barter terms of trade may be due, not only to monetary factors connected with international movements of capital, but also to changes in real costs,<sup>4</sup> and that in the case of France monetary and credit factors, at any rate, were not the sole cause. There were times when the net barter terms were considerably affected by changes in the cost of a few important commodities.<sup>5</sup>

Finally, it should be mentioned that statistics of annual *wage movements* in France between 1880 and 1913 were too meagre for constructing a wage index; only the wages of coal miners are known through the whole period. They show, if anything, the opposite of the inverse correlation between net barter terms of trade and money wages, which the classical theory would lead us to expect.

White also takes up *the modern transfer explanation* for detailed critical examination in the light of his inductive material. He points out explicitly that the postulated adverse change in the barter terms of trade *assumes* that the adjustment of equilibrium must be brought about through changes in price levels, and will not necessarily occur in so far as

<sup>1</sup> *Loc. cit.*, p. 167.

<sup>2</sup> *Ibid.*, p. 171.

<sup>3</sup> *Ibid.*, p. 253—57.

<sup>4</sup> He might have added: and to independent changes in "reciprocal demand."

<sup>5</sup> In 1900, e.g., because of the Boer War, cotton increased 40 per cent, coal 35 per cent, and wool 22 per cent. Their increased costs were almost wholly responsible for the rise in the French import price level; they formed 20 per cent of the French imports of that year.

adjustment is effected through *changes in demand schedules*.<sup>1</sup>

Before attempting to ascertain whether these shifts in demand curves resulted in increased exports or decreased imports of *sufficient magnitude* to correct the disequilibrium, White examines the ways in which the initial transfer of monetary buying power may actually take place. For he rightly contends that the shifts in demand schedules can occur only if this transfer does take place.<sup>2</sup> White recognizes *two media of transfer*: (1) gold flows, and (2) movements of short-time foreign balances.<sup>3</sup>

Thus we are confronted once more with *gold movements*. As already mentioned no correlation, positive or negative, could be demonstrated between annual net gold movements on one hand and capital exports or merchandise movements on the other. In this connection, White makes the interesting suggestion, however, that the importance of gold as a means of international transfer of purchasing power cannot be measured from *net* gold flows. On the other hand, it would be an exaggeration to use the sum of the *total* flows of gold as a measure of the transfer of purchasing power. If the outward and inward flows are too close together — occur, say, within one week — they can hardly exercise any effect on demand schedules. But the period elapsing between an outward and inward movement of gold may well be too short to permit of any appreciable effect on sectional price levels, and yet be quite long enough to influence merchandise movements through shifts in demand schedules. Thus, in the case of increased French capital export, the immediate consequence may be an outflow of specie to the amount of all or part of the loan. In the borrowing countries the added purchasing power in form of receipts of gold will cause demand curves to shift to the right, increase imports relatively to exports, and bring about a *counterflow of gold* which will leave the net imports of gold much smaller than the total imports. In France the converse will occur; the immediate outflow of gold contracts purchasing power, increases the merchandise export surplus and causes at least part of the gold to return.

<sup>1</sup> *Loc. cit.*, p. 224.

<sup>2</sup> Cf. *supra*, p. 289.

<sup>3</sup> *Loc. cit.*, pp. 30 et seq. and 147 et seq.

In France, between 1880 and 1913, the ratio of total to net gold flows was 28.000 to 6.500 mill. francs; during few years only the movement in either direction was less than 200 mill. francs, so that this amount at least does not appear in the annual net figures. And a significant portion of this gold remained either away from or in the country for several months at a time, as indicated by the fact that, in almost all the years, there was, for several consecutive months, either a net export or a net import of specie.

Moreover, the importance of these cancelling movements of gold as a means of adjusting balances is to be measured by comparing them, not with the total of international transactions, but rather with that portion of the international accounts which serves to disrupt an existing equilibrium. White refers to this significant portion of the total of international transactions as being the "*marginal transactions*". Just as in the determination of prices it is the little more or little less demanded or supplied — rather than the total demand and supply — which is significant, so, in adjusting the international accounts, it is the fluctuating portion of the transactions to which attention must be directed. Though it is impossible to determine even roughly the proportion which these sums bear to the total of international transactions, it is certain that the proportion is small. The importance, therefore, of gold flows as a means of transferring purchasing power and adjusting disequilibrium is much greater than appears at first glance.

*Movements of short-term funds* were probably of less importance than gold flows as a means of transferring purchasing power. The absence of a free gold market, with the consequent greater exchange risk, discouraged such movements. The *Banque de France* did not keep any foreign bills in its portfolio till after 1909, but the *commercial joint-stock banks and private banking firms* obviously kept some funds on deposit in foreign money markets. How large these deposits were, and to what extent they fluctuated, it is impossible to say, however, because no records of such movements appear in the banking statistics.

Finally, White points out<sup>1</sup> that the effect of both gold flows and short-term credits is greater than their volume would indicate because the same quantity of purchasing power can be employed *many times* before being finally liquidated.

But all this rests on *general reasoning*. Inductively, White is no more able to verify the modern than the classical transfer theory. Seeing that Russia, e.g., during the 34 years borrowed 10,000 mill. francs and spent on French goods only 1,000 mill. francs—less than 4 per cent of her total imports—he can easily conclude that *directly* France secured only a very small share of such additional imports as resulted from the increased Russian demand schedule. But he is well aware, of course, that French exports may, none the less, have been *indirectly* affected by the increased demand schedules of the borrowing countries. The French loans to Russia may have increased Russia's demand for goods from England and Germany. These two countries were heavy exporters to Russia, and the increase in their sales to Russia may have led in turn to increase in their demand schedules; France may then have exported more merchandise to Germany and England as a result of her loans to Russia.

But of these indirect effects it is impossible to get statistical verification. It is completely out of the question to separate in the trade statistics the exports caused by shifts in demand from the exports caused by other factors. And it is equally impossible to determine to what extent imports were reduced by a shift to the left in the French demand schedule caused by the export of capital. Yet, the reduction was probably not inconsiderable. Any decrease in the domestic expenditure on either capital or consumers' goods involves necessarily a reduction in the consumption of raw materials. In the case of France the common raw materials (coal, wool, cotton, copper, chemicals, rubber, oil) formed an important part of the imports; it is reasonable to assume, therefore, that a transfer of purchasing power from France to a foreign country reduced the French imports of raw materials.

In view of his almost wholly *negative results* the preceding detailed review of White's inductive studies might be deemed

<sup>1</sup> *Loc. cit.*, p. 150.

unnecessary. It is not, however. It serves the important purpose of bringing into clear relief the *limitations* which encounter *any* attempt to verify this section of the theory of international trade. The impossibility of ruling out price changes, occurring for any number of reasons, prevents us from determining statistically what proportion of the changes in the volume of merchandise imports and exports is due to changes in demand schedules, and what proportion to changes in sectional price levels.

## 2. GREAT BRITAIN.

Various attempts have been made at estimating the volume of British foreign investments and ascertaining their effects on economic conditions in Great Britain and the world at large.

The standard work has long been *C. K. Hobson's* study from 1914.<sup>1</sup> The statistical part of Hobson's work consists mainly of a computation of the most important "invisible" items of the annual balances of payments for the period 1870—1912. He adds together freight receipts, commissions, insurance premiums and the like, and "home charges," i.e. certain colonial governments' expenditures in England, emigrants' remittances, ships sold abroad, etc. And against all these current credit items he puts as the only current debit item the surplus import of commodities and specie. The difference between these debits and credits then represents the net amount to be transferred on capital account, cf. table 11. As we have seen before, this balance of capital and interest transactions is a resultant of the fluctuations in four unknown quantities: capital export and capital import, interest payments due to England, and interest payments due to other countries. Hobson makes the simplifying assumption that the slowly, but steadily growing foreign investments in England have tended to offset, year by year, the interest payments due on such investments from previous years. On that assumption Hobson's balance indicates the difference between the annual export of capital and the annual interest and dividend receipts from abroad. Finally, the former amount, the capital export, is computed by making

<sup>1</sup> *The export of capital*, London 1914.

TABLE 11.

Million £	Invisible credits	Import surplus	Transfer balance on capital account	Interest and dividends due to England	Net export of capital
	(1)	(2)	✓ (3)	(4)	(5)
1870	57.5	69.8	+ 12.3	44.0	31.7
71	69.2	51.7	- 17.5	46.0	63.5
72	74.9	39.4	- 35.5	48.0	83.5
73	87.3	65.0	- 22.3	50.0	72.3
74	80.9	79.9	- 1.0	52.0	53.0
75	75.0	98.0	+ 23.0	49.5	26.5
76	76.0	125.9	+ 49.9	46.5	- 3.4
77	76.6	139.5	+ 62.9	47.5	- 15.4
78	80.7	129.0	+ 48.3	47.0	- 1.3
79	74.6	109.8	+ 35.2	47.3	12.1
1880	76.8	122.2	+ 45.4	49.5	4.1
81	77.0	94.3	+ 17.3	50.5	33.2
82	80.7	108.9	+ 28.2	52.5	24.3
83	83.4	122.3	+ 38.9	55.0	16.1
84	76.4	92.4	+ 16.0	57.0	41.0
85	69.6	99.7	+ 30.1	64.0	33.9
86	69.1	80.3	+ 11.2	73.0	61.8
87	71.9	82.6	+ 10.7	77.5	66.8
88	80.4	88.4	+ 8.0	82.5	74.5
89	96.8	114.0	+ 17.2	86.0	68.8
1890	92.3	101.2	+ 8.9	91.5	82.6
91	87.2	128.7	+ 41.5	90.0	48.5
92	79.9	135.6	+ 55.7	90.0	34.3
93	80.3	131.2	+ 50.9	91.0	40.1
94	78.6	145.3	+ 66.7	88.0	21.3
95	78.1	145.9	+ 67.8	90.5	22.7
96	85.8	139.0	+ 53.2	92.5	39.3
97	90.1	156.0	+ 65.9	93.0	27.1
98	101.4	182.7	+ 81.3	98.5	17.2
99	103.4	174.5	+ 71.1	99.0	27.9
1900	117.0	184.8	+ 67.8	99.0	31.2
01	100.4	189.5	+ 89.1	103.0	13.9
02	96.4	190.3	+ 93.9	105.0	11.1
03	101.3	186.3	+ 85.0	108.0	23.0
04	102.4	183.7	+ 81.3	108.5	27.2
05	110.3	169.0	+ 58.7	121.5	62.8
06	132.1	157.7	+ 25.6	130.0	104.4
07	143.3	143.1	- 0.2	140.0	140.2
08	124.0	140.1	+ 16.1	146.0	129.9
09	124.2	167.6	+ 43.4	153.5	110.1
1910	144.4	159.6	+ 15.2	166.0	150.8
11	156.1	134.9	- 21.2	171.0	192.2
12	207.3	157.3	- 50.0	176.0	226.0

annual estimates of the size of the interest payments due to England.

The question of the *mechanism* of international capital movements was not taken up by Hobson. Attention to this aspect of the problems relating to British foreign investments was first given by Taussig in an article<sup>1</sup> which was an offshoot of an interesting controversy between Sir William Beveridge, J. M. Keynes, and others on recent changes in England's terms of trade.

Looking at the international economic transactions of Great Britain during the last 150 years in their broad outlines, Taussig at once admits the impossibility of pushing the verifying process very far. That an excess of exports was the rule until about 1850, while after that time, an import surplus predominated is, of course, in harmony with expectations, since it was in the middle of the century that England was turned from a "young" into a "mature" lending country. But as soon as the question arises just *how* this result was brought about, the observed phenomena do not suggest a clear and unequivocal answer.

The first problem concerns the *movements of gold*. They were usually of small volume compared with capital or merchandise movements and are mostly to be explained on other grounds than fluctuations in the export of capital (financial disturbances, crop failures, increasing gold production, etc.). Stressing the fact that the English monetary and banking system was of a highly sensitive type, Taussig assumes that

"specie movements into the country or out of it, even tho small in comparison either with the country's total monetary stock or with the volume of merchandise imports and exports, none the less had a prompt effect on its credit and currency structure, and so on the movement of prices and money incomes. If they are steadily in the same direction, their effect is cumulative. Reasoning in this way, we can maintain that the observed movements, tho clearly the resultant of many and interacting factors, are yet not inconsistent with the general reasoning. This cannot serve as verification; but it is no ground for saying that there is failure of verification."

But exactly because the movements of prices and incomes were "clearly the resultant of many and interacting factors."

<sup>1</sup> *The change in Great Britain's foreign trade terms after 1900*. Ec. Journ. 1925, cf. *International trade*, pp. 236 et seq.



it becomes impossible to ascertain to what extent and in what direction they were affected by the one factor in which we are interested here: the outward flow of capital. Prima facie Taussig would expect a tendency towards falling prices and falling money incomes until the middle of the nineteenth century and thereafter a reversed movement: rising prices and rising money incomes. The actual development is much less regular:

"From 1775 to 1815 prices rose, but incomes rose still more.

From 1820 to 1851 prices fell 35 per cent, while incomes remained nearly steady.

From 1851 to 1873 prices rose 50 per cent, but incomes rose 60 per cent.

From 1873 to 1895 prices fell 45 per cent, while incomes fell, but rose again to the 1873 level.

From 1895 to 1901 prices rose 12 per cent, but incomes rose 15 per cent."<sup>1</sup>

It is perhaps not impossible to find plausible explanations of these fluctuations in the general levels of prices and incomes, but—as Taussig himself remarks—this is to explain the facts in the light of a theory deemed sound, not to test the soundness of the theory by the figures. And the fact remains that periods of active lending were characterised by rising rather than by falling prices, and that the export of goods apparently took place, not in connection with a cheapening of goods in the lending country, but in spite of the fact that its goods seemed to become dearer at times of great capital export.

One might argue, of course, that what counts in this connection is not the movements of the British price level taken by themselves, but rather the *relation* between the trend of prices in England and elsewhere. All that the classical theory requires is that increased foreign investments should be accompanied by a *relative* fall in British prices; it might well come about by prices rising less or falling more in England than in other countries. And available wholesale price indices for different countries do, in fact, show considerable divergencies. But quite apart from differences in the methods by which these indices have been computed, the different national price levels have been subject to so many special influences in the

<sup>1</sup> A. Bowley, *England's foreign trade in the nineteenth century*, 2. ed., p. 106.

course of a century that it would be rash to try to unravel the effects of this special factor.<sup>1</sup>

For the period between 1880 and 1914 Taussig scrutinizes the data in greater detail. In the figures reproduced in table 11 he finds, of course, an inverse correlation between capital exports and excess of merchandise imports: as the capital exports rise, the excess of imports shrinks, and vice versa. But to his astonishment this correlation is *direct and immediate* without indication of the lag to be expected from the working of the classical specie-flow-price mechanism, and he must concede, once more, that it is impossible to say whether this mechanism has actually been at work or not.<sup>2</sup> Taussig's doubts are confined, however, in the main, to the part played by *gold movements* in bringing about the expected price changes, and do not extend to what really is the major issue: the rôle played by these *price changes* themselves, by whatever route they may have been initiated. The complicating element in the British situation is, of course, that the distribution of the world's gold supplies takes place largely through the London market. Taussig suggests that a searching examination step by step of the flow of gold into and out of the country, of the Bank of England's reserve holdings and discount policy, and of the reserves, interest rates, loan operations, and deposits of the commercial banks, might show that "the process was not always so rapid as it seems to be on first inspection," but he has not found it practicable to carry out this comprehensive task.<sup>3</sup> Instead he turns at once to the final outcome, the barter terms of trade, and on this point he finds the classical reasoning confirmed by his figures.

The data on which Taussig's conclusions rest were compiled by A. G. Silverman,<sup>4</sup> whose computation of the *net barter terms of trade* is reproduced in table 12. It appears that

<sup>1</sup> Cf. e.g. Ohlin, *Interregional and international trade*, ch. XXV; W. T. Layton, *An introduction to the study of prices*, London 1920, pp. 150—51; Harvard Economic Service, *Weekly Letter*, June 10, 1922.

<sup>2</sup> *Loc. cit.*, pp. 259—62, cf. *supra*, p. 227.

<sup>3</sup> Such an inquiry will probably be found in A. G. Silverman's forthcoming study, *The international trade of Great Britain 1880—1913*.

<sup>4</sup> *International trade*, Appendix I.

TABLE 12.

1900 = 100	Import prices (1)	Export prices (2)	Net barter terms of trade (3)	Money wages (Board of Trade) (4)
1880	135	109	124	83
81	134	104	129	85
82	132	104	127	86
83	124	100	124	86
84	120	96	125	85
85	113	92	123	84
86	106	87	122	83
87	105	86	122	83
88	107	87	123	85
89	108	89	121	88
1890	107	95	113	90
91	107	94	114	92
92	103	89	116	90
93	101	88	115	90
94	94	84	112	89
95	90	81	111	89
96	92	82	112	90
97	91	81	112	91
98	92	81	114	93
99	93	87	107	95
1900	100	100	100	100
01	97	95	102	99
02	96	91	105	98
03	97	91	107	97
04	97	92	105	97
05	98	92	107	97
06	102	97	105	98
07	107	102	105	102
08	102	98	104	101
09	103	94	110	100
1910	110	98	112	100
11	107	100	107	100
12	109	102	107	103
13	109	106	103	106

between 1880 and 1900 the terms became markedly more favourable to Great Britain, while after 1900 the tendency was the other way, so that more and more exports were necessary to procure a given quantity of imports. Moreover, these fluctuations in the terms of trade seemed to be inversely correlated with the movements of *money wages*. In the first period when the terms turned more in England's favour, money wages rose, while after 1900 they remained nearly constant. This failure of English money wages to rise after 1900 had been recognized by economists as a puzzling phenomenon, or at least one calling for explanation.<sup>1</sup> Now Taussig suggested that the explanation might be, in part at least, that the conditions of international trade had changed. The decade after 1900 was one of extraordinary economic activity, in which an upward movement of wages might reasonably have been expected; but it was also a period of greatly increased capital export. The effect of this factor, standing alone, according to the classical theory, would be a lowering of domestic prices and money incomes; coming as it did at a time when other factors were causing a world-wide rise in prices, its effect was to prevent money incomes, including wages, from going up as much as they otherwise would.

All this may sound very plausible, but on closer inspection Taussig's results are by no means as conclusive as he believes. As soon as we turn back to the discussion which roused Taussig's interest in the British figures, we are at once confronted with a number of *other forces* which may be wholly or partly responsible for the observed movement in the barter terms of trade.

As early as 1912 Keynes had called attention<sup>2</sup> to the unfavourable shift in the terms of trade during the first decade of the new century. His explanation was that the law of diminishing returns after a temporary lull had been "setting in sharply in quite recent years," so that there was again a steady tendency for a given unit of manufactured products to purchase year by year a diminishing quantity of raw products, thus moving the comparative advantage in trade sharply against industrial countries. But it was not until this contention

<sup>1</sup> Cf. e.g. Pigou, *Ec. Journ.* 1923, p. 163.

<sup>2</sup> In a note in *Ec. Journ.*, pp. 630—31.

was repeated by Keynes after the War in his famous book, "Economic consequences of the peace"<sup>1</sup> that it gave rise to discussion. Sir William Beveridge in an address in 1923 on "Population and unemployment"<sup>2</sup> dealt with it in great detail and came to the conclusion that

"Mr. Keynes' fears seem not merely unnecessary but baseless; his specific statements are inconsistent with facts. Europe on the eve of war was not threatened with a falling standard of life because Nature's response to further increase in population was diminishing. It was not diminishing, it was increasing . . .; the real cost of corn was not rising, it was falling."

In a reply Keynes reaffirmed his position with two modifications:<sup>3</sup> he placed the turning point at 1903 rather than at 1900 (the figures of the period 1899—1903 being much upset by the South African war and by the boom and subsequent depression within that period), and emphasized more decidedly the cessation of improvement and less decidedly the actual deterioration between that date and the outbreak of war.<sup>4</sup>

In a rejoinder<sup>5</sup> Sir William Beveridge pointed out that Keynes completely ignored all changes in manufacturing technique, both absolutely and relatively to agricultural technique; the relation between the price of manufactures and the price of food was a resultant of at least four variables: efficiency of production in industry and in agriculture, demand for industrial and agricultural products. Consequently, the change observed by Keynes might be just as good evidence of an increasing return in industry as of a decreasing return in agriculture; to prove his case, Keynes would

<sup>1</sup> London 1919, ch. II.

<sup>2</sup> Ec. Journ. 1923, pp. 447—75.

<sup>3</sup> *Ibid.*, pp. 476—86.

<sup>4</sup> D. H. Robertson (*A word for the devil*, *Economica* 1923) rightly argues that "whether our standards were rising slightly or falling slightly between 1900 and 1910, there can be no doubt that they were miserably lower than we should have wished, and equally little doubt, surely, that they would have been higher if there had been fewer of us." The activity of the Malthusian devil is not disproved, in other words, merely by showing that average welfare is rising; it must be shown that it is rising faster than it would have done if population had been growing more slowly, that is to say, that average welfare is increased in consequence of a growth in population. A similar definition of over-population is given by Hugh Dalton (*The theory of population*, *Economica* 1928, p. 32).

<sup>5</sup> *Mr. Keynes' evidence for over-population*, *Economica* 1924.

have had to make the improbable assumption that improvements in manufacturing technique stopped altogether after 1900.

With this discussion preceding, it is not surprising that the validity of Taussig's conclusions was soon questioned. At once D. H. Robertson<sup>1</sup> raised the same criticism against Taussig which Sir William Beveridge had directed against Keynes, that he gave no hint that the "worsening" of Great Britain's terms of trade between 1900 and 1914 does not necessarily imply a diminishing command of British *labour* over foreign *goods*, still less over foreign *labour*. If improvement in the effectiveness of labour applied to manufacture continued unabated during the period, while improvement in the effectiveness of labour applied to agriculture received a temporary check—which Robertson found some reason to suspect—a fall in the value of machinery is quite consistent with an increasing value of British engineering labour in terms of wheat, and still more in terms of foreign agricultural labour.

That other factors than the outflow of capital must have been chiefly responsible for the variations in the terms of trade, is also strongly suggested by Ohlin.<sup>2</sup> He makes two interesting comparisons: (1) in the last half of the Eighties the export of capital increased very considerably, and yet the terms of trade did not move against Great Britain, but showed an improvement *greater* than that of the next five-year period, when the capital export declined in about the same degree; (2) in the years 1900—04, when the export of capital was rather insignificant, and in 1911—13, when it reached enormous proportions, the barter terms of trade were *practically the same*. — Ohlin suggests that the improved trade terms before 1900 were due to the cheapening of food imports from oversea countries owing to the improvements in transport conditions;<sup>3</sup> if this be true, it would be an indirect, long-term effect of the

<sup>1</sup> In a *Review of International trade* in *Ec. Journ.* 1928, p. 277.

<sup>2</sup> *Interregional and international trade*, pp. 470—72.

<sup>3</sup> In his noteworthy article *Some aspects of protection further considered* (*Quart. Journ. of Ec.* 1923, pp. 216—17) Frank D. Graham incidentally remarks that the play of reciprocal demand was probably also operating to England's advantage during the nineteenth century, since the secular trend of world demand must have been increasing for manufactured goods relatively to the commodities of extractive industry.

British capital export running counter to the immediate worsening of the terms which, according to classical reasoning, an export of capital occasions. Ohlin's considerations do not show, of course, that such worsening never occurs, but they obviously speak in favour of a theory where such changes play a minor rôle.

Recently, Silverman has supplemented the annual data which formed the basis of Taussig's corroboration of the classical theory by *monthly series of export and import prices* for the same period.<sup>1</sup> A computation of the net barter terms of trade on the basis of these new figures seems to show that for the greater part of the period increased capital export coincided with *more* and not with less favourable terms of trade. The two sets of data are not directly comparable, however, for Silverman is concerned with annual variations, while Taussig dealt with trends. A comparison of trends somewhat diminishes the conflicting character of the two studies. For Silverman's new figures display a downward trend for the early part of the period, though less marked than the one found by Taussig, while both in the Nineties and in the present century the terms appear to remain almost constant in spite of large variations year by year.

Yet, all things considered, the British case can hardly be said to offer conclusive verification of the classical transfer theory. Even Keynes recognizes<sup>2</sup> that British experience during the nineteenth century has lent much support to the modern view.

### 3. THE UNITED STATES.

The third of the large creditor countries of the world to-day is the United States. Here again, attempts have been made to find out inductively by what mechanism international capital movements take place. And here again, the results have been, in the main, negative.

The transition of the United States from the position of a borrower to that of a lender being of so recent origin, the first step in studies of this sort—the determination of the size of

<sup>1</sup> *Monthly index numbers of British export and import prices, 1880—1913*, Rev. of Econ. Stat. 1930. Cf. also his article, *Some international trade factors for Great Britain*, *ibid.* 1931.

<sup>2</sup> *A treatise on money*, p. 330. Cf. *supra*, p. 296.

the annual inflow and outflow of capital—is made comparatively easy by the large amount of work which has been done in the last decade by public authorities in establishing a reliable annual balance of payments.<sup>1</sup> The pertinent figures are summarised in table 13.<sup>2</sup> It appears that several of the princi-

TABLE 13.

Million \$	Excess of merchandise export	Total capital movements	Long-term capital	Short-term capital	Interest and dividends	Other services	Gold	Errors and omissions
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1919	4259	-2825	.....	.....	50	-562	+160	+1082
20	3079	-1174	.....	.....	50	-762	- 50	+1143
21	1865	- 834	.....	.....	80	-672	-667	- 228
22	432	- 251	-770	+ 519	537	-495	-238	- 15
23	96	+ 100	+ 96	+ 4	581	-487	-294	- 4
24	740	- 541	-762	+ 221	603	-495	-258	+ 49
25	428	- 678	-590	- 88	620	-540	+134	- 36
26	112	- 221	-586	+ 365	632	-473	- 98	- 48
27	417	+ 283	-722	+1005	679	-572	- 6	+ 801
28	738	-1032	-684	- 348	680	-684	+392	+ 94
29	382	- 134	- 94	- 40	699	-681	-175	+ 91
30	386	- 687	-224	- 463	769	-580	-280	- 392
31	17	- 165	-233	- 398	621	-493	-145	- 165
32	150	- 699	-247	- 946	455	-504	+446	- 152
33	87	- 248	-116	- 364	308	-244	+140	+ 43

<sup>1</sup> Very detailed and careful estimates of the balance of payments are now published annually by the Department of Commerce (in *Trade Information Bulletins*; also to be found in the *Memoranda on trade and balances of payments*, edited by the League of Nations). This official compilation of the entire international balance was begun in 1922. In the years immediately preceding, J. H. Williams and others collected similar material, though on a less extensive scale, and published it in the *Review of Economic Statistics*. Here also appeared a scholarly survey of the course of American foreign trade in the preceding century by Bullock, Williams and Tucker (*The balance of trade of the United States*, Rev. of Econ. Stat. 1919).

<sup>2</sup> Source: 1919-21: U.S. Department of Commerce, *Trade Information Bul. No. 339*, p. 503. — 1922-26: *Balances of payments 1930*, Geneva 1932, p. 168. — 1927-33: *Statistical year book of the League of Nations 1933-34*, Geneva 1934, p. 196. The classification of items is somewhat different in these publications, and as already mentioned



pal items have undergone extraordinary and often abrupt changes in the post-war period. This is particularly true of the excess of merchandise exports and the net movements of capital. Moreover, there has been a remarkably close correlation between the violent annual fluctuations in these two items, whereas the slow and steady movements of the invisible service items suggest that they have been comparatively inert elements in the situation. But when it comes to the details of the mechanism connecting capital flows and merchandise movements the results of the statistical inquiries are puzzling.

An analysis of the development 1919—26 undertaken by Taussig<sup>1</sup> is merely designed—to use his own words—to show how long the post-war conditions in the United States retained an unusual character and how little they lend themselves to explanation on the lines of the general theory of international trade. In Taussig's language the "general theory of international trade" is, of course, the *classical* doctrine. Naturally, therefore, he turns first to the relationship between *gold flows* and the movements of capital and merchandise. The first three years are briefly dismissed as dominated by transient and abnormal causes. Yet the remark is ventured that these years show "just the contrary of what would be expected under a naïve conception of the theory of the case": a huge excess of exports accompanied by a net outflow of gold, then a drop in the export surplus and a huge inflow of gold. Naïve indeed, the analysis would be, which did not at once compare the movements of commodities and gold with the fluctuations in the net balance to be transferred on capital account. Without doing this, one cannot properly speak of "the inflow of specie

the figures from 1922 onward are much more detailed. Owing to errors and omissions a perfect balance cannot be obtained. The great discrepancies in 1919 and 1920 are partly explained by the contemporary accumulation of short-term credits (including book credits), for which no estimates are available; a large part of the credit balances thus built up simply disappeared during the collapses in 1920—21, when it appeared that many foreign buyers could not pay their debts, and that many goods sent in expectation of profitable sale had to be disposed of at a sacrifice. The large discrepancy in 1930 is probably due to the special difficulties in estimating certain items during a period of rapidly changing prices and business conditions; immigrants' remittances and tourists' expenditures abroad e.g. may have been over-estimated.

<sup>1</sup> *International trade*, pp. 318 et seq.

which would presumably ensue with the continuing enormous excess of exports".<sup>1</sup> But when, finally, the gold did pour in, between 1921 and 1924, and a more "normal" balance of trade was restored, this was no less perplexing in Taussig's eyes. For the result was not reached by the process which his general reasoning would lead him to regard as "normal," i.e. by the classical transfer mechanism. To demonstrate this is easy enough. Taussig describes how the Federal Reserve System was established in 1913 with the express design, among others, of making the currency system of the United States less sensitive to gold movements. Subsequent legislation, concentrating virtually all American gold reserves in the vaults of the Reserve Banks, had strengthened the buffer thus created against the impact of gold flows. And the system did become insensitive to gold movements.<sup>2</sup> Neither the outflow in 1919, nor the enormous inflow in 1921—24 affected prices in the way expected. And yet the adjustment of the different items in the

<sup>1</sup> *Loc. cit.*, p. 331.

<sup>2</sup> In an interesting study of "*Money, gold, and income in the United States 1921—32*" (*Quart. Journ. of Ec.* 1934) Lauchlin Currie presents the following figures:

1000 mill. \$	Monet- ary gold stock	Total money supply (demand deposits and cash)	Gold as per cent of money	Per- centage change in gold	Per- centage change in money	National income	Per- centage change in income
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1921	3.3	22.0	14.9	.....	.....	62.1	.....
22	3.8	21.7	17.4	+ 15.6	- 1.1	65.5	+ 5.5
23	4.1	22.9	17.7	+ 7.0	+ 5.5	74.4	+ 13.6
24	4.5	23.3	19.2	+ 10.8	+ 1.8	75.9	+ 2.0
25	4.4	24.9	17.5	- 2.9	+ 6.6	80.5	+ 6.1
26	4.4	25.6	17.4	+ 2.0	+ 2.9	84.7	+ 5.2
27	4.6	26.3	17.4	+ 3.1	+ 2.8	86.8	+ 2.5
28	4.1	26.7	15.4	- 10.4	+ 1.3	89.2	+ 2.8
29	4.3	26.7	16.2	+ 5.2	+ 0.1	92.9	+ 4.1
30	4.5	25.7	17.6	+ 4.9	- 3.7	85.4	- 8.1

It appears that only in two of the years, 1926 and 1927, did money and gold change proportionally, and that there has also been very little correspondence between changes in gold and in money incomes.

balance of payments was carried through. To explain how this could happen brings Taussig to his wit's end:

"One would argue that such an absorption of gold could not go on indefinitely without enlivening and enlarging the circulating medium as a whole. Eventually there must be rising prices, then increased importations, and thus in the end a readjustment of imports and exports. But it was not eventually, it was promptly, that the equalization of the imports and exports took place. The insensitive character of the monetary system kept the price level impassive and unchanged; yet the new and presumably normal relation between imports and exports none the less was reached with comparatively little delay."

In complete despair he exclaims at last:

"To put it in the fewest words, things just *happened* so . . . The gold which did come in during 1920—24 had no traceable effect on the merchandise imports and exports. Neither did it have an effect on the other item whose marked fluctuations were important in the final balance of payments—the export of capital. To repeat, it all just happened. One can make out nothing in the nature of an ordered sequence, of conformity to rule or to reasoning."

It was probably the feeling that this could not be the last word on this question which led *James W. Angell* to re-examine the case two years later.<sup>1</sup> With equally negative result, however. He admits at the outset that the older classical doctrine running in terms of specie flows with resulting changes in prices and balances of trade requires "at least very considerable modification, if indeed it can be retained at all." We have already seen, however, that the modifications suggested by Angell in order to take account of the growth of deposit banking, are of comparatively slight importance.<sup>2</sup> And here his main concern is also *the failure of prices to behave in a way consistent with the classical theory*. The war-time rise in prices went on, it is true, well into 1920, but then a violent and sudden drop occurred, although the continuous decline in the net capital export from 1919 to 1921, taken by itself, should have led to a continued upward trend. In the period from 1922 to 1926 Angell finds that at times prices moved, though in a very small degree, in the ways which the wide fluctuations in

<sup>1</sup> *Equilibrium in international trade: The United States 1919—26*, Quart. Journ. of Ec. 1928.

<sup>2</sup> Cf. *supra*, pp. 236—37.

capital and merchandise movements apparently required,<sup>1</sup> but at other times they quite distinctly did not; and at all times since 1921 the characteristic feature of the American price level was "its *massive stability* rather than its fluctuations."

In order to explain these apparent contradictions Angell advances two different considerations. In view of the *small relative importance of foreign trade* in the national life of the United States, it does not surprise him that even large upheavals in the balance-of-payment situation play only an imperceptible part in determining the domestic movements of credit and prices. In the second place he points out that in both periods *two major forces* were apparently working on the American balance of payments, not one only. With these two forces acting simultaneously, and with fairly equal intensity, both on the net export of capital and on the net export of commodities, neither of these items had to adapt itself to the other's fluctuations; the effects of the two influences simply tended to offset one another. The two forces which Angell has in mind are (1) the fluctuations in the foreign demand for American *capital*, and (2) the fluctuations in the foreign demand for American *commodities*, and he believes the latter to be largely independent of the former. It is a *happy coincidence*, then, that in point of historical fact these two sets of fluctuations offset one another in this period, a coincidence which is due to their common source: the fluctuating economic fortunes of Europe. Drained of both capital and goods by the War the European countries had turned to the United States for further supplies of both. Later, when Europe began to recover, it was able to supply, not only a steadily increasing part of its own needs, but also an increasing part of the needs of the rest of the world. The world's aggregate demand for *both* American capital and American commodities therefore fell off, and at approximately equal rates. But then the various currency stabilisations resulting in temporary domestic depressions opened up new and greater opportunities for American investments abroad as well as for American commodity exports. Finally, in 1926, demand seemed to fall off again.

<sup>1</sup> Cf. *infra*, p. 376, note 2 where figures are reproduced, according to which the cessation of capital export in 1923 led to rising prices, while the renewed outflow of capital in 1924 had the opposite effect.

Angell's final conclusion was, therefore, that, as yet, there had been no balance-of-payment problem at all. He is well aware, however, that, intellectually, this conclusion is rather unsatisfactory,

"for one dislikes having to say, in Professor Taussig's phrase, that "things just happened so," without being able to assign any single completely adequate reason for the coincidence. But it is apparently the only way of accounting for the almost total absence of a discernible connection between the movements of the net balance of payments and the movements of internal credit and prices; and for the absence of any clear lag or precedence between the changes in the net capital items and net commodity items of the balance itself . . .

The results of our inquiry have been essentially negative, so far as concerns American history since 1919. The machinery for the correction of disturbances of course exists, tho the small relative importance of foreign trade would probably make it work slowly: the correction would have to wait, rather, on the cyclical movements of American credits and prices. But this machinery has not yet been brought into operation on any significant scale. Whether because of a common origin, because of *some other hitherto unsuspected relationship between them*, or because of pure accident,—but most probably the first—the great changes in our balance of payments since the war have substantially offset one another as they occurred."

To attribute the synchronisation of capital and merchandise movements over a period as long as this to *sheer accident* is merely to admit, of course, that one cannot explain it. But Angell's recourse to "*a common antecedent condition*" is hardly more satisfactory. One may well expect that the same economic conditions which give rise to increased capital movements will also stimulate trade. But why should the *amplitude* of the two movements roughly coincide, if it were not for a causal connection between them? Moreover, as Angell himself suggests, it was at best only *the grand totals* of the two sorts of demand, for capital and for commodities, which showed a roughly parallel movement; surely the variations in *the individual demands* of the different countries for American goods were not the same as the fluctuations in their individual demands for American capital; a subtle adjustment in international balances must evidently have been involved in spite of the postulated correlation between the two combined totals.

Naturally, therefore, one looks for "some other hitherto unsuspected relationship," i.e. for an alternative to the classical transfer explanation. For Angel is *not* justified in as-

serting that, in the absence of the classical mechanism, the only possible explanation is that the great changes in the balance of payments have tended, from the very nature of their origin, to offset one another. Two lines of attack on this standpoint suggest themselves.

Even admitting Angell's account of the mechanism of adjustment to be, on the whole, correct, the possibility remains that the price variations which his explanation contemplates took place *not in the United States but elsewhere*. Since it is merely the *relation* between prices in the United States and abroad which must change according to the classical theory, it is obviously insufficient to study only the American price movements in order to test whether the classical mechanism has been at work or not. Normally, the theory would assume price variations to occur *both* in the United States *and* abroad, but it is not at all necessary, perhaps not even probable, that they should be of the same magnitude in both cases; and it is conceivable that the price adjustment might take place exclusively abroad. Instead of the rise in American prices to be expected as a result of declining American capital export, a *fall* of prices might ensue abroad leaving the American level of prices constant.<sup>1</sup>

It is not easy to prove that such was the case; in general, the chaotic post-war conditions in Europe offer no good opportunities for the verification of economic theory; on this particular point the chief difficulty is that the fluctuating *paper currencies* in many of the principal borrowing countries caused their price levels to be dominated by other factors than capital movements. In a comparison of price changes in the United States and other countries one would have, therefore, to let the latter be represented by the few European countries having fairly stable monetary conditions, e.g. Great Britain and Sweden; but since these countries were *lenders rather than borrowers* in the international market such evidence would hardly be conclusive.<sup>2</sup>

<sup>1</sup> In that case the restriction of credit abroad would have to be more severe, of course, than if the "burden of adjustment" were more evenly divided between the two parties.

<sup>2</sup> In a criticism of Angell's analysis (Quart. Journ. of Ec. 1929, pp. 186—88) Ohlin relies, nevertheless, on figures of this sort. He selected the period 1922—24, in which the American capital movements showed violent fluctuations, and compared these shifts with index numbers of

The second line of attack on Angell's position is to dispute the correctness of the classical transfer explanation. The reason why the expected mechanism "has not yet been brought into operation" might be that *another mechanism* served to produce the adjustment more quickly and smoothly. Certainly, the rapidity and exactness of the readjustments could be much more readily explained if the effective mechanism were the *changes in demand schedules* contemplated by the modern transfer theory.

Unfortunately, it is equally difficult to prove statistically that this was the case. The only feature in the situation which points in this direction is that the *fluctuations* in the stream of gold are such as would be expected if gold was used to some extent as a means of transferring buying power: the inflow of gold was, on the whole, largest in the years of declining capital export, while increasing foreign investments were accompanied by a smaller inflow or even an outflow of gold. But here, as in the case of France, it is obviously impossible to single out in the trade statistics the merchandise movements due to shifts in demands directly consequent upon capital movements. What may be said is merely that the logic of the case does not necessarily require a resort to variations in reciprocal demand *independent* of the capital movements.

wholesale prices in U.S.A. and Great Britain (Federal Reserve Board) and Sweden (Svensk Finanstidning) and of retail prices in the same countries (averages of the indices of (1) Bureau of Labor and Bradstreets, (2) Board of Trade, Economist, Statist, and Times and (3) Board of Trade and Svensk Finanstidning).

	American capital export Mill. \$	Wholesale prices			Retail prices		
		U. S. A.	G. B.	Sweden	U. S. A.	G. B.	Sweden
1922	251	158	156	159	140	147	162
23	-100	165	150	157	150	152	148
24	541	159	159	157	145	155	157

As far as these countries are concerned it will be seen that prices in Europe were lower in 1923 than in the preceding and following year, while the reverse was true of the United States. But as already said it was not to these countries that the American capital flowed.

It is curious that neither Taussig nor Angell mention *sectional price levels* or *barter terms of trade* in this connection. It cannot be for lack of the necessary data, for the Federal Reserve Board has computed separate monthly indices of export and import prices from 1919 till 1926, not only for the United States, but also for England, France, Canada, and Japan.<sup>1</sup>

Annual averages of the American indices are given below:

TABLE 14.

1913=100	Import prices (1)	Export prices (2)	Net barter terms of trade (3)
1919	174	221	79
20	191	235	81
21	108	136	79
22	123	157	78
23	147	185	80
24	142	178	80
25	144	171	84

In spite of the violent fluctuations in both import and export prices in these years, the relation between them remained *remarkably constant*, and no clear correlation is discernible between the small shifts in trade terms and the large variations in capital export.

Recently, Theodore J. Krepes<sup>2</sup> has computed separate monthly indices of import, export, and domestic prices for the quinquennium 1926—1930. His principal figures are reproduced in table 15 together with a computation of the barter terms of trade. It appears from the monthly data that international and domestic prices moved nearly parallel up to the middle of 1928. Both fell from a level of 101 in March

<sup>1</sup> *Prices in the United States and abroad, 1919 to 1923*, Wash. 1923 and the monthly *Federal Reserve Bulletins* for the following years. No explanation is given for the dropping of the figures in 1926. Another computation has been made by the Harvard Economic Service, cf. *Weekly Letter* Nr. 7, Febr. 19th, 1927.

<sup>2</sup> *Export, import, and domestic prices in the United States, 1926—30*, Quart. Journ. of Ec. 1932.



1926 to 94 in June 1927, and then moved side by side until June 1928. Thereafter, however, their course became different. Domestic prices went up until September 1929, and then began to fall, while international prices dropped at once. The rapid decline in domestic prices—about two points a month—did not begin till February 1930; in the international group it began four months earlier. Leading in this progressive fall were the import prices. On the average, they

TABLE 15.

1926=100	Import prices (1)	Export prices (2)	Domestic prices (3)	Net Barter terms of trade (4)
1926	100	100	100	100
27	97	93	96	104
28	96	93	96	103
29	92	91	96	101
30	75	79	88	95

went down two points a month from September 1929 until the end of 1930; that is, at an accelerating rate. Thereby they reversed completely their relationship with export prices; up to September 1929 import prices had been consistently higher, thereafter they were not only lower, but increasingly so. That is to say, the barter terms of trade turned more favourable to the United States. This is what the classical reasoning would lead us to expect as a result of the increase and subsequent decline in capital exports. But, obviously, there may be *other explanations* of the low export prices than the increasing capital exports in 1926—28. Kreps himself suggests the following possibilities:

“Why were export prices low? Did they stay down because of increased effectiveness of labor, particularly in chemicals? Or were export prices low because of the large export of American capital? Or was there a decreasing relative intensity of foreign demand for American exports? As the period progressed, might not the inelastic demand of Europe for goods wherewith to repair the damages suffered during the Great War have counted less and less? Or was the relatively diminished monetary demand of foreigners

for American goods due to the changes in the character of American exports: from raw materials to manufactured goods, from food-stuffs to automobiles?"

On the whole, therefore, the American figures can serve no more than the French and English as definite proof of the correctness of the classical theory.

## CHAPTER X

### DEBTOR COUNTRIES

#### 1. CANADA.

So far, the result of our inspection of available statistical material has been negative. In none of the three large creditor countries dealt with in the preceding chapters it has been possible to provide an irrefutable test of the validity either of the classical or of the modern transfer theory. In part, this was openly admitted regarding the classical doctrine even by its most ardent defenders; in part, it was left to their critics to show the inconclusiveness of the evidence produced. It is often contended, however, that the conditions for verification are more favourable in debtor countries, especially if they are young and undeveloped; and above all, there is one case upon which the upholders of the classical doctrine rely for proof of their transfer theorem: the foreign borrowings of Canada 1900—1913, analysed with great ability by *Jacob Viner*.<sup>1</sup> This development has been characterized as "an almost pure experiment in international borrowing,"<sup>2</sup> and it must be readily admitted that a number of factors combined in making this case a particularly fruitful field for research. So much the greater will be its importance, on the other hand, if it can be demonstrated that even under the favourable conditions here obtaining, the attempts at verification of the classical doctrine have failed. In Viner's and Taussig's opinion the evidence supplied by the former provides a *definite and complete proof* of the correctness of the classical position, but as will appear presently, a number

<sup>1</sup> *Canada's balance of international indebtedness 1900—1913, an inductive study in the theory of international trade.*

<sup>2</sup> Taussig, *International trade*, p. 259.

of weighty criticisms can be advanced against their interpretation of the material.

Viner's first task was to compute the Canadian *balances of payments* for each year of the period. For most of the invisible items rough estimates were made, and a balance was struck (table 16, col. 1) representing the net outcome of ca-

TABLE 16.

Million \$	Balances of capital and interest transactions (1)	Can- adian capital abroad (2)	Interest due to Canada (3)	Interest due abroad (4)	Foreign capital in Canada (indirect estimates) (5)	Foreign capital in Canada (direct estimates) (6)	Excess of commo- dity imports (7)
1900	4.6	- 2.9	4.0	36.0	33.7	31.7	4.3
01	- 12.2	28.7	3.9	37.4	50.0	37.2	- 12.5
02	- 7.0	3.3	5.0	39.4	30.7	42.3	- 3.1
03	33.8	- 16.7	5.2	40.7	52.6	54.7	38.5
04	52.6	21.2	4.5	42.9	112.3	61.9	58.8
05	40.9	15.8	5.3	47.4	98.8	112.6	40.1
06	65.8	- 12.5	6.0	51.7	99.0	105.3	61.8
07	131.7	- 21.8	5.5	56.6	161.0	95.1	121.2
08	60.4	92.5	4.6	75.9	224.2	222.1	44.5
09	84.2	33.6	8.3	83.9	193.4	253.4	73.2
1910	168.1	- 25.9	9.6	92.1	224.7	313.2	153.7
11	261.9	3.5	8.6	101.5	358.3	348.4	232.6
12	326.4	- 0.2	8.8	117.5	435.0	321.1	275.5
13	285.9	18.8	8.7	137.2	433.2	546.7	222.8
	1497.1	137.4	88.0	960.2	2506.9	2545.7	1311.4

pital and interest transactions. The four items here involved<sup>1</sup> are then disentangled in the following way: first, direct estimates were made (col. 2) of Canadian investments abroad (or the withdrawals of Canadian capital from abroad), the average return on which is put at 4 per cent (col. 3); next, estimates were made of the rates of interest paid on foreign capital and of the total amount of foreign capital in Ca-

<sup>1</sup> Cf. *supra*, pp. 42 and 360.

nada at the beginning of the period;<sup>1</sup> and on this basis were finally calculated (1) the annual amounts of Canadian interest payments abroad (col. 4), and (2) the annual investments of foreign capital in Canada (col. 5), and, lastly, this *indirect* estimate of the Canadian capital import was checked by a *direct* calculation of the amounts of foreign capital invested in Canada (col. 6).<sup>2</sup>

Considering the incomplete character of the material on which the direct estimates are made and the complicated route by which the indirect estimates are arrived at, the two sets of data are in remarkably close agreement as far as the total amounts for the whole period are concerned. For individual years there is much less harmony; especially for the years 1904, 1907, 1910, 1912, and 1913 the discrepancies are great. A priori one would expect the fluctuations in the indirect estimates to show a time lag as compared with the direct estimates. For 1913, e.g., Viner suggests that heavy borrowings were probably made late in the year, loans which did not reach Canada in the form of commodity imports till 1914. The same explanation may hold for 1910—11 and perhaps for 1907. In order to explain the reversal of the lag in some of the other years, Viner points to the possibility that a public issue recorded in one calendar year may represent merely the funding of treasury bills or a bank loan contracted some time before, or may have been anticipated by purchases abroad on a short-time credit basis; in both cases the loan could then conceivably have affected the balance of trade in a previous year.

From year to year, the fluctuations in the import surplus (col. 7) show fairly close correlation with variations in net capital imports, but the trade balance seems to follow with

<sup>1</sup> The total foreign investments in 1900 are put at 1.200 million dollars, the average rate of interest thereon at 3 per cent until 1907, and, to make allowance for later conversions of old loans at higher rates, at 4 per cent after 1907.

<sup>2</sup> Ohlin (*Interregional and international trade*, p. 459) compares the averages of Viner's direct and indirect estimates of foreign investments in Canada with net interest payment and Canadian investments abroad, in order to find the net balance to be transferred on capital account. Considering the way in which Viner's figures are computed it would seem more logical to start from the indirect estimate; supposing the averages to be the correct figures, the amount of interest payments would have been different from those calculated by Viner.

a lag of about a year. In the second part of his book Viner inquires into the monetary mechanism by which this familiar and obvious result was brought about. Taking John Stuart Mill's exposition of the process of adjustment as his starting point, he naturally turns first to a consideration of exchange rates and gold movements.

Like other outlying debtor countries Canada conducted her *foreign exchange operations* mainly by way of the nearest financial centre, in this case New York. But of the total amounts of loans contracted between 1900 and 1913 only about 630 mill. came from New York, while 1.753 mill. dollars originated from England. The procedure with regard to the bulk of the borrowings may then be explained as follows: a loan was negotiated in London and funds there put at the disposal of the Canadian borrowers. A corresponding supply of bills on London was offered for sale either in London or in New York, and exchanged for American funds. But since the volume of sterling-dollar transactions on English and American account was far greater than the volume of such transactions on Canadian account, the sterling-dollar rate would not, in general, be appreciably affected by these Canadian transactions. Consequently, the Canadian rates for *sterling exchange* did not accurately reflect the fluctuations in the Canadian balance of payments arising from borrowing in Great Britain. To test the operation of exchange-rate variations as part of the mechanism of adjustment, one must look, therefore, in the Canadian case, *exclusively at the exchange relations between Canada and New York.*

Moreover, the exchange market situation was characterized in this case by an *exceptionally narrow range between the gold points.*<sup>1</sup> Gold could be shipped from New York to Montreal at a cost of 70 cents per 1000 dollars, and a discount or premium of  $\frac{1}{16}$  to  $\frac{5}{64}$  of 1 per cent would suffice, therefore, to release gold flows one way or the other. From this Viner rightly concludes that it is *inconceivable* that variations in exchange rates within so limited a range could exert an appreciable *direct* effect on the relative volume of Canadian

<sup>1</sup> So narrow, indeed, that the banks charged a flat rate on all small counter dealings in foreign exchange and used the market rate only for very large transactions.

imports and exports. But he is not justified in drawing the further inference that the only alternative is an indirect influence on merchandise movements *by way of gold flows and price changes*. Merchandise movements may also be released by the shifts in demand schedules occasioned by the transfer of buying power. What the analysis of the foreign exchange market can show is merely how this transfer of buying power has actually taken place. The thing necessary in a borrowing country possessing a "favourable balance of payments," i.e. an excess of foreign funds available on demand, is *either* that the quantity of maturing obligations be increased (e.g. by the direct influence of variations in exchange rates on the profitability of commodity trade) *or that some one be persuaded to postpone the use of a part of the foreign funds* (i.e. that a short-term equalising capital movement be released).

In the case of *temporary and casual disturbances* in the balance of payments Viner admits the important, nay often dominating, influence of equalising capital movements; it is explicitly said that their principal effect is to minimise the flow of gold where, in the absence of their regulatory influence, gold would move in the opposite direction within a short period of time. But regarding *major disturbances*, due to a "more or less permanent factor, such as, for instance, continued borrowings from abroad," the case is supposed to be different. The equalising capital flows are

"limited in their volume, and they are financially attractive only as temporary transactions to be reversed in their direction when the exchanges move to the other side of parity.... If the balance of immediate obligations aside from such speculative transactions is such that the flow of foreign bills will be even for a short time greatly in excess of the demand for such bills,.... these operations will appear financially unattractive and will cease to take place."

It seems very doubtful, however, whether this sharp distinction between two different classes of disturbances to the equilibrium of the balance of payments can be upheld. For even in the case of a permanent factor like continuous foreign borrowings, the disturbance of the balance of payments is of a temporary character.<sup>1</sup> It may be correct that the market

<sup>1</sup> Cf. the interesting comments of Harry D. White, *The French international accounts 1880-1913*, p. 156, note 1.

for "floating securities" in Canada is too narrow to be a significant factor in settling trade balances, but Viner does not seem fully to realise that the alternative mechanism of adjustment through "outside reserves", which he so nicely describes, is more than a modification of the classical explanation. And yet, the fluctuations of "outside reserves", of which more will be said a moment, are, in fact, nothing but equalising capital movements.

During the greater part of the period studied by Viner, the Canadian rate of exchange on New York tended to be favourable to Canada. This, Viner takes offhand to be a corroboration of the classical theory. The implication is, of course, that the next steps in the mechanism of adjustment are gold flows and price changes. But the development may equally well be explained along other lines. The fresh buying power created in Canada, whether directly or indirectly, will give rise in due course to a relative increase of imports and thus to an additional demand for foreign funds. By meeting this demand the banks will decrease both their foreign reserve holdings and their Canadian deposits. If, then, the borrowings are going on at an even pace, demand and supply in the foreign exchange market will balance, whereas an increase in the rate of borrowing will result in an excess supply of foreign funds, i.e. in increasing bank reserves abroad; thus the foreign holdings of the banks may be the direct and immediate regulator of the balance of payments.

But let us turn with Viner to a consideration of the rôle played by *gold movements* (table 17). Since no gold circulated, the data regarding gold held in government and banking reserves could be substituted for the admittedly very inaccurate statistics of gold imports and exports, in order to get a measure of net gold movements into and out of Canada. And once more Viner found his figures "strongly confirmatory of the theory that borrowings from abroad enter the borrowing country in the form of goods only after a preliminary flow of gold." The inflow of gold was greatest in the years in which the excess of Canadian borrowings over Canadian loans was greatest, and with the sole exception of 1908 every decrease in the rate of inward flow of capital was accompanied



by an outflow of gold either in the same or in the preceding year, in spite of the fact that increasing population and growing industry and commerce actually required an expansion of the gold reserve.

TABLE 17.

Million \$	Net capital import	Annual increase in gold stocks
1900	36.6	2.2
01	21.3	-0.8
02	27.4	5.4
03	69.3	11.1
04	91.1	7.8
05	83.0	-0.3
06	111.5	5.1
07	182.8	4.2
08	131.7	21.7
09	159.8	6.8
1910	250.6	12.0
11	354.8	28.2
12	435.2	-1.3
13	414.4	19.5

But here again the objection may be raised that the only thing Viner has shown is that *the actual transfer of buying power took place partly in gold*. All that has been said so far, therefore, remains equally true, if the "theoretical expectations" are those of the *modern* rather than those of the classical school of thought. Indeed, Viner points out himself both that the variations in Canadian gold stocks appear to be too small to have been the effective means of adjusting the Canadian balance of payments to the borrowings from abroad, and that these variations might be adequately explained as due to internal banking and currency conditions in Canada and without direct reference to the borrowings abroad. Regarding the first point it was suggested in the preceding chapter<sup>1</sup> that the *net* movements are an inadequate measure of the importance of gold flows; the absence of data, both with re-

<sup>1</sup> *Supra*, p. 357.

gard to monthly fluctuations in the rate of borrowing and concerning the *total* inflow and outflow of gold, prevents a more detailed analysis, but the figures relating to monthly net increases or decreases in gold holdings<sup>1</sup> certainly suggest that oscillatory gold movements were of greater importance than Viner's text would lead one to suppose.

The next question to which Viner turns is how the Canadian banking system reacted on the inflow of gold. Allowing for seasonal fluctuations, the *total demand liabilities* rose constantly and fairly regularly from about 350 mill. dollars in 1900 to about 1.150 million in 1913. The "*cash reserves*," consisting of specie and Dominion notes (which were virtually gold certificates), increased in about the same proportion so that the reserve ratio showed remarkably small fluctuations (between 6.7 and 11.4 per cent). Indeed, it seems to have been the deliberate policy of the Canadian banks always to have their cash-reserve ratio under close control;<sup>2</sup> they increased it somewhat during the period under review owing to the changing character of their demand liabilities, but they always maintained it at what they decided to be the proper figure under the circumstances of the moment. Clearly, this maintenance of a constant reserve ratio means that the banks continuously adjusted either their total demand liabilities or their cash reserves. They did the latter. The demand liabilities of the banks on account of note issue were governed by general economic conditions largely independent of banking control; the same was true of their considerable holdings of savings deposits, and even the demand deposits, "created" by their own lending operations, had very little flexibility. There was *no attempt by the banks to regulate the volume of these deposits by variations in the rate of discount*, which was kept practically constant throughout the period. Consequently, it was by adjusting the amount of their cash reserves to their total demand liabilities, and not vice versa, that the reserve ratio was maintained at the desired level, and since these cash reserves closely represented the amount of monetary gold in Canada, it follows that gold movements into and out of Ca-

<sup>1</sup> Viner, *loc. cit.*, p. 161.

<sup>2</sup> Cf. F. C. Mead, *Bank reserves in the United States, Canada, and England*, *Quart. Journ. of Ec.* 1907, p. 457.

nada were directly dependent on the total volume of demand liabilities of the banks, and not, as the classical theory presupposes, on the state of the balance of payments. In other words, the expansion of notes and deposits *preceded rather than followed* the enlargement of the reserves.

This changed chronological sequence is not necessarily inconsistent with the classical theory, but it is suggestive of *the secondary importance of gold flows in the mechanism of adjustment*. Gold was imported by the banks as part of the foreign borrowings in order that they might maintain the traditional reserve ratio, but the mechanism would have been substantially the same if there had been no gold movements, i.e. if the banks had allowed the reserve ratio to diminish.

What enabled the Canadian banks to maintain their reserve ratios at so uniform a level was their use of the "outside reserves" already referred to. These outside reserves consisted of demand deposits and funds loaned on call in the leading financial centres, above all in New York. Unlike the cash reserve ratio, the ratio of outside reserves to total demand liabilities showed frequent and more substantial variations (between 7.8 and 20.7 per cent). The outside reserves were used, in other words *to absorb the temporary surplus of foreign funds*. In the way already explained, the granting in London of a loan to a Canadian borrower would increase at the same time the outside reserves of the Canadian banks and their deposits in Canada; the borrower would sell his sterling to the banks in return for a deposit in Canada, and the banks would transfer the funds from London to New York.

To test this part of the transfer mechanism, Viner starts from the assumption that because "loans create deposits", a rough correspondence may be expected in ordinary commercial banking between total loans and total note and deposit liabilities; consequently, he deducts loans made by the Canadian banks from their total note and deposit liabilities in order to find the deposits in Canada which are the result of the borrowings abroad; these "*foreign-loan deposits*" are then compared with the outside reserves (table 18). It appears that without exception the two items rise and fall together. That the foreign-loan deposits are generally somewhat greater than the outside reserves is but natural, since part of

the latter was drawn home in the form of gold in order to maintain the cash-reserve ratio. The movements in outside reserves also show fairly good harmony with the variations in foreign borrowings. Especially the great increase in borrowings in 1908—09, which came in years of business recession, led to a great increase in foreign-loan deposits and outside reserves. In 1907, on the other hand, outside reserves declined,

TABLE 18.

Million \$	Outside reserves	Foreign-loan deposits
1900	39.4	46.5
01	58.8	71.0
02	59.7	66.0
03	52.2	46.8
04	75.0	77.8
05	78.0	85.7
06	72.4	77.5
07	50.8	55.1
08	141.5	173.3
09	164.3	218.2
1910	123.1	202.5
11	128.7	213.7
12	123.3	210.3
13	129.8	251.8

although borrowings, according to the indirect estimate, rose sharply; the reason may be that goods were imported in anticipation of loans still to be floated; according to the direct estimates, borrowings were somewhat smaller in 1907 than in 1906. Similarly, the boom years 1911—13 showed imports of a magnitude not justified even by the great borrowings of this period, and in consequence, no increase in the outside reserves occurred.

Both Taussig and White have argued that this peculiarity of the Canadian case is merely the modification of the classical mechanism naturally introduced by the existence of a devel-

oped system of deposit banking.<sup>1</sup> Nevertheless, Viner himself realises

"that the Canadian variation from the typical method, by preventing sudden inflows and withdrawals of gold, operated to bring about a *steadier and smoother adjustment* of price levels and trade balances in the face of huge and irregular borrowings abroad than would have been possible if gold movements into and out of Canada were as automatic and free as they are elsewhere...."

Assume that the unfavourable balance is less than the volume of borrowings. The usual explanation of the mechanism of adjustment would contend that this would cause a steady inflow of gold until prices rose sufficiently to stimulate imports and check exports to the extent needed to adjust the balance. In Canada, however, such a situation would simply result in a piling-up of deposits in Canada and of outside reserves."<sup>2</sup>

This is the essential point. Viner believes, it is true, that this "increase in Canadian bank deposits, unaccompanied by an increase in the quantity of goods in Canada", *must* result in a rise in the Canadian price level, and that it is this price movement which serves to turn the balance of trade. But as just mentioned his inductive study reveals that, in 1911—12 e.g., no increase occurred in the outside reserves or foreign-loan deposits, because the Canadian borrowers were using the proceeds of the foreign loans as rapidly as they were available.

The last and most important problem is the *behaviour of relative price levels*, i. e. the comparison between the price development in Canada and elsewhere. This question is treated in great detail by Viner. The equivocal character of his deductive reasoning on this point has already been demon-

<sup>1</sup> Taussig: "During the years of the upswing period, the import of specie into the borrowing country may seem to be due at each several date to the higher prices and the higher money rates to follow these, not precede them. But these higher prices could not be maintained, much less could move still higher, unless the flow of specie came to the rescue." (*International trade*, p. 209, cf. pp. 225—27).

White: "Canadian banks regarded their newly acquired claims on foreign specie as equivalent to an increase in reserves.... They could draw at will on these reserves and thus augment the gold reserves in their own vaults; but they did so only after increasing their domestic demand liabilities.... The significant thing is that the expansion in Canada could not have been so large had the secondary reserves not been augmented by the loans" (*The French international accounts 1880—1913*, pp. 11—12).

<sup>2</sup> *Loc. cit.*, p. 182.

strated.<sup>1</sup> What remains is to review the figures by which he attempts to substantiate his conclusions.

The period 1900—1913 was marked by a world-wide rise in prices. To verify the orthodox theory it is therefore necessary to show, not only that there was a rise in the Canadian price level, but that Canadian prices rose *more* than prices in other countries, especially those in which the Canadian loans were chiefly floated, Great Britain and the United States. That the Canadian general price level did, in fact, rise more sharply, particularly in the last few years of the period when Canadian borrowings reached their peak, appears from the index numbers tabulated in tables 19 and 20.<sup>2</sup>

TABLE 19.

1900=100	Unweighted wholesale price index (145 identical commodities)			Excess of net capital import over final means of payment	Annual increase in bank deposits	Excess import of commodities
	Canada	World	Spread between the two levels			
	(1)	(2)	(3)			
1900	100.0	100.0	0	— 2	...	4
01	100.5	99.8	0.7	— 13	29	—12
02	102.7	102.0	0.7	11	42	— 3
03	103.3	102.3	1.0	3	37	39
04	105.3	100.9	4.4	— 49	48	59
05	108.1	104.6	3.5	15	56	40
06	110.9	108.7	2.2	7	80	62
07	115.6	113.8	1.8	— 67	33	121
08	113.3	109.4	3.9	— 2	3	45
09	116.0	110.0	6.0	58	126	73
1910	119.0	112.8	6.2	89	24	154
11	121.3	116.3	5.0	— 8	184	233
12	129.2	122.6	6.6	— 112	125	276
13	128.7	121.2	7.5	113	6	223

First, Viner compares *prices in Canada and the world at large* (table 19, cols. 1—2) and finds that the rise in the

<sup>1</sup> Cf. *supra*, pp. 233—34.

<sup>2</sup> The sources from which the index numbers have been drawn are indicated by Viner, *loc. cit.*, pp. 217 et seq.

Canadian price level was greater than that of the average world price level. The constructor of these two index numbers, the Canadian statistician R. H. Coats, points out that the different national price levels show the following order of "buoyancy": (1) Great Britain, France, Italy, Belgium, Holland, Norway; (2) Germany, Austria, Russia; (3) India, Australia, New Zealand; (4) Japan, Hungary, U. S. A., Canada. In general, therefore, the lending countries seem to have experienced a smaller rise than the borrowing countries.

So far, all seems to be well. But if the rise in Canadian prices is compared in greater detail with the development of bank deposits and net import of capital, one becomes sceptical. It has been demonstrated by Robert M. Carr<sup>1</sup> that *prices rose first* and for the most part maintained their lead throughout the period, the other items following with a lag. The basis of his investigation is the series reproduced in table 19 above, of which cols. 4 and 5 have been compiled by Angell from Viner's figures.<sup>2</sup> Apparently, the spread between Canadian and world prices reached its first peak in 1904, followed in 1905 by a development of an excess of net capital imports, in 1906 by a peak climb in deposits, and in 1907 by a record excess of commodity imports over exports. Similarly, the fall in prices in 1905 was followed in 1906 by a decline in capital imports, in 1907 by a retardation in deposit increases, and in 1908 by a falling-off in net commodity imports. From 1907 to 1910 prices and the excess of net capital imports rose together. But not even here was it possible to detect any causal connection running from capital imports to prices, for the increase in bank deposits, the medium through which the connection should be effected, lagged behind the rise in prices except in one case. In the year 1909, deposits did rise with prices, accompanied by an excess of net capital imports. In this one year, then, the evidence does not altogether preclude a causal relation running from loans to prices and on to an excess of commodity imports. But in the next year, 1910, the continued rise in prices

<sup>1</sup> *The rôle of price in the international trade mechanism*, Quart. Journ. of Ec. 1931, p. 713.

<sup>2</sup> Angell does not indicate exactly how he has computed his "excess of net capital imports" over the combined total of "final means of payment", i. e. net commodity imports, plus other net non-loan imports, and it has proved impossible to obtain complete agreement between these figures and those reproduced in the preceding tables.

is accompanied by a falling-off in the growth of deposits, and therefore such a causal connection does not appear likely. By 1912, prices are again definitely in the lead, followed in 1913 by the development of an excess of net capital imports. Presumably, if the period of study had been extended another year, 1914 would have shown an upward turn in the deposit figures.

Carr deplors that only annual data are available, but he adds that the material at hand does not seem to promise the classical theory much support even by an analysis of data for

TABLE 20.

1900 =100	Unweighted wholesale prices				Weighted wholesale prices		
	52 identical commodities		135 identical commodities		Canada (Coats)	Great Britain (Board of Trade)	United States (Bureau of Labor)
	Canada	Great Britain	Canada	United States			
1900	100.0	100.0	100.0	100.0	100.0	100.0	100.0
01	98.5	99.1	100.8	99.1	100.2	96.7	98.8
02	99.5	95.1	101.9	103.9	103.6	96.4	106.2
03	100.8	95.0	102.8	103.3	103.7	96.9	106.2
04	100.6	95.7	103.6	102.8	104.5	98.2	107.4
05	106.1	90.1	107.8	104.5	107.6	97.6	106.2
06	109.7	103.6	110.8	110.8	113.5	100.8	109.9
07	115.7	108.8	116.2	117.6	122.1	106.0	117.3
08	111.2	102.0	112.7	110.0	118.2	103.0	113.6
09	114.6	102.7	113.6	113.2	119.4	104.1	121.0
1910	120.0	108.1	117.5	118.0	121.0	108.8	124.7
11	122.8	110.3	120.0	118.4	123.9	109.4	118.5
12	130.4	115.2	128.0	122.6	136.0	114.9	125.9
13	126.6	115.7	127.7	119.6	131.9	116.5	124.7

less than yearly periods. One may object, however, that the lags with which Carr operates are not very marked, but this whole argumentation certainly weakens the importance of Viner's figures as a proof of the classical transfer theory.

The next step in Viner's inductive study is to make a comparison of the Canadian price level with the English and the



*American.* In the weighted British index, raw materials and foodstuffs predominate; these are largely import commodities which, on the classical hypothesis, should show a relative rise in a period of increased lending; and in the world at large raw materials and foodstuffs also rose more than manufactured products after 1900. This, apparently, makes the greater rise in the Canadian index all the more significant. Compared with the United States the divergence is less pronounced; in several years the American index is higher than the Canadian, but in 1911—13 the latter decidedly took the lead.

But here again, the adequacy of Viner's proof has been questioned, notably by Ohlin.<sup>1</sup> He objects to Viner's emphatic assertion that *no* factor was operating during this period, other than the import of capital, which would adequately explain the greater rise in prices in Canada, and suggests that while it is probably true that *no single factor* suffices to explain the course of events, it is quite possible that *several other factors* all contributed to the actual result. He points out that, in the years 1900—1902 when the borrowings were still small, Canadian prices rose 4.4 per cent compared with prices in Great Britain according to the unweighted index, while in 1903 when net borrowings increased, this difference increased by only 1.4 per cent. This intimates that other influences must have been at work in the first two years to raise Canadian prices. In the decade 1903—13, each of the three periods 1903—06, 1907—10, and 1911—13 was marked by an increase in the rate of borrowing; and in each of these three periods the margins between the Canadian, British, and American price levels tended first to become wider and then to narrow down again when the adjustment to the current rate of borrowing had been carried out to a greater extent than in the early part of the period. This may perhaps be taken as an indication that the price changes acted *only as an auxiliary force*, serving to speed up the process of adjustment in the interval before the transfer of buying power had exercised its full effects. Towards the end of the second period, in the years 1906—08, however, Canadian prices continued to run ahead of the British index; here again, other influences may have been at work.

<sup>1</sup> *Interregional and international trade*, pp. 463—70.

The third and last step in Viner's price investigations is his analysis of the different trends of the *sectional price levels in Canada*. He constructs separate indices of import-, export- and domestic-commodity prices—reproduced in table 21—and finds what he considers a *clear and substantial verification* of the deductive theory; import goods rose least and home-market goods most, while export goods occupied an intermediate position.

TABLE 21.

1900=100	Import prices	Export prices	Domestic prices	Export prices weighted acc. to importance in		Ratio of domestic-to import-price level
				1900-04	1913	
1900	100.0	100.0	100.0	100.0	100.0	100.0
01	94.8	101.7	111.5	101.7	101.7	110.2
02	92.5	102.8	118.5	102.1	97.9	117.4
03	97.7	103.3	119.1	104.6	99.2	112.9
04	94.0	104.0	119.1	103.0	103.6	119.4
05	98.3	107.9	120.9	109.9	107.8	118.5
06	107.3	115.3	122.8	114.7	107.1	110.1
07	114.2	124.4	135.6	122.2	115.9	109.7
08	99.5	119.9	133.6	122.2	118.1	127.6
09	102.2	123.6	141.0	126.4	121.7	128.3
1910	105.0	125.7	145.7	129.2	119.3	129.0
11	103.8	129.0	151.4	126.5	118.8	133.9
12	113.1	138.8	161.8	135.7	121.7	129.4
13	114.1	133.9	161.7	135.6	120.2	131.9

Of the three indices, the one for *export goods* seems to be the most reliable. Over 90 per cent of the Canadian exports are represented among its 41 commodities. The index for *import goods* comprises only 30 commodities, all of these being either raw materials or foodstuffs; yet, a considerable part of the Canadian imports consisted of manufactured products, especially iron and steel products from the United States and textiles from Great Britain, but the available price statistics did not allow the construction of indices for such commodities with any degree of assurance that *domestic goods* were not included. The price index for these latter goods,

however, is even less reliable. It includes the following heterogeneous and necessarily unrepresentative items: common building bricks; bituminous coal; salt; hay; straw; fresh beef; mess pork; fowls; fresh eggs; salt mackerel; bread; potatoes; apples; tomatoes; beans; strawberries; milk; draught ale; ticking; denims; putty; matches; and common kitchen chairs. Moreover, it gives wholesale prices and not retail prices of these things. To justify the use of this curious selection of price quotations, Viner takes much pains to explain<sup>1</sup> that purely domestic commodities were exceptionally few in number and restricted in range in the Canadian case, but he does not seem to realise that this must imply that *their rôle in the mechanism of adjustment becomes correspondingly insignificant.*

In the import index a crude weighting is employed, while the two others are unweighted. Weights are introduced afterwards in the export index, however, in order to demonstrate whether the relative rise in the domestic commodity prices actually served to restrict exports by shifting commodities from the export class to the domestic or the import classes. For the more important export commodities two different indices were computed, one weighted according to the relative importance of the various commodities in the export trade at the beginning of the period, another similarly weighted according to their importance at the end of the period. To Viner's satisfaction it appeared that the former rose a good deal more than the latter. It has been objected that this shows only the obvious thing that foreigners increased their purchases of those Canadian commodities which rose least in prices, and not that these shifts in commodity prices had anything to do with Canada's foreign borrowing. However, if these relative price changes originated in the world market, one would expect that the export of the commodities which advanced most in price should become more profitable and, consequently, be relatively augmented, and since the exact reverse result evolved, one may infer that the price shifts were *chiefly due to conditions in Canada*, and were not simply a reflection of a changed situation in the world market. In other words: had the rise in prices come from the demand side, it should have resulted in increased sales; as sales decreased,

<sup>1</sup> *Loc. cit.*, pp. 238—39.

one may conclude that the change was on the side of supply. Another objection has been raised by Ohlin.<sup>1</sup> He argues that a seller profits by high prices only to the extent that he can sell his goods, and that, consequently, it is the index using the 1913 quantities as weights which is significant. If the purpose is to measure the gain from international trade, this is true, of course, but in order to verify the classical transfer mechanism it appears to be sufficient to show that the relation between the prices of *the goods originally exported and imported* changes. But, as already mentioned,<sup>2</sup> Viner himself felt the necessity of explaining why Canadian export prices did not rise more than they actually did. He might have added that since the capital import came mainly from England, but the commodity import largely from the United States, a depression of Canadian import prices was equally unlikely to occur. It must be concluded, therefore, that Viner's figures cannot serve to prove the classical contention regarding a necessary connection between capital import and barter terms of trade. And, as already suggested, the importance of this negative result is reinforced by the fact that Viner gave good reasons for assuming the possibilities of inductive verification to be exceptionally favourable in this case.

But while Viner does not succeed in demonstrating that shifts in international prices are a necessary part of the transfer mechanism, it appears from his analysis that *shifts in the relative prices of international and domestic commodities* play a greater rôle. This is more in harmony, however, with the modern than with the classical transfer theory. To a large extent, the Canadian borrowers used their newly acquired buying power to demand domestic commodities the supply of which could not readily be augmented. One would assume that in case of foreign borrowing *at a constant rate*, the discrepancy after reaching a peak would gradually disappear again, as the necessary adjustments of the productive apparatus were carried through. But since the Canadian borrowings went on crescendo, it is but natural that the margin between international and domestic prices shows an almost continuous growth.

<sup>1</sup> *Loc. cit.*, p. 468.

<sup>2</sup> *Supra* p. 234.

True, Viner's index of domestic commodity prices must be supported by further evidence before it can be accepted as a reliable index. But such further evidence is procured by Viner himself in the following price indices for important kinds of services:

TABLE 22.

	1900	1913
Electric light.....	100.0	70.7
Illuminating gas.....	100.0	77.0
Water service.....	100.0	95.6
Freight rates.....	100.0	94.9
Passenger rates.....	100.0	106.2
Hospital services.....	100.0	144.7
House rents.....	100.0	162.0
Business rents.....	100.0	234.5
Weekly money wages...	100.0	148.9

That the prices of *public utility services* did not move in sympathy with other domestic prices is easily explained as due partly to lower costs owing to technical improvements or increasing population, partly to the fact that in some cases these services were sold with little regard to their cost. The index for the average cost *per hospital patient* reflects a whole range of prices of commodities and services belonging to the domestic class. *House and business rents* indicate the trend of prices of land and buildings important commodities, wholly "domestic" in character, which do not enter into the ordinary commodity-price index. But the best single index of domestic prices is perhaps the trend of *wage rates*, reflecting a great variety of domestic prices in the retail trade.<sup>1</sup> As a summary of

<sup>1</sup> A comparison of available wage indices for Canada, United States, and Great Britain gives the following result:

	1900	1912
Canada	100.0	145.0
U. S. A.	100.0	127.5
Great Britain	100.0	103.0

Wages in Canada and the United States moved closely together until 1907, but when the capital import assumed larger proportions the Canadian wage level ran ahead of the American. Cf. Viner, *loc. cit.*, pp. 246-48.

his investigation Viner unites all the partial indices for domestic commodities and services in a total index and measures its divergences from the import price index by means of link relatives. It will appear from the last column of table 21, where this series is reproduced, that the divergence widened with the increase in the rate of borrowings occurring in 1903—04, 1907—08, and 1910—11.

Thus, Viner's figures certainly suggest that shifts in the relation between international and domestic prices may serve to facilitate the readjustments necessary to effectuate an international transfer of capital. Taken as a whole, therefore, they would seem to tally better with the modern than with the classical transfer explanation. Besides, the Canadian price structure may well have been influenced, in the same period, by other potent forces. It is fair to point out that Viner explicitly ascribes the sharp rise in domestic prices in the first few years of the period to the special price development of potatoes and salt mackerel, both of which increased some 75 per cent between 1900 and 1903. For the period as a whole, attention must be called to the improved transport conditions which served to open up new districts and, in general, to raise the prices of exportable goods in the interior parts of the country; this meant increasing demand for, and return to, the productive factors, and this, in turn, tended to raise domestic prices.<sup>1</sup> On the whole, a more rapid technical development in the export than in the home-market industries will serve, of course, to raise the relative prices of the products of the latter, a tendency which may be reinforced by an increasing population.

## 2. AUSTRALIA.

Viner's analysis of the capital imports into Canada soon inspired similar studies of the development in Australia, another of the world's great borrowing countries. Australia, like Canada, is a country to which foreign trade is of very great importance, and where, consequently, any factor which seriously disturbs the equilibrium of the trade balance will have profound effects. And as the foreign borrowings were, not only huge, but spasmodic, the Australian case also

<sup>1</sup> Cf. Ohlin, *loc. cit.* pp. 466—67.

promised good opportunities for an inductive examination of the transfer mechanism.<sup>1</sup>

Two different attempts have been made at estimating the net inflow of capital into Australia and its annual fluctuations. The most comprehensive and careful investigations are due to one of Viner's own pupils, *Roland Wilson*,<sup>2</sup> whose theoretical considerations have already been reviewed.<sup>3</sup> His explicit object is to use his data regarding balances of payments and fluctuations in net imports of capital for a statistical verification or refutation of the orthodox transfer theory. The other student of Australian borrowings, *Gordon Wood*,<sup>4</sup> has a broader object in view. He proposes to give an interpretation of the fluctuations in Australian prosperity during the last century, postulating that variations in capital imports is the sole "efficient cause" determining these fluctuations. This aspect of Wood's work has already been considered.<sup>5</sup> What is of interest here is only his incidental attempts at tracing the classical transfer mechanism.

Wilson's figures cover the period 1871—1930 for which he presents a continuous series of estimates of the annual net import of capital. For the period 1871—1903 these figures are based upon information contained in various works by T. A. Coghlan. For the following period Wilson himself has made an elaborate attempt at ascertaining the annual capital import by the indirect method. A similar, but somewhat more summary and daring computation of annual balances of payments is made by Wood for the periods 1901—13 and 1920—28. The results obtained by both authors will be found in table 23.

A comparison between Wilson's and Wood's figures for the period 1901—13 reveals a fairly close correspondence as to changes in the direction and rate of capital flows, but the total net amount of capital imported is estimated by Wilson at

<sup>1</sup> "Australia has almost turned herself into the social and economic laboratory which is often sought but rarely found." Roland Wilson, *Capital imports and the terms of trade examined in the light of sixty years of Australian borrowings*, p. 3.

<sup>2</sup> In the work just referred to. Cf. also his articles in the *Economic Record*, *Australian capital imports, 1871—1930* (Nov. 1930 and May 1931) and *Economic cycles in Australia and New Zealand* (May 1930).

<sup>3</sup> Cf. *supra*, pp. 250 et seq.

<sup>4</sup> *Borrowing and business in Australia; a study of the correlation between imports of capital and changes in national prosperity*.

<sup>5</sup> Cf. *supra*, pp. 77 et seq.

TABLE 23.

Mill. £	Import surplus	Net capital import (Wilson's estimate)	Mill. £	Import surplus	Net capital import (Wilson's estimate)
1871	-4.7	-0.4	1886	12.5	23.4
72	-3.7	0.7	87	6.2	17.1
73	-1.8	2.5	88	8.0	18.9
74	-1.1	3.3	89	8.0	18.9
75	-0.04	4.3	90	5.8	16.7
76	0.4	5.6	91	1.7	12.7
77	2.7	7.9	92	-3.3	7.8
78	2.4	7.6	93	-9.5	1.6
79	3.0	8.2	94	-10.2	0.8
80	-4.3	0.9	95	-10.4	0.6
81	1.5	8.1	96	-3.3	12.0
82	8.8	15.3	97	-5.8	9.4
83	5.3	11.9	98	-8.7	6.5
84	8.3	14.8	99	-14.3	1.0
85	10.2	16.7	1900	-4.6	10.7

Mill. £	Import surplus	Net capital import		Mill. £	Import surplus	Net capital import	
		Wilson's estimate	Wood's estimate			Wilson's estimate	Wood's estimate
1901	-7.3	5.6	10.6	1914-15	5.7	8.1	
02	-3.2	9.6	14.3	(18 months)			
03	-10.4	3.0	4.5	15-16	3.0	39.6	
04	-20.5	-6.2	-5.5	16-17	-21.7	42.7	
05	-18.5	-3.8	-2.8	17-18	-19.1	17.6	
06	-25.0	-11.3	-8.0	18-19	-11.7	23.0	
07	-21.0	-8.4	-3.5	19-20	-50.8	28.9	-16.5
08	-14.5	-1.8	1.7	20-21	31.6	-25.0	50.6
09	-14.1	-1.7	3.1	21-22	-24.7	37.4	-2.8
10	-14.5	-2.5	3.0	22-23	13.9	-10.5	36.0
11	-12.5	-1.2	4.3	23-24	21.1	26.8	47.7
12	-0.9	10.6	15.9	24-25	-4.9	37.7	27.3
13	1.1	13.1	23.4	25-26	3.0	15.3	38.8
				26-27	19.8	30.9	55.4
				27-28	4.7	46.5	40.6
				28-29	-1.3	37.1	
				29-30	5.2	29.1	



merely £ 25 mill. whereas Wood arrives at a sum of £ 59 mill.; moreover, an attempt by the latter to estimate directly the amounts invested in Australia gives the still larger amount of £ 75 mill.<sup>1</sup> For the period 1919—28 Wood's figures are again considerably higher than Wilson's, and here the annual fluctuations are also utterly different, so different, indeed, as to make the conclusions of both authors regarding the connection with variations in trade terms of very doubtful value.

For three different periods Wood tries to examine the transfer mechanism.<sup>2</sup> It is difficult to make out whether his sympathy is with the classical or with the modern theory. In general, he appears to aim at verification of the classical doctrines, but on a single occasion<sup>3</sup> he seems to subscribe unreservedly to the modern view-point, explaining how contractors, labourers, and retail dealers employed upon constructional work in Australia obtain increased purchasing power which is translated into demand for both foreign-trade and home-trade products.

The first period investigated by Wood is *the decade 1886—96*,<sup>4</sup> in which he finds that all the circumstances constitute "a coherent and causally connected series such as that which Viner has outlined in the parallel Canadian episode."—The *exchange rates* were, of course, "favourable" to Australia, as long as the inflow of capital continued and large funds in London were constantly awaiting transfer to Australia; and

<sup>1</sup> *Ibid.* p. 160. Other estimates have also been widely divergent. While Coghlan's figures show a net import of capital between 1894 and 1903 of £ 59 mill., R. L. Nash, the financial editor of a Sydney daily, said in his evidence before the Dominions Royal Commission in 1913 (*Cmd. 7171*, 1918, p. 292) that there had been an outward movement of capital ever since 1893, and that between 1902 and 1912 this outflow had amounted to £ 30 mill. This opinion was severely criticised, however, by George H. Knibbs (*Ibid.* p. 296), who thought that although there had possibly been some withdrawal of private investments, this had been more than outweighed by foreign investments in public securities. Wilson's estimates, on the other hand, support Nash's opinion, showing a capital export of £ 37 million between 1903 and 1911. Wilson quotes several other estimates at different dates, which all show fairly good agreement with his figures (pp. 44—46).

<sup>2</sup> In all three cases he takes account only of foreign borrowing, without adding capital brought in by immigrants and other one-sided payments.

<sup>3</sup> *Loc. cit.*, p. 123. Cf. *infra*, p. 410, note 2.

<sup>4</sup> *Loc. cit.*, pp. 92 et seq.

when the sudden contraction of the capital import in 1893 quite unexpectedly made interest payments on old loans five times greater than the volume of new borrowing, the first warnings that the tide was near the turn came from the exchange difficulties of the banks.<sup>1</sup>—The effects of the capital imports on *gold movements* are also said to tell the expected tale quite plainly. Australia being a gold producing country, one would expect increased foreign borrowing to cause, not an inflow of gold, but the retention in Australia of an increasing proportion of her own gold production. But table 24 shows

TABLE 24.

Mill. £	Gold production	Gold retained
1886	4.5	2.6
87	4.8	3.6
88	4.8	0.4
89	5.9	1.4
90	5.3	1.5
91	5.3	0.3
92	6.0	2.6
93	6.2	4.6
94	7.5	3.0
95	7.6	2.5
96	7.8	2.0

rather the reverse. In spite of the sustained capital import 1886—90, a decreasing proportion of the gold production was retained at home, and when borrowings were contracted in the early Nineties, the volume of gold retained was increasing.<sup>2</sup>—Finally, the *banking position* is also briefly examined. The monetary system was of the sensitive type so that a large expansion of the circulating medium could follow from a com-

<sup>1</sup> *Loc. cit.*, pp. 54 and 63.

<sup>2</sup> Wood plots instead the total amount of loans publicly subscribed in Australia between 1890 and 1913 and—retarded one year—the retention of gold in Australia, and finds “a consilience that is singularly perfect” (p. 125), adding that the elimination of domestic loans which rose from 10 per cent in 1890 to 23 per cent in 1910 would have no perceptible effect on the parallel movements of the two curves. The figures on which the graph is based are not given, and here, as elsewhere, it is difficult to reconcile Wood’s different series of figures (cf. e.g. the tables pp. 128 and 155).

paratively small increase in gold reserves. It appears from table 25 that this increase was not inconsiderable, and Wood finds it a matter for wonder, rather, that under the extraordinary circumstances of the time, the inflation was not of a much higher order. It will be seen, however, that contrary to expectation<sup>1</sup> advances grew faster than deposits. This certainly "does lend some colour to the belief that the banks were largely responsible for undue expansion of credit in connexion with land transactions." The confirmation of the ortho-

TABLE 25.

Mill. £	Reserves	Deposits	Advances	Ratio of reserves to deposits
1887	14.8	79.9	93.9	18.6
88	16.5	88.5	105.4	18.6
89	15.6	92.2	118.7	16.8
90	17.8	97.5	122.3	18.2
91	17.5	97.6	125.5	17.9
92	17.7	98.6	127.5	17.9
93	17.7	95.1	120.6	18.6
94	20.6	87.8	105.4	23.4
95	21.5	82.0	102.8	26.2
96	23.6	84.0	98.4	28.1
97	21.3	84.8	96.8	25.0

dox reasoning which Wood finds in these figures does not seem very well founded. But, whatever be the intermediary financial mechanism, Wood declares the *movements of prices* to be in precise accord with the previsions of theory. In the Canadian case Viner was anxious to show that Canadian prices rose *faster* than world prices; in the Eighties, on the other hand, with the downward trend in world prices, one would expect the price level to fall more *slowly* in Australia than in the lending countries. And it appears that while wholesale prices in Great Britain fell from 110 to 90 between 1880 and 1890, this world movement was not only resisted, but reversed in Australia, prices actually rising from 111 to 117. These figures are given in

<sup>1</sup> Cf. *supra*, p. 389.

Wood's text<sup>1</sup> without any reference. To a certain extent they are contradicted, however, by the following wholesale price indices:<sup>2</sup>

TABLE 26.

1886=1000	Great Britain	Melbourne
1886	1000	1000
87	959	982
88	957	952
89	975	968
90	1003	1055
91	1014	951
92	1019	849
93	967	825
94	962	764
95	907	674
96	1076	683

Turning to *sectional price levels* Wood expects, of course, a greater fall in the prices for import goods than for domestic or export goods. Taking the indices for the chief domestic groups, viz. meat and dairy produce, he finds a fall from 229.6 to 208.3 or a decline of 9 per cent during the decade; the prices for the three main export groups, viz. wool, agricultural produce, and metals, fell from 402.7 to 345.3 or 15 per cent; and finally, three typical import groups, viz. textiles & leather, chemicals, and groceries, fell from 413.9 to 324.2 or 22 per cent.<sup>3</sup> So far all seems well. But then Wood adds the figures reproduced in table 27.<sup>4</sup> Here the conclusion seems inevitable

<sup>1</sup> *Loc. cit.*, p. 96.

<sup>2</sup> Quoted from the Commonwealth Bureau of Census and Statistics, Labour report no. 1 in Wood's table XX (p. 102).

<sup>3</sup> These figures are drawn from an official publication, *Prices, price indices and cost of living in Australia*, Bureau of Labour Reports no. 1.

<sup>4</sup> The import- and export-price indices are said to be "adapted from Coghlan's Statistical account of Australia and New Zealand". It appears to be Coghlan's indices for New South Wales recomputed to the base-year 1886. The adequacy of these indices will be discussed in a moment. To represent domestic goods Wood compiled a wage index of which he said that "nominal wages offered very little difficulty. The statistical registers of the various colonies contain continuous and reliable series of wage rates for the more important types of labour, and the result accords closely with the remembered experience of wage movements during those years".

that, contrary to expectation, domestic prices fell *more* than either import or export prices. This may be due to Wood's data, however, for an official wage index<sup>1</sup> shows only a fall from 1000 to 962 in the period 1891—96, while Wood's index declines from 884 to 707 or by 20 per cent. More fatal is the fact that in the period of heavy borrowings the terms of trade moved *against* Australia while they were slightly im-

TABLE 27.

1886=1000	Import prices	Export prices	Net barter terms of trade	Money wages
	(1)	(2)	(3)	(4)
1886	1000	1000	1000	1000
87	1009	1027	982	921
88	1004	996	1008	948
89	1046	1012	1034	931
90	1035	978	1058	944
91	990	889	1114	884
92	948	843	1125	871
93	912	761	1198	846
94	866	686	1262	727
95	858	703	1220	687
96	892	740	1205	707

proved in the years of restricted capital import. Wood's only comment on this inconsistency is that after 1890 the normal trend of the borrowing cycle is masked by the phenomenal fall in prices for primary products and by the spread of a world crisis purely monetary in origin. The harmonising of these import and export indices with the group prices first quoted, therefore, "proved too difficult a task."

Next, Wood deals with *the period 1900—1913*. Regarding movements in *exchange rates* it is pointed out that Australia had no free exchange market. The banks accepted the rates on foreign countries ruling in London and fixed their rates with London according to the state of their cash balances

<sup>1</sup> Published in the *Labour reports* of the Bureau of Census and Statistics.

there; only in exceptional cases did these rates move far from parity.<sup>1</sup> It thus appears that here, as in Canada, the exchange fluctuations were kept within very narrow limits. But no detailed examination is attempted either of these fluctuations in rates or of the variations in the "outside reserves" of the banks. On this aspect of the mechanism Wood confines himself to a few brief comments.<sup>2</sup>

TABLE 28.

Mill. £	Gold production	Gold retained
1901	14.0	0.4
02	14.8	0.7
03	16.3	-0.9
04	15.9	0.2
05	15.6	6.1
06	14.6	-0.1
07	13.5	6.1
08	13.1	1.9
09	12.6	4.8
10	11.6	8.4
11	10.5	0.6
12	9.0	-0.6
13	9.4	7.7

Continuing the analysis of *gold retention*—i.e. the excess of production plus import over export—Wood finds (table 28) that contrary to expectation the large inflow of capital in the first years of the period was not accompanied by increasing gold retention; the explanation of this divergence is sought in the extraordinary circumstances of national emergency connected

<sup>1</sup> The Anglo-Australian exchange situation is treated by D. B. Copeland in *Foreign banking systems*, London 1929, ch. II: The banking system of Australia.

<sup>2</sup> "The connexion between bank policy and the rate of exchange in Australia, and the balances of loan funds in London awaiting transfer to Australia, is sufficiently obvious. That it has been a very persistent factor in our financial relations with London, and still influences, perhaps unduly, our bank policy cannot be doubted; and it constitutes the greatest weakness or the greatest strength of our financial system, according to the two opposing schools of thought on the subject." *Loc. cit.*, p. 113.

with the war in South Africa. But for the decade 1904-13 Wood can scarcely imagine a correlation more perfect than the one obtained, and he regards the control exercised upon the Australian gold reserves by fluctuations in the volume of loans as established "beyond the possibility of question."<sup>1</sup> He ad-

TABLE 29.

Mill. £	Reserves	Deposits	Advances	Ratio of reserves to deposits
1900	22.272	90.521	84.743	24.5
01	19.781	91.487	88.239	21.6
02	21.075	93.436	87.725	22.5
03	20.021	91.757	88.224	21.8
04	19.358	91.548	87.052	21.1
05	21.490	98.143	85.157	21.9
06	22.681	106.515	87.228	21.4
07	23.711	112.698	94.223	21.0
08	24.932	113.694	100.844	21.9
09	26.298	117.758	97.693	22.3
10	30.150	129.891	100.611	23.2
11	33.471	143.447	112.766	23.3
12	28.686	149.806	123.760	19.1
13	31.252	149.828	118.919	20.9

mits, however, in a later connection<sup>2</sup> that this analysis does not bring any material contribution to the debate as to whether the flow of gold precedes or follows the issue of a loan. Under the conditions of intimacy existing between the Australian and British financial systems the loans are transferred by opening credits, which enlarge the London funds of Australian banks; and it is, within certain limits, immaterial whether the gold resides in the English or the Australian vaults of the banks. These funds are moved as required and largely in accordance with expediency.

The next phase of Wood's investigation concerns the *banking situation*, cf. table 29. He finds that "the volume of

<sup>1</sup> But here again, the conclusion is based upon the movements in the volume of public loans subscribed in Australia, both domestic and foreign. Cf. *supra*, p. 404, note 2.

<sup>2</sup> *Loc. cit.*, p. 201.

bank credit varies with the size of the gold reserves, and the connexion is complete." Between 1900 and 1904 advances and deposits remained practically stationary, and both in 1904 and in 1906 drains on the gold reserve brought the reserve ratio down to a minimum. This clearly reflects "the difficulties imposed upon a country obliged to continue heavy annual interest payments during periods of deficient production."<sup>1</sup> In the following quinquennium between 1907 and 1912 a period of prosperity developed with increasing deposits and advances and rapidly rising prices. And now deposits rose faster than advances. In 1912 the expansion of credits was checked by a new drain on the gold reserves, followed in 1913 by the very high retention of nearly £ 8 mill. Allowing a time lag of one year Wood concludes that the correlation with the upswing of capital import is again "too clear for doubt."

It is hardly necessary to repeat that data such as these may equally well or better be interpreted as consistent with the modern theory, according to which gold movements and changes in balances abroad are merely the *actual media of immediate transfer* of buying power, which is then reflected in an excess of deposits over loans. Wood himself gives a hint of this explanation when he describes the increased credit facilities consequent upon the capital import:

"The effect of this inflation, whether it is temporary or cumulative, is to raise the price level . . . and so to help in the tendency to attract a relative excess of imports equivalent to the amount of the capital imported."<sup>2</sup>

And when he comes to a more detailed description of the conditions under which a British loan is translated into purchasing power in Australia he approaches the modern point of view still further.<sup>3</sup>

<sup>1</sup> Severe droughts, which affected Queensland and New South Wales most seriously, resulted in a diminished volume of production for many Australian staples.

<sup>2</sup> *Loc. cit.*, p. 123.

<sup>3</sup> "The issue of a loan is invariably for some specific purpose; and most usually it is for some developmental work which requires the expenditure of the greater part of the loan in paying the labour engaged upon the construction. . . . The mobilization of the labour necessary for its carrying out, either in rural areas or urban factories, involves the establishment of all sorts of retail supply services through the medium of which the greater part of the wage fund is expended on



But, on the whole, *price movements* are regarded, not merely as a supplementary force, but as *the* efficient cause which turns the balance of trade. A graph of wholesale prices in Australia and Great Britain is presented<sup>1</sup> which shows a somewhat greater rise in the Australian price level in the early part of the period. Following the stoppage of loans a slight tendency for the levels to approach one another is discernible, but it is by no means as clearly marked as the classical theorist would expect, and the new great outburst of borrowing in 1912-13 has no effect whatever in reverting this convergent movement.

TABLE 30.

1901=100	Import prices	Export prices	Net barter terms of trade	Domestic prices
1901	100.0	100.0	100.0	100.0
02	100.8	107.2	94.0	109.7
03	99.3	111.8	88.8	107.3
04	100.1	112.3	89.1	97.7
05	98.8	119.2	82.9	105.0
06	103.2	124.9	82.6	104.6
07	109.1	130.9	83.3	103.7
08	102.4	117.7	87.0	110.3
09	101.6	121.2	83.8	110.7
10	109.9	124.3	88.4	111.4
11	110.1	116.1	94.0	115.4
12	112.3	126.3	88.9	132.8
13	111.7	129.0	86.6	137.1

Regarding the movements of *sectional price levels* Wood feels more satisfied. He does not claim that his indices (table 30)

the consumption goods required by the labourers or technicians. The import of all the foreign-trade goods which the community ordinarily requires is stimulated; and the anticipated demand for these is measured by a multitude of petty traders of various kinds. The cumulative effect of a number of small and localized booms in trade excited by and dependent upon the expenditure of loan money is concentrated at a relatively few importing points. Thus the business of importing houses in the capital ports responds in a highly sensitive fashion to the stimulation of trade "up-country" as the expenditure of the loan money proceeds." (*Loc. cit.*, p. 200).

<sup>1</sup> No figures or sources are given.

give an exact measure of the tendencies, but he finds a confirmation of the observations made by Viner, since domestic prices rose 37 per cent,<sup>1</sup> export prices 29 per cent, and import prices only 12 per cent.<sup>2</sup> *Net barter terms of trade* also showed a slight movement in favour of Australia in the first years of the period, followed by a slight movement in the opposite direction 1905—11, and a renewed turn in 1912—13.

In the third period which Wood has analysed — 1914—27 — his results are admittedly negative. In this case he is unable to detect the expected changes in sectional price levels, cf. table 31.<sup>3</sup> Wood suggests the explanation that

“changes in domestic price-levels, due to the reaction from the extraordinary internal inflation that had occurred, were too overwhelming in their effects to enable the relatively fainter trends due to the borrowing cycle to be clearly discerned; although the convic-

<sup>1</sup> Weekly money wages rose only 27 per cent 1900—1913, Wood p. 137. Both in this and in the succeeding period Wood seems more interested in “effective (i.e. real) wages,” though it is obviously *money wages* which can be used as a substitute for an index of domestic prices.

<sup>2</sup> The indices for export and import prices are said to have been compiled by Wood from data given by Knibbs in section IV of Labour report No. 1. (*Prices, price indexes, and cost of living in Australia*). Wilson contends, however, (*loc. cit.*, p. 88) that the export index is not derived from this source which does not give individual prices, but merely index numbers for various groups, each containing both import and export goods. For the three final years the export index is taken from the new index published in the Commonwealth Year Books, while the figures for the earlier years are taken from the old index published in the early issues of the Year Books and since discontinued. The import index is probably based in some way or other on Knibbs' groups II, V, and VI, which include wool, hides, tallow, and wine. At any rate, an unweighted average of the index numbers for these three groups comes very near to Wood's figures for most of the years (Wilson, p. 92).

Wood's index for domestic prices which is stated to be based on “Sydney and Hobart retail prices as computed by Knibbs from State data for forty-six commodities with rent,” is in fact based on Commonwealth data for retail prices and rents in Sydney alone. Elsewhere in Labour report No. 1 Knibbs has clearly stated a weighted cost-of-living index for the six capital cities, which, of course, would have been much more suitable for Wood's purpose.

<sup>3</sup> The import-price index is said to be based on “selected group prices and British wholesale prices,” but no explanation is given of the origin of these “group prices”, the basis of selection, or the manner in which the several indices are combined. Regarding the export-price index no source is given; Wilson demonstrates, however, that it is a recomputation of the new index from the Commonwealth Year Books. (*Loc. cit.*, pp. 88 and 92).

tion that these weaker currents were present in the main stream remains."<sup>1</sup>

Besides, the War created an increased demand for Australian products which could not but influence the barter terms of trade.<sup>2</sup> Wool, foodstuffs, minerals, and many other items,

TABLE 31.

1914-15=100	Import prices	Export prices	Net barter terms of trade
1914-15	100	100	100
15-16	127	123	103
16-17	160	151	106
17-18	206	160	129
18-19	226	157	144
19-20	242	173	140
20-21	295	173	171
21-22	182	132	138
22-23	154	157	98
23-24	152	191	80
24-25	164	215	76
25-26	160	165	97
26-27	148	160	93

which Australia was able to contribute towards the civil and military prosecution of the War, assumed an enhanced importance.

*Wilson* makes no attempt to analyse the intermediary financial mechanism in detail. But in order to reconcile his estimates of net capital import obtained by the indirect method with available information regarding net public debt raised overseas, he computes the annual movements in "*banking funds*," i.e. the fluctuations in the London exchange reserves of Australian banks and finds a surprising degree of correlation between these variations and the excess of overseas public debt over the estimated net imports of capital. The annual figures for each of the three series are cumulated from

<sup>1</sup> *Loc. cit.*, p. 189.

<sup>2</sup> The possible influence of this factor on the terms of trade seems to have escaped *Wood's* notice (*Loc. cit.*, p. 184).

July 1903 (table 32). This table clearly suggests the rôle played by short-term equalising capital movements in the transfer mechanism.

TABLE 32.

	Public debt raised abroad	Estimated capital import	Excess of public debt over capital import	Net banking funds held abroad
1904	1.657	— 1.989	3.646	435
05	2.651	— 7.085	9.736	7.138
06	5.604	— 14.910	20.514	12.670
07	— 1.028	— 25.006	23.978	12.134
08	— 3.086	— 29.915	26.829	6.839
09	3.959	— 31.615	35.574	13.151
1910	4.801	— 34.024	38.825	19.930
11	4.666	— 36.043	40.709	14.420
12	7.356	— 31.661	39.017	12.998
13	21.030	— 19.915	40.945	16.825
14	40.816	— 1.940	42.756	22.937
15	62.640	37.687	24.953	16.631
16	84.356	80.337	4.019	11.176
17	106.867	97.934	8.933	35.027
18	163.922	120.914	43.008	28.330
19	160.736	149.837	10.899	15.697
1920	171.578	124.846	46.732	43.146
21	184.953	162.284	22.669	23.115
22	225.220	151.750	73.470	41.759
23	233.097	178.568	54.529	42.197
24	274.724	216.252	58.472	34.927
25	277.294	231.518	45.776	45.490
26	317.717	262.461	55.256	45.559
27	329.405	308.992	20.413	29.354
28	383.660	346.108	37.552	36.815
29	391.275	375.211	16.064	39.169
1930	421.217	415.237	5.980	12.686

Regarding the central question: the importance of *changes in the barter terms of trade*, Wilson's study gave a negative result (table 33)<sup>1</sup> in so far as his data lent "no support to the

<sup>1</sup> Wilson's index of net barter terms of trade is the reciprocal of that usually adopted. His index, therefore, rises when the terms become more favourable, and vice versa.

theory currently accepted." After a detailed examination of the limitations and defects of the Australian price material<sup>1</sup> and of the "unreflecting optimism with which faulty data have been used in some investigations of this subject," Wilson

TABLE 33.

1901 =100	Export prices	Import prices	Net terms of trade	1901 =100	Export prices	Import prices	Net terms of trade
1870	133.4	130.8	102.0	1900	103.5	101.7	101.8
71	162.9	131.4	124.0	01	100.0	100.0	100.0
72	148.7	137.3	108.3	02	108.9	97.9	111.2
73	157.6	139.6	112.9	03	115.3	100.7	114.5
74	156.3	138.2	113.1	04	113.9	102.5	111.1
75	155.6	130.1	119.6	05	120.0	100.4	119.5
76	147.5	127.9	115.3	06	125.8	105.4	119.4
77	135.3	122.9	110.1	07	130.8	111.3	117.5
78	134.6	121.9	110.4	08	119.0	106.2	112.1
79	139.7	116.8	119.6	09	119.3	105.4	113.2
1880	137.2	117.5	116.8	1910	122.6	111.4	110.1
81	136.2	116.3	117.1	11	116.1	110.4	105.2
82	140.6	115.7	121.5	12	126.3	112.9	111.9
83	140.6	117.6	119.6	13	129.0	116.3	110.9
84	139.2	116.6	119.4	1914-15	129.9	121.0	107.4
85	122.3	107.1	114.2	15-16	159.1	146.8	108.4
86	117.6	105.1	111.9	16-17	196.5	193.8	101.4
87	120.8	106.0	114.0	17-18	208.4	245.1	85.1
88	117.2	105.5	111.1	18-19	203.3	260.5	78.1
89	119.0	109.9	108.3	19-20	224.9	287.1	78.3
1890	115.0	108.8	105.7	1920-21	225.4	277.6	81.2
91	104.6	104.0	100.6	21-22	172.1	222.0	77.5
92	99.1	99.7	99.4	22-23	203.9	216.2	94.3
93	89.5	95.9	93.3	23-24	247.6	222.1	111.5
94	80.7	91.0	88.7	24-25	280.3	214.3	130.8
95	82.7	90.2	91.7	25-26	215.2	199.5	107.9
96	87.0	93.9	92.7	26-27	208.0	192.6	108.0
97	84.5	94.7	89.2	27-28	223.0	192.7	115.7
98	89.4	95.9	93.2	28-29	205.9	191.8	107.4
99	111.6	95.4	117.0	29-30	159.1	189.6	83.9

<sup>1</sup> In the period 1870—1901 the indices relate strictly to New South Wales alone, but there seems little reason to doubt that they are

concludes that no consistent correlation, positive or negative, is apparent between trade terms and capital export.<sup>1</sup>

In the period 1870—95 there are hints at a positive correlation. Apart from the drop in 1880 capital imports were increasing until 1886 and, excepting the slight decline in 1887, remained heavy until the end of 1891, then declining to almost nothing in the middle of the decade. The barter terms of trade showed a slightly rising trend until 1882, succeeded by a gradual but increasingly rapid fall until 1894. But it is to be noted that the terms of trade reached their peak four years before the peak was reached in capital imports, and continued to grow less favourable for almost a decade before a substantial diminution in the foreign borrowings occurred. In the rest of the pre-war period which is characterised chiefly by the outflow of capital between 1904 and 1911, there is some indication of a negative correlation between changes in trade terms and in capital flows, but mathematical analysis yielded no significant correlation coefficient. Finally, no correlation whatever is visible in the period of heavy borrowings after the War.

Regarding the connection between capital movements and shifts in the *relative price levels of domestic and international goods* Wilson's conclusions are of a somewhat more positive nature.<sup>2</sup> He computes an average of his import- and export-price indices and shows domestic prices and money wages as percentages of the prices of international goods (table 34). Between 1872 and 1889 there is a fairly high correlation between changes in the volume of foreign borrowing and fluctuations in these percentages. In the early Nineties the connection is less close,

representative of the movements of import and export prices for the whole of Australia. For the subsequent period there exists an official index of export prices, whereas no similar import index has yet been computed. The substitute on which Wilson had to rely—a group index for imported goods included in the Sydney index of wholesale prices—was undoubtedly the weakest link in his reasoning.

<sup>1</sup> Unlike Wood he adds together foreign borrowings and immigrants' capital.

<sup>2</sup> He had considerable difficulty in obtaining an adequate measure of changes in domestic prices. He used (1) the Sydney index for food, groceries and house rents; (2) the cost-of-living index referred to supra p. 592 note 2 for the six capital cities 1901—11, followed by a similar index for 30 towns 1911—30; (3) an official index of money wages for the years 1891, 1896, 1901, and 1906—30.

but the trend of the percentages is downward during the years of small and wavering imports of capital. Between 1900 and 1913, when the data on which the price ratios are based become more extensive, the correlation is very marked. Some

TABLE 34.

1901 =100	Syd- ney cost of living	As per cent of intern. goods	1901 =100	Syd- ney cost of living	As per cent of intern. goods	Au- stralia cost of living	As per cent of intern. goods	Au- stralia money wages	As per cent of intern. goods
1870	105.8	80.1							
71	100.8	68.5	1901	100.0	100.0	100.0	100.0	100.0	100.0
72	97.3	68.0	02	109.2	105.6	105.6	102.1	—	—
73	99.9	67.2	03	103.3	95.7	103.4	95.7	—	—
74	107.7	73.1	04	97.0	89.7	97.5	90.1	—	—
75	105.1	73.6	05	104.6	94.8	102.4	92.9	—	—
76	110.0	79.9	06	105.1	90.9	102.5	88.7	102.1	88.3
77	111.1	86.1	07	104.9	86.6	101.9	84.1	105.3	87.0
78	108.4	84.5	08	109.7	97.4	108.1	96.0	106.1	94.2
79	103.8	80.9	09	111.1	98.8	107.7	95.9	108.8	96.8
1880	102.8	80.7	1910	111.1	95.0	110.2	94.2	112.6	96.2
81	101.3	80.2	11	115.8	102.2	113.6	100.2	117.9	104.1
82	115.4	90.0	12	128.8	107.7	122.7	102.6	123.9	103.5
83	115.2	89.2	13	132.4	107.9	122.7	100.0	126.9	103.5
84	117.7	92.0	14-15	137.5	109.6	131.1	104.5	127.9	102.0
85	115.0	100.3	15-16	157.6	103.0	150.0	98.0	133.2	87.1
86	116.9	104.9	16-17	155.1	79.5	145.9	74.8	143.7	73.6
87	107.8	95.1	17-18	160.3	70.7	149.7	66.0	148.5	65.5
88	107.8	96.8	18-19	166.9	72.0	158.3	68.3	157.8	68.1
89	108.0	94.3	19-20	190.4	74.4	181.2	70.8	185.4	72.4
1890	106.9	95.5	1920-21	208.1	82.8	203.4	80.9	214.6	85.3
91	106.0	101.6	21-22	182.9	92.8	177.9	90.3	212.3	107.6
92	107.4	108.1	22-23	188.9	89.9	183.1	87.2	210.5	100.2
93	102.3	110.4	23-24	196.2	83.5	192.2	81.8	217.0	92.4
94	88.9	103.5	24-25	193.8	78.4	189.4	76.6	217.7	88.0
95	87.7	101.4	25-26	204.1	98.4	198.3	95.6	224.6	108.2
96	89.7	99.1	26-27	205.4	102.5	197.9	98.8	229.0	114.4
97	88.4	98.7	27-28	207.4	99.8	199.2	95.8	231.5	111.7
98	87.3	94.2	28-29	209.9	105.5	200.2	100.7	233.2	117.2
99	93.2	90.1	29-30	211.4	121.2	200.0	114.7	230.6	132.2
1900	92.7	90.4							

agreement is apparent during the early War years, but is probably not significant. After 1920, while there is little close correlation between the two sets of data from year to year, the trend of the percentages is distinctly upwards, in correspondence with the huge influx of capital.

Summarising his results, Wilson says that

“some verification is found in Australian experience for the proposition that imports of capital tend to be positively correlated with increases in the ratio of the “domestic” price-level to the price-level of “international” commodities. Complete verification is not possible with the data at present available. It is even doubtful whether the operation of such a tendency can ever be satisfactorily “verified” by resort to the inductive method.”

Thus our review of the Australian case yields the same result as that of the Canadian; no conclusive proof has been given of the correctness of the classical theory; if anything, the figures point rather towards the modern transfer explanation, though, here too, a definite proof is beyond the compass of the inductive method.

### 3. THE UNITED STATES.

We have already dealt with the United States in its present position as a creditor country. Until recently, however, it was one of the world's largest debtor countries. It remains to be seen, therefore, whether this phase of the economic development of the States lends itself more readily to a testing of the transfer mechanism. Here again, Taussig has attempted to verify the classical theory.<sup>1</sup> In view of the scantiness of the statistical material<sup>2</sup> it is obviously only the more conspicuous aspects of it which may be put to a test. And even those with a negative result.

<sup>1</sup> *International trade*, pp. 284 et seq.

<sup>2</sup> The most important of the scattered data available for the construction of balances of payments have been brought together by Taussig (*Loc. cit.*, pp. 295—96). Considering the vast capital import of the United States during the 19th century, there is a curious lack of quantitative data concerning it. “Beyond question”—Taussig says—“it fluctuated widely from year to year . . . rising to great amounts in the years of expansion, sinking to little or nothing in those of depression. In the ominous year 1894, when there was fear that the United States would go to a silver basis, it came to less than nothing. Securities were then sent back to the country from abroad.”



During large parts of the century the economic situation of the United States was beclouded by special complications which would probably render it impossible to discern the specific effects of capital flows, even if the necessary data were available. In the early decades the monetary and banking situation was highly confused and chaotic. Taussig suggests that an elaborate study of the last decade before the Civil War (1850—1860) might possibly yield results of significance towards testing the Ricardian theory of the relation between gold movements and prices. But—he admits—

“the information on the pertinent matters is fragmentary, and at best the period is short. Even after painstaking sifting of the evidence, the direct effects of gold movements on credit and prices would probably remain obscure, and the long-run trends in the relations between domestic and foreign prices still more so.”

In the next two decades we have the Greenback period, of which something will be said in the next chapter.<sup>1</sup> It is not till 1880, therefore, that conditions are at all favourable to the verification of the working of the transfer mechanism under a gold standard. And by that time a new disturbing factor had entered the picture: the silver controversy lasting from 1878 to 1900. Moreover, on several occasions, in 1879—80, 1890, and 1896, large crops in the United States happened to coincide with deficient harvests elsewhere, which, of course, exercised a considerable influence on gold movements.

In spite of all these troublesome complications Taussig finds that the movements of gold were, on the whole, in consonance with the traditional theory. In the early Eighties there was for a few years an even balance between gold imports and gold exports. Then, during the subsequent stage of heavy borrowing (1885—89), there was a substantial gold inflow while the excess of merchandise exports grew less, and in one year (1888) even ceased. During the first half of the Nineties the flow of capital was reversed; securities moved back into the United States, as European holders were afraid lest the States should abandon the gold standard. After the stoppage of the silver issues in 1893 and the defeat of the silver advocates in the presidential election of 1896, confidence was re-established, but towards the end of the century a renewed backflow of securities set in.

<sup>1</sup> Cf. *infra*, pp. 438 et seq.

Again, gold movements corresponded roughly to these reversals of the stream of capital; during the first period the large sales of securities in the United States promoted the heavy outflow of gold which marked the years 1891 and 1893, during the second they checked the inflow of gold.

In the period 1900—1914 the net result of the oscillating international gold movements was an import of merely 50 mill. dollars, a negligible amount for a country so rich and populous as the United States. But though hardly any gold flowed in from foreign sources, an enormous amount (about 800 mill. dollars after deducting gold used in the arts) was added to the monetary circulation from the domestic gold production of the States. At first sight, this result might seem out of accord with theoretical expectations. For the United States was now a "mature" debtor country with annual interest payments exceeding the volume of fresh borrowings. One would expect, therefore, according to the orthodox theory, an outflow of gold, a fall of prices in America as compared with prices elsewhere, a check on imports, and a stimulation of exports, leading to the final settlement of the payments abroad through an excess of commodity exports. Yet, at this point it is still possible to bring the facts in harmony with theoretical presumptions. Taussig reasons as follows:

*"If the United States had produced no gold; if the country had not been growing in population and wealth more rapidly than other countries; if then the problem had been simply that of distributing the world's stock of gold (either constant, or growing very slowly from other sources)—the metal would have flown out of the United States in consequence of the country's heavy remittances on invisible accounts."*

The actual situation was, however, that gold production was increased, not only in South Africa, but also in the United States. Moreover, since the United States was growing in wealth and population more rapidly than most other countries, it would, in any case, have attracted an increasing proportion of the world's gold. It so happened that the net outcome of these different forces was the retention within the States of exactly the amount which its own mines had produced.

So far all is well. But when it comes to the actual mechanism involved Taussig expresses himself much more guardedly:

"The supposed succession of events is not to be clearly made out. It does not appear that the large increase in the country's gold holdings preceded the increase of imports or preceded the rise in domestic prices. A detailed examination of all the several phases might yield results confirmatory of the familiar reasoning, or might suggest considerable modification or correction. I suspect the latter is quite as probable as the former; ... the consonance of the general course of events with the received doctrine is undeniable, while yet it remains uncertain whether the several steps took place in the precise manner presumed."

After an investigation of the development of *sectional price levels* his scepticism becomes even more pronounced. A com-

TABLE 35.

1903—13 = 100	Import prices	Export prices	Net barter terms of trade	1903—13 = 100	Import prices	Export prices	Net barter terms of trade
1880	137.0	110.4	124.2	1896	88.6	73.1	121.0
81	126.7	110.5	114.7	97	84.1	68.9	122.0
82	123.0	115.8	106.2	98	79.4	68.1	116.6
83	116.1	102.8	112.9	99	86.6	72.7	119.1
84	105.1	102.0	103.0	1900	93.8	86.2	108.8
85	95.4	95.3	100.1	01	85.5	84.7	101.0
86	96.2	87.1	110.5	02	83.6	86.4	96.8
87	109.5	90.7	120.7	03	88.2	94.8	92.9
88	107.7	96.5	111.7	04	92.6	100.9	91.8
89	116.0	92.4	125.5	05	100.9	88.8	113.5
1890	117.8	96.5	122.2	06	102.0	99.3	102.8
91	113.4	89.0	127.3	07	107.0	105.8	101.1
92	108.1	79.7	135.5	08	94.8	99.3	95.6
93	113.2	81.9	138.3	09	94.1	102.6	91.7
94	97.0	71.2	136.2	1910	103.3	118.3	87.4
95	84.9	68.9	123.2	11	104.8	109.2	96.0
				12	112.7	103.6	108.8
				13	106.9	111.3	96.0

putation of both the gross and the net barter terms of trade for the United States 1880—1914 was made by Theodore J. Kreps,<sup>1</sup> the main results of which are reproduced in table 35.<sup>2</sup>

<sup>1</sup> *Import and export prices in the United States and the terms of international trade, 1880—1914*. Quart. Journ. of Ec. 1926, pp. 708 et seq.

<sup>2</sup> For reasons already mentioned no attention is paid to gross barter terms of trade. Cf. *supra*. p. 341.

The movements of the net terms do not show any marked trend. They are at least as favourable after 1900 as before. This, Taussig admits, is an unexpected result; for as a strong believer in the classical reasoning he would have expected less favourable terms of trade after 1900, when the United States had to push the sale of its goods in foreign markets in order to meet its heavy remittances for interest payments and other invisible items. As a possible explanation of the anomaly he points to (1) the American tariff policy and (2) shifts in reciprocal demand, but he adds at once that "I am not sure that this anomaly can be satisfactorily explained".<sup>1</sup>

As regards the *protective policy* it was hardly more stringent after 1900 than before; the changes in rates brought about by the tariffs of 1897 and 1909 were not very considerable. But Taussig suggests that the system had now had more time in which to work out its effects. And these effects might well be to lessen the imports of large classes of goods; it might be as if a decline in demand for European goods had set in.

Regarding *demand conditions* Taussig points to the change in the make-up of American exports which is noticeable after 1900. Cotton retained a dominating position, while food products became less important, and copper, oil, and numerous manufactured goods more important than before. But it seems doubtful that a change of this sort should tend to make the terms of trade more favourable to the United States; it would hardly make the foreign demand curve for American goods *less elastic* than before, but it may, of course, have shifted the position of the curve to the right. Taussig does not commit himself on the question:

"I see no way"—he says—"of testing whether the swelling exports from the United States were to any noticeable extent the results of an increase of demand. It may be that a change of this kind set in, *by the merest chance*, at the very time when the heavier remittances had to be made. The two forces would then tend to neutralize each

<sup>1</sup> Besides, Kreps who has computed the figures points out that the price of cotton was of dominating influence in the export price index, and that, similarly, the import price index was greatly influenced by the prices of coffee and sugar. He does not believe himself that this over-weighting of a few articles renders his results useless, but he admits that a sceptic might feel inclined to think that the maximum figures for the net barter terms of trade in 1892—94 indicate merely that at no other time was the value of cotton less in terms of sugar and coffee than in those years (*Loc cit.*, p. 720).

other, that of increasing demand being reinforced by the working of the protective duties. The growing exports from the United States, and especially those of manufactured goods, may signify that there was an increase of demand from foreign countries; and they may thus constitute a factor which, if standing by itself, would have tended to bring gold into the country and to make the barter terms of trade more advantageous. Or they may signify merely that the barter terms, under the pressure for growing remittances to foreign countries, were becoming less advantageous and that this pressure caused commodities of any and every sort to be exported in greater quantities. There is no way of testing what was cause and what effect."

The question which Taussig does not raise, is whether this confused outcome is merely the result of different forces working in different directions, or whether his failure in verifying the classical theory might not be taken as *prima facie* evidence in favour of the modern transfer explanation.

## CHAPTER XI

### PAPER-STANDARD COUNTRIES

#### I. THE ARGENTINE.

The cases of international lending and borrowing analysed in the two preceding chapters showed the common characteristic that the country from or to which the capital flowed was on the gold standard. It remains to review a few examples of international capital movements between paper-standard countries. Here inductive verification of the transfer mechanism is even more difficult, however, than in the cases already considered. The greater possibilities which the paper standard affords in each particular country for conducting an independent monetary policy, make it less likely that the flow of capital will be the one factor which dominates the economic situation. Whatever be the prospects for the future, the paper régimes of the past certainly have been subject to arbitrary and irregular fluctuations. For this and other reasons the analysis will be confined to *debtor countries* where, in general, conditions for statistical verification appear to be most favourable.

Experience shows that an inflow of capital into a paper-standard country is usually accompanied by an inflationary credit expansion, but there are also examples of heavy foreign borrowing by countries pursuing a credit contraction. It goes without saying that the monetary policy may be dictated by considerations entirely independent of the capital movements, but as stated in chapter VIII there may also be a causal relationship between capital flows and credit policy which explains the preponderance of the inflationary tendency, whether it be the general upswing which attracts foreign capital, or whether, conversely, the capital inflow be the cause of the boom. Examp-

les of borrowing accompanied by inflation may be drawn from the Argentine in the period 1880—1900,<sup>1</sup> while the development in the United States during the Greenback period is probably the most notable case of borrowing accompanied by deflation.

The whole connection between depreciating paper money, foreign borrowing, and foreign trade has been examined by *John H. Williams* in a study of Argentine economic history between 1880 and 1900,<sup>2</sup> undertaken at Taussig's suggestion. Here again, we have a country to which foreign trade is of paramount importance. Domestic production was confined to a narrow range of agricultural products; there were no mines, nor any manufacturing industries to speak of; the economic activity consisted exclusively in an exchange of grain, wool, hides, and meat for a great variety of finished goods from other parts of the world. To build up this exchange the Argentine, like all new countries, needed foreign capital to develop her agricultural resources. Almost all large enterprises, railroads, meat refrigerating plants,<sup>3</sup> banks, importing and exporting houses, etc. were developed by foreign capital. Under such circumstances it is obvious that the balance of payments was a matter of the greatest importance in the economic life of the Argentine.

Now, Williams' main contention is that, contrary to the opinion of most Argentine writers on economic problems, extravagant issues of paper money were not the sole determinant of its value, but that, quite apart from speculative short-time surface fluctuations due to the varying prospects of future redemption, the value of Argentine paper money was also regulated by the state of the balance of payments and, in particular, by variations in the rate at which capital flowed in from abroad, and that this was for most of the period the *controlling* element in the situation.

Consequently, Williams' statistical inquiry aims at two

<sup>1</sup> Strictly speaking, the figures relating to Australia during and immediately after the War also belong to this rather than to the preceding chapter.

<sup>2</sup> *Argentine international trade under inconvertible paper money, 1880—1900*, Cambridge Mass. 1920.

<sup>3</sup> The main development of this important industry took place after 1900, however.

things: (1) to ascertain the varying rate of capital inflow in order to demonstrate that this, rather than the varying amount of money in circulation, is the cause of the fluctuations in the value of the paper currency, and (2) to confirm or refute the classical reasoning regarding the mechanism by which an inflow of capital into a paper-standard country is carried through. The general theoretical framework on which Williams bases this inquiry into the mechanism of international capital transfer between paper-standard countries is, in other words, that (1) borrowings disturb the equilibrium of the balance of payments, that (2) disturbances in the balance of payments affect the value of the inconvertible paper money, and that (3) the changes in the value of the currency affect commodity exports and imports.

Williams' main findings are summarised in table 36. For many years prior to the period here reviewed the Argentine had been on a *paper basis*, or rather on several, for each province had its own paper currency which was more or less depreciated. In 1881 an attempt was made to create a national bi-metallic standard. A certain measure of uniformity was brought about, but the return to convertibility was of brief duration; it lasted only from July 1883 to December 1884. During this interval 882 mill. pesos of greatly depreciated notes were replaced by 61.7 mill. pesos in new national notes on a metallic basis, but by the end of 1884 a financial crisis caused renewed suspension of specie payments. No additional issues of paper money seem to have taken place, however, until December 1886, but under the Act of National Guaranteed Banks of 1887 (modelled upon the National Bank system of the United States) a reckless credit expansion took place, to which not even the Baring panic in 1890 put an end. In order to obtain a funding loan of £ 15 million the government had to pledge itself early in 1891 to cancel bank notes to an amount of at least 15 million pesos annually for three years, but facing a budget deficit of about twice that amount it was unable to keep its promise. On the contrary, there was a considerable further expansion of the quantity of paper in circulation until the end of 1893. After that time it remained almost stationary, and in 1899 a conversion law was passed which put an end to the régime of inconvertible paper by establishing a redemption fund and making



the circulating notes convertible at the rate of 227 of paper to 100 of gold.

In a paper-standard country it is obviously out of the question to use the indirect method for estimating the *inflow* of

TABLE 36.

	Paper money in circulation Dec 31 (mill. pesos)	Export surplus (mill. gold pesos)	Total new capital import (mill. gold pesos)	Interest charges (mill. gold pesos)	Balance of capital items	Total balance of payments	Average gold premium per cent
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1881	—	+ 2.2	14.1	12.0	+ 2.1	+ 4.3	—
82	—	— 0.8	25.3	15.7	+ 9.6	+ 8.8	—
83	—	— 20.2	47.4	19.5	+ 27.9	+ 7.7	—
84	61.7	— 26.0	39.7	27.6	+ 12.1	— 13.9	0
85	74.8	— 8.3	38.7	22.6	+ 16.1	+ 7.8	37
86	89.2	— 25.6	67.6	26.8	+ 40.8	+ 15.2	39
87	94.1	— 32.9	153.5	37.3	+116.2	+ 83.3	35
88	129.5	— 28.3	247.8	49.5	+198.3	+170.0	48
89	163.7	— 74.4	153.6	59.8	+ 93.8	+ 19.4	91
1890	245.1	— 41.4	45.4	60.2	— 14.8	— 56.2	151
91	261.4	+ 36.0	8.2	31.6	— 23.3	+ 12.7	287
92	281.6	+ 21.9	—	—	— 15.9	+ 6.0	232
93	306.7	— 2.1	—	—	— 20.1	— 22.3	224
94	298.7	+ 8.9	—	—	— 30.6	— 21.7	257
95	296.7	+ 25.0	17.2	38.2	— 21.0	+ 4.0	244
96	295.2	+ 4.6	37.1	39.9	— 2.8	+ 1.8	196
97	292.7	+ 2.9	38.3	44.0	— 5.7	— 2.8	191
98	292.0	+ 26.4	46.1	50.5	— 4.4	+ 22.0	158
99	291.3	+ 68.0	25.0	54.7	— 29.7	+ 38.3	125
1900	295.2	+ 41.1	27.5	58.6	— 31.1	+ 10.0	131

*foreign capital.* By means of the *direct method* Williams computes from a great variety of sources (1) the amount of new capital which entered the Argentine in each year (col. 3), (2) the annual interest and amortisation payments on the total foreign capital invested in the country (col. 4), and (3) the

balance between these two items (col. 5), the excess of new borrowings over the interest charge or vice versa, i.e. the net amount to be transferred on capital account.<sup>1</sup>

Between 1881 and 1884 this balance shows a moderate surplus. Government bonds were floated to provide gold for the contemplated conversion of the paper currency, for railway construction, and for the building of the new capital and port (La Plata), and private railway and other companies were also financed from abroad. As will appear in a moment the decrease in this inflow of capital in 1884—85 caused a disturbance in the balance of payments which was responsible for the crisis of these years and the return to inconvertible paper. Nevertheless, in the succeeding five years 1886—1890 recourse was had to foreign borrowing on a scale so extravagant that the former capital import is almost negligible in comparison. This boom was suddenly interrupted by the collapse of the Barings in November 1890. The inevitable result of paying off old debts with new ones was that the bubble burst when new loans could no longer be obtained. As a great part of the borrowings of the preceding period consisted of government loans, it became necessary to allow the government a moratorium of interest and amortisation payments. A moratorium for three years was granted in January 1891 in connection with the floating of the £ 15 mill. funding loan, in the bonds of which the greater part of the interest payments were to be made. It soon appeared, however, that the government would not be able to assume the full burden of its foreign liabilities in 1894, and a new arrangement was made in 1892, allowing a partial suspension of payments for eight years. Williams does not give any figures regarding the modest volume of new borrowing in the years 1892—94, but merely the balance between new loans and interest and amortisation charges. One would expect, of course, to find a large deficit in this balance, but owing to the numerous defaults of interest payments it was not nearly as large as it should have been; a considerable part of the foreign capital invested in municipal bonds, land, and other ventures was simply written off. By 1895 the foreign borrowing was

<sup>1</sup> The construction of these series was facilitated in the case of the Argentine by the fact that the government played so large a part in the borrowing operations, and that, in consequence, much of the data could be drawn from official records.

renewed on a moderate scale, but it proved impossible to assign the miscellaneous investments of this period to particular years, and Williams had to confine himself to include a rough annual average (20 million gold pesos) in his balances of payments. In spite of the renewal of borrowings, however, the balance on capital account continued to show a deficit owing to the large and growing interest payments.

The next step in Williams' investigation is to draw up annual *balances of payments* by combining the figures already quoted with the trade statistics. He openly confesses that the statistics of imports and exports, based on official customs valuations, are unreliable or even worthless in so far as absolute values are concerned, and that there is even some question as to their applicability for purposes of comparison of one year with another. Yet, he feels confident that in the period of his study the changes registered were so large and striking that conclusions may safely be drawn. Since the Argentine evaluates both exports and imports in the Buenos Aires market a separate calculation of freight payments was evaded, and all other items, such as immigrants' remittances, tourists' expenditures, and the like, were omitted, owing to the impossibility of getting reliable information, and with reference to their negligible importance.<sup>1</sup> Thus, the only credit items recognized are commodity exports and borrowings, the only debit items commodity imports and interest and amortisation payments. The balance which results from these calculations (table 36, col. 6) indicates the excess of demand or supply in the foreign exchange market which must be expected to force the exchange rates up or down.

Yet, apart from a brief interval—January to April 1885—the fluctuations were apparently kept within the limits set by the gold points. For the period after April 1885 this was an *artificial stability*, however, created by the peculiar organization of the Argentine foreign exchange market adopted at that time. Foreign exchange was not paid for in paper, but in gold. In other words, the country had not one monetary

<sup>1</sup> At most, the two items just mentioned represent a debit amount of 10 million gold pesos per year in the late Eighties, an amount which cannot materially alter the trend of the balance; its inclusion would result in a slightly smaller surplus in the years up to 1889 and a larger deficit in 1890.

system, but two: the depreciated paper which circulated throughout the country and was legal tender for all domestic transactions, and gold, which was bought and sold only in the foreign trade centres. To buy a bill of exchange one first bought gold, and with the gold bought exchange. Consequently, the measure of the extent of depreciation must be sought in this case in the premium on gold (cf. table 36, column 7). This market organization meant, of course, merely a splitting up of the exchange between depreciated paper and foreign exchange in two transactions. But it was not without importance for the mechanism of transfer.<sup>1</sup>

The traditional reasoning is that, once gold has been driven out and paper has taken the place of the metallic exchange, gold cannot move freely between the trading countries, and that this is the very reason why the exchange rates fluctuate so violently. But in the case of the Argentine there were gold movements. The peculiar organization of the foreign exchange market permitted gold to flow between the Argentine and other countries in much the same way as if there had been no depreciated paper money. There was still a par of exchange between foreign gold currencies and the Argentine gold peso and there were still gold points which operated in precisely the same manner as in gold-standard countries. Once a man had procured the gold with which to buy foreign exchange, he had the choice, here as in a gold-standard country, between buying exchange with his gold and shipping the gold itself. If the exchange rate was below the gold-export point, he would buy exchange; if it had risen to the gold point, it was to his advantage to ship the gold. Similarly, if the rate fell below the gold-import point, the seller of foreign exchange would send for gold rather than dispose of his exchange at so great a loss.

Both the size of the gold movements and, more particularly, their dates seemed to indicate that the mechanism was oper-

<sup>1</sup> Incidentally Williams points out that a case like that of the Argentine shows that the terms "dislocated exchange" is not very fortunate for describing a régime of inconvertible paper; it puts the emphasis on a superficial aspect of the situation, whereas the facts of fundamental importance are the existence of depreciated paper money within the country and the necessity in international dealings of constant comparison between this domestic paper and foreign gold currencies.

ating as in a gold country rather than as in a paper country. Yet, this result was more apparent than real. Quite true, gold moved into and out of *the country* in obedience to the mechanism of gold points; but gold could not flow into and out of *the monetary circulation* of the country. Gold stood constantly at a premium. Consequently, an influx of gold into the country would not raise the price level, nor an outflow of gold lower it, as should be the tendency in a gold-standard country. Gold movements would not, therefore, affect exports and imports in the same way, or by the same means, as they would in a gold-using country. And this is, of course, the significant difference between the Argentine case and that of gold-standard countries.

At the same time, Williams warns us against jumping to the opposite conclusion: that the gold movements were of no importance and did not affect prices at all. Gold could not, to be sure, enter into circulation, but gold coming to the country would have quite as much effect upon the value of money as if it had done so. Only, it would be the opposite effect: it would not depreciate money and raise the price level, but would cause money to appreciate and the price level to fall. It would do so by increasing the supply of gold, and thus cheapening gold in terms of paper.

What Williams sets out to demonstrate is, however, merely that the additional sterling supply, created by the inflow of capital, caused the gold premium to be *somewhat lower than it would have been*, if the inflation had not been accompanied by foreign borrowing. But what he ought to have looked for, *on his own premises*, was the *exact numerical relationship* between depression of gold premium and volume of borrowing which the classical theory postulates. A supporter of the *modern* point of view, on the other hand, could argue as follows: the Argentine borrowers use part of the foreign buying power put at their disposal for the purchase of foreign goods or Argentine export goods; this directly affects the balance of trade and creates an import surplus to be paid for out of the borrowed funds. But another and perhaps greater part of the loans the borrowers want to expend, in the first instance, in exchange for domestic goods and services. In order to do so

they must procure Argentine currency, i.e. they must sell their sterling exchange. This additional supply in the exchange market may tend to depress the rates somewhat, but owing to the inflationary credit expansion the result may not be an actual fall, but merely a smaller rise than one might otherwise have expected.

To test these theories statistically is almost impossible, since one cannot know, of course, how the rates of exchange (the gold premium) *would* have developed, if there had been no foreign loans. A glance at the first and last column of table 36 will suffice to show that the *correlation between quantity of paper money in circulation and gold premium* is not very high. But Williams somewhat overstresses his point when he maintains that there is *hardly any* correlation. On the other hand, there is a considerable similarity throughout the period studied by Williams between the *fluctuations in gold premium and the variations in the surplus or deficit of the balance of payments*. When the balance is "favourable" to the Argentine (prior to 1888) the gold premium is low. When the balance turns against the Argentine, reaching its climax in the large "unfavourable" balance of 1890, the gold premium rises sharply. The fall and the rise of the balance between 1890 and 1894 is matched approximately by a fall and a rise of the premium on gold. And the decline of the premium in the last five years (1894—99) is accompanied by a corresponding change in the balance of payments.

But in this guarded form Williams' conclusions lend no support to the rigid classical reasoning regarding an *impact* in the foreign exchange market of two *fixed quantities*. What he has demonstrated is merely that the changing rate at which foreign capital was imported into the Argentine exercised a *certain*, perhaps a considerable influence on the value of Argentine paper money.

After that, Williams turns to the last part of his analysis: the interrelation between the changing value of the currency and the *movements of commodity trade*. Until 1891 Argentine imports regularly exceeded exports; from that year onward, with the sole exception of 1893, exports just as regularly exceeded imports. Particularly striking is the pronounced rise of imports in the late Eighties, followed by an abrupt drop of more than 50 per cent in 1891. Exports, on the whole, pro-

ceeded more smoothly, until they suddenly jumped upwards at the close of the century.

Coming to the question of *how* the reversal of the balance of trade in 1891 was brought about Williams found his material very defective. Particularly his statistics of import prices and wages were meagre and unreliable, cf. table 37.

TABLE 37.

	Export prices	Import prices	Wages
1886	100	100	100
87	91	—	—
88	84	—	—
89	102	—	—
1890	133	313	120
91	213	—	—
92	213	—	133
93	164	—	—
94	176	—	146
95	181	—	—
96	153	293	161
97	160	—	—
98	157	—	—
99	124	—	—
1900	143	—	—

It was a comparatively easy matter for Williams to compute a *price index for the leading export articles* on the basis of quotations from the principal produce markets in Buenos Aires. But regarding *import prices* he had data for only 18 articles, all of which were either foods or textiles, and these data were for only three years. Such figures are, of course, too scant to allow any but the most general conclusions, particularly as nothing is known about the course of import prices between the three selected years.

A good many scattered *wage data* are quoted by Williams, but his main refuge is an index constructed by him on the basis of material collected by W. I. Buchanan, then United

States minister to the Argentine; this index refers only to city occupations, and only to the years 1886, 1890, 1892, 1894, and 1896. Here again, we do not know what happened to wages in the intervening years.

Turning first to the *export trade* Williams concludes from the figures of table 37 that, in accord with theoretical expectation, export prices were much more sensitive to changes in the price of gold than wages. The result was that when gold was rising, a gap was created between selling prices and costs, and that, conversely, when gold was falling, export prices dropped more rapidly than costs. He would expect, therefore, to find an expansion of exports between 1888 and 1895, followed by a recession in the period 1896—1900. As already mentioned one finds *just the reverse*: in the late Eighties and early Nineties exports increased but slowly, whereas they showed a remarkable expansion towards the end of the century.

To explain this unexpected development Williams points out that "*other things were not equal*"; there was a network of other factors in operation, working sometimes for and sometimes against those arising out of the paper-money situation. He gives the following summary of the development:<sup>1</sup>

"The most important factor was European prices. These were falling between 1890 and 1895: their fall neutralized the effect of the rising gold premium. Though quantity of exports increased, the greater quantity was sold for a lower gold price per unit; with the result that "value of exports" remained virtually stationary. The fall of European prices acted as a restraint upon the wheat trade, though it could not prevent a considerable increase even in "value of exports" because of the enormously increased wheat acreage. In the wool trade, where the quantity was about stationary, the fall of prices abroad produced a decided decline in "value of exports." The general result was that the decline in the wool trade offset the growth of the wheat trade, and kept "value of exports" about stationary during the period of the high premium on gold.

A second complicating factor is the character of the Argentine exports. They were purely agricultural and grazing products, and therefore extremely susceptible to vagaries of climate. Argentine rainfall is very irregular. Moreover, there was the locust, which in some years did but little damage and in others practically destroyed

<sup>1</sup> *Loc. cit.*, pp. 234—35.



the cereal crops. In 1889 the wheat crop was spoiled by excessive rain. In 1891 the locusts ate three-fourths of the corn crop . . . .

The one striking fact is the increase in wheat, especially in the quantity produced and exported. But even this is not ascribable solely to a rising gold premium. Other factors, at least equally powerful, cooperated to the same end; the growing railway net, the inrush of immigrants, the land boom, the mortgage-bank operations, the building of new shipping ports and the improvements of old ones, the improvement in threshing and reaping. Why, among so many, choose a single factor, the rising premium on gold, as chiefly responsible for the remarkable growth of wheat cultivation and exports? The truth, clearly, is that all were responsible. There was no *chief* cause but many causes working in combination, and of these, one undoubtedly was the rising gold premium.

Aside from wheat, it is difficult to point out any striking instance in which the gold premium increased exports. The wool trade, most important of all, affords some favourable evidence, but appears in the main to have depended on the state of foreign demand as reflected by European prices. The corn trade was so irregular that virtually no conclusions can be drawn from it."

After all, Williams must admit that so far as the export trade is concerned his material is inconclusive. But it does not occur to him that the capital flows might exercise a more *direct* influence on the volume of exports. He does not even realise how odd it is to expect an expansion of exports in the late Eighties when the import of capital reached its maximum. Curiously enough, this is suggested by Tausig.<sup>1</sup> In general, he doubts whether a currency depreciation leads inevitably to a bounty on exports. He admits, of course, that very often, if not always, money wages fail to rise as fast as commodity prices. But he contends that this merely means that the exporter gains in common with all other entrepreneurs; profits expand everywhere; there is a bounty for the business class at large, but there is no *special* bounty for the exporters, serving to increase the volume of exports. It is only if exchange rises *more* than prices, i.e. if the currency is temporarily undervalued abroad, that the phenomenon known as "exchange dumping" appears. And events may well take precisely the reverse course, exchange rising *less* than prices, the currency becoming temporarily overvalued abroad. Then the effect of depreciation will be to put a tax

<sup>1</sup> *International trade*, pp. 404—08, cf. 385—89.

on exports and give a bounty on imports. Which of these two results will actually emerge depends presumably on the way in which the additional purchasing power is used. When a credit expansion takes place, the money is not scattered broadcast, so to speak, it is put in the hands of particular individuals and applied to the purchase of definite commodities or services. If it is used predominantly for the purchase of imported goods (or for making remittances to foreigners), the exchange is likely to rise more than domestic prices and to create the export bounty. How long this bounty will persist, depends on the ease with which additional exports are called forth. As in the case of an unchanging paper currency the advantage is only transitional. Producers of domestic goods will transfer to the export industries, and those already engaged in them will expand. The quicker an increasing supply of export goods is created, the sooner will the foreign exchange rates go down from their abnormal heights.

In the light of such general considerations Taussig cannot share Williams' expectation of swelling exports towards the end of the Eighties. On the contrary, he regards the course of events in the Argentine prior to 1890 as a good example of the conditions under which depreciation gives a bounty on imports rather than on exports. Quite true, money wages in the Argentine failed to rise in proportion to prices, and business profits expanded; but they were probably expanding in *all* industries, inflation serving in the familiar manner to cut down real wages. Indeed, Taussig contends that while the lag in money wages was the same in export industries and domestic industries, the rise of profits was *less* in the former than in the latter, owing to the relatively low premium on gold obtaining before 1890. This low premium, as we have seen, was the natural concomitant of the heavy loans then made to the Argentine. The borrowings in London being large, there was a large supply of sterling exchange in the market. Consequently, the Argentine exporter got for his bills on London a price which was low in relation to the increasing volume of paper currency. It is but natural, therefore, that the increase in exports was checked. After 1890, on the other hand, the situation was reversed. Loans ceased and the supply of sterling exchange decreased. Consequently, the

gold premium, the effective rate of exchange, went up and stimulated exports.

To test this theory one should have had reliable separate indices of export, import, and domestic prices. For the explanation obviously assumes that in the years prior to 1890 domestic prices in the Argentine rose more sharply than export prices. It is curious to notice, however, how Taussig here approaches the modern point of view.

Regarding the *import trade*, a gap appears between import prices and wages so enormous that, notwithstanding the deficiency of the price data, Williams has confidence in the result; import prices jumped up markedly and rapidly while wages, as we have seen, rose but *slowly*; even by 1896, they had not caught up with the prices of imports. And here the value of imports *did* move in the expected direction, at least during the period after 1889. Prior to that year, no inverse correlation can be demonstrated between gold premium and volume of imports, the explanation being, according to Williams, that relatively much of the capital imported in these years was used for railway construction and that, consequently, the direct linking of imports and borrowings played a greater rôle in this period than later on. But here again, the explanation may be that suggested by Taussig. On the whole, therefore, the classical reasoning regarding the rôle of price changes is *not* conclusively proved by Williams.

Comparing the development of the Argentine with that of Canada and other gold-standard debtors it appears that in both cases new buying power was created and put in the hands of the borrowers in exchange for their foreign funds. In the gold-standard countries, however, the total volume of buying power was dependent upon the inflow of foreign capital. Not so in this case, where a credit expansion took place independent of the loan operations.<sup>1</sup> Yet, even here

<sup>1</sup> According to the National Guaranteed Bank Act the notes of the Argentine banks were secured by government bonds to be paid for in gold, and since there was practically no other method of acquiring gold than through foreign borrowing, this law would seem to create a link between borrowings and the volume of circulation similar to that existing in gold-standard countries. The execution of this law was *lax*, though; several provinces never paid for the bonds which they acquired as guarantee for their note issue.

there is sufficient parallelism between the volume of borrowings and the quantity of money in circulation to indicate a causal connection along the lines of the modern theory.

Williams study is confined deliberately to the transitory effects of an inflow of capital into a paper-standard country. The ultimate consequence, the possible benefits or losses accruing to the people of the Argentine, are not considered at all. He points out that even in the relatively simple situation of gold-using countries it is extremely difficult to verify these long-time effects. To endeavour to test their validity under the infinitely more complex conditions of depreciated paper money, he holds to be futile.

## 2. THE UNITED STATES.

The statistical study of the international trade of the United States during the Greenback period, undertaken by *Frank D. Graham*,<sup>1</sup> is also inspired by Taussig. Graham explicitly professes to aim at verifying the theory of international trade under depreciated paper, advanced by Taussig, and in all essentials he finds this theory to be correct.

The first four or five years of the period are dominated by the financial upheavals arising out of the Civil War, which were also, of course, the immediate occasion of the suspension of specie payments in 1862 and the commencement in the following years of heavy foreign borrowing. But by 1866, something like "normal" economic conditions had been restored, and from now on a development took place which appears to be singularly favourable for testing the transfer mechanism. For the inflow of capital was continued until the panic of 1873, when it was abruptly brought to an end. The period as a whole, therefore, presents for consideration two contrasting situations: (1) foreign borrowings on a large scale, disturbing a state of equilibrium and setting in motion a mechanism of adjustment; and (2) when they are suddenly interrupted, a reverse movement of interest charges and repayments, calling for similar adjustments in the opposite direction.

<sup>1</sup> *International trade under depreciated paper. The United States 1862—79*, Quart. Journ. of Ec. 1922.

In this respect, the American and the Argentine episodes closely resemble one another; the crisis of 1873 occupies a similar position in the American development as the Baring panic in that of the Argentine; in both countries there was a marked boom followed by severe depression and gradual recovery.

In another respect, however, the American and the Argentine episodes were decidedly different. In the Argentine the borrowings went hand in hand with a policy of inflation; in the United States, on the other hand, the bent of monetary policy was towards *deflation*. The total volume of paper money remained practically unchanged, and as population and trade volume were constantly growing, the supply of money tended to become more and more scarce in relation to the demand for it; this development was described at the time as a "growing up to the currency."<sup>1</sup>

Before attempting to determine inductively the mechanism by which the capital flow was effected, Graham made some interesting remarks concerning the differences between short-run and long-run phenomena. When foreign borrowings are continued over a long period, the long-run effects of loans contracted in previous years are working themselves out at the same time as the short-run effects of more recent borrowing operations. And in many respects these two sets of effects tend to neutralise each other. Whenever the scale of borrowings is greatly increased, the short-run effects may be expected to gain headway; but when borrowings are continued at a constant rate, the long-run effects will gradually become more powerful, especially as the immediate effects of increasing interest payments tend to offset the short-run effects of the recent borrowings. But, on the whole, Graham like Williams holds that the long-run tendencies will be disturbed by so many new phenomena that their effects can seldom be traced with precision. And in a case like the American during the period 1862—79, he regards the short-run phenomena as dominating the situation in an exceptional degree,

<sup>1</sup> In 1865 the total money in circulation in the United States (gold and silver coin, United States notes, national and other bank notes) was 770.4 million dollars. Until 1869 there was a slow decline to 716.5 million dollars, followed by an upward movement to 806.0 million in 1874 and a new recession to 763.1 million dollars in 1877.

owing to the way in which these years may be broken up in sub-periods. Borrowing on a large scale began in 1863 and was maintained for about five years at about the same rate. In 1868—69 it was very largely increased, so that just when the long-range effects might be expected to become dominant, short-range effects were given a new impetus. In 1873 the crisis and the relative cessation of borrowing reversed the former conditions and again gave predominant importance to short-range effects. Thus, the long-range effects would probably just be beginning to dominate the situation at the end of each of the three stages, 1863—68, 1868—73, and 1873—78, when their influence would be overthrown by the phenomena of the succeeding period.

Graham's first task was to construct annual *balances of payments*. The most important among the data he has brought together are reproduced in table 38. To the official figures regarding commodity trade and movements of gold and silver, he added estimated freight receipts and expenditures, proceeds from sales of ships, borrowings, interest payments, and repayments of old loans.<sup>1</sup> Other items such as tourists' expenditures, immigrants' remittances, capital brought in by immigrants, and insurance premiums were omitted owing to lack of adequate data.<sup>2</sup>

The volume of *borrowings* is, of course, estimated by the direct method. Apparently, the estimates refer only to long-term loans. Amounting to 70—80 million dollars annually in 1864—68 they swelled to an average of about 130 million for the quinquennium 1869—73. As in the Argentine case the capital was chiefly British, and here too, it was used mostly for railway construction. When the crisis came in 1873, the ca-

<sup>1</sup> All the figures are in gold values, paper prices having been reduced to their gold equivalents at the current rate of gold premium.

<sup>2</sup> Seeing that for the whole period the debits and credits independently ascertained by him give an almost even balance Graham feels confident that his omissions, if not quite negligible, must at any rate have served approximately to offset each other, so that the balance on capital account is not materially affected. This conclusion does not seem warranted, however. In a gold-standard country the total balance of payments must, of course, balance. But the very essence of the theory, which Graham attempts to verify, is that in a paper-standard country a positive or a negative balance may ensue, which is then corrected by alterations of the exchange rates. And this is but very imperfectly taken into account by recalculating the paper values on the basis of the annual average gold premium.

pital import ceased almost at once, only such contracts being maintained as could not possibly be cancelled. And a year or two later considerable repayments of loans were effected until a new borrowing cycle was started in 1879.

TABLE 38.

Mill. \$	Export surplus of com- modi- ties (1)	Export surplus of gold and silver (2)	New capital im- ported (3)	Interest pay- ments (4)	Repay- ments on loans (5)	Freights; sales of ships (6)	Total balance of pay- ments (7)	Capital balance (8)
1860	- 20.0	+ 57.9	15.0	18.0	...	+ 14.5	+ 49.4	- 3.0
61	- 69.7	- 16.5	10.0	18.0	...	+ 4.6	- 89.6	- 8.0
62	+ 1.3	+ 20.5	...	15.0	25.0	+ 5.8	- 12.4	- 40.0
63	- 39.3	+ 54.6	...	12.0	25.0	+ 4.5	- 17.2	- 37.0
64	-157.6	+ 92.3	80.0	15.0	...	- 6.1	- 6.4	+ 65.0
65	- 72.7	+ 59.8	75.0	24.0	...	- 7.1	+ 31.0	+ 51.1
66	- 85.9	+ 75.3	70.0	30.0	...	- 16.7	+ 12.7	+ 40.0
67	-101.3	+ 38.8	74.0	36.0	...	- 17.0	- 41.5	+ 38.0
68	- 75.4	+ 79.6	76.0	42.0	...	- 12.0	+ 26.2	+ 34.0
69	-131.4	+ 37.3	129.5	52.0	7.4	- 18.7	- 42.7	+ 70.1
1870	- 43.2	+ 31.7	145.0	61.0	15.2	- 14.4	+ 42.9	+ 68.8
71	- 77.4	+ 77.1	116.4	67.0	16.2	- 19.1	+ 13.8	+ 33.2
72	-182.4	+ 66.1	127.4	72.0	15.0	- 29.4	-105.3	+ 40.4
73	-119.6	+ 63.1	147.6	78.0	2.8	- 32.2	- 21.9	+ 66.8
74	+ 18.9	+ 38.1	51.0	60.0	...	- 24.8	+ 23.3	- 9.0
75	- 19.6	+ 71.2	20.2	63.0	...	- 24.3	- 15.4	- 42.8
76	+ 79.7	+ 40.6	...	60.0	50.0	- 17.3	- 7.0	-110.0
77	+151.2	+ 15.3	...	55.0	100.0	- 17.6	- 6.1	-155.0
78	+257.9	- 4.7	...	45.0	150.0	- 14.4	+ 43.8	-195.0

Taking into account both repayments and current interest payments the "balance to be transferred on capital account" is calculated in col. 8. Connecting this with the items regarding commodity trade, gold movements, and freight payments we get the surplus or deficit appearing in the foreign exchange market (col. 7). It will be seen that after the war years a credit or debit balance is seldom allowed to pile up for more than a couple of years, before it is followed by a balance of the opposite complexion. This means, says Graham, that unsecured credits were not granted for any

lengthy period by either party. An advocate of the modern transfer theory would regard the short duration of these fluctuations as evidence of the efficiency of the mechanism which serves to bring about equality of total debits and credits without substantial variations in the rates of exchange, and he would refer to unsecured short-term credits as the chief force in this mechanism of adjustment.

Ignoring the early war period, the balance of trade showed an import surplus averaging about 105 million dollars between 1864 and 1873 and, after a transition, 1874—75, in which imports and exports approximately balanced, an excess of exports averaging 163 million dollars during the rest of the period. The correlation between the shifts in the balance of merchandise trade and the varying rate of borrowing is apparent. Large loans and a large excess of imports go together; while large repayments are accompanied by a large export surplus.

Coming to the *mechanism* through which the loan operations thus affected commodity trade, Graham makes the same distinction as Williams; he attempts to demonstrate: (1) a correspondence between the rate of borrowing and the value of the paper currency, and (2) a causal connection between changes in the value of the currency and merchandise movements.

The first effect postulated by the classical transfer theory as a result of a large capital import from England into the United States, was an increased supply of sterling bills in the New York market with a consequent fall of the sterling rate. Great Britain being on a gold standard, sterling bills were equivalent to gold. The New York sterling rate and the price of gold in terms of American paper money would, therefore, necessarily move together, so that this price, the gold premium, could be used as a measure of the depression of sterling exchange. One would expect, then, that the price of gold in terms of American paper currency should be low compared with other American prices during the first stage. And after the curtailment of the foreign borrowing the value of gold ought to rise in comparison with other prices.

The main trend during the whole period 1866 to 1878, both of the gold premium and of commodity prices in general, was



clearly downward, thus indicating the deflationary movement, the "growing up to the currency." But a closer examination of the minor fluctuations might, of course, reveal also the influence of the borrowing cycle. Between 1866 and 1869 the gold premium remained fairly stable, though with a slight downward tendency. But from October 1869 to October 1870—the year in which the greatest acceleration in borrowings took place—it fell from 130.2 to 112.8, remaining stable for the next four years. After the crisis it rose somewhat in 1875—the year in which borrowings shrank almost to nothing—reaching a maximum of 116.4 in the last quarter; but from 1876 to 1878 there was a renewed steady fall, until the premium disappeared, of course, with the resumption of specie payments on January 1, 1879.<sup>1</sup>

A comparison between the price of gold in Greenback currency and an index number of other commodity prices shows that from 1865 till 1876 the average price of gold was *lower* than the commodity price index, whereas it was *higher* in 1877 and 1878. On the whole, there is a relative rise in the price of gold after 1874.

In order to confirm the explanation of these fluctuations as being due to the inflow of capital into the United States, Graham tries to compare the movements in the value of gold occurring in the United States and elsewhere. He finds (table 39) that between 1869 and 1873 the movements in the *value of gold in the United States and in England and Germany* were usually in opposite directions, appreciation in America being matched by depreciation in Europe, and vice versa. The same is true during the second stage, particularly between 1875 and 1877, and Graham sums up, therefore, that throughout the period the fluctuations of the value of gold in the United States show (1) a close direct correlation which the rate of borrowings or repayments by the United States in the European loan market, and (2) a certain inverse correlation with the synchronous movements in the value of gold in England and Germany.

<sup>1</sup> During the period of heavy borrowing the net export of gold was large. This was to be expected in as much as the borrowing tended to depress the premium on gold and thus to make it relatively cheap. A reverse movement appears in 1877 and 1878 when the value of gold appreciated. It is worth noticing, that just the opposite trends would be expected under a gold standard.

But though with few exceptions the *direction* of the movements are what theory would lead one to expect, there are two limitations which must be borne in mind: (1) here, as in the case of the Argentine, it is obviously impossible to say what the gold premium *would have been* in the absence of capital movements; and (2) there is no trace of the exact

TABLE 39.

1860 = 100	Price of gold in Green- backs  (1)	Wholesale prices in			Sectional price levels in U. S. A.		
		United States  (2)	Eng- land  (3)	Ger- many  (4)	Export prices  (5)	Import prices  (6)	Domestic prices  (7)
1866	141	177	100	104	181	175	182
67	138	162	100	102	165	163	173
68	140	158	99	103	167	161	173
69	133	157	99	105	162	161	164
1870	115	139	95	103	144	153	146
71	112	131	102	105	134	138	144
72	112	134	107	112	137	136	147
73	114	133	107	113	134	132	146
74	111	130	103	108	140	124	139
75	115	123	97	108	135	119	130
76	112	112	94	106	123	113	116
77	105	106	98	106	118	120	110
78	101	95	98	98	100	108	99

*correspondence* which Taussig's rigid reasoning postulates between the size of the loans compared with the payments previously existing and the degree in which the gold premium must change. On the contrary, the figures go to show that equilibrium in the balance of payments can be maintained with much smaller changes in exchange rates.

The second stage of Graham's argumentation is an attempt to show how the depression of the gold premium, resulting from the loans, acted on prices in such a way as to stimulate imports into the United States and check exports from the United States; and how, conversely, the appreciation of gold, following upon the cessation of the capital import, tended to

stimulate exports and check imports. This involves, of course, an investigation of *prices and costs* (cf. table 39, cols. 5—7).<sup>1</sup>

Up to 1874, during the period of heavy borrowings, export and import prices fell, on the whole, more than domestic prices;<sup>2</sup> after that time they were almost without exception relatively, and for the most part absolutely, higher than domestic goods; or, in other words, domestic goods fell more sharply than international goods after the change-over in 1873. Both during the period of capital inflow and after its cessation, export prices responded much more quickly than import prices to the change in the situation; being determined in foreign markets, export prices reflect at once a change in the premium on gold; import prices are affected more gradually as competition among the foreign exporters (or the domestic importers) force them down. In the first years of the borrowing period, export prices declined more sharply than import prices, so that the margin between the two indices was narrowed. After the cessation of borrowings, export prices rose rapidly and then gradually fell, while import prices remained fairly constant.

Besides, Graham tries to ascertain the movements of wages in American export and home-market industries. In general, wage rates should reflect the course of domestic prices, and in addition the relative wage levels in different industries should be such as to promote the adjustment of production to the international movements of capital. In the first period (1866—74) Graham expects, therefore, to find exporting industries unprosperous as compared with home-market industries, and between 1874 and 1878 this relation should then be reversed, tending to move labour from home-market to export industries. On the basis of Mitchell's wage

<sup>1</sup> The material, on which this analysis is based, is drawn largely from W. C. Mitchell's book *Gold, wages, and prices under the Greenback standard*, Berkeley 1908. The starting point is an index of general prices constructed by Mitchell from 92 wholesale price series. This index is split up by Graham in separate indices for export, import, and domestic goods, comprising 18, 14, and 42 price series, 18 of the original series of quotations not being amenable to this classification. Prices in 1860 are taken as basis.

<sup>2</sup> The most notable exception is the year 1870, when import prices exceed domestic prices in all four quarters. Graham suggests that the explanation may be found in the additional demand for English exports (i.e. American imports) created by the Franco-Prussian war.

data he constructs indices (table 40) from which the rising prosperity of the domestic trades in 1866—73 and their declining prosperity in the following years is clearly evident. In these industries, working solely for the home market and not subject to foreign competition, a distinct upward movement of wages from 1866 to 1873 was followed by a sharp decline during the second stage of the period. In the exporting industries, on the other hand, the wage level remained vir-

TABLE 40.

	Wages in American	
	export industries	home-market industries
1866	150	165
67	151	171
68	151	174
69	152	180
1870	154	181
71	152	182
72	154	183
73	153	182
74	151	177
75	148	168
76	144	160
77	141	147
78	137	142

tually stationary up to the crisis, and was much better maintained during the depression. Relatively, domestic wages rose during the first stage, fell during the second.

Naturally, Taussig finds in all these figures a *satisfactory confirmation* of his a priori description of the mechanism.<sup>1</sup> Yet here as elsewhere, Taussig is on his guard against

“oversimplification in interpreting phenomena that are confused and complicated, often remaining obscure after the most painstaking examination.”

Finally, Graham compares the price movements in the United States and England, taking the latter as the type of the lending

<sup>1</sup> *International trade*, pp. 398—99.

gold-standard country. The course of prices in Great Britain, so far as they were affected by the movements in the exchange rate on the United States, ought to show tendencies

TABLE 41.

	Export goods	Import goods	Domestic goods	All goods
1866	124	110	102	106.5
67	118	106	104	103.9
68	113	106	103	103.1
69	114	105	100	101.9
70	111	103	98	100.3
71	111	103	104	102.6
72	126	106	111	112.5
73	130	103	119	116.6
74	122	98	110	107.0
75	116	91	109	100.3
76	110	90	109	97.5
77	105	94	107	97.4
78	100	86	105	91.2

opposite to those appearing in the States. It is not to be supposed, of course, that English prices would respond as readily as American prices, since Great Britain was on a gold basis and the fluctuations of the New York exchange would affect only a portion of her total foreign trade.<sup>1</sup>

The indices presented by Graham are reproduced in table 41. In Graham's opinion the figures give the appearance that British prices were to a certain extent affected in the expected direction. He points, in particular, to the fact that the export-price index was higher than either import or domestic prices during the period of large lending to the United States (1866—73). It is rather dangerous, however, to compare the *absolute heights* of these different indices, as they are apt to depend on the selection of the base period from which the variations are measured. The decisive thing would seem to be the *relative movements*,

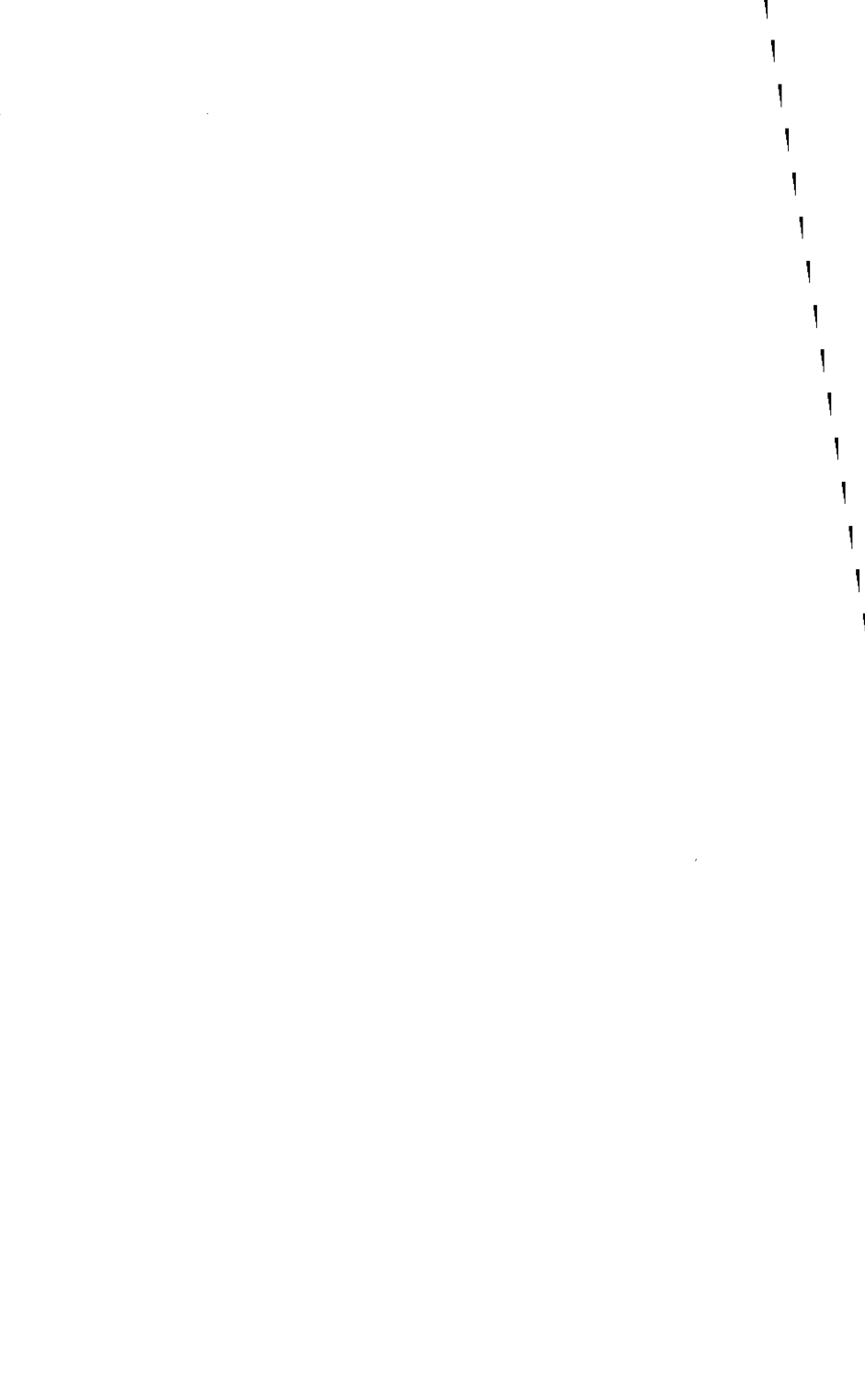
<sup>1</sup> Graham's reasoning at this point is not quite consistent. In discussing American conditions he regards the foreign gold price as relatively constant and the paper price as varying. Here, on the other hand, he is inclined to make the paper price the base. Cf. Angell, *The theory of international prices*, p. 165.

and regarding them Graham must admit that during the whole period 1866—73 export prices *fell* relatively to domestic commodities. The fall was continued, it is true, after the cessation of the capital export, but the export prices were not lower absolutely till 1877. Regarding import prices, they exceeded domestic prices in 1866—70, but in all succeeding years they were lower, and throughout the period they *fell* relatively to the prices of domestic goods.

As far as British prices are concerned, the evidence on which Graham's conclusion rests seems extremely meagre, and there is ample ground for Taussig's renewed warning in this connection against interpreting statistics of this sort in such a way as to discover what one has set out to find. Regarding Graham's American price and wage data, it would, indeed, seem to be easier to interpret them in accordance with the "modern" theory outlined in chapter VIII 2 above. At all events, Graham's study of the Greenback period does *not* verify the rigid classical reasoning to the extent both he and Taussig appear to believe. His findings regarding the changing relations between domestic and international prices would seem to fit better into the modern explanation, though they do not conclusively prove its correctness.

**C**

**CONCLUSIONS**





## INTRODUCTORY REMARKS

The most important conclusion to be drawn from the material reviewed in the preceding chapters is that a satisfactory explanation of the mechanism of international capital movements is impossible as long as *the direct or indirect effects of the transfer of monetary buying power* are neglected. An examination of these effects must form the starting point of the explanation. To have emphasized this fundamental truth is the merit of the modern transfer theory.

It is not contended, however, that this necessarily runs contrary to the classical doctrine, according to which *shifts in price levels* play an important rôle in the mechanism. On the contrary, a more detailed study of the effects of the transfer of buying power, and in particular of its influence on the relative scarcity of the different factors of production, will reveal that although it serves to shift demand schedules in the countries concerned, there is no guaranty that these schedules will be shifted *exactly in such degree* that the real transfer of commodities or services takes place at unaltered prices. That depends on the conditions of the concrete case. The transfer of monetary buying power from country to country does not generally mean that the buying power of *all buyers* in the two countries is *proportionately* decreased and increased. It is particular individuals or groups which have their available resources diminished or enlarged. The immediate effects are concentrated, therefore, on the goods in which these individuals or groups are primarily interested. This will set up a diffusion of price changes, but the new equilibrium eventually reached may well be different in greater or less degree from that existing prior to the transfer.

An international capital transfer, as indeed *any* transfer of buying power from one person to another, is likely to affect the *direction* of demand, i.e. its distribution between different commodities, and since the two parties to an *international capital transfer* live in different national markets, it is likely to affect also the *localisation* of demand, i.e. its distribution between different countries. An international capital transfer means that *other goods* will be demanded, and it means that they will be demanded at *different places*. And since the factors of production are combined in different proportions in the making of different commodities, this will influence relative factor scarcity, the methods and costs of production, and relative commodity prices. In a general way, the possible influence of these changes on all prices and quantities sold, both of commodities and of factors, is indicated by the system of simultaneous equations by which modern price theory depicts the whole price structure.

Even though we must admit our inability to *solve* the equations, and thus directly ascertain the effect of the capital movement on each individual price, the system of equations reminds us of the interdependence of all prices. In particular, we are reminded that attention must be given, not only to possible changes in the relation between *import and export prices*, but also to shifts in the relative heights of *domestic and international prices*. And it must be emphasized that since the mechanism of international capital movements is *a time-requiring process of readjustment*, the outcome as to prices and quantities will change from moment to moment, even if the capital flow is supposed to continue at a steady rate. The description must necessarily be a genetic account in which short-time and long-time effects run more or less into one another. The classical economists were mostly concerned with the immediate effects on price levels set in motion by the transfer mechanism. But as an international capital flow means a changed local distribution of the factor of production called capital disposal or waiting, it also results, ultimately, in a *changed relative scarcity of factors in the future*, and though the amount of capital transferred in any one year may be too small compared with a country's total stock of capital to exercise an appreciable influence, the cumulative

effect of capital flows continued year after year may be very considerable. Finally, it is not permissible to restrict the analysis to the two countries directly affected by the capital flow; in many ways the process of adaptation is modified and facilitated by the existence of *outside countries*.

To predict the *extent* to which the different groups of prices will be shifted relatively to each other in a concrete case, a knowledge of the *elasticities of demand and supply* is required. All that the theorist can do in this connection is to point out the complexity of the phenomena covered by these concepts. He cannot indicate a simple formula from which the outcome may be deduced. He must admit that there is an infinite variety of possibilities. But he can produce certain general arguments which make it extremely unlikely that the terms of trade will be greatly affected.

Moreover, a discussion of the elasticities of supply may serve to throw into clearer light the aspect of the transfer mechanism already touched upon — that the changed direction of demand may alter the *relative* scarcity of the factors of production. This difference between the classical theory with its postulate of a uniform combination of capital and labour in all branches of production and a truly modern doctrine based on the principle of *varying proportions*, has hardly received the attention it deserves even in the more recent transfer discussions.

All these different aspects of the process of readjustment will be considered in chapter XII. Finally, we turn in chapter XIII to an examination of the actual media of transfer of monetary buying power. Here the most important conclusion to be drawn from the preceding chapters is that *gold movements* play a somewhat different, and less important, rôle than assumed by the classical theory. In return, more importance must be assigned to *short-term equalising capital movements*.

## CHAPTER XII

### THE TRANSFER PROCESS

#### 1. THE TRANSFER OF BUYING POWER.

As already explained<sup>1</sup> discussions of the transfer mechanism have often suffered from a certain ambiguity, because it was difficult or impossible to make out whether a particular statement referred to the *monetary transfer* or to the *real transfer*, to the first or to the last link in the process. Yet, in order to understand the mechanism through which international capital movements take place, it is essential to keep this distinction in mind<sup>2</sup> and remember that, practically always, the first step in an international transfer of capital is that monetary buying power<sup>3</sup> belonging to the inhabitants of one country

<sup>1</sup> *Supra*, pp. 44—45 and 197—98.

<sup>2</sup> The following perplexing statement may illustrate the consequences of confusion at this point: "It is impossible that the export of capital from the industrial countries of Europe to the colonial world should produce in the colonial world or anywhere else genuine buying markets. The buying power of the colonial world being the amount of its exports to the industrial countries of Europe, if the capacity of the colonial world to buy the products of the industrial countries of Europe is to be increased, it is indispensable that the imports of colonial products into the industrial countries of Europe should be increased. If the imports of the colonial world into the industrial countries of Europe are increased to the amount of the exports of the industrial countries of Europe to the colonial world, there would be no exports of capital at all." (Frederic E. Holsinger, *The mystery of the trade depression*, London 1929, p. 146).

<sup>3</sup> Used with reference to a particular country the term indicates the flow of monetary buying power at its disposal during a certain period of time. As indicated in chapter I (p. 25, *supra*) production is the natural source of buying power, but it may be artificially altered by the credit policy of the banks. It consists, in other words, of (1) the aggregate of money incomes (including profits) from productive factors owned by the inhabitants of the country (whether these factors be situated at home or abroad) plus (2) the amortisation quotas of the

is placed at the disposal of inhabitants in another. The object of the transfer theory is exactly to explain how this transfer of titles or claims to commodities or services is converted into an actual transfer of goods.

Another ambiguity arises from the treatment of *countries as economic entities which has bulked large in popular discussions* of all international trade problems and sometimes led even the most competent economists astray.<sup>1</sup> It may be well, therefore, to stress at once that normally international capital transactions no less than international commodity trade take place between individual persons or individual economic units. For brevity's sake we may speak of "England's export of capital or "Denmark's import of capital, but we must always remember that this use of the singular is merely an elliptical way of expressing that certain particular Englishmen are lending abroad, while certain particular Danes are borrowing abroad.<sup>2</sup> When this is kept in mind, international economic transactions cease to be something *sui generis*; then it becomes easier to see the fundamental similarity between the mechanism of domestic and of international capital movements and to detect the specific peculiarities of the latter mechanism. In order to bring out both the similarity and the differences

period plus (3) net foreign borrowing (or minus net foreign investment) plus (4) credit inflation (or minus credit deflation). Cf. Ohlin, *Inter-regional and international trade*, p. 378.

<sup>1</sup> A well-known instance is Jevons' fatal use of the concept of "trading bodies"; cf. A. A. Young's criticism in *Am. Ec. Rev.* 1912, p. 584). The dangers of this ambiguity are particularly apparent in the special province of economic science instituted by the Germans under the name of "*Weltwirtschaftslehre*."

<sup>2</sup> This individualistic character of foreign trade is strongly emphasized e.g. by J. A. Hobson (*International trade. An application of economic theory*, London 1904, p. 20), Friedrich von Wieser (*Theorie der gesellschaftlichen Wirtschaft*, Grundriss I, 1. Aufl. Tübingen 1914, p. 435) and Wilhelm Röpke (*Geld und Aussenhandel*, Jena 1925, p. 13). In the same spirit E. W. Kemmerer in the introductory article of a symposium on foreign investments in the *Annals of the Amer. Acad. of Pol. and Soc. Sc.*, November 1916, writes: "The basic principles of foreign investments are essentially the same as those of home investments. The word *foreign* is a political term, but the word *investment* is an economic one, and the political boundaries do not obstruct the operation of economic law. Obviously there is not much difference in motive or in principle between the investment of a million dollars by a citizen of the United States in a paper factory in Ontario and one in New York. It is the *likeness*, therefore, rather than the difference that should be emphasized in comparing the principles of foreign investments with those of domestic."

we are going to compare capital transfers between persons living (1) in the same region, (2) in different regions within the same country, and (3) in different countries.

It may facilitate understanding if we recall<sup>1</sup> that a balance of payments can be drawn up, not only for each country, but for any arbitrary region, nay even for each single individual or economic unit, and that it is one of the governing elements of the system of simultaneous equations that *all* these balances of payments *must necessarily balance* for any period of time whether it be short or long. But for the individual as well as for the country this even balance may be brought about, of course, by lending or borrowing.<sup>2</sup>

I. Let us see, first, what takes place when capital is transferred from a lender to a borrower living *within the same market*. It means that the buying power of the lender is reduced by the amount of the loan, whereas that of the borrower is correspondingly increased. It is conceivable that this leads the borrower to buy exactly the same goods which the lender refrains from buying. But this is highly improbable. In all likelihood, a transfer of capital will be accompanied by a *change in the direction of demand*:<sup>3</sup> for some goods (now wanted by the borrower) the demand will be greater than before, for others (previously used by the lender) it will be less. Such shifts in demand, which may also occur, of course, for many other reasons, are sufficiently analysed by general economic theory and need not engage us here. Suffice it to point out two things: (1) the adjustment of production to the changed conditions of demand may alter the relative scarcity of the factors of production and thus influence all prices and quantities within the price structure,<sup>4</sup> but (2) since both the lender and the borrower live in the same market the *local* redistribution of demand which has taken place is without consequence; whether the goods are bought

<sup>1</sup> Cf. *supra* p. 32.

<sup>2</sup> And possibly by creation or annihilation or hoarding of monetary buying power.

<sup>3</sup> Cf. pp. 47—48 *supra*. F. Eulenburg speaks of "Streuung der Nachfrage" (*Die Preisbildung in der modernen Wirtschaft*, Grundriss IV 1., Tübingen 1925, p. 296).

<sup>4</sup> As repeatedly suggested above this means that the classical assumption of a constant combination of capital and labour is given up, cf. *infra* pp. 479—80.

by a man living in one street or in another is immaterial; no special costs of transport are incurred. In other words: the "balances of trade" of the two individuals are automatically adjusted.

II 1. Suppose, next, that the lender and the borrower live in different markets or regions within the same country. Let us assume first that the only thing which separates the two regions is that *labour is unable to move between them*. Neither the transfer of capital nor the transport of commodities or services from region to region meets with any hindrances or costs.<sup>1</sup> In that case we have exactly the same situation as before: an interregional capital movement may change the direction of demand and the relative scarcity of the productive factors, but the local redistribution of the buying power has no other special consequences. The "trade balances" of the two regions are automatically and immediately adjusted to the change in their "balances of payments". The only difference from the previous case is that the labour of the two regions forms non-competing groups, and the consequence is that wages will not be equalised. But the same consequence would arise, if we introduced non-competing occupational groups within the same region.

II 2. If the flow of capital between the regions entails a certain *cost of transfer*, its direct effect will merely be to reduce the differences between interest rates; they will not be completely equalised. But as long as the transport of commodities and services is supposed to be costless, the mechanism of transfer shows the same result as before: changed direction of demand and changed relative factor scarcity, but automatically adjusted trade balances.

II 3. But the moment we introduce *commodity costs of transport* and recognize that for a great number of commodities and services these costs are so high as to be prohibitive, the situation is changed. Now the changed *localisation of demand*, i.e. its local distribution between the different regions, becomes a matter of importance apart from the changed *direction of demand*, i.e. its distribution between the different commodities and services. The situation would, however, remain unchanged in this case also under the highly improbable

<sup>1</sup> That is to say, *all* goods are "interregional"; there are no "domestic" goods.

assumption that the borrower uses his buying power for exactly the same goods as the lender would have bought in the absence of the loan.<sup>1</sup> But, apart from that, the changed direction of demand now assumes a greater importance than before owing to the difficulty, or even the impossibility, of transporting certain commodities and services from one region to the other. For now the trade balances are no longer immediately and automatically adjusted. The transfer problem is exactly the problem of how the balances of trade are finally adjusted.

What creates the transfer problem is, in other words, a concurrence of two facts: (1) capital can only be transferred from region to region in the form of commodities or services, and (2) commodities and services can only be transferred at a cost, and sometimes not at all.<sup>2</sup> The difficulty is that as a result of the capital movement other goods are demanded at other places than before, and this difficulty is present in the case of an interregional transfer within the same country no less than in the case of an international transfer of capital. It will pay, therefore, to examine in some detail the connection between the monetary and the real transfer in the case of both domestic and international capital movements.<sup>3</sup>

#### *A: Domestic capital movements.*

We will assume, that the states of New York and California are separate markets<sup>4</sup> in the sense just indicated (II 3), and that a loan is contracted in New York City for the building of a new railway along the Pacific coast. Here the transfer of monetary buying power might take place simply by the borrower sending coins or Federal Reserve notes by mail to the lender. But it is more probable, of course, that the monetary transfer will take place through the banking system. For simplicity's sake we will assume that it is carried

<sup>1</sup> Obviously, this means that both should buy nothing but inter-regional goods for this part of their buying power. As soon as the increase and decrease of consumption extend to domestic goods it does not help even though the lender uses goods of *exactly the same sort* as those which the borrower refrains from buying.

<sup>2</sup> Duties and other artificial restrictions of commodity trade play the same rôle, of course, as ordinary transportation costs.

<sup>3</sup> Cf. Ohlin, *Interregional and international trade*, chs. XIX—XXI.

<sup>4</sup> Provisionally, we ignore the existence of other regions than these two. Cf. *infra* pp. 488—89.



through by a single bank in New York City and another in San Francisco. What happens is that the lending capitalist in New York writes out a cheque on his account with the New York bank and sends it to the borrower, who has its amount added to his deposit with the San Francisco bank, which thus increases the balance which it keeps in New York. The service which the banks have performed is to exchange a New York deposit for a San Francisco deposits; their total deposits are unchanged, but the deposits of the New York bank are diminished, those of the San Francisco bank increased by the amount of the loan. The following simplified balance sheets may serve to make clear the nature of the transaction, assuming that the amount of the loan is one million dollars.

## I. BEFORE THE LOAN

NEW YORK BANK (mill. dollars)		SAN FRANCISCO BANK (mill. dollars)	
<i>Assets</i>	<i>Liabilities</i>	<i>Assets</i>	<i>Liabilities</i>
Bills dis- counted 11	Private deposits 10	Bills dis- counted 3	Private deposits 6
Cash 1	Balance of San Fran- cisco bank 2	Balance with New York bank 2	
		Cash 1	
12	12	6	6

## II. AFTER THE LOAN.

NEW YORK BANK (mill. dollars)		SAN FRANCISCO BANK (mill. dollars)	
<i>Assets</i>	<i>Liabilities</i>	<i>Assets</i>	<i>Liabilities</i>
Bills dis- counted 11	Private deposits 9	Bills dis- counted 3	Private deposits 7
Cash 1	Balance of San Fran- cisco bank 3	Balance with New York bank 3	
		Cash 1	
12	12	7	7

In this case, just as in the case of actual shipment of currency, the immediate effect of the capital flow is that the total aggregate of buying power is increased in California and decreased in New York. *This is the monetary transfer.*

The consequence of this transfer of buying power is that *demand expands* in California, while it is contracted in New York. Part of the borrowed money is spent immediately on purchasing commodities from the state of New York; the rails are perhaps bought there<sup>1</sup>. Another part is spent on Californian products which would otherwise have gone to New York; let this be the sleepers. Conversely, the New York lender buys less goods coming from both California and New York, which goods can now be sold in California instead. But as already pointed out it may be *other* goods than those now wanted by the Californian borrower, so that a readjustment of production becomes necessary in both states. The New York iron works must turn, e.g., from structural steel to rails, the Californian wooden industry, e.g., from deals to sleepers. Or a transfer of capital and labour must perhaps gradually take place to entirely different industries. Moreover, the *part* of

<sup>1</sup> This increase in demand was recognized by the classical transfer theory only in the exceptional cases where capital exports and commodity exports were directly linked together (cf. *supra*, p. 308) and in the similar case of reparation payments in kind (cf. e.g. Pigou, *The real ratio of international exchange*, in the Manchester Guardian Reconstruction Supplement, December 1922, reprinted in *Essays in applied economics*, London 1923, pp. 149—155). These cases appear to represent nothing but *an organized shifting of demand*, the nature of which does not differ from the shifts which always accompany a transfer of capital. It may perhaps facilitate the readjustment. But when the existence of outside countries is taken into account, the direct linking of capital and commodity movements may also work in the opposite direction by confining the adjustments within the two countries between which the capital flows. In the case of the German reparations it was often suggested to include the neutral countries in a scheme of deliveries in kind; cf. a letter from J. A. Hobson to the "Times" (quoted in H. G. Moulton, *The Reparation plan*, New York 1924, pp. 108—09): "It seems essential that the policy of the German government and German industrialists shall be directed to the production of such sorts and quantities of export goods as Germans are best able to produce and the world markets able and willing to absorb. It would therefore seem wise that in order to secure this requisite size and composition of the German export trade, the interested Allies should give some clear indication of the kinds and quantities of German goods in which they respectively desire their reparation payments to be made. Having regard to "round-about-trade" this should involve consideration of a consolidation with other foreign countries. Would it not be wise for the Allies to agree as to what trades they wish to stimulate in Germany and to damp down in their own and foreign countries? Obviously they will get most reparation if they encourage Germany to produce the manufactured goods in which her science and skill and high organization give her most advantage in production."

the loan, which the borrower spends on such interregional goods, may be either greater or smaller than the part of the money which the lender would have spent on this class of goods.

But, at all events, there are forces at work in both regions which tend immediately to turn the Californian trade balance in a negative direction, while New York tends to get a corresponding export surplus (or a corresponding decrease in its import surplus). That part of the borrowed funds is used in this way, means that more cheques on the California bank reach its New York agent than vice versa. Part of the money flows back to New York; the deposit of the Californian borrower and the New York balance of the Californian bank decrease again, while deposits in all New York banks tend to go up. *In part, the real transfer is accomplished.*

But only in part. For the Californian borrower also spends part of the loan *at home*, e.g. for wage payments or for Californian domestic commodities, such as bricks. And, similarly, the New York lender reduces his demand for *domestic goods*. But by definition these goods are excluded from moving between the two regions. Consequently, the increase of demand in California cannot offset the reduction of demand in New York, not even in those cases where the direction of demand is the same. Here a readjustment of production is always necessary.

The workers who are to build the railway may perhaps be taken from the Californian unemployment reserve. Or they may be attracted from other occupations by the offer of higher wages. In both cases the weekly wage payments increase. Similarly, if the Californian home-market industries have a large unused capacity, their output may expand at unaltered prices; otherwise, prices are likely to rise for the moment; but in both cases the incomes, and thereby the demands, of those engaged in home-market industries are increased.<sup>1</sup> And this increased demand will turn both towards interregional and towards domestic goods. The increased purchases consist of

<sup>1</sup> Ohlin stresses the fact often overlooked that total money incomes are increased by an amount *much larger* than that originally borrowed. Each time the money passes from hand to hand, new income is created, and it is the aggregate of money incomes, of course, which counts as part of total buying power. (*Interregional and international trade*, pp. 412—13).

(1) goods coming from New York, (2) goods that would otherwise have gone to New York, and (3) Californian home-market goods. In the first two cases they serve to turn the trade balance still further in the proper direction and to *accomplish yet another part of the real transfer*. In the third case, the expansion in domestic industries is enhanced, resulting in still larger incomes and still greater demand, of which a part turns towards interregional goods.

Besides, the prosperity of the home-market industries will *attract productive factors* from the Californian export industries and from the manufacture of goods that can be imported, which again serves to check exports and expand imports, and thus to increase the import surplus. This means, not only that smaller quantities of the previous export commodities are exported and greater quantities of the previous import commodities are imported, but also that *goods are shifted* from the export to the domestic group, or from the latter to the import group, or even from the export to the import group.

It makes some difference, however, whether we assume the existence of unused factors of production in the capital-importing region, or suppose the productive apparatus to be utilised to full or "normal" capacity. In the former case the increased domestic demand for many commodities can be satisfied without curtailing the supply available for export, and without attracting already employed labour and capital from other industries. In this situation the *direct* efficiency of the changes-in-demand-schedules mechanism is obviously reduced, even though allowance be made for the secondary expansion described above. And except during the later years of the upswing period there will probably be some excess of unused capacity, allowing an increase in output without a corresponding reduction at some other point. But it is, of course, particularly in the boom years that the capital flows are likely to be large.

If we give up the assumption of complete interregional immobility of labour, the prosperity in Californian home-market industries may finally attract productive factors, not only from other occupations within California, but also from other regions. It is conceivable that part of the labourers and engineers who are to build the railway are called in from New

York, or that New York labourers are called in to satisfy the increased demand for home-market goods. In those cases, we have a new instance of a factor movement serving as a substitute for the movement of home-market goods or services rendered impossible by the prohibitive transportation cost.<sup>1</sup> But it should be noticed that even if the railway could be built exclusively by goods or labour coming from New York, so that all the borrowed buying power was spent in the first instance either on New York goods or on New York labour, this would not solve the transfer question. For the immigrated labourers would have to spend at least part of their wages in California, and would spend it in part presumably on domestic goods.

It is worth pointing out that the boom in the home-market industries develops whether the loan is applied productively or not. In both cases the immediate effect is expanding consumption. But subsequently, the volume of commodities or services supplied will be different according to the use made of the capital import.

In New York an adjustment in the opposite direction takes place. Home-market industries suffer a depression which reduces incomes and demand for both interregional and domestic goods, and which tends to drive the factors of production over into the export industries or even to cause emigration to the borrowing region. On the other hand, it is conceivable that it becomes so cheap to live in New York that Californian tourists and "absentee capitalists" are attracted.

These readjustments will go on, until the cumulative expansion or contraction of home-market industries have brought about the *sufficient* surplus and deficit in the trade balances. When that stage is reached, *the real transfer is completed*. The whole amount of capital has then reached California in the form of interregional goods, and the whole amount of buying power put at the borrower's disposal has then been used for the purchase of these goods.

After the completion of this adaptation of the productive apparatus the net capital inflow may continue *at the same*

<sup>1</sup> It is also conceivable that capital goods, special machinery e.g., might be rented in New York for temporary use in California; motor vehicles might be a possible case in our hypothetical example above, but as previously mentioned *ships* are the only form of capital goods for which this sort of transaction is of practical importance. Cf. *supra* p. 27, note 1.

rate without further readjustments, except (1) those which are the direct consequence of the changed distribution of the capital supply between the two regions, and (2) those which become necessary if the direction of demand of the borrowers and lenders of succeeding periods is different from that of the borrowers and lenders in the initial period. And conversely, if the flow of capital does *not* continue, a new readjustment becomes necessary, running in the opposite direction.

The preceding analysis of the transfer mechanism takes the contraction of a foreign loan as its starting point. But in order to be complete, the analysis must be pushed one step further. As indicated in part I, the set-in of an interregional flow of capital must be regarded as the consequence of a change in the basis data of the price systems of the two regions. If these basic data remained the same after this initial change, a new equilibrium would finally be established in which no further capital movements took place; the distribution of the total capital supply between the two regions would then be adapted to the new data. But in actual life the data are constantly changing, new capital movements are released, others are suddenly stopped. Moreover, the interest payments, to which the capital movements normally give rise, involve transfers of buying power in the opposite direction, which must be set off against the capital flows.<sup>1</sup> The process of readjustment is, therefore, highly complicated. At any given moment a great number of forces are at work; long-run effects of the capital flows of previous periods are intermingled with short-run effects of more recent movements.<sup>2</sup>

For all these readjustments require time, often a long time. In the meantime, the balance which the California bank keeps on demand in New York will remain higher than it used to be.<sup>3</sup> As we have seen, this balance is not depleted till the Californian import surplus has to be paid for. Gradually the California bank will find that the demand for remittances to New York increases, while the supply of bills on New York coming from the exporters contracts. But in the meantime the California bank has an abnormally large demand deposit in

<sup>1</sup> Obviously, it is only the net amount of buying power to be transferred in either direction on account of capital and interest transactions which creates a transfer problem. If these sums exactly cancel each other out, there is no transfer problem. (Cf. *supra* pp. 345—46).

<sup>2</sup> Cf. *supra*. pp. 439—40.

<sup>3</sup> Cf. the example *supra*, p. 459.

New York. That is to say, *in the meantime the California bank has granted its New York agent a short-term credit.* In other words: the long-term real capital movement from New York to California is temporarily offset by a short-term equalising capital transfer in the opposite direction. It is in this way that the balance of payment is kept in equilibrium throughout the period of adjustment, and it is in this way that equalising credits may be said to effect the monetary transfer and create a breathing space for the accomplishment of the real transfer.

The *credit policy* of the two banks is obviously of the greatest importance to the working of the transfer mechanism. Up to this point our reasoning has ignored this complication. That is to say, we have tacitly assumed that monetary equilibrium in the Wicksellian sense has in both regions been maintained throughout.<sup>1</sup> Or, in other words, we have considered only the ultimate causes of the movements of capital: its relative scarcity in the different regions and the cost of transferring it between them.

We must recognize, however, that even if the two banks constantly attempt to adjust their rates of discount in such a way as to maintain equilibrium in the capital market, temporary divergencies are likely to arise in connection with the cyclical fluctuations in business conditions. Momentarily, the situation in each region may be more or less removed from equilibrium. And even though the cyclical fluctuations are largely parallel in the two regions, there are likely to be certain time lags.<sup>2</sup> For both reasons it may be the credit policy of the banks which is the immediate "cause" of the capital flow between the regions.

The capital movements called forth in this way are largely of the short-term equalising sort, however. To them we shall return in the next chapter. But behind these cross-currents of short-term capital may generally be discerned the long-term real capital movements called forth by the more fundamental causes discussed in part I.

But even if we assume that the "cause" of the loan trans-

<sup>1</sup> Cf. for definition of this concept Gunnar Myrdal, *Der Gleichgewichtsbegriff als Instrument der geldtheoretischen Analyse*. Beiträge zur Geldtheorie, Wien 1933, pp. 365 et seq.

<sup>2</sup> Cf. *supra*, pp. 72 et seq.

action is to be found outside the banking system, we must inquire what action our banks are likely to take as a consequence of the changed distribution of buying power between New York and San Francisco. The California bank will probably expand its credits; for regarding its New York balance as a secondary cash reserve, it sees its liquidity improved. The New York bank, on the other hand, knowing that the balance of the San Francisco bank is a less reliable deposit than that belonging to the lending capitalist in New York, will probably attempt to strengthen its cash reserve by a credit contraction. Particularly if the adjustment of production in California to the inflow of capital makes slow progress, and the New York balance of the California bank continues to grow, the latter is likely to expand its advances. And if it does, this will obviously tend to *facilitate* the adjustment by increasing the amount of buying power still further.<sup>1</sup> But it clearly appears that these credit operations are *secondary, supplementary forces* which are potent in proportion with the need, whereas the transfer of monetary buying power is the *prime cause* which sets the mechanism of adjustment in operation.

In the absence of capital movements (and credit inflation or deflation) the total amount of buying power in each of the two regions will correspond to the value of its total social product. The effect of the loan is to increase the aggregate of buying power in California and reduce it in New York; for the moment, it enables California to buy a larger share of the combined social products of the two regions, whereas New York must be content with a smaller share. In the simple case where there were no costs of commodity transfer, this redistribution of consumption took place automatically; in the more complicated case it involved a readjustment of production which it might prove convenient or necessary to speed up by means of an adequate credit policy.

<sup>1</sup> Ohlin distinguishes between three stages: of the "primary" increase in buying power—equal to the amount of the loan—the part spent on domestic goods remains in circulation and constitutes an inflation of credit, which serves directly to call forth a "secondary" increase in buying power, as it passes from hand to hand and creates money incomes to an amount much larger than the original loan. To this is finally added the "tertiary" increase in buying power which is due to the more liberal credit policy which the increased outside reserve tends to call forth.



It should be noticed, finally, that the surplus and deficit in the trade balances need not correspond *exactly* to the amount of the loan. For the San Francisco bank may find it convenient, either as a result of the borrowing operation or for other independent reasons, to alter the size of the balance, which it keeps in New York. In case it increases this balance, the counterflow of short-term capital is a real capital movement.<sup>1</sup> If the New York bank had previously kept a balance in San Francisco, which it now allows to be diminished by the amount of the loan, there is no net capital movement, but merely a conversion of a short-term into a long-term loan.

*B: International capital movements.*

Let us assume, next, that the lender and the borrower live in two different countries;<sup>2</sup> let a group of English bankers float a loan for the City of Copenhagen which wants to build a new power plant. English investors subscribe to the loan by transferring their bank deposits to the issuing houses. The amount of the loan is put at the disposal of the City of Copenhagen in the form of a deposit in one of the English banks. Here again, we will notice that this means that the City of Copenhagen lends money on short term in the London market, i.e. that momentarily the Danish long-term borrowing is offset by an equalising capital transfer in the opposite direction.

Suppose now that the City of Copenhagen spends one half of the loan on the purchase of an English generator in which a similar part of the lenders' money would otherwise have been directly invested in England. Obviously, this purchase is effected simply by paying the English manufacturer by cheque on the City of Copenhagen's deposit with the London bank. A cheque passing through the London clearing house is here the connecting link between the monetary and the real transfer. Suppose further that the City of Copenhagen wants to spend the other half of the loan on a Danish Diesel engine which

<sup>1</sup> There can be no doubt that the desire of European countries to build up larger exchange reserves in New York facilitated the transfer of the long-term capital export from the United States in the post-war period.

<sup>2</sup> Again we assume provisionally that there are only these two countries in existence.

would otherwise have been sold to England—to the very firm, we may assume, in which the English capitalists would otherwise have invested their money. On this assumption, Danish exports are immediately reduced relatively to Danish imports, and the City of Copenhagen is able to sell its sterling deposit to importers who would otherwise have bought their sterling from the exporters of the Diesel engine. *Then the real transfer is completed at once.*

The situation becomes somewhat more complex, if we assume a *change in the direction of the demand for international goods*, but here, as in the case of domestic capital movements, it is the existence of *home-market goods* which constitutes the main difficulty in the way of the real transfer. Suppose, e.g., that the City of Copenhagen uses only one-fourth of the loan for buying Danish export goods and wants to spend the last fourth of the proceeds on Danish home-market commodities or for wage payments to Danish labourers. And suppose, conversely, that the English lenders would otherwise have demanded English home-market goods. Then a readjustment of production similar to that described above becomes necessary.

But now a further complication arises. In order to buy Danish goods or services the City of Copenhagen must have its sterling deposit *converted into Danish currency*. It must *sell* its sterling deposit to somebody else. In the case just considered of the purchase of the Diesel engine this entailed no difficulty. The supply of sterling offered for sale by the City of Copenhagen immediately met a corresponding demand from the importers. No disturbance occurred of the equilibrium in the foreign exchange market. But when the borrower wants to use his buying power for domestic goods the situation is different. Then the supply of sterling exceeds the normal commercial demand, which is not immediately and automatically increased. Then somebody must be found who is willing and able to undertake the exchange operation, i.e. who can supply the City of Copenhagen with Danish currency in return for the sterling deposit. That is to say, *a speculative demand for sterling must be created*; somebody must be found who will temporarily invest Danish money in short-term funds in London, i.e. who will render an equalising credit to England.

In the case of the domestic capital movement, the banks undertook the transformation of New York buying power into San Francisco buying power almost free of charge.<sup>1</sup> That is, they were willing to let the New York balance of the California bank increase by the amount which the Californian borrower wanted to spend at home. In the case of an international capital movement there is no similar guaranty. Here the additional sterling supply may affect the price of sterling in terms of Danish currency. The important question is, in other words, *at what price* an additional demand for sterling can be called forth.

This obviously depends upon the *organization of the monetary system*. In gold-standard countries the fluctuations of the rates of exchange are limited within the *gold points*, i.e. the points at which export or import of gold becomes profitable. In paper-standard countries one might speak in a similar way of a series of "*commodity points*," i.e. the points at which additional exports or imports of various commodities become profitable.<sup>2</sup> But in both cases a speculative demand for sterling may arise long before these limiting points are reached; in both cases short-term equalising capital movements will play a large rôle in the mechanism of adjustment.

One might speak, therefore, of "*lending points*"<sup>3</sup> and argue that in a great many cases both of gold- and paper-standard countries it is the narrow margin between these lending points which really counts. This is the main reason why it was maintained in chapter VIII that the transfer mechanism is essentially the same in gold and in paper countries. But here again it must be pointed out that there is a *whole series* of such lending points applying to different forms of credit transactions.

Much will depend here upon the organization of the money market, the character of the banking system, the international connections between the commercial banks, and the policy of

<sup>1</sup> Cf., however, *supra*, pp. 6—7.

<sup>2</sup> This term has been suggested by Eli F. Heckscher (*Växelkursens grundval vid pappersmyntfod*, Ek. Tidskr. 1916, p. 309). Obviously, the margin between these points will differ from commodity to commodity, and for less actively traded and less standardised commodities the "point" becomes a rather indefinite zone (cf. Angell, *The theory of international prices*, p. 376, note 1).

<sup>3</sup> Cf. G. Westin Silverstolpe in Ek. Tidskr. 1916, p. 296 and R. G. Hawtrey, *Currency and credit*, 2. ed. London 1923, p. 122.

the central bank to which the additional sterling supply will presumably be offered in the last resort. But to the phenomena of this short-run adjustment we will return in the next chapter.

Here we will assume that the sterling deposit is sold at once to the central bank. This means that the central bank increases at the same time (1) its foreign exchange reserve and (2) either its deposits or its note circulation. Thus, *the monetary transfer is completed by the release of additional buying power in Denmark*, and from now on the links which connect the monetary and the real transfer are the same as in the case of a domestic capital movement. Home-market industries are expanded in Denmark and contracted in Great Britain, and gradually a Danish import surplus is created. When this surplus has to be paid for, the exchange reserve temporarily kept by the central bank will again be depleted, and concomitantly its deposits or note circulation will be reduced.

As in the previous case the *credit policy* of the banks will be of paramount importance.<sup>1</sup> It may act as an auxiliary force, tending to carry through the necessary readjustments more rapidly and smoothly. But it may also delay and impede the process of adaptation. This will be the case, if the central bank of the borrowing country tries to contract its credits, or if the central bank in the lending country offsets the buying power surrendered by the lenders through credit expansion. This shows that the mechanism of changes in buying power, with all its consequences may work more effectively in one country than in the other; it appears, in other words, that one of the countries may succeed in throwing the burden of readjustment primarily on the other.<sup>2</sup> But by limiting the range over which the adjustment may take place, this policy will tend to make it unnecessarily difficult. To carry it though as smoothly and rapidly as possible requires close cooperation between the banks of the two countries.

In a similar way the *tax and tariff policy* of the two countries may either promote or hamper the adaptation of production. If the capital-importing country favours its export

<sup>1</sup> Cf. on this aspect of the problem Fritz Köppler, *Die inflatorische Wirkung der von Deutschland seit der Annahme des Dawesplanes im Auslande aufgenommenen Kredite* (Greifswalder staatsw. Abh., Heft 35), Greifswald 1929.

<sup>2</sup> Cf. Keynes, *A treatise on money*, p. 336 and supra 299.

industries by low taxation, this naturally retards the transfer of labour and capital to the home-market industries. The effects of duties in a capital-importing country have already been considered; they make the transfer more difficult and tend to shift the burdens of readjustment to the capital-exporting country.

This comparison between a domestic and an international capital movement has revealed that in both cases the chief difficulty is that *capital must be transferred in the form of commodities and services the geographical mobility of which is more or less limited*. This is what creates the transfer problem, and the fundamental nature of this problem is the same, therefore, in the two cases. The difference between them rests on the fact that within a single country the "currencies" of the different regions will always exchange at par, whereas between countries the rates of foreign exchange may fluctuate. Coins or notes could be sent from New York to California at a negligible cost, and deposits of New York banks exchanged for deposits in San Francisco at a very low charge. The transformation of New York buying power into San Francisco buying power took place automatically, and none of the parties had to bother about this aspect of the transfer mechanism. In the case of international capital movements, on the other hand, *this transformation of buying power in terms of one currency into buying power in terms of another took place at a varying price*. But it is only in this peculiarity of the mechanism that the two cases differ. Fundamentally, the transfer mechanism is the same in both. The transfer of capital between countries is a foreign exchange problem, but it is *also and mainly* a problem of readjustment of trade and production.

Incidentally, this comparison between regions and countries may serve to bring out that the costs of transport which render an international capital transfer difficult, are not only those *between* the countries, but also the costs of transporting commodities between different regions *within* each country. This aspect of the problem is emphasized in the localisation theory outlined by Ohlin.<sup>1</sup>

Finally, the preceding considerations suggest that it is probably more than a mere coincidence that migrating capital has

<sup>1</sup> Cf. *supra*, p. 11, note 1.

shown such marked preference for investment in railways and other transport facilities. In that way a direct connection is established between the capital flows and the conditions of transport which is fitted to pave the way for larger capital movements in the future.

What has been analysed above is the mechanism of adjustment set in operation when an international capital movement starts. In view of the recent breakdown of the international capital market it might seem more appropriate to have analysed the effects that ensue when an international movement of capital is interrupted. It is easily seen, however, that this involves a readjustment of essentially the same nature, only running in the opposite direction. There is, however, an important difference between the stimuli to action in the two cases. In the former it is an expectation of gain, in the latter it is a fear of loss, which may be increased by the efforts to avoid it.

## 2. SECTIONAL PRICE LEVELS.

We are now in a position to analyse the probable effects of a capital movement on the price structures of the two regions or countries. For simplicity's sake, the discussion will be confined to international capital movements, but essentially the same considerations apply to domestic movements of capital between different regions.

It has already been pointed out<sup>1</sup> that it is impossible to indicate the development of *the absolute height of prices* until something is known as to the monetary policy pursued in the countries between which the capital flows. The freedom of the individual country in this respect is obviously greater under a paper than under a gold régime, but here again, the fundamental similarity of the two cases must be stressed; both under gold and under paper it is the credit policy of the banks which determines the outcome; the modern gold-standard is also a "managed" rather than an "automatic" standard.

What interests us in the present section, however, is rather the *shifts in relative prices*, i.e. the effects of a capital movement on the individual commodity and factor prices. At this point there is a characteristic difference between the "classical" and the "modern" view-point. In general, modern economists begin to realise that further progress is impossible in

<sup>1</sup> Cf. *supra*, p. 320.

the theories of money and of international trade as long as it is attempted to establish *direct* causal connections between the total quantity of money and the *general* level of prices; it is claimed that the theory of money must apply the same "individualistic" method which it is the merit of the Austrian and the Lausanne schools to have introduced in the general theories of value and distribution.<sup>1</sup> The older classical economists, on the other hand, confined themselves in the main to such discussions of the effects of a capital movement on the general level of prices in the two countries. As we have seen they dealt exclusively with gold-standard countries, and here they found the connecting link between capital movements and prices in the mechanism of specie flows. Gold would flow from the capital-exporting to the capital-importing country and cause prices and incomes to fall in the former and rise in the latter. And these shifts in price levels would then affect the exports and imports of the two countries in opposite directions.

The first step towards a more deep-going analysis was taken by Cairnes by his introduction of the distinction between *in-*

<sup>1</sup> Cf. e.g. Friedrich A. Hayek, *Prices and production*, London 1931, pp. 4—5. He even goes so far as to assert that, from the very nature of economic theory, averages can never form a link in its reasoning.

<sup>2</sup> *Some leading principles of political economy*, London 1874, pp. 491—92: "Among countries commercially connected there is a large class of commodities—all those, namely, which constitute the great staples of commerce, such as corn, flour, tea, sugar, metals, and most raw materials of industry—of which the prices can not vary much in different localities. As a rule the difference of prices will not be greater than the cost of carriage between the countries of production and consumption, always, of course, excepting the case where such articles come under the operation of local fiscal laws. In the exchange for commodities of this description, the value of gold, though not the same all the world over, does not greatly vary within the range of general commerce. But besides the commodities which form the staples of commerce, there are those which, through unsuitableness for distant traffic, or owing to some other obstacle, do not enter into international trade. With regard to these, there is nothing to prevent the widest divergence in their gold prices, or, therefore, in the value of gold in relation to them, not merely in remote quarters of the world, but sometimes even in localities within the same country; and the class of goods to which this description applies—it will vary in extent with the situation of each country and the means of communication at its command—far from being insignificant, must under all circumstances include some of the most important articles of general consumption. To perceive this, it is only necessary to remember that the group includes the items of house accommodation, meat, and a large proportion of those things which fall under the head of "provisions"—a list which would have to be greatly enlarged

*ternational and domestic commodities.*<sup>2</sup> He used it only to prove that gold was not of the same value in all countries, but later the suggestion was followed up by Taussig; one of his major contributions to the theory of international trade is exactly the attempt to determine the causal relationship between the prices of international and domestic commodities and the heights of money incomes in different countries.<sup>1</sup> At the hands of Taussig and his pupils the analysis of "*sectional price levels*,"<sup>2</sup> calculated separately for import, export, and home-market goods, came to play an important rôle in the transfer explanation, but as has been shown in preceding chapters the classical writers never succeeded in giving this part of their doctrine a clear and unequivocal form.

There are several reasons why the classical theory of international trade has been unable to give a satisfactory explanation of the effects of international capital movements on prices:

(1) Very often the classical economists confined themselves to an analysis of the price relations of the commodities and services actually traded between countries.<sup>3</sup>

(2) When domestic commodities were taken into account, a fixed line of demarcation was often assumed between the three groups: import, export, and home-market goods.

(3) Here, as elsewhere in their discussions of international trade problems, the classical economists usually confine their analysis to two countries. They contrast the situation in the capital-exporting and capital-importing country, but do not take account of outside neutral countries.

(4) Moreover, the assumption of constant costs—and the antecedent assumptions of the Ricardian theory of value that capital and labour were combined in equal proportions in the

if we had to deal with countries lying aside from the leading thoroughfares of commerce, or in which the means of communication have been imperfectly developed."

<sup>1</sup> *Supra* pp. 226 and 8, note 3.

<sup>2</sup> The term "*sectional price levels*" is not very fortunate; it may easily connote a geographical division of the market. It would probably have been better to speak of "*partial*" price levels or "*classified*" price levels, or something like that, but in order to avoid misunderstanding the traditional term is retained in the text. Note also that, strictly speaking, it is the goods which are either domestic or international. *Prices* are always local, but they are more or less responsive to quotations elsewhere according to the degree of mobility of the goods.

<sup>3</sup> *Cf. supra*, p. 8.



production of all goods, and that different categories of labour were paid according to a scale of remuneration fixed once for all—precludes a priori a response of the relative scarcity of the different factors of production and the relative costs of the different commodities to changes in demand conditions.<sup>1</sup>

(5) Finally, the more or less complete failure of the classical economists to take account of the direct and indirect effects of the transfer of monetary buying power, led them to exaggerate those changes in the barter terms of trade which they believed to be a necessary concomitant of international capital movements.

Starting from the modern interdependence theory of value we realise at once that an international capital flow may conceivably affect *all* prices and quantities within the price structures. It is only in order to get a manageable survey of these innumerable changes that we class the different commodities and services in certain groups, and compute sectional price averages.<sup>2</sup> We are well aware that individual commodities within each of the groups may show widely divergent price movements and that capital flows are likely to lead to shifts of commodities from one group into another.

In order to stress the fact that there is a gradual transition between the most truly international goods and the most decidedly domestic goods a further subdivision has often been suggested.<sup>3</sup> As already explained<sup>4</sup> the grouping depends upon the imperfect international mobility of commodities and services. The *truly international goods* consist mainly of raw materials and crude foodstuffs. Probably the most truly international among them is gold. For the handling of these homogeneous or graded staple commodities complex and efficient market organizations have been developed in the large commercial centres, and their prices cannot for any length of time differ

<sup>1</sup> Cf. *infra*, p. 498 and *supra*, p. 456.

<sup>2</sup> Cf. L. B. Zapolon, *International and domestic commodities and the theory of prices*, *Quart. Journ. of Ec.* 1931, pp. 409—59.

<sup>3</sup> Angell speaks of "partially traded goods" (*The theory of international prices*, pp. 379 et seq.); R. F. Harrod uses the term "quasi-international goods" (*International economics*, pp. 59 et seq.); Ohlin distinguishes between "competing home-market goods" and "non-competing home-market goods" (*Interregional and international trade*, pp. 143 et seq.).

<sup>4</sup> *Supra*, p. 48.

from market to market by more than costs of transportation and duties; for if they did, arbitrage operations would immediately correct the divergence. Among services shipping is probably the only one which is truly international. The *quasi-international goods* are of a different character. A great many highly manufactured goods belong in this class. They will usually be much more adapted to local tastes. And between these products, national price differences will often be greater than their slight qualitative differences and the actual costs of transport would lead one to expect. For the lack of an organized market means that personal contact between buyer and seller plays a larger rôle; habits and traditions are formed which it may require relatively large price differentials to break. Harrod points out that several important services belong in this category, e.g. those rendered by insurance companies or issuing houses; they are not of exactly the same quality in different commercial centres; here too, customs and traditions are developed, in consequence of which goodwill may be established. The most truly *domestic goods* are those which by their very nature are incapable of entering international trade. Here also, the cost of transport sets a limit to international price discrepancies, but if this be infinite, any price difference will, of course, be less than the transportation cost. The higher the latter, the more likely is the commodity to be found among the home-market goods. Here the bulk of services are found; and in some cases, particularly in new countries,<sup>1</sup> the domestic group consists of almost nothing but services, practically all material commodities being either imported or exported. But usually there will also be a smaller or larger group of commodities which are too bulky or perishable to be transported between countries. Most fixed capital goods belong in this class. Retail goods are also generally characterised as domestic goods; in reality, they are amalgams of international and domestic goods; what is domestic, are the services of the retailer for which the margin between the wholesale and retail price forms the payment.

The deeper insight which the modern theory of value affords into the nature of the different national price structures and their interrelations is well summarised by Ohlin

<sup>1</sup> Cf. *supra*, pp. 397 and 425.

in the statement that the interdependence is closer for home-market goods and less close for international goods than appears at first sight.<sup>1</sup> There is no *direct* connection, of course, between the prices of truly domestic goods in different countries, but there are several *indirect* ways in which domestic prices are related to international or semi-international prices and through them to domestic prices in other countries. The most important of these connecting links are briefly indicated below as a background for the analysis of the effects of a capital movement.<sup>2</sup>

(1) Each country's supply of productive factors is used in the production of both domestic and international goods. Unless the factors used in these two groups of industries form non-competing groups, their returns will, in the long run, tend towards equality in all occupations, which means that trade in international goods will affect the supply prices of domestic goods through its influence on factor scarcity and methods of production. Thus, the prices of services in different countries are influenced by international commodity trade through its effect on wages.

(2) The demand for domestic goods is a function of all prices and incomes, and since some of these prices and incomes are altered by international trade, it will also affect the demand for domestic goods.

(3) The prices of goods at different stages of production are closely interrelated. If the goods of a higher order have their prices equalised by international trade, this must also affect the prices of goods of a lower order, even if the latter be home-market goods. International trade in machines affects the prices of the domestic goods produced by the machinery. Conversely, international trade in finished goods may affect the prices of their raw products or auxiliary material, even if the latter be domestic goods. International trade in butter affects the price of milk.

(4) Moreover, domestic and international prices are connected through the links of joint supply or joint demand, competing supply or competing demand. In particular, it must be emphasized that goods competing either with imports or with

<sup>1</sup> *Interregional and international trade*, p. 158.

<sup>2</sup> Cf. *supra*, pp. 152 et seq.

exports cannot differ too much in price from the international goods with which they compete.

(5) Finally, the international movements of the productive factors will alter, not only the factor prices, but also commodity prices, and among them the prices of domestic goods no less than those of international goods.

In general, it may be pointed out that a commodity may be truly international, even though the quantity of it actually traded between different countries is comparatively insignificant.<sup>1</sup> In the staples of world commerce a relatively small number of international commodity exchanges dominate the world markets through their spot and future quotations, which are closely watched by all substantial traders or manufacturing consumers. With respect to several manufactured goods the case is similar. Great foreign-trade houses and manufacturing concerns with world-embracing organizations maintain close price contact between distant places. Cartels, foreign trade associations, cooperative marketing and buying organizations, department- and chain-store buyers also increase the contact between national markets. This sensitive mechanism rests, of course, upon the modern development of transportation and the complementary services of telegraph and telephone which have shifted a host of commodities from the domestic into the international group.<sup>2</sup>

In the preceding section it was shown how an international transfer of monetary buying power involved a change in the direction and localisation of demand. We are now to inquire what effects this change is likely to have on the different national price structures.

Generally speaking, this will depend, not only on their influence on unit costs of production, but also on the relation which prices bear to costs. This will be different, of course, under free competition and in the case of monopolies. In the short run this relation may also vary considerably between

<sup>1</sup> This has been more generally recognized with regard to gold than in the case of other international goods.

<sup>2</sup> Cf. Zapoleon, *loc. cit.*, pp. 415--18. Other technological changes have worked in the same direction. Local handicraft industries have been superseded by large-scale manufacturing concerns selling their products all over the world. The boot and shoe and ready-to-wear garment industries are good examples.

industries, even though competitive conditions obtain. Besides, cost of production per unit of product is a rather ambiguous term; we may say, of course, that it depends on the prices which must be paid for the factors of production and the quantities required to produce a unit of product (the technical coefficients); but in the short run we must take account of the degree in which available productive capacity is utilised, and here again, considerable differences may exist at any given moment from industry to industry.

The most important aspect of the change in demand conditions caused by the transfer of buying power is that the demand for domestic commodities is increased in the borrowing country and decreased in the lending. In the former country, producers of home-market goods may reduce their unit costs by working their plants to full capacity, but this is more likely to swell their profits than to induce them to cut their prices. In the lending country, on the other hand, the depressed home-market industries may be forced to sell at a loss.

The most immediate and probable effect of the transfer of buying power is, therefore, that *home-market prices go up in the former country and fall in the latter*.<sup>1</sup> This short-run effect is reinforced by the influence of the changed demand conditions on factor prices within each country. When no more surplus capacity is available in the borrowing country, productive factors will be attracted to its expanding home-market industries by the offer of higher prices, until the normal relation between profits and costs is re-established. And in the lending country, productive factors will gradually leave the home-market industries under the pressure of reduced returns. This means that, taken as a whole, the means of production have become more scarce in the borrowing country, less scarce in the lending country. The change of commodity demand implies a corresponding shift in factor demand. The demand for a commodity is always indirectly a joint demand for certain factors of production.

Under the assumption underlying most of the classical expositions of international trade theory—that all goods produced in a country require for their production identical “units of productive power” (i.e. a combination of the factors of pro-

<sup>1</sup> The movements here described are relative. Cf. *supra*, p. 472.

duction in fixed proportions)—the analysis cannot be pushed beyond this point. The shift in demand means that the scarcity of this "productive unit" is increased in the borrowing country, decreased in the lending. Consequently, all commodities produced in the former country become dearer than before compared with all goods produced in the latter. Then it follows directly that the *barter terms of trade*—the ratio of interchange between the exports of the two countries—are *changed in favour of the borrowing country*.<sup>1</sup>

But as soon as it is recalled that the main effect of capital movements was to *reduce* the scarcity of capital in the capital-importing countries, the ambiguity of this analysis becomes apparent. It is only the scarcity of the *immobile* factors which is increased in the capital-importing countries. That is to say: instead of dealing with an "average scarcity" of all productive agents we are at once led to consider alterations in their *relative* scarcity.

The merit of the modern interdependence theory of value is precisely that it is based on the principle of variable proportions. It recognizes, in other words, that the production of home-market goods may require *other* productive factors, or at least require them in *other proportions*, than the production of international or quasi-international goods. And on this assumption the analysis may be further extended. It now appears that the readjustment of production may involve also a *change in the relative scarcity of the productive agents* which cannot fail to affect their relative prices.

It must be noted, however, that in the short run, at least, the same productive factors need not obtain the same prices in all occupations. For a considerable time, the wages, e.g., offered by the expanding industries in order to attract a certain quality of labour may exceed those paid for exactly the same labour in the declining industries. In a similar way, land or durable capital instruments may for a time continue to be in use in their previous occupations, even though the quasi-rents obtained by their owners be low compared with the return offered by the more prosperous branches of production. But gradually, the friction in the way of occupational factor movements is likely to be largely overcome, if the adjustment is not impeded by trade-union policy or similar monopolistic in-

<sup>1</sup> Cf. Ohlin, *loc. cit.*, pp. 418 and 425, note 1 and, as a contrast, Tausig's reasoning reviewed *supra*, pp. 305—06.

fluences, tending to create permanent non-competing groups.

The next step in our analysis is, consequently, to follow up *the reflex influences of the changed relative factor prices*. Obviously, they will react on the prices of international and quasi-international goods. But *how* these prices will be affected cannot be said *a priori*.

On the whole, the productive factors of the borrowing country have come into greater demand, while those of the lending country have become in smaller demand. But *in particular*, it is factors largely used in home-market industries the relative scarcity of which is increased and reduced in the two countries. It is even conceivable that certain factors, less needful to the home-market industries, may become *less* demanded than before in the borrowing country and *more* demanded than before in the lending country. If now the export industries require comparatively much of the *same* productive factors which are used in relatively large quantities in the home-market industries, their costs and prices in the borrowing country will rise compared with their costs and prices in the lending country. In that case, the barter terms of trade are turned in favour of the borrowing country. But if the exports are produced in the main by *other* factors than the domestic goods, their prices need not go up in the borrowing country relatively to their prices in the lending country. It is even conceivable that they may fall, and that the barter terms of trade may turn in favour of the lending country.

The decisive question is whether export and home-market industries use, in the main, the same or different productive factors. Starting from the law of comparative cost one might be tempted to argue as follows: a country will produce for *export* the commodities in the production of which it is comparatively most efficient, and *import* goods in the making of which it is relatively least efficient, whereas its home-market commodities are likely to occupy an intermediate position as regards the effectiveness with which they are produced. Dressed in the language of the modern theory of international trade this would mean that while exports contain much of factors which are relatively abundant, and imports much of factors which are comparatively scarce in the country in question, its home-market goods will probably be found in the middle between these extremes. This reasoning overlooks, however, that

costs of transport are of much greater importance for some commodities than for others. When this is realised, it becomes clear that the home-market group may include both goods containing much of the scarce agents and others containing much of the relatively abundant agents. It is not possible, therefore, to say a priori whether the export and the home-market goods contain mostly the same or mostly different productive agents, and whether, consequently, the changed factor scarcity will, on the whole, cause the exports of either country to rise or to fall in price compared with one another. As far as this reflex influence on export prices is concerned, it would seem, therefore, that barter terms of trade *might* also move in favour of the lending country.

But the *prices of international and quasi-international goods* are not only changed in this indirect way through changes in their supply conditions. They will also feel *the direct effect of the change in demand conditions* caused by the transfer of buying power. They do not feel it to the same extent as the home-market goods, however. For in this case, the increased demand coming from the borrowing country will act as an offsetting tendency against the decline in demand occurring in the lending country. But there need not be an exact compensation. In the first place, because the transfer of buying power from the lenders to the borrowers may mean that either a larger or a smaller proportion of it than before is now spent immediately on international goods. This means that *the combined demand* in both countries for international goods is either increased or diminished. But in the second place, the *distribution* of this demand between the export goods of the two countries is likely to be affected. As already explained the transfer of buying power will almost certainly alter the direction of demand and necessitate a readjustment of production in both countries, raising certain prices and lowering others, and affecting once more the relative scarcity of the factors of production. And this changed direction of demand for the different international goods may, of course, turn particularly towards the export commodities of one of the countries.<sup>1</sup> But

<sup>1</sup> Ohlin points out, e.g., that the difficulties of many British export industries in the post-war period may be partly due to the decline in the export of capital from England, France, and Germany, which has served to keep down the world demand for British rails, machinery, ships, etc. The consequent unemployment and losses may have reduced British savings and thus diminished the capital export still further (*Loc. cit.*, p. 456).



here again, it is impossible to say a priori whether, on the average, the exports of the borrowing country will rise relatively to those of the lending. Here too, the barter terms of trade *may* move in either direction.

Even if the influence on the supply prices of international goods discussed a moment ago should tend to turn the barter terms of trade somewhat in favour of the borrowing country, this tendency may obviously be counterbalanced by the demand influence here considered, in case the transferred buying power is spent to a larger extent than before on the lending country's exports. Generally speaking, the "average scarcity" of *all* the productive factors of the lending country is here, as before, diminished by the relative depression obtaining in its home-market industries, but, in return, it is increased by the greater demand for its exports. But the *individual* factors may be differently affected, so that a changed relative factor scarcity ensues *within* each country exercising its subsequent effects on all prices.

A special influence on the price structures may be exercised by the changes in *costs of transportation* consequent upon an international capital movement. This aspect of the problem was stressed by Wicksell<sup>1</sup> who pointed out that the relative increase in imports in which a net inflow of capital must necessarily express itself, will tend to raise inward freight rates and depress outward freight rates, and that this might be the explanation of the turn in the terms of trade postulated by the classical economists.

Wicksell holds that the prices of both imported and exported goods will tend to rise in the borrowing and to fall in the lending country; and in a similar way, Ohlin argues that if costs of transport in both directions raise import prices by the same amount, an index number of international prices equally weighted must, of course, be identical in both countries; but if import prices in the lending country are raised less over export prices in the borrowing country than the import prices of the latter are raised over the export prices of the former, the level of international prices must evidently be reduced in the lending compared with the borrowing country.<sup>2</sup> This is quite true; but it may be well to point out that this index does not tell us

<sup>1</sup> *Supra*, pp. 245 et seq.

<sup>2</sup> *Loc. cit.*, pp. 152 and 443.

anything regarding the change in barter terms of trade. That depends on the relation between export and import prices. Analysing a capital flow from England to Scotland, Ohlin argues that this development of freight rates will "tend to raise the prices received by the Scottish producers relative to the prices received by producers of English export goods".<sup>1</sup> This result is probably reached on the tacit assumption that export prices are determined in the "world market", and that the exporters simply get these prices less freight.<sup>2</sup> It is the familiar argument<sup>3</sup> that out-of-the-way countries exporting bulky commodities will get low export prices and low rewards to their agents of production. But when there are only two countries this reasoning does not seem applicable. It might perhaps even be argued that the quantity of imports which a unit of exports can procure to a consumer in the exporting country will depend upon the share of the imports which he must render to the transporter; this share is diminished in the lending country, increased in the borrowing; consequently, the change in freight rates will tend rather to move the terms of commodity trade in favour of the *lending* country.

But this whole approach to the problem appears to be beside the point. To treat the change in the relative prices of import and export *commodities* resulting from the shift in freight rates as a "transfer burden" (whether on the borrowing or on the lending country) is logically unsatisfactory. Let it be remembered that, strictly speaking, the calculation of the barter terms of trade ought to include all quid-pro-quo items, service transactions no less than commodity trade. Then it appears necessary to ask how the rendering of the transport services is distributed among the countries. In general, the changed direction of demand consequent upon the capital movements affects, not only commodity prices, but also the price of the international good called transport service. This exercises a direct influence on the relative scarcity of the productive agents, since their combination in transportation may not be the same as in other industries, and besides, consumers' demand will react to the changed relative prices of imports and exports and release the secondary effect on relative factor scarcity already

<sup>1</sup> *Loc. cit.*, p. 403.

<sup>2</sup> *Cf. loc. cit.*, p. 523.

<sup>3</sup> *Cf. Senior, Three lectures on the high cost of obtaining money*, London 1830.

described. In particular, it must be noted that the readjustment resulting from altered transport conditions may involve changes in the localisation of production, which in turn may react on the volume of traffic. It is uncertain, however, what the direct effect of a capital movement on the total demand for transport services will be; the *relative* increase in the imports of the borrowing country and in the exports of the lending country may result from changes either on the import or on the export side, and whether or to what extent the total volume of commodity trade between the countries will be increased cannot be said a priori.<sup>1</sup> But whether the total demand for transport services is increased or reduced, its distribution between the two countries may be altered according to their comparative advantage in rendering the particular kinds of transport services now demanded. As long as we do not know by which country these services are primarily performed, or what factors of production are predominant in its transport industries, it would seem impossible to determine the final outcome regarding barter terms of trade.

All the effects on the national price structures hitherto considered have originated in the mechanism of transfer. Apart from that, the international migrations of capital disposal exercise a *direct and lasting influence on the relative scarcity of this factor of production* in different countries. This aspect of the international movements of capital has been treated in detail in chapter III. Here it will suffice to observe that the change of this basic element of the price structures will also tend to affect sectional price levels, but that is a decidedly long-run influence, the importance of which will usually be negligible as far as the transfer mechanism is concerned; this is due simply to the fact that, in general, the amount of capital moving between two countries in any one year will be too small compared with their total capital supply to have perceptible direct effects on relative factor scarcity. As mentioned in the preceding section the adaptation of production caused by an international capital flow may also involve *other factor movements*. It is easily perceived now that this depends on the repercussions in the price structures; here, as elsewhere, the choice between commodity and factor movements is made along the line of least resistance. But whether the readjustment

<sup>1</sup> *Supra*, pp. 181 et seq.

of production entails changes in commodity trade or in factor movements, relative factor scarcity and relative commodity prices will obviously be further affected. Finally, it remains to take into account that *domestic factor supply* in both countries may be affected by the changes in factor scarcity directly and indirectly called forth by an international capital movement. But this aspect of the problem has also been treated in an earlier connection.<sup>1</sup>

The outline given above of the nature of the changes which are likely to take place in the price structures of a capital-exporting or capital-importing country makes it obvious that the mechanism of transfer is a highly complex process. It may be well to stress in conclusion that it is a *process*, a dynamic evolution, constantly changing as time goes on, even if the capital flow is continued at a constant rate. Some of the reactions come about quickly, others—particularly the supply reactions—may take considerable time. In this connection attention must be paid to the many kinds of “money-contracts, money-customs and money-understandings”<sup>2</sup> fixed over shorter or longer periods of time. In the short run, some prices are more or less rigid, while others are highly flexible; the most important among the former are, of course, wages.

Whenever a movement of capital is started or stopped, enhanced or retarded, there is likely, therefore, to be an initial period marked by relatively large price changes, above all for domestic goods. But gradually the supply of the productive factors will tend to adjust itself to the changed demand conditions and cause prices to return more or less towards their former position. There is no reason to expect, however, that the new equilibrium will be exactly identical to the old; on the contrary, this would require highly unrealistic assumptions.

Finally, a comparison of the effects on the price structures of the change in demand conditions resulting from (1) variations in the scale of wants in one of the countries, and (2) international capital movements may serve to bring out the characteristics of the effects of the latter.<sup>3</sup> In both cases, the direction and local distribution of the buying power of the

<sup>1</sup> *Supra*, pp. 183 et seq.

<sup>2</sup> Keynes, *A treatise on money*, I, p. 93.

<sup>3</sup> Cf. Ohlin, *loc. cit.*, pp. 512—14 and Yntema, *loc. cit.*, p. 62.

two countries is changed. In both cases, the *indirect* secondary effects called forth by these changes are of similar nature. But the *direct* effects of the changes on commodity prices and quantities sold are partly similar, partly different. In so far as the transfer of buying power from the lending to the borrowing country merely means that it is diverted from certain international goods to others, the same result could have been brought about by a change in wants in the lending country. If the transferred buying power is diverted from home-market goods in the lending country to international goods bought by the borrowers, the same result could also have been brought about by the lenders by a change in their wants. And if the transferred buying power is diverted from international goods bought in the lending country to the domestic goods of the borrowing country, the same result could have been brought about by a change in wants in the borrowing country. In these three cases, therefore, the direct effects of the altered demand conditions are of similar nature, whether they are caused by capital movements or changing wants.

But if the transfer of buying power from the lending to the borrowing country means that it is diverted from the home-market goods of the former to the home-market goods of the latter, the nature of the two cases becomes different. A change in wants in either country cannot shift buying power from the home-market goods of one country to the home-market goods of another; people may redistribute their buying power at pleasure between import goods, exports goods, and *their own* home-market goods, but by definition the home-market goods of another country are beyond their reach. In most international capital movements, on the other hand, such shifts of buying power from the home-market goods of one country to those of another play a prominent rôle. Once more, the expansion of home-market production in the borrowing country and its contraction in the lending appear to be the characteristic concomitants of an international capital flow.

Import of capital and increased foreign demand for its products will both tend to augment the scarcity of a country's productive factors *taken as a whole*. But their *relative* scarcity is likely to be differently affected. In the former case, factors largely used in the home-market industries will probably come into greater demand; in the latter case, it is the factors most

prominent in the export industries which become more scarce. Conversely, export of capital and decreased foreign demand for its goods will both tend to diminish the scarcity of a country's productive agents taken as a whole. But here again, the capital export will probably lessen the demand most for factors used in domestic industries, while the declining foreign demand will fall exclusively upon factors employed in export production.

In the case of a change in the scale of wants we may safely conclude that the barter terms of trade will always be affected in favour of the country the products of which have come into greater demand.<sup>1</sup> In the case of international capital movements no such definite statement is possible.

### 3. OUTSIDE COUNTRIES.

In the preceding sections our attention has been confined to the two countries directly affected by the capital flow: the capital-exporting and the capital-importing country. It remains to indicate how the transfer mechanism is modified by the fact that these countries are not the only two in existence. It is fairly obvious that this widening of the area over which the readjustment of production may be spread tends to facilitate the capital transfer and, consequently, to reduce the price changes to which it gives rise.

Let us assume that besides the lending and the borrowing country there are a number of "neutral," outside countries. In this case, the monetary transfer may lead to a changed distribution of buying power, not only between the goods of the lending and the borrowing country, but also between these goods and the *international* or *quasi-international* goods of the neutral countries. But here again, it must be kept in mind that the home market goods of these latter countries are beyond the

<sup>1</sup> Conversely, the terms become more "unfavourable" to the country in which the demand for foreign goods has increased. Note, however, that this merely means that in terms of *physical units* this country gets less imported goods per unit of exports. In terms of *utilities* (satisfactions) there is presumably a gain and not a loss. This is shown by the simple fact of choice. The altered trade terms are merely the registration of a different state of mind. When the terms move in consequence of a capital movement, the case is different. Then the change is an inevitable incidence, not the result of a voluntary act.

reach of foreigners.<sup>1</sup> *Indirectly*, their domestic industries may be affected by the capital flow. But the direct influence of the capital transfer on home-market production continues to be limited to the two countries directly concerned. It is still a characteristic feature of the mechanism of international capital movements that buying power is diverted from home-market goods in the lending country to home-market goods in the borrowing. At this point, the existence of neutral countries makes no difference. But (1) the secondary effects of this diversion and (2) the direct changes in the demand for international goods and their subsequent effects may take a different course.

It is conceivable that both the direct and the indirect effects of the transfer of capital might leave the combined demand of the borrowing and lending countries for the goods of the outside world completely unaffected. But here, as between the countries directly concerned, the changed direction of demand is likely also to alter its localisation, favouring the goods of some neutral countries in preference to those of the others. These repercussions have been analysed in detail by Ohlin.<sup>2</sup> They are of the same nature, however, as those described in the preceding section and need not engage us further.

Suffice it to say that the outcome regarding the price structures in all the different countries will depend on three things: (1) the local distribution of demand and the way in which this is altered by the capital movement, (2) the local distribution of the factors of production and the possibilities of changing it, and (3) the local distribution of commodity supply, i.e. the transport conditions.

Quite clearly, the adjustment will also be affected by the credit policy pursued in the neutral countries.

#### 4. ELASTICITY OF DEMAND AND SUPPLY.

In the preceding sections the *general nature* of the readjustments to which international capital movements are likely to give rise, has been outlined in some detail. It remains to inquire whether definite statements can be made regarding the

<sup>1</sup> Note, however, that the same commodity may be a home-market good in one country and an international good in another owing to their different transport conditions.

<sup>2</sup> *Loc. cit.*, pp. 434 et seq. Cf. also Jacques Rueff, *Theorie des phénomènes monétaires*, Paris 1927, ch. VII.

extent to which the different groups of prices will probably be altered or, at any rate, regarding what *factors* will determine the magnitude of the variations in relative prices.

In order to answer this question the proper procedure would be, apparently, to start from the *system of simultaneous equations* and try to solve them both before and after the incorporation of the new element.<sup>1</sup> But as already suggested, this is hardly ever practicable. The system of equations gives a useful bird's-eye view of the types of relations connecting all economic phenomena, but the equations are too numerous and complex to be of much help in the solution of concrete problems.

When this is realised, one naturally looks for a simpler technique for handling the problem, and as we have seen in part II A, much energy has been spent on inventing some such simpler method of approach. Unquestionably, the *Marshallian curve apparatus* is the most elegant among the tools that have been applied. But notwithstanding the excellent services yielded by this tool in other fields of international trade theory, it fails to be of much use at this point. And here again, the reason is that the economic interrelations on which we want to throw light are too complex to be condensed into only two curves. With eminent propriety Edgeworth has compared the point of intersection between the two Marshallian curves to the hand of a clock:

"Movement along a supply-and-demand curve of international trade should be regarded as attended with rearrangements of international trade: as the movements of the hand of a clock correspond to considerable unseen movements of the machinery."<sup>2</sup>

This clearly suggests that if we want to know *why* the hands move in that particular fashion, there is nothing to do but to open the clock and study the interaction between all the component parts of its complicated interior.<sup>3</sup>

<sup>1</sup> Cf. *supra*, pp. 13 and 256.

<sup>2</sup> *The theory of international values*, in *Papers relating to political economy*, London 1925, II, p. 32.

<sup>3</sup> "Wenn uns die Lage und Gestalt der Marshall'schen Kurven nach Vollzug der Zahlungen bekannt wäre, wäre es in der Tat ein leichtes, das Resultat abzulesen. Da diese Kurven jedoch das *Ergebnis* des gesamten Handelsmechanismus darstellen, bleibt wohl nichts übrig, als diesen, so gut es geht, schrittweise zu rekonstruieren, die Mar-



As early as in 1904, Sir H. A. Cunyngname criticised Marshall's original curves relating to only two commodities—cloth and linen—as insufficient to enable the whole conditions of the problem to be stated:

“They simply compare a German demand curve of cloth with an English demand curve of linen; but they do not show the differences produced by a change in the relative utility of cloth and linen in Germany, nor a similar change in England. It is an attempt to represent a problem that really involves four curves by two only.”<sup>1</sup>

Later Marshall made his curves represent “bales of goods,” supposed to embody uniform aggregate investments of a country's labour and capital, instead of particular commodities. But this meant, of course, that he now attempted to represent by only two curves a problem which really involved an infinite number of curves, the forms of which might be differently affected by a disturbance of an existing equilibrium. It might conceivably be useful, as Edgeworth suggests,<sup>2</sup> to operate with an “ideal” article, typical of a country's imports or exports, *provided* the composition of this ideal commodity were not constantly changing. But as we know, it is constantly changing. Obviously, a country's demand for imports is not a demand for the Marshallian “uniform aggregates of labour and capital,” but for specific commodities of various sorts, incorporating the productive agents in different proportions.

“To construct demand schedules for representative bales the physical composition of which is inevitably changing as we move along the schedules, with commodities even shifting from one demand schedule to its reciprocal, is not only to build imaginary bricks with imaginary clay, but also to commit the worse fault of assuming a homogeneity in the bricks which, tho a logical necessity for the construction of the demand schedules in question is at the same time a logical impossibility.”<sup>3</sup>

shallischen Kurven aus ihren Elementen aufzubauen. Das heisst aber nichts anderes als mit den gewöhnlichen Geldnachfrage- und Angebotskurven zu arbeiten, die Kaufkraftübertragungen und Nachfrageschiebungen zu analysieren... Eine Methode, die schneller und ohne diese Umwege ans Ziel führt, gibt es nicht.” Haberler, *Der internationale Handel*, p. 120.

<sup>1</sup> *A geometrical political economy*, Oxford 1904, p. 113.

<sup>2</sup> *Loc. cit.*, p. 58.

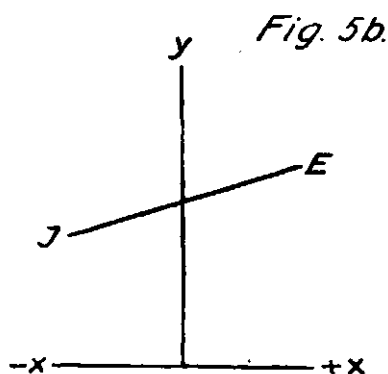
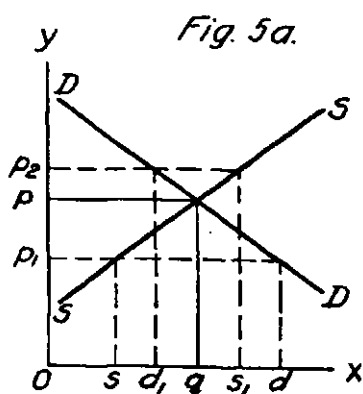
<sup>3</sup> Frank D. Graham, *The theory of international values*, *Quart. Journ. of Ec* 1932, p. 583.

On one condition only will the compound demand for commodities and the demand for uniform aggregates of labour and capital be identical, and that is, of course, on the Ricardian assumption that labour and capital are combined in equal proportions in the making of all commodities.

To gauge the effects of an international capital movement on prices and terms of trade, one is forced, therefore, to go behind the Marshallian curves and consider all the demand and supply schedules on which they are built up. But that means that we are forced back on the system of equations in which the forms of these functions are basic data.

But though the Marshallian curves, no more than the general system of equations, are able to give an exact solution in concrete cases, they may serve as a convenient illustration of a general conclusion of great importance. In spite of the deficient logic on which they are based, they have undoubtedly brought home to many economists the truth, often overlooked, that a country's aggregate demand for imports and supply of exports is generally highly elastic.

(A) For each particular commodity we can treat a country's demand for imports and its supply of exports as *surplus demands and surplus supplies*.<sup>1</sup> For reasons to be stated in a moment we may regard increasing domestic supply schedules as the main rule. Let then the curves DD and SS in fig. 5 a



<sup>1</sup> Cf. Cunyngame, *loc. cit.*, pp. 92 et seq. Yntema, *loc. cit.*, pp. 41 et seq.

be the domestic demand and supply curves for a certain commodity in a particular country. In the absence of foreign trade the price will be  $op$ , and the quantity demanded and supplied will be  $oq$ . But suppose a foreign country offers the commodity at  $op_1$ ; at that price the quantity demanded would be  $od$ , and the quantity supplied at home  $os$ . The difference  $-sd$ —would represent *imports*. Suppose, on the other hand, that our country is able to sell abroad at  $op_2$ ; at that price domestic demand will go down to  $od_1$ , whereas domestic supply will expand to  $os_1$ , the difference between the two quantities being exported. If other horizontal lines were drawn in the figure it is clear that the parts intercepted between the demand curve and the supply curve will represent either exports or imports. These intercepted portions, the length of which will vary with price, represent the dealings which the country is prepared to have with foreign countries. A new curve may then be constructed, representing the quantities imported or exported as a function of the price. This curve is drawn in fig. 5 b. It is obtained simply by subtracting for successive values of  $p$  the abscissas of  $DD$  from the abscissas of  $SS$ .<sup>1</sup> When the price is low, there will be a considerable import; as the price rises, imports will diminish, and when the price exceeds  $p$ , the commodity will be exported. It is from this new curve that the elasticities of import demand and export supply must be computed. And then it is easily seen that import demand and export supply are *more elastic* than domestic demand and supply.

If the elasticities of domestic demand and supply are indicated in the usual way ( $q_d$  and  $q_s$  being the quantities demanded and supplied)

$$e_d = \left( \frac{p}{q_d} \cdot \frac{\delta q_d}{\delta p} \right)$$

$$e_s = \left( \frac{p}{q_s} \cdot \frac{\delta q_s}{\delta p} \right)$$

the elasticity of import demand of export supply may be indicated thus

<sup>1</sup> On the treatment of negatively inclined supply curves cf. Yntema, *loc. cit.*, p. 42 and Acheson J. Duncan's *Review* in *Weltw. Arch.* 1933 II, p. 49.\*

$$E = \left( \frac{p}{q_s - q_d} \cdot \frac{\delta(q_s - q_d)}{\delta p} \right).$$

The relation between these elasticities may be expressed in the following formula<sup>1</sup>

$$E = \left( \frac{e_s \cdot q_s - e_d \cdot q_d}{q_s - q_d} \right).$$

What this formula indicates is that as long as the supply curve has a positive slope ( $e_s > 0$ ) the absolute magnitude of the elasticity of import demand or export supply is greater, (1) the *larger* are the absolute values of the elasticities of domestic demand and supply and the quantities produced and consumed, and (2) the *smaller* is the difference between these two quantities, i.e. the volume of exports or imports.

This goes to show that as long as we are dealing with increasing costs, inelastic demand for imports will be relatively rare, if there is a domestic industry of any size competing with the imports. Similarly, the more the elasticity of export supply exceeds the elasticity of the whole domestic supply, the greater is domestic consumption. The tendency towards high elasticities of supply is lessened, on the other hand, if different producers specialize in foreign and domestic markets and if there are serious obstacles to shifting sales from one market to another.

(B) The prevalence of high elasticities of aggregate import demand and export supply is due further to the fact already alluded to that it is not given once for all what commodities a certain country is to import or to export; on the contrary, the composition of the import and export groups is constantly changing in response to shifts in the terms of trade. If the terms of trade move against a country this movement is checked, not only by additional sales of the goods hitherto exported, but also by the inclusion of new commodities in the export group. The greater the number of actual and potential export goods each country possesses, the less likely it is that the aggregate import demand of the other country will be inelastic.

<sup>1</sup> Cf. Yntema, *loc. cit.*, p. 44.

As pointed out in chapter I, capital may move, not only in the form of material commodities, but also in the form of services. Shipping and catering to tourists, e.g., may be shifted from the domestic to the international group, or vice versa, and thus contribute to make the aggregate import demand and export supply more elastic. The post-war period of currency depreciation offers striking examples of the rapidity with which foreign tourists take advantage of low prices of domestic goods and services in a particular country.

(C) Finally, the existence of outside countries, the possibility of having the commodities supplied from other sources, tends, of course, to make the foreign demand for the goods of a particular country highly elastic. Apart from its influence on the total quantity demanded, a slight increase or decrease in price may suffice to bring about substantial changes in the proportion of it supplied by this particular country. This reinforces the importance of the shifts of commodities between the international and the domestic group just mentioned.

In this connection it is pointed out by Ohlin<sup>1</sup> that, ordinarily, a country will not have done *everything possible* to expand sales of its goods in *all possible* markets. Consequently, a decline of sales in the usual markets may stimulate the exploitation of secondary markets by creation of new sales' organizations. And similarly, a depression of home-market industries may cause more energy and capital to be devoted to the cultivation of foreign markets. It is quite conceivable, therefore, that considerable variations in the volume of exports may be brought about by very small price changes.

All things considered, we may safely conclude that regarding each single country in its commercial intercourse with the whole world, an inelastic aggregate foreign demand for its imports is highly improbable. It will occur only in those exceptional cases in which a single country provides a large part of the world's requirements of one or a few important articles, and has, moreover, a very one-sided equipment of resources, so that it has great difficulty in turning to the export of other goods.

The obvious conclusion is that only in rare cases will an international capital movement be able to cause a consider-

<sup>1</sup> *Loc. cit.*, pp. 437 and 485: "Commodities do not sell themselves, foreign demand is not a question solely of prices, but depends also upon the effectiveness of marketing."

able shift in the barter terms of trade. From this two further inferences may be drawn. (1) as far as changes in barter terms of trade are concerned, a detailed deductive analysis based on varying degrees of elasticity of demand or supply for particular commodities is of little value; only under very exceptional circumstances will the compound curves be inelastic at the point of intersection; (2) in view of the large number of other factors which may affect the barter terms of trade in a dynamic society, there is little prospect of verifying statistically whether and in what direction a capital movement has influenced the terms.

Even in the exceptional cases just referred to of an inelastic foreign demand for a country's total exports, the elasticity of this country's demand for imports will usually be large enough to allow the adjustment to take place on that side.<sup>1</sup>

But the Marshallian analysis suggests further that such shifts as do occur are most likely to be in the direction assumed by the classical economists. While the ordinary monetary demand curves assume a constant value of the means of payments (a constant marginal utility of money)<sup>2</sup>, the Marshallian curves take account of the varying value of the means of payment (the export quantity); and—as Robertson and Pigou<sup>3</sup> have pointed out—the exports of a particular country are likely to have more nearly the character of money (constant marginal utility) to its own inhabitants than to foreigners; consequently, the unilateral transfer of a certain quantity of the goods of a capital-exporting country, is likely to reduce the willingness of foreigners to trade *more* than the corresponding willingness of the inhabitants of the lending country, which means, of course, that the barter terms of trade move against the latter. Expressed in other words, this outcome is the more probable because "foreigners," i.e. the rest of the world, spend a comparatively small part of their productive force on securing the goods of a particular country. Unless the demand for imports is extremely elastic in either or both countries, there is a general presumption, therefore, that the clas-

<sup>1</sup> Cf. *supra*, pp. 317—18.

<sup>2</sup> Cf. *infra*, pp. 507 et seq.

<sup>3</sup> Cf. *supra*, pp. 290—91 and 292—93.

sical theory was right in its conclusion, although the premises on which it was based were inadequate.

To demonstrate that the world's demand for a country's total exports could not have an elasticity less than unity was of particular importance to the classical transfer theory. For on its assumption of unchanged demand conditions an inelastic demand would mean that if a country attempted to increase exports by offering lower prices, it would be able to sell a *greater quantity* of exports, but the *total value of its exports would fall*.<sup>1</sup> Thus it would be impossible to reach a position of equilibrium; the transfer mechanism would necessarily break down. According to the modern theory, on the other hand, the transfer of buying power and the shifting of the demand curves would allow the real transfer to take place, even in the improbable case of an inelastic aggregate demand for a country's exports.

If we are interested, not only in variations of trade terms—this was the chief concern of the classical economists—but in all aspects of the relation between international capital movements and national price structures, it is a tempting task, of course, to try to indicate the outcome under certain simplified conditions. Different attempts in this direction have been reviewed in preceding chapters. In each of these cases a great number of the factors actually involved were ruled out in order to inform us that *on these premises* the result must depend on the interaction of the remaining factors. Such attempts to isolate the tendencies at work are not without value. In many fields of economic theory this one-thing-at-a-time method with its *ceteris paribus* assumption has yielded excellent results. It requires, however, that the secondary repercussions of a given change are negligible or, at any rate, are too small to reverse the tendencies directly called forth.<sup>2</sup> But as we have already seen, these repercussions are of primary importance in the case of international capital movements. It is self-evident that if we *assume* other things to re-

<sup>1</sup> And as we were reminded by Keynes, even if a price reduction of 10 per cent stimulates the quantity exported by 20 per cent, the *value* of exports will only increase by 8 per cent—still provided that demand conditions remain unchanged.

<sup>2</sup> Cf. Yntema, *loc. cit.*, p. 1.

main equal, we cannot disclose the total significance of changes which of necessity are accompanied by changes elsewhere.

As abundantly demonstrated above the outcome is generally said to depend on the elasticities of demand and supply in the different countries, but very often the statements to this effect are given in a vague and indefinite form which leaves dubious what these concepts really cover.

In order to isolate the influence of the elasticity of demand, it is often assumed that costs are constant and, consequently, that the elasticity of supply is infinite.<sup>1</sup> As we have seen, the assumption of constant cost is, on the whole, the starting point of the classical transfer explanation. This assumption is intimately connected with the foundation of the classical theory of international trade upon the Ricardian theory of value. If we define costs of production as the aggregate price paid for the factors employed in the making of a unit of a commodity, constant cost means that both the quantities of the factors employed (the technical coefficients) and the relative prices of these factors remain unchanged, irrespective of the number of units to be produced, or that, by chance, variations in quantities and prices exactly offset each other. If there were only one universal factor of production, say common unskilled labour, capable of moving freely from occupation to occupation, it would be an easy matter to define costs in quantitative technical terms and conceive of these costs as remaining constant for each particular commodity, irrespective of the quantity produced. In this case, a transfer of demand from one commodity to another would not affect costs and prices under a régime of free competition. But if we have more than one factor of production, the definition of costs in purely technical terms can only be maintained under the Ricardian assumption of constant proportions of the factors being employed in the making of all commodities. Under this assumption it is still an easy matter to conceive of constant costs for each particular commodity, and regard a changed direction of demand as irrelevant to costs and relative commodity prices. But if we give up the Ricardian assumption, costs can only be measured in price or value terms. And

<sup>1</sup> Cf., e.g. Pigou's treatment, *supra*, p. 292.



then the possibility of varying costs presents itself. If demand is increased for commodity X, the production of which requires  $2a + b$  per unit of two productive factors, and decreased for commodity Y, requiring  $a + 2b$ , the relative scarcity of these two factors will obviously be changed;  $a$  becomes more scarce,  $b$  less scarce than before. Besides, the technical coefficients are not, as a rule, rigidly fixed; the general law of diminishing productivity indicates that the relative proportions of the factors combined in the production of a particular commodity may be varied, and that such variations are usually accompanied by changes in yield. But this means that the technical coefficients depend, not only upon a technical element—the “physical conditions of production”—but also on the relative scarcity of the productive agents. The technical coefficients must be treated, in other words, as functions of relative factor prices; changes in relative factor scarcity will react on the methods of production and on the yield to be obtained.<sup>1</sup>

The preceding considerations appear to suggest the conclusion that the universal rule must be increasing, and not constant costs. Increasing costs do in fact always obtain if, *with the whole price structure in a position of equilibrium*, it is attempted to increase the supply of a certain commodity; with given demand conditions this necessarily implies the attraction of productive factors from other uses in which they would yield a greater return; this, indeed, is the touchstone for determining whether the price structure is in equilibrium or not. But, as has recently been pointed out by Robbins,<sup>2</sup> it does not follow from this reasoning that increasing cost is the universal rule *when we move from one equilibrium position to another*. If the direction of demand is changed, the reduced production of the commodities less demanded than before may conceivably release factors of production in such combination as to permit the necessary extension of the production of the goods more demanded than before at constant or even at

<sup>1</sup> It has already been suggested how the rigid Ricardian assumption implicit in the classical theory of international values has led to a very inadequate treatment, not only of the laws of return, but also of the theory of rent and, in general, of the influence of international trade on the distribution of the national income. Cf. *supra*, pp. 10 and 4, note 2.

<sup>2</sup> *Certain aspects of the theory of costs*, *Ec. Journ.* 1934, pp. 7—8.

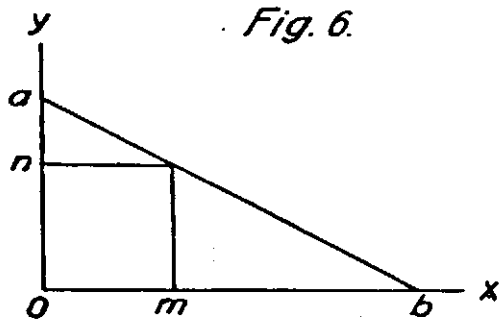
decreasing costs.<sup>1</sup> And besides, the advantages of large-scale production may be of greater importance in the expanding than in the contracting industries, so that a further tendency towards decreasing costs is invoked. Regarding this last aspect of the problem, it is generally agreed that the existence of internal economies is incompatible in the long run with free competition. But where monopolies have already been established, the case becomes different. How far a monopolist will extend his production depends upon the elasticity of the demand for his product. Even though his costs can be lowered by an expansion of production, he will only increase output, provided he can dispose of the larger quantity without reducing his selling price in proportion, or more than in proportion, to the decrease in costs. And this obviously depends upon demand conditions. Here a shift in demand may affect costs and prices.<sup>2</sup> Under competitive conditions, on the other hand, cost reductions due to technical factors can only be expected in connection with a changed direction of demand, if they result from the so-called external economies. But whether this concept is more or less elusive or covers a reality, and whether this reality is of great or small importance in practice, are questions the solution or even the discussion of which belong to general economic theory, and not to a monograph on international capital movements. The purpose of the preceding trespass on the territory of cost theory is merely to insist that an a priori assumption of constant cost unduly narrows the conspectus of an analysis of the price changes resulting from international movements of capital.

Using the curve apparatus developed by Barone and others<sup>3</sup> we may illustrate the classical assumption in the following way (fig. 6). Let the quantities to be produced of two com-

<sup>1</sup> Cf. *supra*, pp. 153—54.

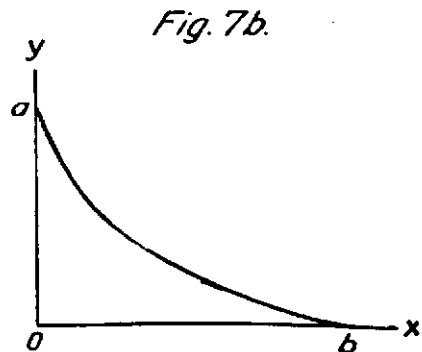
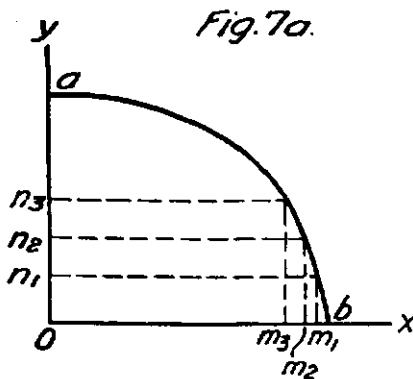
<sup>2</sup> Cf. Erich Schneider, *Kostentheoretisches zum Monopolproblem*, *Zeitschr. für Nationalök.* 1931, pp. 186 et seq. and *Reine Theorie monopolistischer Wirtschaftsformen*, Tübingen 1932.

<sup>3</sup> Barone-Stachle, *Grundzüge der theoretischen Nationalökonomie*, Bonn 1927, pp. 101 et seq., Haberler, *Die Theorie der komparativen Kosten und ihre Auswertung für die Begründung des Freihandels*, *Weltw. Archiv* 1930, I, pp. 353 et seq. and *Der internationale Handel*, Berlin 1933, pp. 132 et seq., A. Lerner, *The diagrammatical representation of cost conditions in international trade*, *Economica* 1932, pp. 346 et seq.



modities X and Y be measured along the two axes. With a given quantity of productive factors available we may produce either  $a$  units of Y, or  $b$  units of X, or  $nY + mX$ , or any other combination indicated by the ordinates of the production indifference curve  $ab$ . That the curve is rectilinear indicates that the proportion in which X can be substituted for Y, or vice versa, remains constant; for every unit of Y which is surrendered, two units of X may be acquired.

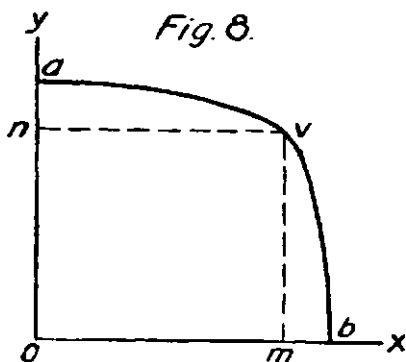
In a similar way, the conditions of increasing cost may be illustrated by a convex curve (fig. 7 a) and the conditions of decreasing cost by a concave curve (fig. 7 b).



The former curve indicates that to get  $n_1, n_2$  of Y, one must surrender  $m_1, m_2$  of X, and that in order to get  $n_2, n_3$  ( $n_1, n_2 = n_2, n_3$ ) of Y, *more* of X must be surrendered ( $m_2, m_3 > m_1, m_2$ ). The increasing negativness of the slope of the curve from  $a$  to  $b$  indicates the conditions of increasing costs. In an exactly similar way, fig. 7 b illustrates the conditions of decreasing costs. Directly, the costs of obtaining one of the two commodities is expressed in terms of the other. It is the conception

of costs as displaced alternatives, developed by von Wieser, Wicksteed, Davenport, and others. In a money economy the two commodities are not compared directly, of course, but through the medium of money. But this splitting, so to speak, of the indifference curve in two money cost curves, does not affect the fundamental relationship, as long as free competition is assumed.<sup>1</sup>

The more any two commodities compared require the same productive factors, and require them in the same proportion, the more nearly rectilinear the indifference curve will be, the more nearly constant the costs, the smaller the price changes to be expected in consequence of the replacement of one by the other. The more difficult it is, on the other hand, to transfer productive factors from the making of X to the making of Y, the more convex the curve will be (fig. 8). Here a large



reduction of the production of X will only lead to a small expansion of the production of Y. In the extreme case where the two commodities have absolutely no factors in common, we get the straight lines *nvm*, indicating that contraction of X does not allow of any increase in the production of Y. In these

cases, great price changes must be expected when the direction of demand is altered from X to Y, or vice versa.

As suggested in the preceding section the adjustment of production often requires a considerable time. We may express this by saying that the indifference curves are more convex in the short run than in the long run. Or, in other words, the shifts in relative prices are likely to be more considerable immediately after the disturbance of an equilibrium than later on.

With regard to capital it has been sufficiently shown in part I that it is only *free* capital disposal over which one can

<sup>1</sup> Haberler, *Der internationale Handel*, pp. 136—37, cf. Robbins' criticism, *loc. cit.* pp. 3—6.

really dispose with complete freedom. As soon as it has been embodied in concrete capital goods its "occupational mobility" is more or less restricted. Yet, the importance of this must not be over-emphasized.<sup>1</sup> Even if it is no longer true that "the greater part, in value, of the wealth now existing in England has been produced by human hands within the last twelve months", it may probably still be said that "a very small proportion indeed, of this large aggregate was in existence ten years ago".<sup>2</sup> A large part of the capital goods have only a comparatively short length of life. Moreover, the occupational mobility depends, not only on the durability of the goods in which the capital is embodied, but also on the degree in which the services of these goods are specialized. Goods of the highest orders, primary industrial raw materials, such as coal, pig iron, and sawn lumber are capable of a great variety of alternative uses. And indirectly, the same is true of the fixed capital devoted to the production of such primary materials. Railway transportation and a supply of electric power are necessary elements of a great variety of industries.<sup>3</sup> Finally, it should be remembered that even large disturbances do not require a transformation of all parts of the productive apparatus. It is not necessary, therefore, that the whole stock of capital goods is occupationally mobile; it is only necessary that a certain interchangeability exists "at the margins".

With regard to agricultural land there is also a considerable occupational mobility. Within reasonable limits it is often a comparatively easy matter to alter the rotation of crops. And though the mines themselves are permanently specialized the minerals obtained from them are capable, as just suggested, of greatly varied application.

It is probably in the case of labour that the obstacles in the way of a quick adjustment are of the greatest importance. The retraining of labourers is generally a costly and difficult affair.

<sup>1</sup> Cf. Lawrence H. Seltzer, *The mobility of capital*, *Quart. Journ. of Ec.* 1932, pp. 496 et seq.

<sup>2</sup> J. S. Mill, *Principles*, Ashley ed., p. 74.

<sup>3</sup> During the World War, not only the primary industries, but also producers of automobiles, bicycles, and other finished goods were able to divert large proportions of their capital facilities directly or indirectly to the production of shells, munitions, and other military supplies.

As we saw in the preceding section considerable wage discrepancies may exist (1) between labourers employed in the expanding or contracting industries and other labourers of the same grade in other industries, and (2) between the grades of labour which are required in particularly large quantities in the affected industries and other grades of labour. The nature of the obstacles to labour mobility have been briefly sketched in chapter II.

How much the relative scarcity of the productive factors is changed depends then on the occupational mobility of the different factors. If the mobility of the productive factors between the various industries were complete, the factors for which demand is increased or decreased in the home-market industries would be attracted from, or spread over, the *whole* productive field. Their scarcity might be somewhat greater or less than before, but this increased or decreased scarcity would make itself felt equally in all industries. That is to say, the factors would obtain the same prices everywhere. Not so, however, where they are temporarily or permanently divided into non-competing groups.

Finally, the "reflex influence of remuneration" on the total factor supply must also be taken into account, but on this aspect of the problem: elasticity of factor supply as distinct from the elasticity of commodity supply, enough has been said in chapter III.

It must be admitted that the adaptability of the productive factors to changed demand conditions is very considerable in the long run. Yet it seems doubtful whether economists like Frank H. Knight and Piero Sraffa are correct in maintaining that the general rule in the long run is approximately constant cost.<sup>1</sup> But as already said a detailed discussion of these complicated problems would take us too far afield in the general theory of cost.<sup>2</sup> In the short run, at any rate, it is obviously necessary to take account of the varying degrees of supply elasticity. And the mechanism of transfer is essentially a short-run phenomenon.

<sup>1</sup> Cf. P. Sraffa, *The laws of return under competitive conditions*, Ec. Journ. 1926, p. 541 and Frank H. Knight, *Professor Fisher's interest theory: a case in point*, Journ. of Pol. Econ. 1931, p. 196.

<sup>2</sup> The possibilities of "complete" elasticity of factor supply in the sense that identical relative factor prices are restored in the long run in spite of a disturbance of an existing equilibrium, are discussed at some length by Ohlin (*Loc. cit.*, pp. 115—23).

In this connection we must recall the importance assigned above to the producers' anticipations of the future.<sup>1</sup> The process of adaptation depends not only upon the technical obstacles to change; the entrepreneurs' opinion of the nature and duration of the disturbance will also exercise a considerable influence on the way in which they respond to it.<sup>2</sup>

Existing business practices may also affect the rapidity of adjustment in several ways. A new or growing industry may divert existing capital resources to its use, without formally acquiring the ownership of these resources. It may hire their services or buy their products. This has the effect of greatly reducing the deterrent influence of risk upon the mobility of capital. The flow of capital into new or speculative industries, particularly, is commonly thought to be greatly impeded by the large risks involved. To the extent, however, that the producers of new goods are able to rely upon the capital equipment of other industries, the amount of capital that they themselves are called upon to risk is minimised. The wide distribution of capital burdens is accompanied by a considerable diffusion of risk which tends to diminish its deterrent influence on capital mobility. If, on the other hand, each finished commodity were to be manufactured by a highly integrated enterprise, the concentration of risk might seriously obstruct the ready flow of capital to new products.<sup>3</sup>

The intimate connection between capital transfer and the general state of business has been touched upon on various occasions. It goes without saying that the transfer mechanism will function in different ways during a boom and during a depression with widespread unemployment and surplus capacity.

The necessary readjustments will obviously be facilitated

<sup>1</sup> *Supra*, pp. 14—15.

<sup>2</sup> "If by long period we understand a period long enough for final equilibrium to be reached, we can say that the length of the period is not only a function of the magnitude of the technical obstacles but also of the expectations entertained by the producers. The time it takes for an industry to become adapted to a permanent shrinkage of demand depends in part upon the rate of physical depreciation. But it depends, too, upon the length of time taken by producers to become convinced that the change is permanent." (Robbins, *loc. cit.*, pp. 17—18).

<sup>3</sup> For a discussion of these business practices cf. K. Enevold Sørensen, *Driftøkonomien i Videnskab og Anvendelse*, Nationaløk. Tidsskr. 1931, pp. 65—66.

in a progressive country where the shifts between export and home-market industries may only mean unequal rates of growth; quite clearly, it is easier to retard expansion than to contract or close down production already in existence.

It has been pointed out<sup>1</sup> that, in general, the difficulties of readjustment will be greater in the capital-exporting than in the capital-importing country because of the resistance with which wage reductions in its home-market industries are likely to be met. As stressed by Keynes, the credit policy of the banks has much to do with the way in which the burdens of transition are distributed between the two countries.

It is hardly necessary to mention that the size of the price reactions will depend on the volume of capital to be transferred within a given period. Large and sudden capital flows have more pronounced effects than more modest and gradual movements.

In a sense it sounds completely preposterous to assume constant cost in order to bring out the influence of different elasticities of demand on prices. For is it not generally agreed that under conditions of constant cost the demand curve is without any influence on price, serving only to determine the quantity produced? It cannot surprise us, therefore, that the only thing actually shown e.g. by Pigou's "four relevant elasticities" is the quantities to be produced of the two export commodities to which his analysis is confined. Or, in other words, how the relative scarcity of the "productive unit" in the two countries is affected by the changed direction of demand. For the classical theorist would argue, of course, that it is only *within* each country that costs are decisive; between them the outcome depends, owing to the immobility of the productive factors, on "reciprocal demand." That this theory is particularly unsatisfactory in a discussion of the effects of a factor movement has been pointed out often enough in the preceding chapters.

Turning, finally, to the importance of the elasticity of demand in determining the degrees of variations in relative

<sup>1</sup> Ohlin, *loc. cit.*, p. 427.



prices, the natural starting point is the simple monetary demand curve found in every elementary exposition of the theory of value. This curve indicates for a single individual and a particular commodity the functional relationship between price and quantity demanded. With regard to this curve it is a comparatively simple matter to indicate the elasticity of demand.<sup>1</sup>

Starting from these demand schedules of each single individual for a particular commodity, general economic theory proceeds to compute the aggregate demand schedules of all consumers in a given market for each commodity. And the theory of international trade sometimes takes the further step of computing a single schedule indicating the demand of all consumers in one country for all the export goods of another. The logical difficulties involved in this last procedure have already been considered. It may be well, however, to recall at this point that the individual demand schedules from which we start are based on two assumptions: (a) that the total amount of buying power at each person's disposal is given, and (b) that the marginal utility of money remains constant. Even if we admit that the variations of the amount spent on a single commodity will usually be too small to have a noticeable effect on a person's marginal utility of money, these two assumptions are obviously vitiated in the case of international capital movements. It is the very essence of an international capital flow that monetary buying power is transferred from the lender to the borrower, and when a large number of prices are changed at the same time it is clearly unwarranted to assume that the marginal utility of money remains constant even to persons with unchanged buying power. Realising this last difficulty Marshall declared<sup>2</sup> that

"money, even when firmly based on gold, does not afford a good measure of international values, and it does not help to explain the changes in those values, which are caused by broad variations in international demand: but on the contrary it disguises and conceals them. For it measures changes in values by standards which

<sup>1</sup> The familiar Marshallian formula is quoted on p. 493, *supra*. Cf. my article *Efterspørgselsens Elasticitet*, *Nationaløk. Tidsskr.* 1930, pp. 313 et seq.

<sup>2</sup> *Money, credit and commerce*, p. 157.

are automatically modified by the very variations in international demand, the effects of which are to be measured."

We have already seen in what way Marshall attempted to evade this difficulty.<sup>1</sup> In the interdependence theory of international trade these difficulties are recognized in the *formulation* of the systems of equations,<sup>2</sup> but as long as it is not feasible to *solve* the equations this does not, of course, afford a clue to the size of the price variations.

Authors who prefer to retain the schedules of international demand expressed in monetary terms try to take account of the transfer of buying power by saying that the demand curves for both international and domestic goods are "shifted to the right" (i.e. raised) in the borrowing country and "shifted to the left" (i.e. lowered) in the lending country. And this illustrative expression may undoubtedly serve to open people's eyes to the prime mover of the transfer mechanism; it may make them understand that the adjustment of the national price structures to international capital movements does not consist merely in movements of the equilibrium prices along given demand schedules in accordance with changes in the quantities demanded, but that it involves also, and primarily, shifts up or down of the demand curves themselves. To use Taussig's terminology: it involves changes in demand "in the schedule sense" and not merely "in the market sense." But when the analysis of these shifts is carried out in detail, a number of difficulties arise: (a) we have no guaranty that *all* demand curves are shifted by a *uniform ratio*; (b) we have no guaranty that these shifts will not at the same time alter the *shape* of the curves; (c) and as already indicated we have no guaranty that the *composition* of the groups of import goods, export goods, and home-market goods will remain the same. On the contrary, irregular and unpredictable changes are likely to appear in all these three respects.

One might perhaps speak of the "*flexibility*" of demand for different goods as distinct from the elasticity of demand; while the latter tells us how the quantity demanded reacts on changes in *price*, the former concept should indicate how

<sup>1</sup> *Supra*, pp. 221 et seq.

<sup>2</sup> Cf. Ohlin, *Interregional and international trade*, Appendix I.

the demand schedule is affected by changes in the income or buying power at the purchaser's disposal. But no simple formula can be given for measuring this flexibility.

Yntema's simplified treatment of the problem shows these difficulties in a particularly clear light. He admits<sup>1</sup> that

"current formulations of monetary theory show that in the expansion or contraction of credit and currency demand and supply schedules do not shift by a uniform ratio. Movements in the price levels are phenomena with important dynamic characteristics which cannot be described in static terms."

Obviously, this is even more true of international capital movements; here the buying power is still less "spread broadcast." Yet, Yntema assumes<sup>2</sup> that the increase of spendable funds in a country receiving unilateral payments and its decrease in the country making them, will be distributed on all commodities in such a way that their net effect is to raise or lower the demand schedules for internationally traded commodities in both countries in the same ratio, and that no shifts of commodities take place between the domestic and the international group. If this "net effect" emerges, merely because a large number of counteracting tendencies happen exactly to offset each other, it is a coincidence so extremely improbable that it is void of practical interest. And if it emerges, because it is assumed that (1) a transfer of capital means that all the individuals or economic units in the two countries have the buying power at their disposal proportionately decreased or increased, and that (2) they will continue to distribute their smaller or larger volume of buying power in exactly the same way between the different commodities, these assumptions preclude a priori a consideration of one of the most important aspects of the capital movement: the changes in the direction of demand to which it will usually give rise. When these changes are taken into account, the decisive questions are: (1) which persons have their buying power diminished or enlarged, directly or indirectly, as a consequence of the loan, and (2) how will their demand schedules for different commodities be affected. And then there are innumerable possibilities. As

<sup>1</sup> *Loc. cit.*, p. 7.

<sup>2</sup> *Lic. cit.*, pp. 27, 31, and 62.

Haberler expressed it when dealing with the Marshallian curves, there is no shortcut to the final result; the aggregate demand schedules of each country for imports must be dissolved into their component parts, and when all these elements are considered separately it does not seem feasible to reach definite conclusions by means of general deductive reasoning.

Here as in the case of supply reactions, the degree of elasticity is likely to be greater in the long than in the short run. If prices fall, e.g., and a further fall is expected, a "buyers' strike" may ensue.<sup>1</sup> Customs and contracts, goodwill, patents and trade secrets, specialized brands, etc. may also make the sensitivity smaller in the short run.

### 5. THE TERMS OF TRADE.

In view of the prominent place which the question of changes in the barter terms of trade has occupied in all discussions of the transfer mechanism it may be convenient to summarize the conclusions to be gathered from the preceding sections regarding this central problem.

I. Negatively, it has been shown that the classical transfer theory was wrong in maintaining that an international capital movement must necessarily turn the barter terms of trade in favour of the capital-importing country. This contention was due to a double neglect on the part of the classical writers. They failed to take due account of (1) the direct and indirect effects of the transfer of buying power, and of (2) the changing relative scarcity of the factors of production.

II A. Positively, general reasons have been given for supposing that ordinarily an international capital movement will have only a comparatively slight effect upon the terms of trade, and it has been demonstrated that it is even conceivable that no change at all will occur.

II B. Regarding the direction in which the barter terms of trade may be moved by international capital flows, we have seen that (1) the direct effect of a changed direction of demand for international goods may equally well favour

<sup>1</sup> *Supra*, pp. 317—18.

the export commodities of the capital-exporting and of the capital-importing country. There is a certain probability, however, that the terms of trade will move against the lending country; the reason is that in all probability its exports will have more nearly the character of money to its own inhabitants than to foreigners; that is to say, their marginal utility is less affected at home than abroad by the export surplus accompanying the outward movement of capital. Concerning (2) the indirect effects of the shifts in the demand for home-market goods, it is also impossible to lay down a definite rule, though here again, the trade terms are perhaps *more* likely to move in favour of the capital-importing country than vice versa; this is more probable, the greater the similarity in the factor combinations used in that country's home-market industries and export industries. Finally, (3) we cannot accept the classical conclusion that the terms of trade will necessarily move in opposite directions in the initial period of a capital movement and in the later period when the counterflow of interest and amortisation payments predominates. In the meantime, the situation in the respects just mentioned may have changed and this cannot but influence the process of adjustment.

II C. When the existence of outside countries is taken into account, the outcome regarding barter terms of trade becomes even less certain. The range of their movements is probably further narrowed, but now the changed direction of demand may favour or prejudice, not only the international goods of the capital-exporting or the capital-importing country, but also those of neutral countries. Thus, the gain or loss of a shift in trade terms may go to the latter rather than to either direct party in the capital movement. Even among the neutral countries themselves, changed barter terms of trade may ensue as a result of the capital flows between other countries.

III. Finally, we have seen that the causal relationship between capital movements and barter terms of trade may be the exact reverse of that assumed by the classical theory: an improvement in the barter terms of trade—resulting from a change in the scale of wants—may be the cause and not the effect of an inflow of capital.

Contrary to the classical contention it has been suggested that the *importance* of such shifts in the terms of trade as do occur, is *not* that they induce the borrowing country to accept the goods in the form of which the capital can alone be transferred, but rather that they alter the proportions in which it is found desirable to effect the transfer through increase in imports or decrease in exports.

The possibility of changes in the barter terms of trade, whether they occur in connection with international capital movements or for other reasons, obviously represents one of the most serious limitations in the validity of the so-called purchasing-power-parity theory.

## CHAPTER XIII

### THE MEDIA OF INTERNATIONAL PAYMENT

#### 1. GOLD.

In the preceding chapter an analysis has been presented of the different aspects of the transfer process, i.e. of the mechanism which connects the monetary and the real transfer. It only remains to add a few words regarding the actual means by which the initial transfer of monetary buying power may be effected, i.e. regarding the different *media of international payment*. As repeatedly suggested they are of two kinds: *gold* (or silver) and *short-term credits in various forms*. Between countries on a metallic standard both these types of media are available for the settlement of international payments, whereas paper-standard countries have recourse only to media of the latter type. The chief difference between the mechanism of transfer under gold and under paper conditions is merely that the *order* in which the different means of adjustment begin to operate is changed.<sup>1</sup> But it must be emphasized that between paper-standard countries the immediate monetary transfer is always in the form of short-term credits. Or in other words, the movements of gold between paper-standard countries are *commodity movements*; they form part of the real and not of the monetary transfer; they must be *preceded* by a transfer of monetary buying power, whereas specie flows between gold-standard countries *are themselves* a transfer of buying power which tends to release subsequent commodity movements.

The classical economists, as we have seen, confined their analysis in the main to gold-standard countries, and between

<sup>1</sup> Cf. *supra*, p. 313.

them they relied chiefly upon *specie flows* as the connecting link between the monetary and the real transfer. Their doctrine was based directly on the quantity theory of money; the movements of gold affected the trade balance *through their influence on prices*. Originally, this influence was taken to be *direct*, but gradually it was realised that the connection was established *indirectly* with bank reserves and discount rates as intermediaries.<sup>1</sup> Consequently, the efficacy of the discount rate became a question of paramount importance to the correctness and adequacy of the classical transfer theory. As scepticism arose in this respect — and it was recognized in several of the inductive studies reviewed above<sup>2</sup> that gold movements had surprisingly little influence on the total volume of credit—a distinction was suggested between the immediate sensitiveness of prices to a specie flow which might be doubtful and would vary, at all events, with the organization of the banking system, and the ultimate domination of prices by the size of gold reserves.<sup>3</sup>

It is hardly necessary to point out that this scepticism has become more widespread in recent years. Owing to monopolistic manipulations and various forms of friction, the price and wage structures display a growing rigidity, which constantly narrows the range over which the discount policy may exercise direct influence. It is quite generally admitted that while it may always be possible to check a rise in prices and bring about a fall by means of an increase in the rates of loan interest, it is much more doubtful whether a fall in prices can always be stopped by reducing interest rates; at least, this might necessitate negative rates since the prospective profits which govern the activity of entrepreneurs may well be negative in a period of falling prices. And, at all events, it is realised by modern economists that the credit policy of central banks is influenced by many other considerations besides the size of their gold reserves or, in other words, that the gold standard under modern conditions is a “managed” currency just as well as the paper standard. The cyclical movements in business activity will obviously tend either to retard or to hasten the influence of gold flows on credit contraction

<sup>1</sup> *Supra*, chs. IV—VI and p. 472.

<sup>2</sup> *Supra*, pp. 352, 372, and 388.

<sup>3</sup> *Supra*, p. 229.



or credit expansion. In a period of depression and widespread pessimism the banks may be too cautious to expand their credit, notwithstanding increasing reserves; and even if the banks are willing to lend, they may be unable to do so for lack of solvent borrowers. Besides, the general character of a country's economic life and the nature of its banking system will affect both the extent and the remoteness of the reactions to be expected in case of changes in the rate of discount.<sup>1</sup> But this whole problem of the relation between gold, credit policy, and prices cannot be attacked here; it belongs to the general treatises on money and banking.<sup>2</sup>

To the modern transfer theory the movements of gold represent primarily *an actual means of transferring monetary buying power* from one country to another; gold is an *international medium of payment*. It is not to be denied that gold flows *may* have far-reaching indirect effects through their influence on the volume of credit. If nothing else happened *before* these indirect effects were released the classical analysis would probably be substantially correct. But the fatal inadvertence of the classical theory is exactly to overlook these other immediate reactions which tend to bring about the necessary adjustments much more quickly and smoothly. Irrespective of its subsequent influence on volumes of credit and price levels, the gold flow means that people in one country put buying power at the disposal of people in another.

This has an important implication. What counts in the classical analysis of the effects of gold on prices is only the *net additions to or net reductions of the gold reserves* of the individual countries, and comments were often made on the surprising smallness of these net changes.<sup>3</sup> But when our attention is turned from these possible indirect effects of gold flows to their direct function of transmitting buying power, it is obviously not only the *net movements* in either direction which count. In that case, we should rather expect

<sup>1</sup> Cf., e.g., Hawtrey, *Currency and credit*, ch. VIII.

<sup>2</sup> Cf., e.g., Axel Nielsen, *Bankpolitik*, II, pp. 331 et seq., and Alfred Tisner, *Grenzen der Diskontpolitik*, München and Leipzig 1932.

<sup>3</sup> Cf. e.g. Angell, *The theory of international prices*, p. 400.

*oscillatory movements of gold.*<sup>1</sup> When a loan is transferred from the lending to the borrowing country, wholly or partially in the form of gold, it serves in the way already explained to change the direction and localisation of demand, and when these altered demand conditions begin to affect commodity trade, a counterflow of gold will take place in payment of the excess import into the borrowing country. Moreover, these cancelling gold flows should be measured by comparison, not with the total of international transactions, but rather with what has been called the "marginal transactions."<sup>2</sup>

But although it thus appears that gold movements play a greater rôle than might be surmised at first glance, their importance under modern conditions is usually rather insignificant.<sup>3</sup> How large they are going to be will depend primarily on the policy of the central banks. If the central bank in the borrowing country refuses to augment its foreign holdings, and immediately depresses the foreign exchange rates to the gold import point, the entire part of the loan which is to be spent, in the first instance, on domestic goods may enter the country in the form of gold. But ordinarily, the bulk of the monetary transfer takes place by means of short-term credits. It may fairly be contended that the mechanism of international capital movements would remain substantially as it is, even though specie flows between gold-standard countries were completely ruled out.

The modern point of view makes us realise that a net inflow of gold into a debtor country is something "unnatural and

<sup>1</sup> *Supra*, pp. 357—58. To the French figures quoted there we may add the following from the United States: from 1919 to 1931 the total of gold movements, including earmarked gold, was 7,600 mill. dollars, while the net total was only 1,200 mill. English figures would not be significant, owing to the exceptional character of the English gold market.

<sup>2</sup> *Supra*, p. 358. A large portion of the items listed in the balance of payments appear more or less regularly month by month and year by year without causing great changes in the relationship between debits and credits. It is capital movements which constitute, in normal times, the most important disturbing element in the international accounts. And even of them a portion proceed at a fairly steady rate for considerable periods. (Cf. White's *Review of Haberler's and Ohlin's treatises*, *Quart. Journ. of Ec.* 1934, p. 731).

<sup>3</sup> More importance should perhaps be assigned to flows of *silver* in cases where such silver movements are possible (i.e. when one or more of the trading countries maintain either a pure silver standard or a bimetallic standard). Cf. Angell, *loc. cit.*, pp. 423 et seq.

artificial," an observation which was made earlier by Goshen.<sup>1</sup> The debtor country may be said to borrow its gold from abroad; part of the imported capital is "invested" in the increased gold holdings; normally, the debtor country will not import more gold, therefore, than it considers necessary as note cover.<sup>2</sup> According to the classical theory of specie flows gold would not move till the pressure on the foreign exchanges had brought the rates to the gold points. As a matter of fact, debtor countries often import gold although the rates of exchange are well above the specie-import point. The explanation is, that the central bank, when it wants to increase its specie reserve, deliberately pays the higher price for the gold in order to relieve the business world of the inconvenience of comparatively large exchange fluctuations.<sup>3</sup> The classical theory regards the changes in volume of credit and height of prices as effects of the movements of specie. The modern doctrine, on the other hand, admits that the gold flows may often be more adequately described as effects of changes in the volume of credit and buying power which have already occurred in direct or indirect consequence of the equalising capital movements, i.e. as a result of decreases or increases in the countries' foreign exchange holdings in various forms. At all events, it is regarded as a matter of secondary importance whether part of these "outside reserves" are converted into gold. This reversed time sequence: credit expansion preceding gold import, was clearly noticeable in Viner's Canadian material.<sup>4</sup> Both he and others have attempted to explain it merely as an adaptation of the classical mechanism to the conditions of modern deposit banking,<sup>5</sup> apparently without fully perceiving that it involves a decided shift of emphasis from gold to credit as the principal medium of international payment.

<sup>1</sup> *Supra*, p. 219.

<sup>2</sup> The new gold will flow to the creditor countries, and it is here that the adjustment of the price level to changes in the volume of gold primarily takes place, but obviously, the demand for gold from the debtor countries is also a factor in the determination of the international value of gold.

<sup>3</sup> *Supra*, p. 241.

<sup>4</sup> *Supra*, pp. 388 et seq.

<sup>5</sup> *Supra*, pp. 229, 235—36 and 390—91.

## 2. SHORT-TERM CREDITS.

The alternative to gold movements by which the classical economists attempted to connect the monetary and the real transfer in the case of paper-standard countries was changes in the rates of exchange.<sup>1</sup> Not only was the exchange rate regarded as the multiplier which will just maintain equilibrium in the balance of payments, but it was also assumed that this equilibrium would always result from an impact of two given quantities. This obviously meant that the possibility of equalising short-term capital movements was completely ruled out.<sup>2</sup>

In fact, however, it is such short-term credits in various forms which constitute the predominant media of transfer under modern conditions, both between paper- and between gold-standard countries. Between the latter the existence of equalising capital movements was admitted by the later classical economists,<sup>3</sup> and several of them explicitly pointed out how they served to render gold flows superfluous and make the transfer mechanism work more smoothly and quickly than would otherwise have been possible. This modified classical position is very clearly brought out, e.g., in Walter Eucken's schedule reproduced in an earlier chapter.<sup>4</sup>

The more sudden and violent the shift occurring in the balance of payments, the more necessary becomes the "Streckungsfunktion" which the equalising capital movements serve to perform. This may explain that they often play a particularly large rôle in the case of reparation payments; it must be admitted, however, that if confidence in the reparation-

<sup>1</sup> *Supra*, p. 304.

<sup>2</sup> *Supra*, p. 314.

<sup>3</sup> J. S. Mill seems to be the first to make this admission. Cf. *supra*, p. 199, note 2. In another connection Mili writes; "Suppose that England possessed a currency wholly metallic, of twenty millions sterling, and that suddenly twenty millions of bank notes were sent into circulation. If these were issued by bankers, they would be employed in loans or in the purchase of securities and would therefore create a sudden fall in the rate of interest which would probably send a great part of the twenty millions of gold out of the country as capital to seek a higher rate of interest elsewhere, *before there had been time for any action on prices.*" (Ashley ed., p. 631). Directly, this statement refers only to an artificial creation of purchasing power. But a similar reasoning would suggest the conclusion that a large capital import is likely to be temporarily offset by equalising credit movements in the opposite direction.

<sup>4</sup> *Supra*, p. 269.

paying country is not shaken, the reparation payments may be postponed or offset, not only by short-term equalising capital movements, but also by an inflow capital lent for terms of considerable duration. Most obvious is the connection when it is the reparation-paying government itself which borrows abroad in order to meet its obligations. But there may also be an indirect connection through the influence of a restrictive credit policy on interest rates and capital inflow.<sup>1</sup>

How the transfer of monetary buying power from one region to another within the same country may be effected through the banking system has been explained in the preceding chapter. It was also briefly mentioned that in the case of international capital movements the monetary transfer will take place through the foreign exchange market. This aspect of the problem must now be analysed in greater detail.

Any change in a country's balance of payments must work itself out through the foreign exchange market, giving rise to alterations in the demand for or supply of foreign exchange in one form or another. The essential question is, therefore, what reactions a change in this demand or supply is likely to call forth. It may be well to recall at the outset the fact, particularly stressed by Hawtrey,<sup>2</sup> that the main function of the foreign exchange market is *not* to exchange debts expressed in different *currencies*, but rather to exchange debts due in different *places*. Fundamentally, international payments are of the same nature as payments between different regions within a single country.

In the foreign exchange market we find professional dealers, mostly banks or bankers, who keep balances in different countries and undertake to perform this exchange of debits or credits due in different places. The central banks may also keep demand deposits in the leading financial centres, as a

<sup>1</sup> It should be noted that the credit policy need only be restrictive *relatively to that of other countries* in order to exercise this attractive influence, i.e. the volume of credit may well be increased, provided the expansion is still greater elsewhere. Cf. A. H. Hansen, *Stabilisation in an unbalanced world*, New York 1932, pp. 46 et seq. and Haberler, *Der internationale Handel*, p. 67, and *supra*, p. 41, where it was suggested that only part of the German capital import between 1924 and 1929 may be regarded as being due to the reparation payments. Here as elsewhere the conclusion "post hoc ergo propter hoc" may lead to dangerous errors.

<sup>2</sup> *Currency and credit*, pp. 104 et seq. and 58 et seq.

supplement to their gold reserves, or perhaps completely replacing them (as in the case of gold-exchange-standard countries).

If, then, persons in country X want to remit money to country Y, i.e. to obtain a credit in Y in exchange for a credit in X, they will hand over a cheque to the exchange dealer, i.e. transfer money to his banking account in X, and in return he will pay out the stipulated equivalent in Y from his account there. The amount he agrees to pay out depends upon the *rate of exchange* which is the indicator of the terms on which credits in different countries are traded for one another.

In each country the dealer will find his balance increasing or decreasing according as the remittances *from* the country in question are greater or less than the remittances *to* it. If the dealer is a banker he can *create* credits in favour of those who want to remit money to a particular country. But whether he is a banker or not, he will not and can not let an inequality of remittances continue indefinitely. If he is a banker, a disproportionate growth of his demand liabilities in a particular country will threaten his liquidity at that centre as soon as his customers use their balances. If he is not a banker, he will also be unwilling to deplete or increase his credit balances at any of his places of business beyond a certain limit. If the exchange dealers are receiving greater sums than they pay out at any centre, they offer less in other centres for a credit there; having too much credit in the centre in question they make it cheaper in terms of foreign currency.

Now, this is exactly what happens in the case of an export of capital. The foreign borrowers want to use part of the funds put at their disposal in the creditor country for expenditures at home. Consequently, they want to exchange their credit in the lending country for credits in the borrowing country. If the exchange dealer undertakes this operation, he provides the offsetting or equalising credit movement. But when the exchange dealers find their balances in the creditor country increasing, they may begin to offer less than before of its currency in return for a unit of the borrowing country's currency. Then the rates of foreign exchange tend to become "unfavourable" in the lending country, "favourable" in the borrowing.

However, as soon as the exchange rates begin to move, an *additional speculative demand* for the lending country's currency is likely to appear, which means that further equalising short-term credits are released. Under the gold standard a very slight reduction in the rate will normally be sufficient to tempt bankers or speculators to buy the cheap credits in the lending country in order to profit by a subsequent rise in their price. The greater the probability of this subsequent rise, the smaller will be the fall in the rate which is necessary to call forth this additional speculative demand. This is the reason why the large seasonal fluctuations in international trade normally cause only very slight variations in the rates of exchange. When other more irregular disturbances occur, such as the contraction of a large foreign loan, a further stimulus may be necessary.

This is afforded by the *changes in short-term interest rates* which may be expected to follow a transaction of this kind. The rates quoted in the open market may be affected first; this will cause the exchange dealers to redistribute their balances between the different centres in order to take advantage of the higher interest rates. Besides, the changes in the market rates may release movements of that class of international securities in which regular arbitrage operations take place. If this does not suffice to restore equilibrium in the exchange market, the central bank in the lending country will experience a drain on its foreign holdings, while those of the central bank in the borrowing country are glutted.

When the exchange rates in gold-standard countries approach the gold points, the central banks are forced to resort to changes in their official discount rates, to open market operations, or other measures to make the market in question more or less attractive to foreign short-term capital.<sup>1</sup> Whether similar action may be expected in a paper-standard country will obviously depend on the monetary policy pursued.<sup>2</sup>

<sup>1</sup> If the gold points are reached and specie begins to move this will tend, of course, to widen the difference in discount rates, and besides, the exchange risk is now reduced to a minimum (Cf. *supra*, p. 109). For both reasons short-term capital movements are further stimulated.

<sup>2</sup> *Supra*, p. 320.

As already suggested, most of these short-term credit transactions are undertaken by the professional exchange dealers. But the ordinary merchant has also a certain range of choice both regarding the time for which, and the country in which, he borrows the funds for carrying on his business.

The flows of short-term capital between the leading money markets serve to maintain equilibrium in the pace of credit expansion in the different countries. As demonstrated by Axel Nielsen, the relation between the different money markets is analogous to that existing between the individual banks within a single country. Just as a particular bank attempting to expand its lending more rapidly than the others is checked by the adverse balance which it meets in the clearing house, a particular country which tries to expand its credits more rapidly than its neighbours will be faced with a tendency towards an adverse balance of payments. And just as the individual bank may be relieved by borrowing from other banks, an individual money market may apply to the others for support. What happens in such cases is that the banks in one country get cash from the banks of another.

An essential function of the short-term equalising capital movements is to postpone the real transfer and make it more gradual.<sup>1</sup> In order to understand how this postponement may facilitate the final transfer, we must remember that all these short-term credit operations have a double effect. (1) They exercise a *direct* equalising influence on the supply and demand in the foreign exchange market. (2) *Indirectly*, these transactions and the changes in credit policy which go with them will affect the other items in the balance of payments through their influence on the volume of credit and buying power in circulation. This connection between the demand for and supply of foreign credits and the total volume of purchasing power in circulation, is strongly emphasized by Angell.<sup>2</sup>

The *form* in which the monetary buying power is transferred is likely to affect its influence on the credit policy of

<sup>1</sup> Supra, p. 316.

<sup>2</sup> Supra, pp. 236—37.



the two countries.<sup>1</sup> In order to demonstrate this we may use the familiar illustration of a pyramid standing on its apex to present the credit structure of a gold-standard country (fig. 9)

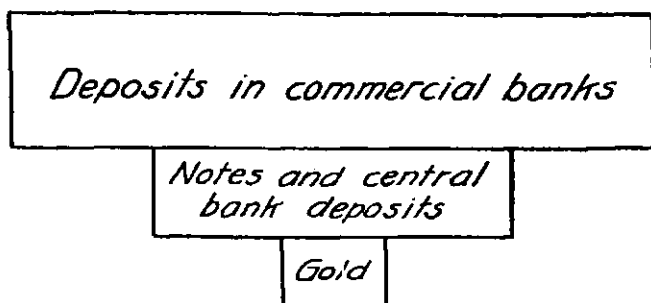


Fig. 9.

Suppose first that the monetary transfer of a loan, granted by residents in country A to residents in country B, is effected in the form of a *transfer of gold* from the central bank in A to the central bank in B. If one could assume that the conditions of liquidity prior to the loan were the same in the two countries, it would seem a natural inference that the transfer of gold would be without influence on the total volume of credit in the two countries taken together; it would merely result in a contraction of credit in A offset by an exactly equivalent credit expansion in B (fig. 10).

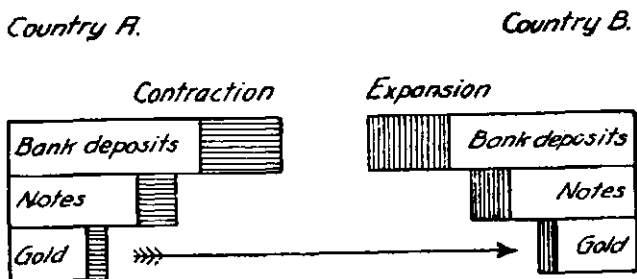


Fig. 10.

<sup>1</sup> Cf. Hans Herbert Hohlfield, *Die Struktur der zwischen-ländischen Kapitalbewegungen*, Weltw. Arch. 1933 I, pp. 473 et seq. The variety of forms which the transfer of buying power may take is also analysed by E. Walb, *Zur Mechanik der internationalen Kapitalwanderungen*, Zeitschr. für handelswissensch. Forschung, Leipzig 1929, pp. 380 et seq.

But as already suggested, the banking situation in the lending country is likely to be highly liquid, while that of the borrowing country is likely to be strained. In that case it would be but natural, if the credit expansion in B were greater than the contraction in A.

Suppose, next, that it is a central bank deposit (or bank notes) in A which is transferred to B. In that case there is a further reason to expect an increase in the total volume of credit in both countries taken together. It is reasonable to assume that the central bank in B will regard the foreign central-bank deposit as equivalent to gold, and that means that it is the very base of B's credit structure which is enlarged while the contraction in A affects only the superstructure of credit (fig. 11).

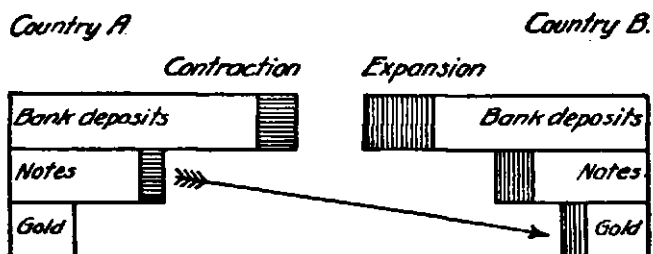


Fig. 11.

It may also be a deposit in one of A's commercial banks which is bought by B's central bank (fig. 12).

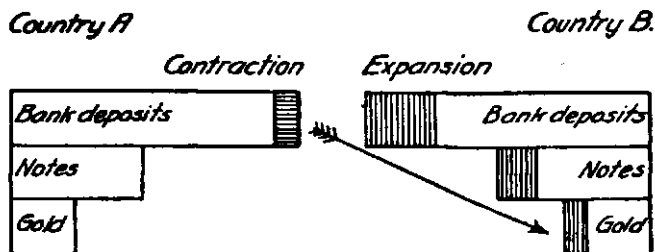


Fig. 12.

Here the total volume of credit is likely to expand still more than in the previous case.

Finally, a commercial bank deposit in A may be put at the disposal of a commercial bank in B. These "foreign holdings" may be sold to the central bank in B or drawn home in the form of gold. Consequently, the banks in B will consider them as part of their cash reserve equal to notes or central bank deposits. The transaction is illustrated in fig. 13. Here again,

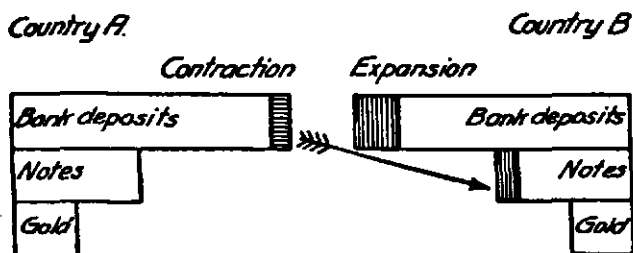


Fig. 13.

the probable result is that the expansion in B will be greater than the contraction in A.

Finally, attention must again be called to the anomaly that, on the one hand, the general adoption of the gold standard has been a necessary prerequisite to the development of short-term movements of capital on a large scale, and that, on the other hand, these short-term capital movements have become a dangerous menace to the maintenance of this standard.

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