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MONEY AND BANKING, 1935/36

PREFACE

This publication, *Money and Banking, 1935/36*, is a continuation of the memoranda on *Commercial Banks*, issued in 1931, 1934 and 1935. The title has been changed in order to provide a more accurate description of the contents, which cover general monetary developments as well as purely commercial banking. The general approach remains, however, along the avenue of commercial banking.

The present edition is issued in two volumes. The first volume, *Monetary Review*, replaces the Introduction contained in earlier editions. It consists of an outline sketch of the main types of monetary policy pursued in various countries in recent years, together with an examination of the relationship between monetary and banking phenomena and the general course of economic developments. The nature of that relationship is, however, often difficult to determine with precision and such conclusions as are suggested must be regarded as tentative and provisional.

The second volume, *Commercial Banks*, gives a detailed analysis of banking developments in forty-eight countries in 1934/35. The Summary Tables, in which the national statistics are adapted to a standard balance-sheet form, are carried in most cases up to the end of 1934. Where monthly statistics are available, the analysis of individual countries covers, in addition, part or the whole of the year 1935. The scope of this part of the work has been somewhat extended in order to relate the changes in commercial banking to a more general monetary background.

Chapters have been added on China, Egypt, Luxemburg and Paraguay.

A. LOVEDAY,

*Director of the Financial Section
and Economic Intelligence Service.*

League of Nations,
Geneva, June 1936.

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A detailed account of recent monetary and banking
developments in forty-eight countries
will be found in the
companion
volume
"COMMERCIAL BANKS".

MONETARY REVIEW.

In this Review, an attempt is made to analyse some of the interrelationships between monetary changes and changes in the general economic situation in a number of countries. A detailed account of the recent monetary and banking developments in forty-eight countries is given in the companion volume *Commercial Banks*. For a fuller exposition of recent monetary history the reader is referred to that volume, and for an analysis of central banking and commercial banking statistics and of certain other related economic series — interest rates, prices, exchange rates — to the introduction to the preceding edition.¹ In the present volume, it is taken for granted that the reader will refer to these publications for details, and attention is concentrated on the economic effects of monetary changes: in this way a preliminary attempt is made to provide some interpretation as well as a description of recent monetary history.

In this attempt, reference is frequently made to the changes in economic factors — such as production, trade, balances of payments, prices, and public finance — which do not form the subject-matter of this volume. On each of these subjects, the Economic Intelligence Service publishes a special volume giving a detailed and complete analysis² and the *World Economic Survey* provides a general description and analysis of the economic situation as a whole. The present volume must therefore in no sense be regarded as a primary source of information on any but purely monetary subjects; for information on other matters reference should be made to the volumes consecrated to them.

In the pages which follow, changes in monetary factors are taken as a starting-point and variations in prices, production, etc., considered in relation to them. The interpretation may, as a result, appear to stress unduly the importance of purely monetary factors in economic change. If this is so, it is not due to theoretical predilections, but to the fact that this volume is primarily concerned with monetary questions which are in consequence given a central position in the analysis.

For reasons of space, it has been necessary to limit the present analysis to relatively few countries. An effort has, however, been made to select countries representative of the principal types of monetary experience. The main distinction is, of course, between the countries where monetary expansion has occurred and those where contraction has continued. Within the first group, a further distinction is drawn between countries such as the United Kingdom, where expansion has resulted mainly from banking policy, and those such as the United States of America, where deficit financing has been the propelling force. The countries of the gold *bloc* are representative of the second main group. On the basis of the analysis of the monetary experience of these countries and of Belgium and Czechoslovakia, where devaluation occurred late and independently of other countries, a few general conclusions are formulated at the end of this Review.

¹ *Commercial Banks, 1929-1934.*

² The most recent editions of these studies are: *World Production and Prices, 1925-1934*; *Review of World Trade, 1934*; *Balances of Payments, 1934*; and *Public Finance, 1928-1935.*

Types of Monetary Expansion : Banking Policy.

United Kingdom.

The analysis may begin with the United Kingdom, where banking policy resulted in a cheap and abundant supply of money in recent years.

The principal factors affecting the supply of money in the United Kingdom are summarised in the following table :

	BANK OF ENGLAND.				LONDON CLEARING BANKS.							Ratio of current accounts to total deposits	Ratio of cash to total deposits, etc.
	Gold coin and bullion ^a	Govt. secur. in both departments	Other secur. in Banking Dept.	Notes in circulation	Cash	Advances	Investments	Discounts	Total	Deposits Current	Time		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
	Annual averages — £(000,000's)				Annual averages — £(000,000's)								
1929	147	302	20	362	194	991	257	229	1,738	940	798	54.1	10.8
1930	155	294	18	359	192	963	258	264	1,741	921	820	52.9	10.7
1931	140	295	28	355	182	919	301	256	1,699	895	804	52.7	10.4
1932	130	312	26	360	187	844	348	308	1,750	867	883	49.5	10.4
1933	177	335	14	371	212	759	537	354	1,908	978	930	51.3	10.8
1934	192	337	11	379	212	753	560	230	1,839	953	886	51.8	11.3
1935	194	345	12	395	215	769	615	266	1,958	1,054	904	53.8	10.8

^a Valued at Mint parity.

The evidence of monetary expansion in the United Kingdom in recent years is to be found in the rise in the London Clearing Banks' cash reserves and in their total deposit liabilities; the latter were, on an average, £259 million higher in 1935 than in 1931 and £220 million higher than in 1929.

Although this study is primarily concerned with the period of expansion, it is worth observing that the total deposit currency did not fall in 1930 in spite of the sharp decline in business activity. The fall in the total deposits in 1931 (2½%) was not nearly proportionate to the central bank's gold loss (nearly 10%). The deflationary effect of this gold loss was offset in part by an expansion of central bank credit and by a drop in the cash reserve ratio of the commercial banks. More important than the decline in the total volume of deposit currency during the depression period was the shift of deposits from current to time account. The changes in this ratio (shown in column (12) above) are generally taken to reflect the variations in the attitude of *entrepreneurs* and private individuals towards investment. When they are pessimistic, they tend to postpone investment and to build up large liquid balances, part of which are held in the form of time deposits. The withdrawal of these funds from active circulation reduces other peoples' incomes. The shift from current to time accounts is therefore as much a deflationary factor as a fall in total deposits. In the same way, the rise in the relative importance of current accounts since 1932 reflects the improvement in business psychology and the increased willingness of *entrepreneurs* to undertake the risk of investment during the recovery period.

Up to September 1931, the freedom of the monetary policy of the Bank of England was limited by the attachment of the pound to the international gold standard. The suspension of gold payments removed this limitation. Early in 1932, the policy of the Bank was directed to preparing the market for the great refunding and conversion operations of that year, and to this end it bought Government securities from the market. At the same time, the Bank rate was reduced by stages from 6 to 2%. The open-market purchases of the Bank raised the cash reserves of the commercial banks. These work to a relatively stable cash ratio (which has, of course, the effect of facilitating central bank control) and they used the increased cash to buy gilt-edged investments and Treasury bills, increasing their deposit liabilities by an amount nine to ten times as large as the original cash expansion. The sale of investments by *entrepreneurs* to the banks

rendered the former liquid ; bank debts could be repaid and increases in production financed without any resort to the banks for additional credits. Money was not only cheap, but plentiful. The capital market, practically closed to foreign issues, was in a position to meet all domestic requirements and flotations grew steadily in volume. The funds thus made available for investment tended, as they were spent, to support the commodity market, but the continued fall in import prices and the existence of important unemployed domestic resources prevented any marked rise in commodity prices.

The purchase of Government securities by the banks had two economic consequences of primary importance. In the first place, as already indicated, these purchases rendered *entrepreneurs* liquid and made it unnecessary for them to go on restricting their investment in business in order to build up large cash balances. In the second place, the purchase by the London Clearing Banks of £344 million of securities between February 1932 and June 1935 (representing an increase of 123 % in their holdings and a rise in the proportion of investments to deposits from 16.9 to 31.2 %) helped raise the price of gilt-edged securities, facilitated conversion, and was an important factor in depressing and keeping low the long-term rate of interest.

Diagram I

LONDON CLEARING BANKS' INVESTMENT HOLDINGS AND THE PRICE OF GILT-EDGED SECURITIES.

- A Investment holdings.
- B Price of gilt-edged securities (1929=100).

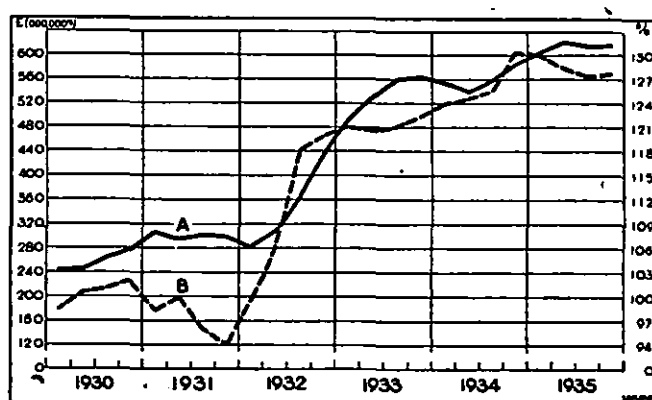


Diagram I shows a close relationship between changes in the London Clearing Banks' investment holdings and changes in the price of gilt-edged securities. The diagram cannot, however, be taken as proof that the London Clearing Banks control the price of Government securities. It might, in the absence of further evidence, equally be interpreted as showing merely that the banks bought Government securities as their prices rose. The total funded internal national debt rose from £1,467 million on March 31st, 1932, to £3,368 million on March 31st, 1935, the funding operations of 1932 accounting for the whole of this increase. The unfunded debt, excluding Treasury bills, fell from £4,252 million to £2,551 million, and the total funded and unfunded debt, excluding Treasury bills, rose from £5,719 million to £5,919 million. In view of the magnitude of these figures, it would be gratuitous to assume that the addition of some £330 million to the holdings of the joint-stock banks was the principal factor in driving up the price of 2½% Consols from 60½ at the end of March 1932 to 86 at the end of March 1935. The revival of confidence in the state of the public finances was no doubt of basic importance. The direct influence of bank purchases of gilt-edged securities was most marked in the first part of 1932 and went a long way towards preparing the market for the enormous and successful conversion operations of that year, which consolidated interest rates at much lower levels. In assessing the importance of these bank purchases, it is necessary to bear in mind that a large part of the national debt is inert ; that is, it is held quasi-permanently by philanthropic institutions, endowments, etc., and very seldom brought on the market. Of the variable supply, the joint-stock banks control a large proportion, and other important holders, such as insurance companies, would probably tend to buy and sell simultaneously with the banks.

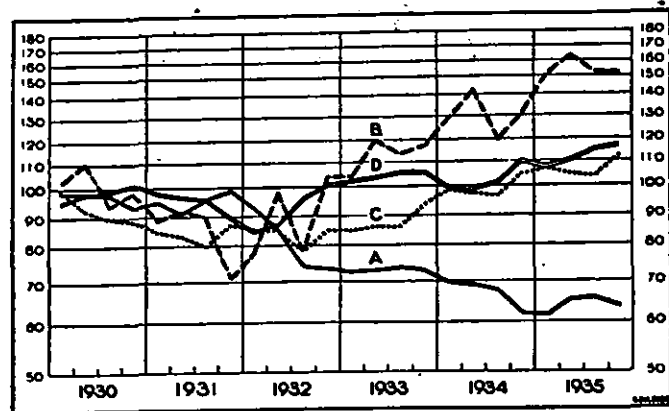
The effect of the fall in the long-term rate of interest on the business situation may be examined on the basis of Diagram II below, which shows, in quarterly averages, the yield of Consols, the general level of industrial production, the volume of building activity and the volume of current

account deposits, — all based on the average of the year, 1929. The diagram is drawn on a logarithmic scale.

Diagram II.
THE YIELD OF CONSOLS
AND VARIOUS ECONOMIC INDICES.

(1929=100.)

A Yield of Consols. C Industrial production.
B Building activity. D Current accounts.



The sharp rise of industrial production which followed the abandonment of the gold standard was not sustained in 1932 and the general index reached a new low level in the third quarter of that year. The expectation of higher prices after sterling depreciated led to a short period of speculative buying and increased production. As, however, a large part of the world — and in particular that part from which the United Kingdom draws her supplies of raw materials and foodstuffs — also left the gold standard at about the same time, the rise in prices was moderate and short-lived and production relapsed. The recovery in industrial production definitely set in only in the latter part of 1932, when the long-term rate of interest had already been falling for three-quarters of a year. During this period commodity prices were still falling. The speculative flurry mentioned raised the Board of Trade index of wholesale prices from 99.2% of its 1913 level in September 1931 to 106.5% in November. Thereafter, the index fell month by month to 97.7 in July 1932. This continued fall in commodity prices meant, in effect, that, in addition to the market rate of interest, business-men had to pay a “price-premium”: the true rate of interest in terms of commodities was considerably higher than the market rate of interest. But gradually, as *entrepreneurs* made themselves liquid by selling securities (which the banks in turn bought from the market) and used these liquid funds to replace capital equipment, replenish stocks, etc., support was given to the commodity markets, the fall in prices came to an end, and the production curve turned up.

It must be pointed out that this interpretation throws little light on *why* the production curve turned up. It is, indeed, doubtful whether any single cause, monetary or other, can be assigned. In spite of the relapse of prices which followed the initial spurt after the depreciation of sterling, the conviction became general among business-men that sterling prices would not, at any rate, fall below the levels prevailing before September 1931, while they might rise higher, and this conviction acted as a stimulus to investment. Moreover, the fall of the pound acted as a tariff against foreign imports, and its effect in this respect was reinforced by the imposition of directly protective measures. The quantum of imports of manufactured goods was 45% lower in the third quarter of 1932 than in the corresponding quarter of 1931. There seems little reason to doubt that, in the peculiar circumstances of 1931/32 — namely, a greatly restricted volume of international trade and the existence of important unemployed domestic resources — these factors gave a fillip to industrial production in the United Kingdom.

The drop in the long-term rate of interest had a particularly stimulating influence on the volume of building activity; as the use of buildings is spread over a long period of time, the rate of interest plays a very important part in determining building costs and in fixing the level of rents. A high (and probably, in the United Kingdom, an increasing) proportion of building activity is financed with borrowed money and, as the rate at which building societies, insurance companies, etc., were willing to lend fell and as their willingness to lend on building mortgages increased with the growing abundance of funds, the building activity increased very sharply. The total volume of residential building was more than twice as high in 1935 as in 1931.

The building boom, fundamentally based on cheap money, was a very important element in the British recovery. A private estimate¹ recently made suggests that, in 1930, new house-building accounted for 20% of total investment (excluding maintenance and repairs) in the United Kingdom. The indirect repercussions of the building boom on other industries are difficult to trace in detail, but there can be no doubt that the rise in the monetary demand for goods all along the line represented in large measure the spending of funds which had been originally put into circulation through the building industry.

The quantum of exports of British produce was 19% higher in 1935 than in 1931, compared with a rise of 25% in the general index of industrial production. These figures show that, while the recovery was primarily one of the home market, it was not entirely so. The restriction of imports of manufactured goods which followed the depreciation of sterling and the imposition of tariffs directly stimulated certain domestic industries. The adverse balance of trade fell from £407 million in 1931 to £276 million in 1935, and this was an important cause contributing to the monetary abundance in the United Kingdom.

The abundance and cheapness of money explains how so considerable an expansion of business activity took place after 1931 without any expansion of bank advances. The high prices of fixed interest-bearing securities induced many bank borrowers to realise their investments and repay bank loans. Moreover, with the fall in interest rates, it was possible to raise new long-term resources on relatively advantageous terms in the market for new capital issues and repay bank indebtedness. Up to 1935, such repayments exceeded new loans granted by banks; in the course of that year, however, bank advances rose from £753 million (January 1935) to £788 million (January 1936).

The estimates of security flotations published by the Bank of England are shown below :

	NEW ISSUES.			REFUNDING AND CONVERSION ISSUES.				
	For U. K.		For Abroad	For United Kingdom				For Abroad
	Total	Industrial £ (000,000's)		Total	Industrial	Average yield of industrial issues		
			£ (000,000's)		Old %	New %	£ (000,000's)	
1929	136.3	134.7	107.3	17.4	14.7	5.7	4.5	24.5
1930	122.0	92.9	112.8	64.8	64.3	5.6	4.5	129.7
1931	40.0	32.9	49.6	49.4	44.3	5.0	4.0	97.3
1932	87.7	77.5	29.4	58.5	43.6	4.6	3.8	71.7
1933	95.2	70.2	40.6					
1934	119.2	91.0	42.0					
1935	160.5	139.4	21.3					

The total figures of domestic issues do not include Government issues, but do include issues on behalf of local authorities. The receptiveness of the capital market is illustrated in the steady rise in the volume of flotations and in the large savings which British industrialists were able to effect in their interest requirements through conversion operations. The partial embargo on new foreign issues instituted in 1931 should be mentioned as one of the factors tending to reduce interest rates at home. Conversion operations were not subject to these restrictions and the volume of overseas conversion issues was quite considerable in the years 1933-1935; but outside the British Empire, only a few debtor countries (for example, the Argentine, Austria and Norway) gained relief in this way.

The supply of funds available on the London market was, over the period 1932-1935 as a whole, probably increased by the inflow of short-term capital from abroad. The bulk of foreign short-term lending to London was due to two causes: the countries which based their currency on sterling after the depreciation of the pound — in particular, most British Dominions and the Scandinavian countries — built up important sterling balances in the form of bank deposits, Treasury bills, etc.; and capital also came to London from countries where currency depreciation

¹ COLIN CLARK: "Investment in Fixed Capital in Great Britain." Memorandum No. 49, Royal Economic Society, 1934.

was feared. It is impossible to say to what extent the fluctuations of sterling were influenced by the movement of short-term funds, as the Exchange Equalisation Account publishes no accounts. It seems clear, however, that the accumulation of foreign balances in London contributed to the very low level of money rates prevailing in 1935. The plethora of funds in London was so marked that agreement among the banks was necessary to keep the average tender rate on Treasury bills from falling below $\frac{1}{2}$ %.

The importance of the inflow of foreign funds in 1935 is unknown ; its effect on the sterling exchange rate was evidently offset by operations of the Exchange Equalisation Account, as sterling remained remarkably stable after April 1935. Certain broad inferences concerning the operations of the Account may be drawn from the statistics of Treasury bill issues. The following statement is taken from the London *Economist*:

	End of: 1934	1935
	£ (000,000's)	
Tender bills	450	565
Tap bills	450	301
Total issue	900	866

The capital of the fund was originally in the form of Treasury bills issued directly to it by the Treasury. When the Account wishes to put itself in sterling to sell, it issues these bills through the tender in the ordinary way. So long as they are held by the Account they are "tap" bills, having been issued directly by the Treasury "through the tap". The *Economist* suggests that the rise in tender issues and fall in tap bills in 1935 was principally due to the Account, which put itself in sterling to sell by issuing bills through the tender. The purchase of Treasury bills by the banks (whose bill portfolio rose from £255 million to £322 million between December 1934 and December 1935) had the effect of increasing bank deposits.

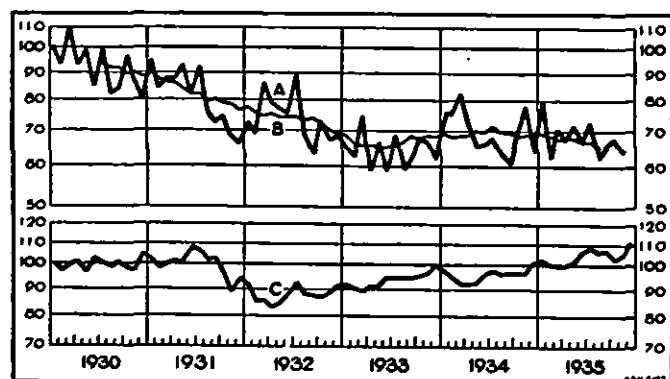
Up to this point, attention has been concentrated chiefly on the changes in the volume of bank deposits and the price of money-capital. The volume of monetary demand is, however, affected, not only by the quantity of means of payment available, but also by the efficiency with which the money supply is used. No single accurate measure of the changes in this latter factor exists, but monthly figures are available for the total turnover of current accounts at the London Clearing Banks since 1930 ; and by comparing these figures with the volume of current accounts with these banks in the corresponding months, it is possible to measure the changes in the rate of turnover of current accounts. The turnover of current accounts represents the total volume of debit entries to current-account deposits arising through cash withdrawals, cheque payments or direct transfers to other accounts. If this figure for turnover in any month be divided by the total volume of current accounts outstanding during the same month, the result can be taken as a measure of the frequency with which the average unit of current accounts was used to make payments during that month. A comparison of these figures, month after month, shows the monthly changes in this frequency — *i.e.*, changes in the rate of turnover of current accounts. The series attained in this way is shown as curves A and B of Diagram III below. Curve C shows the changes in the ratio of current accounts to deposit accounts.

Diagram III.

RATE OF TURNOVER OF CURRENT ACCOUNTS AND
RATIO OF CURRENT TO DEPOSIT ACCOUNTS.

(January 1930=100.)

- A Monthly rate of turnover.
- B Thirteen-month moving average of A.
- C Percentage ratio of current to deposit accounts.



The rate of turnover of current accounts fell very sharply in 1930 and 1931 and, at the beginning of 1932, was about 30% lower than at the beginning of 1930. During the same period, current accounts themselves fell by only 12%. These figures show that, during the depression, the unwillingness of *entrepreneurs* to invest and the propensity to hoard were much more important deflationary elements than the contraction of the monetary supply. The ratio of current to deposit accounts did not fall until the second half of 1931. This is somewhat curious, as it might be expected that the decline in investment activity would result in a marked shift to deposit accounts. The annual figures confirm this expectation: the monthly average of current accounts with the London Clearing Banks fell from £940 million to £921 million between 1929 and 1930, while deposit accounts increased from £798 million to £820 million.¹

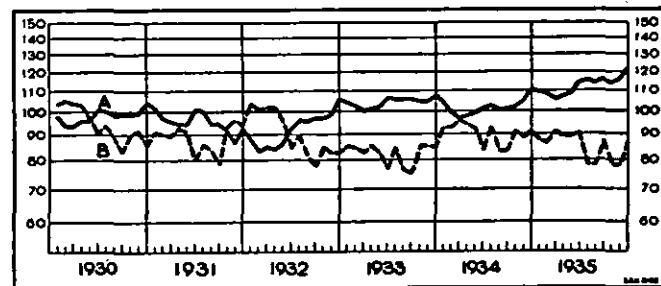
In the first months of 1932, the frequency with which the average unit of current accounts was used in making payments rose rapidly, while the relative importance of current accounts in the total deposit currency, which had fallen very sharply in the second half of 1931, continued to decline. This latter curve turned up in the second quarter of 1932 and continued to rise steadily with the progressive improvement in the business situation in 1933 and subsequent years.

Though the increasing importance of current accounts in total deposits thus reflects the improvement in business conditions after 1932, the same is not true of the rate of turnover of current accounts. After a considerable recovery during the first half of 1932, this curve fell sharply in the second half of the year and remained at a very low level (between 60 and 70% of the January 1930 figure) in 1933. The volume of current accounts was, however, increasing rapidly during this period. As *entrepreneurs* sold securities to the banks, they tended in the first instant to regard the resulting deposit as an investment, even when the deposit was held on current account. As economic recovery became general in the latter part of 1933 and beginning of 1934, the rate of turnover of current accounts shows a distinct tendency to rise. The movements of curve A since that date are rather difficult to interpret. There was a recovery from the sharp decline in the rate of turnover which occurred between March and July 1934, but no distinct upward trend can be discerned. This is somewhat surprising in view of the large investment activity in 1934 and 1935. It must be borne in mind that the relative importance of foreign-owned deposits, which are likely to be relatively inactive, varied from year to year, and these variations affect the computed rate of turnover of current accounts, though it is impossible to say to what extent. In view of the figures quoted above in connection with the operations of the Exchange Equalisation Account in 1935, it seems likely that foreign-owned deposits were of greater importance than in previous years, so that a curve showing the rate of turnover of domestic deposits would be higher on the diagram. In considering the failure of the rate of turnover of current accounts to rise more sharply and consistently with the economic recovery in recent years, it should be remembered that, during this period, bank deposits were high and rising, the whole economic system was very liquid and the price of liquidity — in terms of the loss of interest on funds held idle — was low. Diagram IV below shows, for the period 1930-1935, a rather striking inverse correlation between the monthly changes in the current accounts of the

Diagram IV.

CURRENT ACCOUNTS AND THEIR VELOCITY OF CIRCULATION.

- A Current accounts.
- B Velocity of circulation.



¹ See also footnote 1, page 16.

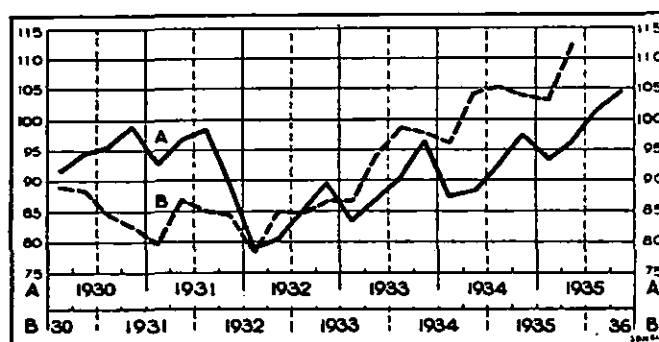
London Clearing Banks and the monthly changes in their velocity of circulation, as measured with the use of country and provincial clearings statistics. The use of these clearings figures instead of the more complete turnover statistics minimises the influence of purely financial transactions. The diagram is drawn on a logarithmic scale.

The velocity figures reflect clearly the downward trend until the abandonment of the gold standard, the short-lived but intense speculative activity that followed it, and the fresh contraction of investment up to 1933. The inverse correlation is no doubt partly due to the ebb and flow of foreign funds. If it were interpreted as indicating that *entrepreneurs* tend to offset increases in the quantity of money by reducing the efficiency with which they use it, and *vice versa*, the diagram would suggest that there are severe limitations of the effectiveness of monetary policy.

Diagrams III and IV and the discussion thereon suggest that the ratio of current accounts to time deposits is a better index of the trend of business activity than the rate of turnover of current accounts. Diagram V below compares the quarterly movements of the ratio of current to deposit accounts with the quarterly movements of industrial production.

Diagram V.
RATIO OF CURRENT TO DEPOSIT ACCOUNTS
AND INDUSTRIAL PRODUCTION.
(1929=100.)

A Ratio of current to deposit accounts.
B Industrial production.



The diagram shows the quarterly movements of the ratio of current accounts to time deposits from 1930 to 1935 (taking the ratio during the corresponding quarter of 1929 as 100) and, with a lag of six months, the quarterly movements of the general index of industrial production (1929 = 100). Since 1931, the major turning-points of production seem to be preceded by corresponding changes in the relative importance of current accounts,¹ suggesting that a shift from current to deposit accounts exercises a deflationary, and a shift from deposit to current accounts an inflationary, influence which makes itself felt on the level of output some six to nine months later. As a shift from current accounts entails a corresponding contraction of the means of payment in a system, such as the British, where the banks work to a stable cash ratio against *total* deposits, the correspondence of the two curves is not surprising. Even if the relative importance of time deposits increases without any contraction in the absolute volume of current accounts — *i.e.*, if total deposits are rising, but less rapidly than time accounts — the increase in the *relative* importance of time deposits suggests that *entrepreneurs* are, on the whole, “bearish” in their

¹ The fit of the two curves is bad at the very beginning of the period (*i.e.*, the last three quarters of 1930 for the ratio of current to time accounts and the third quarter of 1930 to the second quarter of 1931 for production). The ratio of current accounts to time deposits rose, while production fell. Diagram III shows a drop of 12 to 14% in the average velocity of circulation of current accounts in the course of 1930. Moreover, it should be noted that the relative importance of current accounts was lower in each quarter of 1930 than in the corresponding quarter of 1929. The monthly average of current accounts fell from £940 million to £921 million between 1929 and 1930, while the monthly average of deposit accounts rose from £798 million to £820 million. The quarterly averages for these two years are shown below in millions of pounds:

		Current accounts	Deposit accounts			Current accounts	Deposit accounts
1929	I	956	788	1930	I	890	799
	II	940	790		II	918	814
	III	938	797		III	927	824
	IV	927	816		IV	949	843

The increase in the relative importance of time deposits was already under way in 1929 (indeed, for several years before that) and it was the particularly sharp fall in current accounts in the first quarter of 1930 that accounts for the rise in the relevant curve during the remainder of the year.

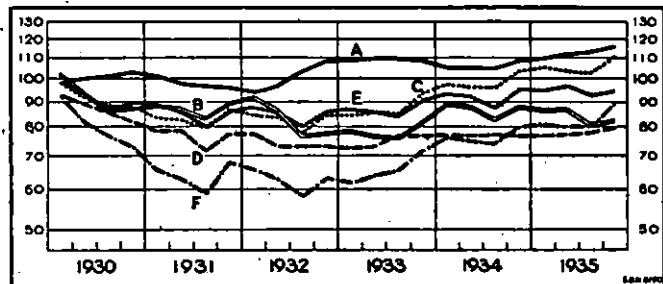
attitude towards investment, and prefer holding cash balances to spending them. The deflationary effect of this shift clearly requires time to make itself felt on production, but to attempt to explain the length of the lag would be to attribute a degree of importance to this correlation which it probably does not deserve.

It is now possible to synthesise the evidence regarding the relationship between money and economic activity in the United Kingdom during the period considered. Diagram VI below shows the quarterly changes in the general level of wholesale prices, the level of industrial production, the total volume of commercial bank deposits and the velocity of circulation of total deposits. The velocity of circulation of total deposits is computed by comparing the changes in country and provincial clearings with the corresponding changes in total deposits. Total deposits are taken in preference to current accounts because it has been shown that the relative importance of the latter varies widely and that these variations are themselves an important factor affecting the velocity of circulation of the whole deposit currency. Country and provincial clearings are taken in preference to the more complete figures for turnover for two reasons: first, because it is desired to eliminate purely financial transactions so far as possible and, secondly, because it is desired to base the diagram on 1929 and the turnover figures are available only since 1930. In the diagram, a fifth curve shows the quarterly movements in country and provincial clearings, and a sixth curve has been added showing the combination of the curves of industrial production and wholesale prices. The diagram is drawn on a logarithmic scale.

Diagram VI.

**MONEY, PRICES AND PRODUCTION
IN THE UNITED KINGDOM.**

- | | |
|--|--------------------------|
| A Deposits. | C Industrial production. |
| B Velocity. | D Wholesale prices. |
| E Country and provincial clearings. | |
| F Industrial production \times Wholesale prices. | |



Two preliminary observations of a general nature may be made. The first is to draw attention to the very striking similarity between the movements of curves C and E — industrial production and country and provincial clearings. This similarity offers confirmation of the view that the latter figures provide a fairly reliable reflection of general trade conditions. The second general observation is that curve F, showing the product of industrial production and wholesale prices, fell much more during the depression than did the clearings figures. This is not surprising, as the clearings figures are affected by trade in general, and it is well known that retail trade was less restricted than wholesale trade and retail prices fell less than wholesale prices.

During 1930 and the first three quarters of 1931, the principal counterpart of the decline in the demand for money consequent upon the shrinkage of production and the rapid fall in prices was a fall in the velocity of circulation of the deposit currency (which, as shown in Diagram III above, was principally reflected in a reduction in the average activity of the current accounts and only to a slight extent in a shift from current to deposit accounts). The increase in the demand for money resulting from the recovery of production and prices in the final quarter of 1931 was entirely met by an increase in velocity, as the total volume of deposits fell. The renewed decline in prices and production during the second and third quarters of 1932 was reflected on the monetary side exclusively in a fall in velocity as total deposits began to rise sharply in the second quarter of the year. This rise in deposits was followed, two quarters later, by an upward movement in production, while the velocity curve flattened out. Thereafter, the quarterly fluctuations — though not the trend — of the computed velocity index are strikingly similar to the fluctuations in the production curve. Over the whole period 1930-1935, the similarity in the quarter-to-quarter movements of these two curves is, indeed, the outstanding feature of Diagram VI. A comparison of curve F with curves A and B very strongly suggests that the changes in the money

value of industrial production in the United Kingdom from 1930 to 1935 had their counterpart on the monetary side more in changes in the efficiency with which the money supply was used than in changes in the volume of money supply itself.

Sweden, South Africa, Australia and Canada.

In several other countries of the sterling area, the broad lines of monetary development during the past few years were similar to those analysed above for the United Kingdom. It is not possible, for reasons of space, to trace in detail the particular evolution in each of these countries. In the following paragraphs, attention is briefly drawn to certain relationships of particular interest.

The basis of monetary expansion was somewhat different in Sweden from the United Kingdom. As shown above, in the United Kingdom, it was due to the rise in the cash basis of commercial bank credit resulting from purchases of Government securities by the Bank of England, particularly in 1932, and from the purchase by the Bank of England of gold acquired by the Exchange Equalisation Account in its efforts to control the movements of the pound or, to a more limited extent, to the purchase of gold directly by the Bank in the open market. In the case of Sweden, central bank as distinct from currency policy appears to have been much less important and the basis of the monetary expansion was chiefly the acquisition by the Riksbank and commercial banks of gold and foreign exchange resulting from an improvement in the balance of international payments.

End of year	RIKSBANK.				RIKSBANK AND COMMERCIAL BANKS.		COMMERCIAL BANKS.			
	Gold ^a	Govt. securities	Dis-counts, etc.	Note circulation	Net foreign assets	Deposits		Cash, etc.	Loans and dis-counts	
						Total	Cheque accounts			
	Kronor (000,000's)									
1929 . . .	245	23	379	569	583	3,481	409	128	4,169	
1930 . . .	241	4	321	594	554	3,631	436	135	4,437	
1931 . . .	206	4	558	583	290	3,554	438	135	4,368	
1932 . . .	206	238	205	598	428	3,556	406	180	4,200	
1933 . . .	370	227	56	648	553	3,629	437	391	3,905	
1934 . . .	351	149	44	708	778	3,553	497	349	3,795	
1935 . . .	408	29	42	786	859	3,632	567	351	3,828	

^a Valued at Mint parity.

The increase in the Riksbank's holdings of Government securities in 1932 was connected with the substitution of a Government guarantee for bills rediscounted for one of the large commercial banks and does not reflect open-market operations.¹ The rise in the note circulation and in the cheque accounts with commercial banks after that year can be entirely accounted for by the inflow of gold and foreign *devisen* consequent upon the undervaluation of the krona. Unlike the British commercial banks, those of Sweden did not use the whole of the increase in their cash reserves to buy Government securities and thus produce a multiple expansion in their deposit liabilities. They did, indeed, buy some Government securities, but just enough — considering the period 1931-1934 as a whole — to compensate for the repayment of loans and discounts, with the result that their aggregate deposit liabilities remained substantially unchanged. The extreme liquidity of the commercial banks is reflected, not only in the rise in their cash holdings, but also in the virtual elimination of indebtedness at the Riksbank. In 1935 there was some resumption of commercial lending and at the same time the banks bought Government securities. Their total deposit liabilities rose while their cash reserves fell slightly, but they were still, at the end of 1935, in an extraordinary liquid position. The monetary abundance which characterised the Swedish situation after 1932 was thus chiefly due to a favourable development in the country's

¹ See *Commercial Banks, 1929-1934*, page xxviii.

international balance of payments, which is reflected in the additions to its reserves of gold and foreign currency. The annual balances are summarised below ; a plus sign indicates a balance of inward payments and a minus sign a balance of outward payments :

	GOODS AND SERVICES.			Total	GOLD.	CAPITAL ITEMS.		
	Merchandise	Interest and dividends	Other services			Long term	Short term	Total*
1931 . . .	-304	- 6	+183	-127	+38	-138	+190	+ 52
1932 . . .	-205	+128	+166	+ 89	+ 7	+124	-227	-103
1933 . . .	- 15	+ 78	+149	+212	-43	+ 55	-249	-194
1934 . . .	0	+ 67	+139	+206	+78	- 48	-246	-294

* The discrepancies between these figures and the total of goods, services and gold are due to errors or omissions in the basic statistics.

It is obvious that the change from an unfavourable balance of 127 million kronor on account of goods and services in 1931 to a favourable balance which rose to the high figure of 206 million kronor in 1934 was principally due to the elimination of the merchandise import surplus, which exceeded 300 million kronor in 1931. The cessation of long-term lending abroad (which amounted to nearly 400 million kronor in 1930) also helped to make money abundant at home. After the depreciation of the krona, there was a well-marked tendency for the Swedish holders of foreign securities to sell these securities in order to realise an exchange profit. These sales were largely responsible for the increase in the Riksbank's gold and foreign currency reserves ; the foreign currency acquired in this way was either sold to the Riksbank and so gave rise to an expansion in its cash outstanding, or went into portfolio of the commercial banks, where it was regarded as a sort of secondary cash reserve.

The reduction in the Swedish import surplus was largely due to currency depreciation, which, while favouring exports, afforded increased protection to the home market.

The movements of price and production indices are shown below :

	PRICE INDICES.			PRODUCTION INDICES.	
	Domestic goods	Imported goods (September 1931 = 100.)	Exported goods	Home-market goods (1931 = 100.)	Export goods
1932	97.3	117.5	98.2	97.9	84.6
1933	95.6	117.5	100.0	98.9	92.3
1934	103.5	120.0	107.2	122.1	107.7
1935	108.0	122.5	103.6	132.0 ^a	114.7 ^a

* Five months.

The stimulation of domestic industries through the differential price movements which followed the abandonment of the gold standard is brought out clearly in these figures. In interpreting the deterioration in the terms of trade involved in the greater rise in the price of imported than of exported goods, it must be borne in mind that the prices of imported goods had by September 1931 fallen very much more than those of domestic and exported goods. In 1935, prices of imported goods remained lower, compared with the average for 1923-1925, than those of both domestic and exported goods.

After the abandonment of the gold standard in September 1931, the official aim of Swedish monetary policy was to stabilise the purchasing power of the krona in the hands of the consumer, and the success which attended this policy is indicated in the fact that the Riksbank index of the retail prices of consumption goods fluctuated only fractionally thereafter and was only 1% above the September 1931 level in January 1936. The general index of wholesale prices which, when based on 1929 = 100, stood at 79.3 in 1931, fell to 77.9 and 76.4 during the next two years and rose only to 81.4 and 82.9 in 1934 and 1935 respectively. The gold value of the krona was as much as 45% below parity in 1935. It must, of course, be borne in mind that the great bulk of Swedish trade is carried on with countries which also depreciated their currencies and that her principal

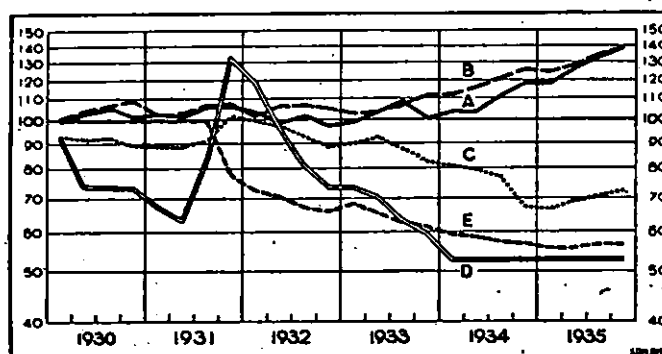
competitors did likewise, so that the competitive advantage which the above figures suggest was gained by depreciation is exaggerated. It is likely that the recovery in business conditions abroad and particularly the building boom in the United Kingdom were chiefly responsible for the increase in exports.

The abundance of money naturally resulted in a decline in interest rates, long as well as short term. This is shown in Diagram VII below, where the quarterly changes in cheque accounts at commercial banks and notes in circulation are compared with those in the yield on Government bonds, the discount rate on commercial paper and in the gold value of the krona. The diagram is drawn on a logarithmic scale.

Diagram VII.

MONEY AND INTEREST RATES IN SWEDEN.
(1929=100.)

- A Cheque accounts. C Yield on eight Government bonds.
B Notes in circulation. D Rate on three-month commercial paper.
E Gold value of krona.



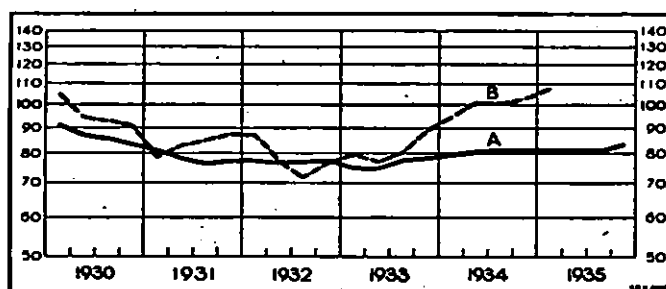
By the end of 1932, interest and money rates had recovered to the levels at which they had stood before the financial disturbances of 1931/32. The note circulation and volume of cheque accounts began to rise rapidly early in 1933 and, after some hesitation, the long-term rate again began to fall. Its decline was particularly marked in 1934, which is rather remarkable when account is taken of the large public works expenditures financed through borrowing during that year.

Diagram VIII below shows the quarterly movements in the level of industrial production and wholesale prices in Sweden. It is drawn on a logarithmic scale.

Diagram VIII.

WHOLESALE PRICES AND INDUSTRIAL PRODUCTION IN SWEDEN.
(1929=100.)

- A Prices. B Production.



The policy of borrowing for public works with a view to relieving unemployment was adopted early in 1933. In accordance with a long-established rule of Swedish budgetary policy, recourse to loans is permissible only for the purpose of financing credits voted for remunerative objects. In the 1933/34 budget, the application of this rule was extended to cover the raising of loans for works on which no immediate return could be expected. There was some delay in getting the public works started and the actual expenditures in 1933 were no greater than in 1932. The volume of industrial production, which had been very unfavourably affected by a labour dispute lasting from April to August 1932 recovered during the rest of that year, but did not definitely turn upwards until the spring of 1933. During the rest of 1933, the volume of industrial production increased rapidly and, as this increase took place before the extraordinary loan expenditures by the Government, it is clear that public works were not the initiating factor in the business recovery in Sweden. In 1934 there was a great increase in public works expenditure, particularly after the labour dispute in the building industry was settled in February, and there seems no reason to doubt that these expenditures exercised a favourable influence on the business situation in that year. Extraordinary expenditures were continued during 1935 and, in spite of a slight rising tendency of the long-term interest rates, the volume of industrial production continued to rise

sharply and probably exceeded that of 1929 by more than 25%.¹ In January 1936, it was decided, in view of the high level of economic activity and the large budget surplus, to put an end to these extraordinary loan expenditures and to repay the outstanding debt incurred on their account out of the yield of taxation.

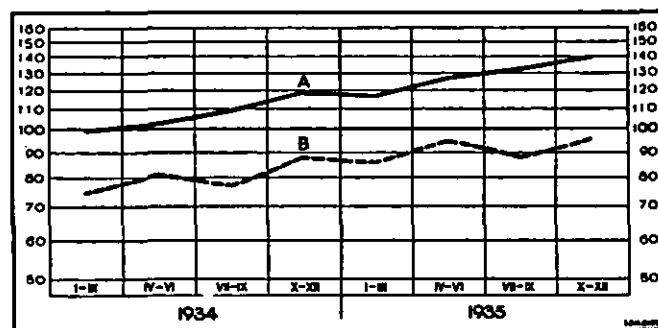
In attempting to evaluate the relative importance of the revival of the export trade and the public works expenditures in the economic recovery of Sweden, account must be taken of two facts. The first is that the public works expenditures were later in time and smaller in amount than the inflow of funds from abroad resulting from the improvement in the balance of payments. The timing of the public works has been referred to in the previous paragraph: the recovery was already well under way before the extraordinary expenditures under this head were begun. The amounts actually spent amounted to 86.1 million kronor in 1933/34 and 98.1 millions in 1934/35. The relative importance of these amounts can best be judged by comparing them with the increase in exports from 947 million kronor in 1932 to 1,291 millions in 1935 and the rise in the country's net holdings of gold and foreign exchange amounting to over 750 millions during this period. The amount of money put into circulation as a result of the favourable development of the Swedish balance of payments since 1932 was thus several times as great as the amount involved in these extraordinary public works expenditures.

The second fact is that the public works expenditures did not involve the creation of any new central bank money, as the increase in the public debt to which they gave rise was taken up by the investing public and the commercial banks and not by the Riksbank. The liquid condition of the money market, resulting (as shown above) from the accumulation of foreign assets, enabled these loans to be absorbed without any rise in rates or any deliberate easing of the market by the Riksbank. The bank deposits which investors gave up in exchange for bonds acquired a higher degree of activity as they passed into general circulation through Government expenditures. This is shown in Diagram IX below, which plots the quarterly movements of the computed velocity of circulation of total deposits and of the ratio of current accounts to time deposits in 1934 and 1935. The diagram is drawn on a logarithmic scale.

Diagram IX.

MEASURES OF VELOCITY IN SWEDEN.
(1929=100.)

- A Ratio of cheque accounts to time deposits.
- B Velocity of circulation of total deposits.



The change in the composition of deposits in favour of current accounts and the rise in the velocity of circulation of total deposits both date from the beginning of 1934. This fact, together with the other evidence, would suggest that an important effect of the public works expenditures in Sweden was to increase the rate of turnover of the money supply — that is, to diminish the propensity to hoard. The importance which hoarding tendencies acquired during the depression phase is obvious from the fact (shown in Diagram VII) that both cheque accounts and note circulation were consistently above their 1929 level in 1930 and 1931, while both industrial production and wholesale prices were 20-30% lower.

Like Sweden and the United Kingdom, the characteristic feature of the monetary situation in South Africa after the abandonment of the gold standard was the abundance and cheapness of money. In the case of South Africa, the stimulating effect of the depreciation of the currency was particularly direct on account of the important part which gold-mining plays in the national

¹ The precise index figure for 1935 is not yet available. Pending a revision of the monthly production index, no monthly figures have been published since May 1935.

economy. The price of gold automatically went up in terms of South-African currency, while costs of production were remarkably stable. The abundance of money after 1934 was partly due to the return flow of capital which had escaped in 1931/32. It is reflected in the rise in demand deposits from £32.8 million at the end of 1932 to £66.1 million at the end of 1935, and in the note circulation from £6.9 million to £12.0 million.

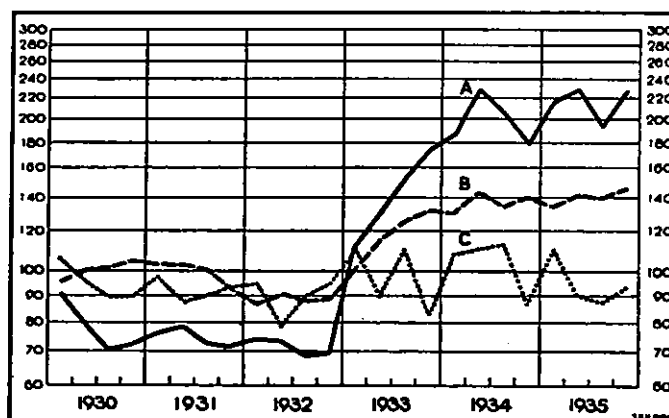
The discount rate of the Reserve Bank fell in the course of 1933 from 5 to 3½% and the rate paid by private banks on time deposits, which stood at 3¼-4¼% at the end of 1932, was steadily reduced until no interest was offered. This no doubt partly explains the very sharp increase in the relative importance of current accounts illustrated in Diagram X below.

Diagram X.

RATIO OF CURRENT ACCOUNTS TO TIME ACCOUNTS, TOTAL DEPOSITS AND VELOCITY OF CIRCULATION OF TOTAL DEPOSITS IN SOUTH AFRICA.

(1929=100.)

- A Ratio of current to time accounts.
- B Total deposits.
- C Velocity of circulation of total deposits.



The velocity of circulation of deposits is measured by comparing the changes in the ratio of bank clearings to total deposits since 1929.

The great expansion in the quantity of money available in South Africa and in the total volume of monetary transactions (bank clearings in seven cities rose from £402 million in 1932 to £696 million in 1935) did not lead to any very remarkable rise in commodity prices, as the following table shows :

	Wholesale prices	Cost of living	South African goods	Imported goods	Export goods ^a
	(1929=100.)				
1932	79.0	89.9	78.0	79.8	37.0
1933	80.2	87.5	79.6	80.0	54.2
1934	87.7	88.6	91.3	81.1	65.9
1935	81.8	88.1	82.2	78.6	...

^a Excluding gold.

The cost of living shows practically no change since the abandonment of the gold standard : the index was, indeed, slightly lower in 1935 than in 1932. The principal effect of the depreciation on the price system was to establish a better equilibrium within the price structure, which is particularly reflected in the rise in the prices of export goods.

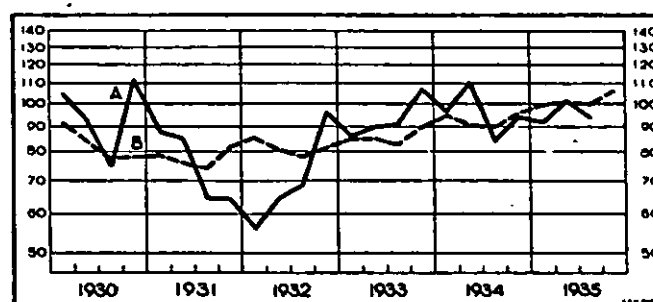
In Australia, the low point of the cycle was reached in 1931/32, when the national wages-bill amounted to £56 million, as compared with £91 million in 1928/29. The value added in production in that year was £111 million, compared with £168 million in the earlier period. The fall in the money supply was not at all proportionate to the contraction of economic activity represented by these figures. Deposits at the nine trading banks operating in the Commonwealth (that is, excluding the Commonwealth Bank) fell from about £275 million at the middle of 1929 to about £255 million at the middle of 1931 and the note circulation even rose from £38 million to £46 million. As in the United Kingdom and Sweden, the contraction of economic activity had its principal monetary counterpart in the holding of funds idle by business-men. This is reflected, in Diagram XI on the opposite page, both in the decline in the relative importance of current accounts and in the decline in the average velocity of circulation of the whole deposit currency, as measured by the changes in the ratio of bank clearings to bank deposits.

Diagram XI.

MEASURES OF VELOCITY OF CIRCULATION OF BANK DEPOSITS IN AUSTRALIA.

(1929=100.)

- A Velocity of circulation of total deposits.
- B Ratio of non-interest-bearing to interest-bearing deposits.



The whole of the decline in deposits which occurred during the business slump (1929-1931) was due to current accounts, which fell from £100 million to less than £80 million between the middle of 1929 and the middle of 1931, while fixed deposits remained stable. During the second half of 1931, current accounts began to rise and increased fairly steadily thereafter. Fixed accounts reached a record level in the second quarter of 1934 and, though they fell after that, the total volume of deposits of the nine trading banks at the end of 1935 was higher than at the end of 1930. The note circulation increased during the same period from £42.3 million to £46.1 million.

The rise in the total monetary circulation was naturally accompanied by a fall in interest rates; the following table summarises the reductions in the rates paid by trading banks on time deposits:

Per cent per annum	Rate on three-month deposits	Rate on two-year deposits	Per cent per annum	Rate on three-month deposits	Rate on two-year deposits
Up to June 25th, 1931	4½	5½	Nov. 1st, 1932—Feb. 6th, 1933 . .	2½	3½
June 26th—November 26th, 1931.	3½	4½	Feb. 7th, 1933—April 11th, 1934	2	3
Nov. 27th, 1931—March 7th, 1932.	3	4	April 12th, 1934—August 5th, 1934	2	2½
March 8th, 1932—May/June 1932.	2½	4	August 6th, 1934—Oct. 10th, 1934	1½	2½
May/June 1932—Oct. 31st, 1932 .	2½	3½	October 11th, 1934—	1½	2½

Reductions were also made in the banks' loan rates, and the total volume of advances to private enterprise increased from £225 million in the first quarter of 1932 to £260 million in the fourth quarter of 1935.

The increase in the supply of money in Australia after 1931 was partly due to an improvement in the balance of international payments, partly to loan expenditures for public works, partly to the issue of Treasury bills, and partly, at a later stage, to a revival of bank lending. The last factor has already been mentioned; it reflects the growing confidence of business-men towards investment (which is also shown in the increase in the relative importance of current accounts in Diagram XI), and also the rise in imports.

The policy of issuing Treasury bills to finance certain public expenditures was the one expansionist element in the Premiers' Plan of 1931. The other parts of this programme — a 20% reduction in variable State expenditures, the conversion of the internal Government debts, the raising of additional taxation, the reduction in interest rates on bank deposits — all tended, in the first instance at any rate, to reduce money incomes. Up to the end of 1935, the total volume of Treasury bills issued by the States under the Premiers' Plan was £45 million. Of this amount, about half was held by the Commonwealth Bank and half by the ordinary trading banks.

The improvement in the Australian balance of payments after 1931 is reflected in the accumulation of foreign assets, which have been privately estimated ¹ as follows:

		Year ending June 30th						
		1928	1929	1930	1931	1932	1933	1934
Reserves	Millions of £ sterling	106.4	92.8	36.5	27.2	39.9	46.4	68.2
	Millions of gold £ . .					29.6	32.0	42.1
Change —	Millions of £ sterling		-13.6	-56.3	-9.3	+12.7	+6.4	+21.9

¹ R. WILSON, in *Economic Record*, No. XI, 1935, page 104.

It may be recalled that the Australian pound was allowed to fall to a discount of nearly 10% on sterling during 1930 and that the rate was raised to 30% in January 1931. In the twelve-month period ending June 1931 there was a substantial reduction in the loss of reserves. The increase in reserves in subsequent years was only partly due to an improvement in the balance of payments on current account. In 1932 there was a visible gold export of £5 million and in 1933/34 there were substantial capital imports. Since the middle of 1934, total reserves have fallen substantially; an estimate of the total is not available, but, between that date and the end of 1935, the Commonwealth Bank's holdings of sterling and money at call in London fell from £A.47.7 million to £A.30.4 million.

The loss in reserves in the year ending June 1935 was due to a fresh deterioration in the merchandise trade position, as the following table suggests :

	1931	1932	Year ending June 30th		1935	1935 (July-Dec.)
			1933	1934		
	£ sterling (000,000's)					
Exports . . .	76.3	75.2	77.8	90.0	81.9	47.6
Imports . . .	60.6	44.0	56.8	59.4	72.4	42.1
Balance . .	+15.7	+31.2	+21.0	+30.6	+9.5	+5.5

The sharp rise in the value of exports in the year ending June 30th, 1934, is largely explained by wool prices, as is the fall in the following year. The sterling price of greasy merino wool, as calculated by the New South Wales Government statistician, rose from an average of 6.8 pence per pound in 1932/33 to 12.6 pence per pound in 1933/34 and fell to 7.8 pence per pound in 1934/35. The rise in imports, which was particularly marked in the year ending June 1935, was no doubt partly due to the reduction in the tariffs, but it would also appear to be not unconnected with the substantial increase in the domestic monetary circulation and turnover (largely resulting from the previous increase in exports) to which reference is made above. The general level of wholesale prices showed no signs of rising during 1932 and 1933, when it was 78.2% of its 1929 average. A slight but fairly persistent increase set in in 1934 and, at the end of 1935, the index was 81% of its 1929 average. From such indications as are available, there seems little doubt that this increase was principally due to a rise in the price of home-market goods. The cost of living in Australia shows a rise of the same order of magnitude as the general index of wholesale prices.

The strain on the Australian balance of payments resulting in part from the policy of monetary expansion and reflected in the loss of sterling reserves also reduced the cash reserves of the trading banks, which are partly held in sterling. The banks, however, continued to increase their advances. In 1935, the trading banks' cash reserves fell by £14 million and, in spite of this loss of cash, their advances rose by about £16 million. The ratio of cash to outside liabilities fell from 15.6% in the fourth quarter of 1934 to 11.7% in the fourth quarter of 1935. At the same time the ratio of advances to deposits, which had fallen below 80% in the second quarter of 1934, rose from 80.2 to 85.7%. Early in 1936, the Commonwealth Bank took a step which might be interpreted as an attempt to reduce the monetary supply and protect the exchange rate by offering for public sale £1 million of its holdings of 1½% Treasury bills. The rate on three-month deposits at the trading banks was 1½% and, in order to protect these deposits, the banks raised the rate to 2% and the Commonwealth Bank followed suit. This is the first reversal of the downward trend of interest rates in Australia since 1931, but it is still too early to say whether it is the precursor of a policy of monetary restriction.

The offer of Treasury bills for sale to the public has also been interpreted as an attempt to establish an open market with a view to enhancing central bank control. In this respect the step was unsuccessful; only £315,000 of the bills offered were taken up.

During the years of depression, the supply of money in Canada fell considerably, as a result principally of a very sharp contraction in the banks' outstanding loans and discounts, which

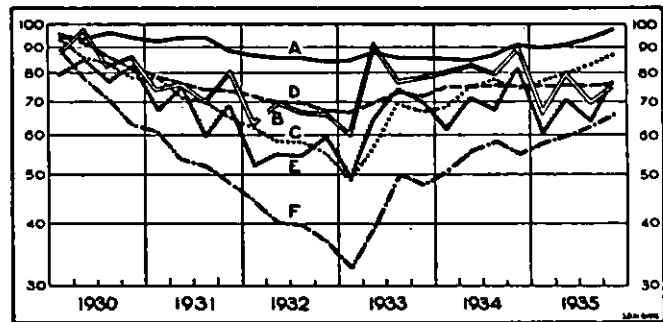
were reduced from \$1,665 to \$1,067 million between the end of 1929 and the end of 1932. Part of the contraction in bank deposits resulting from the repayment of these loans was made good by bank purchases of Government securities, but total deposits in Canada fell from \$2,255 to \$1,916 million. The fall in sight deposits made by the public in Canada was proportionately greater (from \$729 to \$466 million) ; as elsewhere, time or savings accounts increased in relative importance with the deepening of the depression and the uncertainty of the investment outlook.

Great though this contraction was in the monetary supply, the decline in monetary turnover was even greater. Between December 1929 and December 1932, total bank debits to individual accounts fell by 45%, as compared with a fall of 15% in total deposits and nearly 35% in sight deposits in Canada. Diagram XII below shows that the fall in the rate of turnover of total deposits in Canada was more important than the decline in the volume of deposits. The diagram is drawn on a logarithmic scale.

Diagram XII.

MONEY AND ECONOMIC ACTIVITY IN CANADA.

- A Total deposits.
- B Velocity of circulation.
- C Industrial production.
- D Wholesale prices.
- E Bank debits to individual accounts.
- F Industrial production × Wholesale prices.



The velocity of circulation of total deposits is measured by comparing the quarterly changes in bank debits to individual accounts with the quarterly changes in bank deposits since 1929.

Since the beginning of 1933, a very considerable measure of economic recovery has taken place in Canada, illustrated in the steady rise in the production curve in Diagram XII and in the rise in the index of physical volume of business from 68.1% of its 1926 level in January 1933 to 92.4% at the end of 1934 and 106.2% at the end of 1935. This revival took place without any increase in the volume of bank lending: current loans in Canada amounted to \$820 million at the end of 1935, compared with \$964 million at the end of 1932. A detailed classification of bank loans available since October 1934 shows that, from that date to the corresponding month of 1935, loans to manufacturers in Canada fell from \$214 million to \$192 million. During the same period, the output of manufacturers increased by 15% and the average prices of manufactured goods were stable. During the depression, the liquid position of many manufacturers was improved through the building-up of reserves in the form of cash and Government securities, so that they became less directly dependent upon bank credit. Indirectly, however, it would seem that the banks helped to finance this expansion by buying securities which business-men were thus able to sell at relatively high prices. The banks' holdings of Government securities increased from \$562 million to \$781 million between the end of 1932 and the end of 1934 and by a further \$175 million during 1935.

These purchases more than made good the contraction in deposits resulting from the repayment of loans, so that the total volume of bank deposits displays an upward tendency. The rise was most marked in the case of sight deposits, which increased from \$466 million at the end of 1932 to \$641 million at the end of 1935.

End of year	Sight deposits	Time deposits \$ (000,000's)	Total deposits
1932	466	1,378	1,844
1933	502	1,357	1,859
1934	576	1,407	1,983
1935	641	1,486	2,127

The increase in sight deposits was much more rapid (37%) than the rise in time deposits (8%). Further evidence of the growth of business confidence is to be found in the rise in velocity of circulation of total deposits in 1933 and 1934, as shown in Diagram XII. In spite, however,

of the rise in the average rate of turnover of bank deposits in these years, it was still much below its 1929 level at the end of 1935. In 1929, the total volume of bank deposits in Canada was only 3% higher than at the end of 1935. The average rate of turnover of bank deposits, on the other hand, was 40% higher; this factor was thus clearly more important than any scarcity in the monetary supply.

The expansion in the volume of bank deposits which characterised the recovery period in Canada took place without any central bank intervention. The Bank of Canada began to function only in 1935 and the rise in bank deposits was fairly continuous after 1933. The increase in the quantity of money was primarily based on an improvement in the country's trade balance, which is shown in the following figures :

Monthly averages	Exports	Imports \$(000,000's)	Balance
1932	46.69	37.72	+ 8.97
1933	51.31	33.43	+17.88
1934	63.81	42.79	+21.02
1935	69.86	45.86	+24.00

In 1932 and again in 1934 — that is, prior to the establishment of a central bank — the Government took steps to ease monetary conditions by arranging certain advances to the chartered banks under the Finance Act,¹ and in the latter half of 1935 the newly-established central bank took a further step in the same direction by buying certain quantities of Government securities. As already indicated, the principal use made by the chartered banks of the increase in their cash reserves resulting from these different elements was to buy Government securities, though there was a slight but perceptible increase in loans to customers during the latter months of 1935. The cash reserves of the commercial banks at the end of 1935 were, however, still nearly double the legal requirements. The monetary abundance produced a distinct easing of interest rates. The price of Dominion of Canada bonds, which had fallen to a 5% yield basis at the end of 1931, rose steadily from then until the end of 1934, when they were on 3 to 3.5% yield basis, and these prices were maintained in 1935. Internal taxable bonds maturing from six months to two years were sold in 1935 to yield less than 2%. Favoured by the abundant monetary supply, the higher level of industrial operations and the relative stability of commodity prices, the prices of common stocks rose from 51.6% of their 1926 average in January 1933 to 107.4% in December 1935. The revival of speculative activity is also reflected in the figures of the number of shares bought in Montreal, which increased from 2.9 millions in 1932 to 4.4 millions in 1935. Most of these purchases were for cash; the chartered banks' call loans in Canada were considerably lower at the end of 1935 than at the end of 1932, and brokers' loans at the end of 1935 were less than \$20 million.

The recovery reflected in all these figures took place without any remarkable rise in the general level of wholesale prices. In 1933 there was a sharp rebound from the low point reached early that year, but, in 1934 and 1935, when business was increasingly active, the general index showed great stability. This stability conceals, however, a progressive improvement in price relationships, which had undergone a profound distortion during the period of deflation. Some examples of the degree of disequilibrium reached at the end of 1932 and of the approach to a better equilibrium in subsequent years are given below :

December	(1926=100.)							
	Wholesale prices	Cost of living	Raw materials	Manufactured goods	Producers' materials	Producers' equipment	Consumers' goods	Canadian agricultural products
1932 . .	64.0	79.1	51.0	67.8	55.3	87.7	70.0	42.6
1933 . .	69.0	78.0	58.9	72.0	61.8	87.2	73.3	53.6
1934 . .	71.2	78.8	64.3	72.7	61.0	89.6	73.2	61.6
1935 . .	72.6	80.7	67.3	72.9	66.9	90.1	74.3	65.4

¹ See chapters on Canada in the two previous editions of this volume. The principal effect of these operations was to raise the cash reserve ratio of the banks and give them a profit represented by the spread between the interest rate on the bonds and the (lower) rate at which they were rediscounted by the Ministry of Finance.

Types of Monetary Expansion : Deficit Financing.

In the five countries whose experience has been considered above, the abundance and cheapness of money which characterised the revival of business after 1932 was based to only a limited extent, if at all, on the creation of new credit through Government borrowing. The expansion in the means of payment was due principally either to central bank policy (open-market operations, reductions in bank rate) or to an improvement in the balance of international payments or to both. As money became plentiful, interest rates fell. Government finance and policy played an important part in bringing down interest rates. Successful conversion operations were undertaken and banking institutions were encouraged or required to reduce their interest allowances on deposits and so stimulate the movement of funds into the security and commodity markets. The decline in prices stopped, business confidence was restored and *entrepreneurs* again invested their large idle balances, thus initiating the economic recovery. The analysis will now be directed to the experience in another group of countries — Japan, Chile, the United States and Germany — where an expansionist monetary policy has been accompanied by economic revival during the past few years and the expansion in the amount of money available was largely due to the Government finances.

Japan.

At the end of 1935, the general index of industrial production in Japan was 50% above the average 1929 level. The increase was practically continuous from the beginning of 1932; it was greater in Japan than in any other highly industrialised State.

The abandonment of the gold standard by the United Kingdom was immediately followed by a flight of capital from Japan. Between November 1931 and January 1932, the Bank of Japan lost 400 million yen, or half its cover reserves. The gold standard, which had been re-established only in January 1930, was abandoned in December 1931; within a year the gold value of the yen had fallen by 60%.

The early determination to allow an expansion of the currency to take place is reflected in the change in the organic law of the Bank of Japan effected early in 1932, under which the limit of the issue of notes which might be covered by bills and securities was raised from 120 to 1,000 million yen and the annual tax on uncovered note issue reduced from 5 to 3%. At the same time, the Bank of Japan's discount rate was reduced by stages to 4.38% in August 1932 — the lowest rate since the establishment of the Bank. It was subsequently reduced still further to 3.65%, at which level it has remained from July 1933 to April 1934, when it was lowered to 3.29%. Along with these preparations for an expansion of the monetary circulation, steps were taken by a Law of July 1932 to prevent a flight of capital.

Between the end of October 1931 and the same date in 1935, the total volume of Government bonds outstanding in Japan increased from 4.5 to 8.2 milliard yen — *i.e.*, by 3.7 milliard yen or 80%. Part of this debt was contracted to finance the war in the Northern Provinces of China and part for domestic purposes; the yen requirements for the former purpose naturally rose with the depreciation of the exchange. The financial requirements of the Government were met in the first instance by sales of its bonds to the Bank of Japan, which could use these bonds as cover for its note circulation. The inflationary effects of this Government borrowing were, however, partly offset by the fact that the Bank of Japan re-sold most of the bonds so acquired to the market. As the funds spent by the Government were paid into the ordinary banks and insurance companies, these bought Government bonds from the Bank of Japan.

The net total issue of Government securities — *i.e.*, excluding redemptions, was as follows

	1932	1933	1934	1935	Change	Outstanding end of 1935
	Yen (000,000's)					
Bonds	625	1,250	842	967	+ 3,684	8,208
Treasury bills . . . . .	.	— 340	.	.	— 340	0
Rice-purchase notes	36	200	198	— 88	+ 346	422

The Bank of Japan's operations in Government bonds, Treasury bills, etc., are summarised below :

	Yen (000,000's)				
	1932	1933	1934	1935	1932-1935
Acquired	1,596	2,793	1,807	1,810	8,006
Disposed of	1,290	2,676	1,842	1,728	7,536
Change	+306	+117	-35	+82	+470

The total Government debt thus increased during these four years by 3,700 million yen, and of this sum the Bank of Japan retained purchases amounting to nearly 500 million yen. The greater part of the remainder was taken up by the various parts of the banking system whose holdings of Government bonds and bills are shown below :

End of year	All ordinary banks	All savings banks	All trust companies	Treasury Deposit Bureau
Yen (000,000's)				
1931	1,144	562	103	1,087
1932	1,189	696	105	1,093
1933	1,568	862	154	1,348
1934	2,017	934	245	1,614
1935	2,205	1,070	277	1,740
Increase Dec. 1931- Dec. 1935	1,061	508	174	653

These institutions account for 2.4 of the 3.2 milliard increase in Government debt not taken up by the Bank of Japan. The proportion of the total deposits of the ordinary banks invested in Government securities rose from 14% at the end of 1931 to 22% at the end of 1935, and of the savings banks from 34 to over 50%.

The inflation of the circulating medium resulting from the financing of budgetary deficits through selling securities to the banking system was counteracted to some extent — up to the end of 1934 — by a steady reduction in the commercial banks' commercial advances and by a tendency on the part of the commercial banks to build up larger cash reserves. Moreover, the depreciation of the yen did not cause an expansion in the means of payment through the discounting of commercial bills resulting from an improvement in the balance of trade. Exports did, indeed, rise in value, but hardly more than imports (up to 1935), as the following statement shows :

	Imports	Exports	Balance
Yen (000,000's)			
1931	1,206	1,118	- 88
1932	1,383	1,362	- 21
1933	1,883	1,827	- 56
1934	2,244	2,134	-110
1935	2,426	2,454	+ 28

It is not possible to say to what extent the very large increase in production which occurred in Japan after 1932 was directly due to Government spending for military purposes, to what extent to the indirect repercussions of this spending and to what extent to other causes.

The output of "investment" goods more than doubled between 1931 and 1935, while the output of "consumption" goods rose by 38%. The very sharp rise in the output of "investment" goods is due in part to the fact that the heavy industries producing armaments, etc., are included under this heading and in part to the large export of capital to Manchuria after 1932. The wages paid out in connection with these expenditures naturally resulted in an increased demand for consumption goods, and these industries also benefited directly from Government orders in connection with larger army requirements.

The Government deficits at the rate of about 1 milliard yen (about £100 million at par) per year were financed chiefly through the sale of securities to the banking system and not to private savers, and they did not result in any rise in the rate of interest at which the Government could

borrow. The average yield on Government bonds fell from over 6% at the end of 1931 to less than 4½% at the end of 1935. The decline was fairly continuous except in 1934, when, as shown above, the Bank of Japan also sold Government securities to the market and temporarily arrested the downward course of interest rates. There was, however, very little sign of any marked revival in the market for new private capital issues, as the following table shows :

Net increase in Corporation bonds outstanding
Yen (000,000's)

1933	-64	1934	243	1935 (to November)	190
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The combined effect of the heavy depreciation of the currency and large Government expenditures financed through borrowing was, of course, to raise commodity prices.

	Yen value of gold (Parity = 100.)	Wholesale prices (1929 = 100.)	Cost of living (1929 = 100.)
1930	102.0	69.6	74.7
1932	177.3	73.3	75.4
1933	247.5	81.6	80.3
1934	280.9	80.8	82.0
1935	292.4	84.4	83.6

The increase was, however, very slight in comparison with the magnitude of the depreciation and the importance of Government deficits. This is partly explained by the fact that a large mass of agricultural labour was idle and in distressed circumstances ; this labour was shifted to industrial production and the expansion took place concomitantly with a steady reduction in average wages paid:

Nominal wage rates of factory workers (1931 = 100)

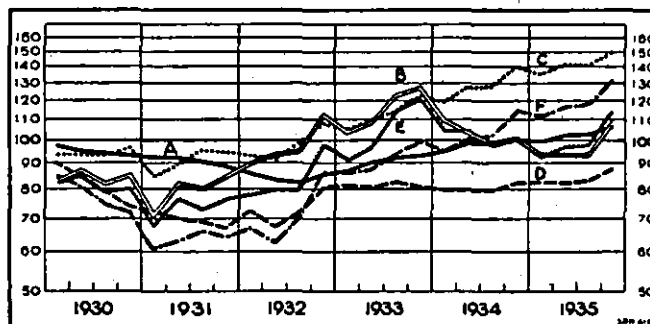
1932	97.4	1933	94.2	1934	91.7	1935	90.2
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Diagram XIII below shows for 1930-1935 the quarterly changes in the volume of commercial bank deposits in Japan, in their average velocity of circulation, in the level of wholesale prices and in the volume of industrial production. All the curves are based on 1929 = 100 ; the diagram is drawn on a logarithmic scale.

Diagram XIII.

MONEY, PRICES AND PRODUCTION IN JAPAN.
(1929 = 100.)

- A Total deposits.
- B Velocity of circulation.
- C Industrial production.
- D Wholesale prices.
- E Bank clearings.
- F Industrial production × Wholesale prices.



The velocity of circulation is calculated by comparing the changes in bank clearings with changes in bank deposits. Total deposits are taken on account of the changes in the relative importance of current accounts.

Attention is particularly directed to the general similarity in the movement of the velocity and production curves up to the end of 1933. This similarity is consistent with the view expressed above that Government spending was the main determinant of the rise in production in Japan. It would appear that, so long as this expenditure continued to increase, private business-men tended to turn over their funds rapidly, thus giving secondary support to the rise in production. When, however, the Bank of Japan took funds off the market in 1934 by selling Government securities, it would seem that the anticipations of business-men regarding the future course of values became less optimistic, and they again preferred to hold more cash, thus causing a sharp fall in the velocity index. In 1935, there was a fresh rise in the rate of Government borrowing, and the commercial banks allowed their cash reserves to run down and increased their advances to industry ; the fall in the velocity curve came to an end.

Chile.

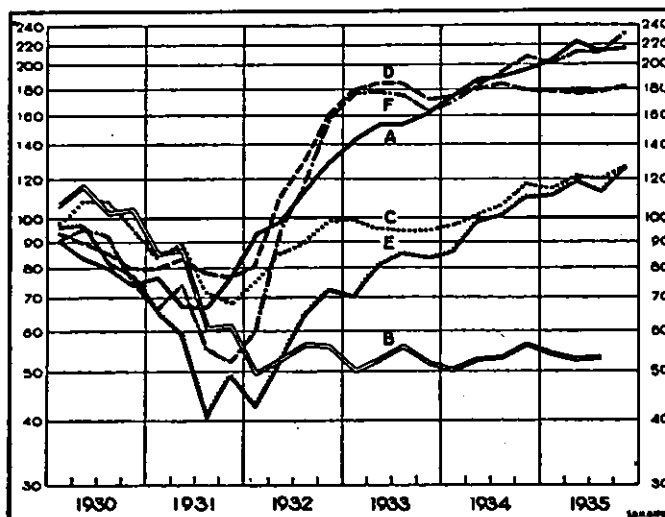
Diagram XIV shows the quarterly movement of certain essential series in Chile from 1930 to 1935. In this diagram, current account deposits only are shown, and the velocity of circulation is calculated by comparing their movements with the movements of bank clearings.

Diagram XIV.

MONEY, PRICES AND PRODUCTION IN CHILE.

(1929=100.)

- A Current accounts.
- B Velocity.
- C Industrial production.
- D Wholesale prices.
- E Bank clearings.
- F Industrial production × Wholesale prices.



The severity of the deflation to which Chile, as a raw-material-producing country dependent on foreign trade, was exposed is reflected in the 35% decline in current account deposits between 1929 and the third quarter of 1931. The subsequent inflation was fundamentally based on Government borrowing at the central bank, and it was accompanied by a sharp depreciation of the exchange, the free rate falling to as little as 20% of parity in 1933. The effect of the expansion of the monetary circulation was felt to a much greater extent on the prices of commodities than on the volume produced. The rate of turnover of current accounts remained at a very low level. When the rate of inflation was tapered off in 1934 and 1935, and the price curve flattened out, industrial production — which, after a sharp increase in 1932, had tended to fall in 1933 — steadily increased. It will be observed that bank clearings rose much less sharply than the curve showing the product of industrial production and wholesale prices: other parts of the price system were less affected by the currency inflation than wholesale prices.

United States of America.

During the past two and a-half years, the outstanding feature of the American monetary situation has been the accumulation by the commercial banks of extremely large reserve balances in excess of legal requirements which produced a condition of extraordinary liquidity in the money market. It is therefore convenient to begin the analysis with a summary of the changes in the principal factors influencing member bank reserves.

	Dec. 31st, 1929, to June 30th, 1933		June 30th, 1933, to Dec. 31st, 1935	
	Changes that added to reserves	Changes that reduced reserves	Changes that added to reserves	Changes that reduced reserves
\$ (100,000's)				
Items increases in which add to reserves :				
Reserve bank credit	+637		+ 266	
Monetary gold stock	+ 34		+6,094 ^a	
Treasury and national bank currency . . .	+264		+ 190	
Items increases in which reduce reserves :				
Money in circulation		+856		+ 448
Treasury cash and deposits with Federal Reserve banks		+ 54		+2,811 ^b
Non-member deposits		+136		+ 89
Other Federal Reserve accounts	- 47		- 93	
Net change in member bank reserve balances .		- 63		+3,295

^a Including increment of \$2,813 million resulting from reduction in the weight of the gold dollar.
^b Including unexpended portion of above.

The import of gold has been the principal factor responsible for the very large increase in member bank balances since the middle of 1933. The profit accruing to the Treasury from the revaluation of the gold stocks held prior to January 31st, 1934, gave rise to an almost equivalent increase in Treasury cash and deposits with the Federal Reserve banks, and so did not greatly affect member bank reserves. There was only a slight net increase in Federal reserve credit outstanding, the open-market purchases of Government securities early in the period being countered by the retirement of bills previously discounted at the Reserve banks.

The use made by the member banks of this large increase in their cash resources is summarised in the following table, which shows the changes in their principal accounts in the corresponding periods :

	Dec. 31st, 1929, to June 30th, 1933	June 30th, 1933, to Dec. 31st, 1935
	\$ (000,000's)	
Reserve balances	— 139	+ 3,338
Loans to customers	— 11,857	— 789
U.S. Government Direct and Guaranteed Securities	+ 3,024	+ 5,382
Other securities	— 880	+ 500
Net demand deposits	— 4,871	+ 7,959
Time deposits	— 4,338	+ 1,548
Excess reserves	+ 315	+ 2,369

The chief use made by the member banks of the increase in their reserve balances was to buy Government and Government-guaranteed securities. As these funds were spent by the Government, they came back to the banks either in repayment of bank loans or in the form of deposits. Between the middle of 1933 and the end of 1935, net demand and time deposits increased from \$22,974 to \$32,480 million, or by nearly half. At the latter date, net demand deposits were over \$3,000 million higher than at the end of 1929 ; and net demand and time deposits were also slightly higher.

The two characteristic aspects of the recent American monetary situation — namely, the huge gold imports resulting in unprecedented increases in member bank reserve balances and deficit financing resulting in a large expansion in the deposit currency — require separate analysis. The inflow of gold can be examined in the light of the following summary of the American balance of payments in 1933 and 1934.

	1933	1934
Balance of inward (+) or outward (—) payments due to :		
Current items :	\$ (000,000's)	
Merchandise	+ 83	+ 289
Interest and dividends	+ 404	+ 328
Other services	— 271	— 237
Total	+ 216	+ 380
Capital items :		
Long-term	+ 48	+ 202
Short-term	— 475	+ 136
Total	— 427	+ 338
Residual item	+ 38	+ 499
Gold imports (+) or exports (—)	— 173	+ 1,217

The "residual" item in the above table is thought by the American authorities to represent principally short-term movement of capital which escapes recording. The very large imports of gold in 1934 and 1935, which raised the monetary gold stocks of the United States to the record level of \$10,125 million or almost half the visible monetary supplies of the world at the end of 1935, were principally due to movements of capital into the United States. The increase in the surplus on current account was only \$164 million in 1934.

Half-yearly figures for the balance of payments for 1935 are compared with those for 1934 below :

	1934		1935	
	January-June	July-December	January-June	July-December
Balances in \$ (000,000's)				
Current items :				
Merchandise, including silver, according to trade returns	+161	+231	- 50	- 52
Interest and dividends	+160	+167	+145	+141
Other services	-174	-165	-184	-189
Total	+147	+233	- 89	-100
Capital items :				
Long-term	+310	-108	+100	+457
Short-term	+220	- 84	+549	+421
Total	+530	-192	+649	+878
Residual item	+243	+256	+242	+160
Gold imports, etc.	+920	+297	+802	+937

In 1935 there was a net deficit on account of current transactions, suggesting an adaptation of the American balance of payments to her international creditor position. The import of capital from abroad took place on a very large scale, however, and gold imports exceeded \$1,700 million.

As has been frequently pointed out, the American price level did not adapt itself immediately or fully to the heavy depreciation of the exchange rate, but some tendency, albeit hesitant and incomplete, towards a gradual adaptation is illustrated in the above table and in the following statistics :

	1933		1934		1935	
	I	II	I	II	I	II
Value of dollar as % of parity	87.2	67.6	60.1	59.1	59.4	59.4
Wholesale prices (1932=100)	94.9	108.7	113.5	118.0	122.9	124.1
Cost of living (1932=100)	93.1	99.3	100.8	103.4	106.2	107.7

The fact that the dollar was "under-valued" would appear to have been less important as a factor determining the large inward movement of capital in 1934 and 1935 than the fact that it was provisionally stabilised. Only a small part of the gold imports of those years can be accounted for by merchandise trade. The import of gold was chiefly the result of the inflow of capital, mainly from countries remaining on the gold standard at the old parities ; it was the desire to avoid capital losses due to the depreciation of these currencies that was primarily responsible for the gold movements. Of the \$1,739 million of gold imported during 1935, over two-thirds came directly from France and the Netherlands ; imports were particularly heavy during the period of political or budgetary crisis.

As already indicated, the principal use made by the commercial banks of the additions to their cash resources accruing principally from gold imports was to buy Government securities. In doing so, they helped to finance the budgetary deficits which formed so important a part of the economic programme of the New Deal. Between the middle of 1933 and the end of 1935, the gross debt of the United States increased from \$22,539 to \$30,557 million or by \$8,018 million. At the same time, the general fund balance increased by \$1,347 million, so that the increase in the net debt was \$6,671 million. During the same period, the member banks of the Federal Reserve system increased their holdings of direct Government obligations by \$3,614 million exclusive of Government-guaranteed securities, of which they bought \$1,768 million. The net increase in the net public debt (excluding guarantees) and in the member banks' holdings of direct

Government obligations are shown below by six-monthly periods since the second half of 1933 :

	1933		1934		1935		Total
	II	I	II	I	II		
Net increase in net public debt	I,111	1,883	1,444	945	1,488	6,671	
Net increase in M.B. holdings of direct Government obligations	367	1,883	769	-35	630	3,614	

During the period covered by the above figures, the Federal Reserve Bank holdings of Government securities rose by \$433 million. The non-member banks total investment portfolio rose by \$1,635 million in the same period, and it is likely that the greater part of this increase consisted of Government securities. In the light of these figures, it is obvious that the great bulk of the increase in public debt during the New Deal period has been absorbed by the banking system.

Three important consequences followed from this fact. The first concerns the duration of the public debt. As the deficit was financed through the banks, it was necessary for the Government to issue securities of a type acceptable to banks, namely short-term maturities. The change in the character of the public debt is indicated in the following table, which shows the percentage distribution of the gross public debt of the United States at different dates :

	Bonds	Notes	Certificates	Bills	Matured and other non-interest- bearing
June 30th, 1930	74.8	14.8	7.8	1.0	1.6
June 30th, 1933	63.1	21.2	9.8	4.2	1.7
December 31st, 1935	48.0	40.2	0.8	7.9	3.1

According to Treasury compilations, of the gross debt of \$29,596 million outstanding at the end of 1935, \$4,886 million or about a sixth was due to mature in 1936 ; another \$1,749 million in 1937 and another \$7,562 million during the next three years. The Treasury is still, during the first half of 1936, incurring large deficits, and the banking system, which, as already shown, has been the chief purchaser of Government bonds, already holds an exceptionally high proportion of its assets in this form. With a revival of opportunities for commercial lending, the banking system might be expected to wish to reduce its investments in Government securities. It should be observed, however, that, in March 1936, the Treasury successfully floated an issue of \$1,250 million of Treasury bonds and notes offered for cash in addition to further amounts of the same securities in exchange for Treasury notes maturing on April 15th. The Treasury bonds bear interest at $2\frac{3}{4}\%$ and are dated 1948-1951; the Treasury notes bear interest at $1\frac{1}{2}\%$ and are due in 1941. This was one of the largest offerings for cash in recent years, and subscriptions for the new securities were extraordinarily large, amounting to nearly \$8,500 million.

The second important consequence of the financing of budgetary deficits through the banks rests in the change which this has effected in the character of the commercial banking system. This is illustrated in the following table, showing the principal assets held by member banks at selected dates :

	December 31st, 1929	June 30th, 1933	December 31st, 1935
		\$ (000,000's)	
Loans to customers	23,194	11,337	10,548
Holdings of U.S. Government obligations	3,863	6,887	12,269

The principal function of the American commercial banking system has become the financing of Government deficits ; at the end of 1935, more than half the earning assets of the member banks were Government securities. This proportion is not, indeed, very much higher than in the United Kingdom ; at the end of 1935, the London clearing banks held £605 million of their earning assets — amounting to £1,265 million — in the form of investments (chiefly gilt-edged securities),

and the greater part of their bill portfolio of £322 million consisted in Treasury Bills. A glance at the above table shows, however, how important a change this represents in American banking practice.

The third consequence of the close connection between Treasury financing and banking policy is that deficits of the magnitude shown above could occur simultaneously with a very considerable improvement in the rate at which the Government was able to borrow. The average yield on all United States Treasury bonds outstanding, excluding those due or callable within eight years was as follows :

1932 . .	3.66%	1933 . .	3.31%	1934 . .	3.10%	1935 . .	2.70%
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The yield on short-term Treasury bills was at no time higher than seven-tenths of 1% between the middle of 1933 and the end of 1935, and at the last date mentioned was less than a tenth of 1%.

It is impossible to isolate the effects of the expenditure of these large sums by the Federal Government on the general business situation. There is no clear relation between the changes in the rate of Government spending and either the general level of industrial production or the general level of wholesale prices.

	Net increase in net Public Debt	Increase in demand deposits		Change in industrial production	Change in wholesale prices
	\$ (000,000's)		%	%	%
1933	3,037	-17	.	+18.8	+ 1.9
1934	3,127	3,012	+23.8	+ 3.9	+13.6
1935	2,433	2,376	+15.9	+13.8	+ 5.3

The absence of any clear, direct relationship between the rate of Government spending and industrial production is not, of course, surprising. Most of the Government expenditure covered by borrowing was on relief and public works and therefore *directly* affected the level of industrial activity to only a limited extent. The secondary effects of the injection of this new money into circulation were limited by two facts. In the first place, a large but incalculable part was used by the recipients to pay off debts in the form of bank loans, insurance policy loans, etc. Secondly, in so far as large budgetary deficits and other parts of the Government's economic programme had the result of impairing business confidence, there was a tendency on the part of business-men not to re-invest immediately the fresh accretions to their resources resulting from Government borrowing and spending, but to use these funds to put themselves in a more liquid position by paying off bank loans or building up their bank deposits. Loans to customers by member banks fell steadily from the middle of 1933 to the middle of 1935, the decline being from \$11,337 to \$10,369 million. Considerations of earnings would suggest that this fall in bank loans can hardly have been due to any desire on the part of the banks to pursue a restrictive credit policy. A special investigation¹ of the availability of bank credit in the Seventh (Chicago) Federal Reserve District undertaken at the request of the Secretary of the Treasury in 1934 and early 1935 reached the conclusion that the total amount of the "unsatisfied demand for (bank) credit is considerably smaller than is popularly believed, but is large enough to be a significant factor, among many others, in retarding business recovery". The report points out that "a very large proportion of would-be borrowers are persons whose equity in the business they control is so small that any bank or individual who lends them substantial amounts is assuming a major part of the risk of the business, rather than the normal risk of a creditor" and goes on to observe that "there is a larger demand for long-term working capital credit than for one-turnover loans" and that the pressure on the part of banks for liquidation of old working capital loans is "partly due to the determination on the part of bankers to avoid a recurrence of the errors to which they attribute much of the responsibility for the recent wave of bank failures" and that "it is also due in large part to the attitude of bank examiners, both State and national".

¹ Report on the Availability of Bank Credit in the Seventh Federal Reserve District submitted to the Secretary of the Treasury by Charles O. HARDY and Jacob VINER. Washington, 1935.

The rate of interest charged by banks on loans to customers was steadily reduced, as the following figures compiled by the Federal Reserve System show :

December	New York City	Eight other northern and eastern cities	Twenty-seven southern and western cities
	%	%	%
1929	5.74	5.94	6.20
1932	4.22	4.88	5.60
1933	3.48	4.59	5.43
1934	3.18	3.98	4.92
1935	2.61	3.67	4.55

The inelasticity in the demand for loans is further illustrated in the small volume of credit extended directly to business corporations by the Federal Reserve Banks and the Reconstruction Financial Corporation after they had been given authorisation to make such loans by Congress. At the end of 1935, their outstanding credits of this type amounted to only \$32 million and \$40 million respectively. It is worth observing that, during the second half of 1935, member banks' loans to customers rose by nearly \$200 million.

The influence of the factors tending to offset the effects of the expansion in the monetary supply on the general business situation may be summarised by saying that the efficiency with which bank deposits were used failed to rise concomitantly with the increase in bank deposits themselves. The most striking manifestation of the accumulation of "idle" balances is, of course, the huge excess reserve balances held by the member banks of the Federal Reserve System. Further reference is made to these balances below. The low level of the activity of the deposits held by individuals and corporations is reflected in the indices of velocity of circulation of demand deposits calculated by the Federal Reserve Bank of New York :

1932 I . . 64	1933 I . . 58	1934 I . . 58	1935 I . . 52
II . . 58	II . . 62	II . . 53	II . . 54

The desire for an abnormal degree of liquidity reflected in the above figures had, of course, the effect of preventing the increases in the monetary circulation after 1932 from resulting in proportionate increases in monetary incomes. The rate of turnover of money can be measured by comparing the national income with the total money supply available. The multiple which the former constitutes of the latter shows the number of times in the course of the year that money turns over against final income. It will be noted that this "income-velocity" of money differs from the "transactions velocity" shown above. In the latter, any act of spending has an equal weight in the final result. In the former, intermediate transactions are excluded except in so far as they yield net income : what is measured is the rate of turnover of money against final incomes — *i.e.*, wages, dividends, interest payment, etc.

	Net demand deposits of member banks subject to reserve	Money in circulation	Total monetary supply (1+2)	National income paid out	Income velocity of money (4 ÷ 3)	Column 5 (1929=100)	Wholesale prices (1929=100)	Cost of living (1929=100)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Monthly averages (\$ 000,000's)					Annual figures		
1929 . .	18,880	4,773	23,653	78,632	3.32	100	100	100
1932 . .	14,642	5,327	19,969	48,362	2.42	73	68	79
1933 . .	14,191	5,556	19,747	44,940	2.27	68	69	76
1934 . .	17,038	5,404	22,442	50,189	2.24	67	79	79
1935 . .	20,689	5,600	26,289				84	81

The failure of private investment to revive to pre-depression levels is also shown in the market for new private capital issues. In spite of the plethora of funds reflected in large excess cash reserves, high commercial bank deposits and low interest rates, the volume of new issues remained very low even in 1935.

	New Corporate Issues ^a		Corporate Refunding issues ^a	Corporate Bonds		Industrial share prices ^d
	Bonds and notes	Stocks		Prices ^b	Yields ^c	
	\$ (ooo,ooo's)			(1929=100)		(1929=100)
1929	2,078	5,924	1,374	100	4.93	100
1932	305	20	319	71	5.97	24
1933	40	120	219	75	5.23	35
1934	144	35	312	86	4.44	43
1935	334	69	1,864	90	4.13	48

^a Commercial and Financial Chronicle.

^b Prices of sixty corporate bonds ; Standard Statistics Co.

^c Yield on 30 Aa corporate bonds ; Moody's Investors Service.

^d Prices of 351 common stocks ; Standard Statistics Co.

The increase in new issues in 1934 and 1935 was significant principally as a reflection of the reversal of trend. Of the \$334 million of new corporation bonds and notes issued in 1935, no less than \$246 million were issued in the second half of the year. Considered in conjunction with the revival of bank lending referred to above and the slight increase in the average velocity of circulation of bank deposits, this suggests that the process of private investment had begun by that time. The rise in security prices which occurred in 1934 and 1935 can be directly traced to the expansion of the currency. The cheapness of money and optimistic anticipations on the part of investors regarding the future trend of values made it possible for corporations to reduce the burden of past indebtedness by refunding operations, and — as is seen in the above statement — these operations became important in 1935. It is likely that the rise in bank loans in the second half of the year is connected with the growth of refunding issues, as corporations took advantage of the low rates of interest to borrow from banks and retire callable bonds. They also borrowed and bought and held their own uncallable bonds.

Some further reference must now be made to excess reserves. It has been shown that the large expansion in these reserves was principally due to the import of gold from abroad which followed the *de facto* stabilisation of the dollar at the end of January 1934. In December 1935, the member banks held reserve balances of \$5,716 million or \$2,983 million in excess of legal requirements. The commercial banking system was free of debt to the Federal Reserve banks. It could double the deposit currency of the country on the basis of its existing reserves without having to borrow at all from the Federal Reserve system. A substantial degree of business recovery had already taken place without any revival in commercial bank lending. There were, however, signs of an increase of private investment activity which would normally produce an increase in the demand for ordinary bank accommodation. The banks were technically able to meet this demand. Moreover, the yield on Government securities had fallen so low that many banks, which hold their assets chiefly in this form, were finding difficulty in covering expenses, and would no doubt welcome an increase in their loans to private industry. An increase in bank lending would, of course, result in an expansion of bank deposits. Furthermore, the Federal budget was still unbalanced and there was no immediate prospect of an equilibrium between revenues and expenditures being reached. The covering of deficits through the banking system results, as already observed, in the creation of additional means of payment in the form of bank deposits. The banks already held \$10,000 million of Government securities which could, under the new banking legislation, be immediately converted into cash by the simple process of borrowing against them at the Federal Reserve banks. In this situation, the inflation of the means of payment technically possible is even larger than the enormous figure suggested by the excess cash reserves.

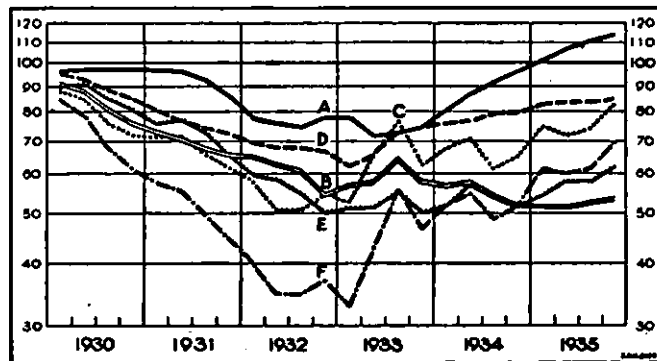
The huge excess cash reserves held by member banks have caused the American monetary authorities considerable anxiety, and the Federal Reserve Advisory Council has twice recommended that steps be taken to reduce them. As the banks are free of debt to the Federal Reserve system, the raising of the discount rate would have little more than symbolic value. The two possible steps in the purely monetary field are (1) the sale of part or whole of the \$2,431 million of Government securities held by the Federal Reserve banks and (2) the raising of member bank cash reserve requirements.¹ Up to the time of writing, neither of these steps has been taken. The Treasury is still a heavy borrower and the banks already hold so high a proportion of their total assets in the form of Government securities that any attempt on the part of the Federal Reserve authorities to force additional securities on the market would probably result in a rise in interest rates — a development which would be unwelcome to the authorities both on fiscal and on general economic grounds. With regard to the second possibility, it must be pointed out that, although member banks as a whole had reserve balances twice as large as those legally required, a large number of individual member banks held only modest balances above legal requirements. A very considerable increase in reserve requirements would risk putting certain banks in a deficitary reserve position, forcing them to borrow from the Reserve banks and to contract credit. In the early months of 1936, the Treasury appears to have made an effort to reduce excess reserves by transferring deposits from commercial banks to the Federal Reserve banks. At the end of March 1936, excess reserves had been reduced to \$2,305 million. Subsequent expenditures from Treasury deposits and (in May) gold imports again raised these reserves, however, and at the end of May 1936 they amounted to \$2,900 million.

One further aspect of these excess reserves should be mentioned. Although they constitute a danger of inflation in the United States, at the same time they represent an important element of "sound banking". They are largely due to the inflow of foreign funds, "bad money" which may be withdrawn at a moment's notice. The fact that the funds which sought refuge in the United States during the past two years have not been absorbed into the domestic credit structure provides an assurance that their repatriation can — in the event, for example, of improved currency conditions elsewhere — be effected with a minimum of disturbance in the United States.

The quarterly changes in essential aspects of the American situation between 1930 and 1935 are summarised in Diagram XV below.

Diagram XV.
MONEY, PRICES AND PRODUCTION
IN THE UNITED STATES.
 (1929=100.)

- A Demand deposits.
- B Velocity of circulation of demand deposits.
- C Wholesale prices.
- D Industrial production.
- E Bank debits to individual accounts.
- F Industrial production × Wholesale prices.



The figures for velocity of circulation of demand deposits plotted in this diagram are computed by the Federal Reserve Bank of New York.

During the depression phase of the cycle, the unwillingness of business-men to spend was quantitatively of greater importance than the contraction in the monetary supply. In the third quarter of 1932, demand deposits were as much as 22% below their 1929 level, but the average rate of turnover of this reduced volume of deposits had fallen even more — by 45%. The sharp recovery in production which occurred in the second and third quarters of 1933 appears to have

¹ The Banking Act of 1935 authorises the Board of Governors of the Federal Reserve System to raise the legal cash reserve ratios which member banks must maintain in the form of balances with the Federal Reserve banks, by any amount up to 100%.

been entirely financed by a rise in velocity. The rapid re-opening of the banks after the acute crisis of March 1933 and the abandonment of the gold standard were accompanied by a distinct improvement in business psychology which is reflected in the curve. Demand deposits did not begin to rise sharply until the end of 1933, by which time production had already lapsed. The steady rise in bank deposits during 1934 and 1935 was accompanied by a steady, but by no means proportionate, rise in prices. On the other hand, the production curve moved irregularly and it was not until the latter part of 1934 that a sustained rise set in.

A comparison of the above diagram with the corresponding diagram (No. VI) for the United Kingdom affords some interesting contrasts. The severity of the deflation was clearly much greater in the United States than in the United Kingdom, and the industrial recovery has been much less. In the United Kingdom, the only direct monetary action taken by the Government to stimulate production was to encourage the development of cheap money, while in the United States a long series of recovery measures was introduced. Cheap money in the United Kingdom was the result of banking policy, while in the United States it was achieved at the cost of a heavy addition to the national debt. The increase in production in the United Kingdom took place without any considerable rise in prices, while in the United States prices rose much more sharply. In the last quarter of 1935, the general index of industrial production was 12% above the 1929 level in the United Kingdom, while wholesale prices were 20% below that level; in the United States, where wholesale prices were only 15% below the 1929 level, the general level of industrial production was nearly 20% lower than in 1929. The essential monetary difference between the two countries lies in the differences in the rapidity of circulation of the monetary medium; the medium itself was abundant in both cases. In the United States, the velocity of circulation of demand deposits in the last quarter of 1935 was still only half as great as in 1929, while, in the United Kingdom, the rate of turnover of current accounts was only about 30% less than at the beginning of 1930. These differences principally reflect varying degrees of business confidence in the two countries.

Germany.

The economic and monetary situation in Germany since the beginning of 1933 has been dominated by the expenditure of large sums by or with the guarantee of the State for re-armament, public works, etc. The general index of industrial production rose from an average of 53.3% of its 1929 level in 1932 to an average of 94.1% in 1935, and the official unemployment statistics dropped from 5,500,000 in 1932 to 2,150,000 in 1935 (not including persons employed in labour camps). The official gold parity was not abandoned, but the control of foreign-exchange transactions was made more rigorous and a complicated system of differential depreciation developed, under which Reichsmarks were made available to tourists, exporters, foreign creditors, etc., at rates involving degrees of discount on the gold parity ranging up to 75%.

State expenditures were financed in part by the issuing of Treasury bills and bonds by the Reich and Länder, and in part by the issue of special *Arbeitsbeschaffungs-, Rüstungs-Wechsel*, etc. It is unfortunately impossible to ascertain from the official statistics published how much the State and its subsidiaries have borrowed and spent during this period; budget accounts for recent years have not been published. According to the figures published by the Reichskreditgesellschaft,¹ the total circulation of bills in Germany increased from RM. 10½ to 16 milliard between the end of 1932 and September 1935. The increase in the circulation of Treasury and of "special" bills must, however, have been considerably greater than RM. 5½ milliard (nearly £500 million at par), as the volume of acceptances fell, with the decline in foreign trade, by about RM. 1 milliard, and there is reason to believe that the volume of "genuine" commercial bills was also reduced.²

¹ *Deutschlands wirtschaftliche Lage an der Jahreswende 1935/36.*

² These figures do not, of course, reflect the whole State expenditure on re-armament, public works, etc. Part was financed out of the higher yield of taxation resulting from increased incomes and from the sums made available through the reduction in unemployment benefits. According to the source quoted in the previous footnote, RM. 7 milliard were made available in these two ways during the period April 1933-March 1936; the greater part is said to have been spent on "public investments".

About half the apparent increase in the bill circulation was taken over by the Reichsbank and its affiliate, the Golddiskontbank, whose bill holdings increased from RM. 3.1 to 5.8 milliard. This expansion of RM. 2.7 milliard in central bank credit naturally rendered the money market liquid and enabled the banks to take up a large part of the remaining bills. The public banks, savings banks, *Girozentralen* and the public works banks increased their bill holdings from RM. 1.1 to 3.4 milliard during the period mentioned, while the big Berlin banks increased theirs from RM. 1.7 to 2.0 milliard.

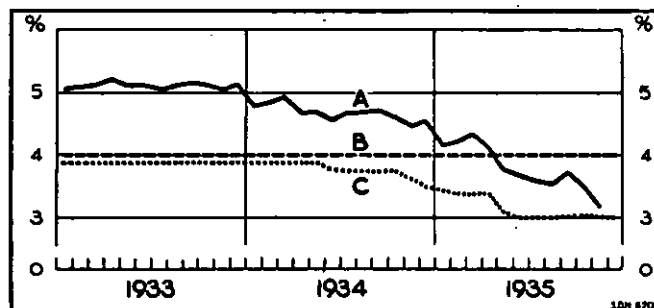
The rediscounting of "special" bills with the Reichsbank went hand-in-hand with a reduction in the offer of foreign bills from the market to the Reichsbank, so that the expansion in the note circulation was not as great as the above figures might suggest :

	End of November	1932	1933	1934	1935
			RM. (000,000's)		
Reichsbank notes in circulation		3,531	3,542	3,810	4,186
Other sight liabilities		418	478	961	806

The lower line of figures reflects the increased cash liquidity of the German money market ; as the funds spent by the State flowed back to credit institutions, part was used to increase their cash reserves. Moreover, as the "special" bills are rediscountable at the Reichsbank, they are themselves a "liquid" asset from a purely banking point of view. In fact, however, these bills require frequent prolongations and, in 1935, the Golddiskontbank issued its own three-month rediscountable promissory notes to the market and used the proceeds to take up these "special bills". The amount involved appears to be about RM. 600 million. Moreover, to the extent of some RM. 200 million, the funds of the Konversionkasse for foreign debts were invested in bills in 1935, thus relieving the market still further.

In view of this monetary expansion, the trend of short-term interest rates was naturally down, as Diagram XVI opposite shows :

Diagram XVI.
MONEY RATES IN GERMANY.
A Private discount rate.
B Bank rate.
C Day-to-day money.



It must be remarked that these rates are to some extent nominal, as private credit transactions have come to play a progressively less important part in the German credit system. This development constitutes the natural counterpart of the growing dependence of all branches of the economy on State expenditures. These are financed chiefly by the Reichsbank and public credit institutions. The declining importance of the purely "private" credit transactions is reflected in the fact that deposits in the banks directly concerned with financing public expenditures, and in particular in the savings banks and various public credit institutes, have increased, while deposits with the ordinary credit banks have been reduced. Moreover, the ordinary commercial business of the credit banks has continued to fall quite sharply in spite of the revival of economic activity, as the following statement of the principal assets of the big Berlin banks shows :

	End of October	1932	1933	1934	1935
			RM. (000,000's)		
Loans and advances		4,614	4,133	3,894	3,531
Reimbursement credits		1,001	595	425	209
Contango and lombards		35	26	23	14
Treasury bills discounted		466	577	560	655
Other bills discounted		1,193	1,106	1,457	1,512

The first three items, representing ordinary commercial credits, have fallen markedly, while the last two, the movement of which now reflects chiefly public expenditures, have increased.

The explanation currently given for the reduction in ordinary commercial credits is that the expenditures on public works, etc., have indirectly resulted in large profits to business-men who have improved their liquidity by paying off bank loans and have been able to finance the expansion in business out of their own resources.

The small demand for capital for private investment is also reflected in the figures for new capital issues. Negative figures in the following statement represent net reduction of indebtedness:

	Private mortgage bonds	Loans of private undertakings RM. (ooo,ooo's)	Share issues
1930	1,021	35	555
1931	226	1	635
1932	-377	10	150
1933	-175	2	90
1934	-84	4	143
1935 (to October)	45	1	129

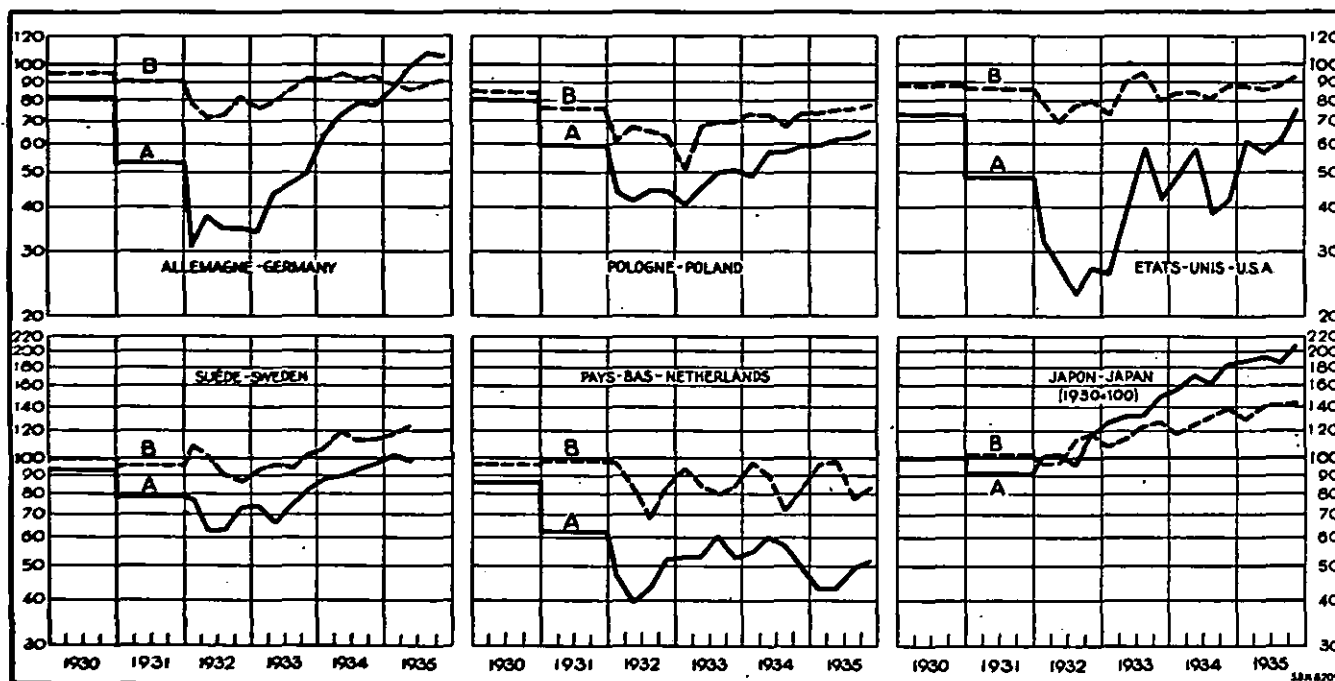
This apparent slackness in the private demand for capital stands in striking contrast to the recovery in industrial production. With the index of production above the 1930 level in 1935, private capital issues were only about a tenth of their amount in the earlier year, and the loans and advances of the big Berlin banks were down by over RM. 4.5 milliard, or 65%, and showed no signs of reviving.

It is apparent from these data that the "secondary" repercussions of the large public expenditures of 1933/35 have, up to the present, been of slight importance; and that the rise in industrial production is almost entirely due to the increase in the output of industries directly benefiting from State orders. The burden of financing this increase in production was borne by the State and the public credit institutes and necessitated no special financing on the part of the industries concerned.

The unimportance of the secondary repercussions of State expenditures is reflected in the different degrees to which production increased in the investment industries, which were directly affected through public works, re-armament, etc., and in the consumption industries, which were not. Diagram XVII below shows the movements (annual in 1930 and 1931 and quarterly since

Diagram XVII.
PRODUCTION OF INVESTMENT AND CONSUMPTION GOODS.
 (1929=100.)

A Consumption goods. B Investment goods.



1932) in the production of investment and consumption goods in Germany and five other countries. The indices are based on 1929 in all cases except Japan, where the figures are available only since 1930 and that year is taken as base. The diagram is drawn on a logarithmic scale, so that the slopes of the curves show directly the rates of change of the series to which they relate.

For reasons which are well known, the output of investment goods fluctuates in a wider amplitude in the course of the business cycle than the output of consumption goods, falling more rapidly during depression and recovering more rapidly during prosperity. The contrast between the movements of the two curves since 1933 is, however, much more striking in Germany than in any other country. Between 1932 and 1934, the output of investment goods more than doubled, while the output of consumption goods increased by about 20%. In 1935,¹ the output of investment goods rose by a further 40%, while the production of consumption goods actually declined. The failure of the sharp recovery in the investment industries to spread to a greater extent to the consumption industries is explained by the wage policy pursued. Wages have not risen; in 1935, the general index of hourly rates of pay was more than 10% lower than in 1932.

Average Hourly Wages (1929=100).

1932 . . .	92.4	1933 . . .	89.7	1934 . . .	86.1	1935 . . .	82.5
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As there has been a slight rise in the cost of living since 1933, it is obvious that real hourly wages have fallen since that year. As a result of re-employment, there was, however, an increase in aggregate labour income, as the following official statistics show :

				RM. (000,000,000's)			
1932 . . .	26.0	1933 . . .	26.3	1934 . . .	29.6	1935 . . .	31.8

Partly because of this wages policy and as a result also of the existence of important unemployed resources in the form of machinery, the increase in monetary demand consequent upon State expenditures did not, up to the end of 1935, cause any very marked rise in wholesale prices or in the cost of living.

				(1929=100.)				
Wholesale prices :	1932 . . .	70.3	1933 . . .	68.0	1934 . . .	71.7	1935 . . .	74.2
Cost of living :	1932 . . .	78.3	1933 . . .	76.6	1934 . . .	78.6	1935 . . .	80.0

The failure of prices to rise more than the above official figures indicate is somewhat surprising, particularly when account is taken of the large credit expansion and of the fact that, as a result of trade and clearing agreements with foreign countries, certain raw materials were purchased at prices higher than those prevailing in world markets. It must be pointed out that an official price control exists and the prices on which the indices are based are those officially fixed. Prices higher than the official have in fact been paid for certain commodities, so the above indices probably understate the real rise in wholesale prices and the cost of living in Germany.

The Gold Bloc.

In all the countries whose experience has been analysed up to this point, a considerable measure of economic recovery had taken place by the end of 1935. The nature of the recovery was not uniform, but it was everywhere accompanied by an increase in the effective monetary supply and a lowering of long- and short-term rates of interest. In the small group of countries remaining on the gold standard at old parities, few signs of recovery are discernible after 1933. The percentage changes in industrial production of six countries from February 1933 to February 1936 are shown below :

	%		%
Germany	+79.2	United Kingdom	+35.2
United States of America	+49.2	France	- 3.9
Japan	+38.7	Netherlands	- 8.3

¹ Since March 1935, including the production of the Saar Territory, which is not taken account of in the index figures for the preceding years. Had the Saar production been covered throughout the period considered, the rise in the index in 1935 compared with the preceding years would have been somewhat less pronounced than the above figures suggest.

At the beginning of 1936, industrial production was more than 30% below its 1929 level in France and the Netherlands, while in the United Kingdom, Sweden, Denmark, Estonia and most other countries of the sterling group it was higher than in 1929, in Germany about as high, and in the United States and Canada 15% lower. The Polish index of industrial production rose considerably in 1934 and somewhat further in 1935, but at the beginning of 1936 was still more than 30% below 1929.

Other economic indices confirm the low level of economic activity in the countries of the gold *bloc*. The total number of applications for work, at official employment exchange bureaux in France, was 481,000 at the end of 1935, compared with 465,000 a year earlier and 308,000 at the end of 1932. In the Netherlands, the figures for corresponding dates are (1935) 403,000, (1934) 414,000 and (1932) 256,000. In Switzerland, according to the unemployment insurance statistics, 16.9% of the working population was wholly unemployed at the end of 1935, compared to 13.9% at the end of 1934 and 9.1% at the end of 1932. The volume of goods transported by Swiss railways was 30% lower in 1935 than in 1929, and such partial indications as are available regarding industrial production do not disclose any reversal of the downward trend of recent years.

Up to September 1931, the development in the gold-*bloc* countries was broadly similar to that of other highly industrialised States. Prices fell, profits were reduced, and production restricted. The contraction was, on the whole, less severe in France than in most countries: taking the year 1931 as a whole, the index of industrial production was 88.9% of its 1929 level in France, compared to 83.8% in the United Kingdom and 68.1% in the United States. In the Netherlands, which, like the United Kingdom, is largely dependent on foreign trade, the index was 79% of its 1929 level in 1931.

The depreciation of sterling and many other currencies in the latter part of 1931 intensified the shock to confidence in the creditor gold countries and gave rise to renewed currency hoarding on a large scale. Prices declined more rapidly than before, unemployment rose, bankruptcies became more frequent: in short, the depression deepened.

The divergence between economic developments in the countries of the gold *bloc* and most of those which had allowed their currencies to depreciate became particularly striking after the middle of 1933. It is to the explanation of the monetary aspects of this divergence that the following analysis is particularly directed.

Stated briefly, the essential characteristics of the developments in the gold countries after the spring of 1933 were these: hoarding on a large scale continued, with some shift from the hoarding of notes to the hoarding of gold; foreign balances previously invested were withdrawn and domestic speculation against the currencies developed; budgetary deficits were large and were covered through the issue of loans on the private capital market. The shrinkage in the supply of funds resulting from the first two factors, combined with the increase in demand resulting from the last, gave rise to a much higher level of interest rates than that prevailing in the sterling *bloc* and the United States of America.

The following table shows some of the factors involved in the narrowing of the money markets of the gold-standard countries between the end of 1932 and the end of 1935:

	End of year	France		Netherlands		Switzerland	
		1932	1935	1932	1934	1932	1935
(In millions of national currency units)							
Central Bank	Gold reserves	83,017	66,296	1,033	643	2,471	1,389
	Private deposits	20,072	8,716	304	51	922	358
	Notes in circulation	85,028	81,150	961	809	1,613	1,366
Commercial banks	Deposits	37,759	27,553	1,112	944	4,520	2,693
	Cash reserves	9,945	5,434	212	169	970	367
	Loans, discounts, investments, etc.	30,925	25,182	1,203	998	4,847	3,231
Money rates	Official discount rate	2½	5	2½	3½	2	2½
	Open-market rate	1½	6	½	3½	1½	2½
	Yield of Government bonds	3.84	3.88	4.98	4.11	3.62	4.56

The heavy gold losses in no case gave rise to an equivalent contraction in the note circulation, and the private banks were forced to let their cash reserves run down ; they had been built up to very high levels while capital was entering from abroad. As outstanding loans were paid off they were not renewed and the quantity of commercial bank credit outstanding fell. The fall would no doubt have been more rapid than the above figures indicate if certain credits had not been frozen by the continued deterioration in economic conditions.

It is not possible to measure the amount of currency in private hoards nor, to judge from the figures given above, by what amount, if any, hoarding increased during these years. Between the end of 1928 and the end of 1932, the note circulation in France rose by 21 milliards. During the next three years it fell by nearly 4 milliards, or about 5%, while wholesale prices fell by almost 20% and the cost of living nearly 10%. These figures suggest that there was net new hoarding of notes in 1933-1935 ; it is commonly estimated that 25 milliards were in private hoards at the end of 1935. In Switzerland, the note circulation outstanding at that date was 367 millions higher than at 1929, though wholesale prices had fallen by 35%, the cost of living by 20% and the volume of business was very substantially lower.

The withdrawal of capital from the countries of the gold *bloc*, reflected in the gold losses suffered after 1933 and the continued hoarding reflected in the high note circulation, were based in large part upon a fear of currency depreciation and distrust of the banking structure. This fear was not due to any weakness in the technical position, which remained extraordinarily strong, even after the heavy gold losses suffered. At the end of 1935, the ratio of gold to note circulation and other sight liabilities was 72, 75, and 80% in France, the Netherlands and Switzerland respectively. The fear was due to the continued deterioration in the general economic position and to the banking and budgetary difficulties experienced in these countries.

As a result of hoarding and credit contraction, prices (as already observed) continued to fall in the countries remaining on the gold standard. The decline was, however, not sufficient to eliminate the under-valuation of sterling and the currencies attached to it, or of the American dollar. The difficulty of attaining a position of equilibrium with sterling was aggravated by the fact that the gold value of that currency fell month by month almost without interruption up to April 1935. The effect of deflation in the gold countries was thus partly wiped out through the continued depreciation of sterling. The heavy depreciation of the American dollar did not result in a proportionate rise in prices in that country, and this intensified the deflationary pressure on the gold *bloc*.

In spite of these obstacles to equilibrium, there was in evidence, at least until the early months of 1935, a fairly-well-marked tendency for the degree of under-valuation of the Anglo-Saxon currencies against the French francs to be reduced. It is impossible to measure precisely the degree of under-valuation of the Anglo-Saxon currencies ; in default of better measures, the relative movements of wholesale price indices of the different countries *in terms of gold* are shown below :

	United Kingdom	United States (1929=100.)	France	French index as % of British index	French index as % of United States index (1929=100.)
Average 1930 . . .	87.5	90.7	88.4	101.0	97.5
Average 1931 . . .	71.6	76.6	80.0	111.7	104.4
Average 1932 . . .	54.0	68.0	68.2	126.3	100.3
Average 1933 . . .	51.1	55.8	63.6	124.5	114.0
December 1934 . . .	46.4	47.9	54.9	118.3	114.6
July 1935	46.5	49.3	51.4	110.5	104.3
December 1935 . . .	48.1	50.4	56.5	117.5	112.1
March 1936	48.4	49.3	60.0	124.0	121.7

By the middle of 1935, gold prices had stopped falling in the Anglo-Saxon countries and the very sharp decline in France had succeeded in reducing very substantially the degree of under-

valuation of the Anglo-Saxon currencies. The last two columns of the above table are not to be taken as an accurate measure of the under-valuation of the currencies in question ; they measure only the changes in price relationships since 1929, a year when they were probably far from being in equilibrium. As, however, it was the franc which was under-valued in that year, it is reasonable to suppose that the real under-valuation of the pound and the dollar — in terms of purchasing-power parities — was less than the figures in the last two columns would suggest.

Since the middle of 1935, the gap has again increased : a *de facto* stability in the gold value of the pound has been maintained and wholesale prices have risen very markedly in France and only modestly in the United Kingdom and the United States. Further reference is made to this important development below.

Notwithstanding the under-valuation of other currencies, the gold *bloc* sharply reduced its adverse balance of trade after 1932. The "improvement" was achieved through a very drastic restriction of imports. Exports fell heavily or — as in the case of Switzerland — were maintained fairly stable at relatively low levels. The importance of the contraction in trade (and in the tourist traffic) resulting, at least in part, from the over-valuation of the gold currencies was naturally greater in the Netherlands and Switzerland, where a large part of the population is directly affected, than in France, where production for the home market is relatively much more important.

The disequilibria in the internal-price structure resulting from the continued deflation were even more important as a factor of depression than the loss of foreign markets. With the reduced circulation of money caused by hoarding, the calling-in of bank loans, etc., *entrepreneurs* found it necessary to cut their prices sharply, while at the same time unit costs remained high. Besides this general disequilibrium in the cost-price structure resulting from the spreading of much the same volume of fixed or semi-fixed costs over a smaller output, there were particular disequilibria resulting from trade policy. The drastic restriction of imports through quantitative trade restrictions and tariffs made it possible for domestic producers of certain products — in particular, foodstuffs — to hold prices at levels which covered the high domestic costs. In short, the deflation was not even, but lopsided : it depressed severely certain exposed prices and left others relatively immune. The unevenness of the deflation is reflected in the failure of the cost of living to fall as much as wholesale prices. The changes in the margin between these two indices, taking 1929 as 100, are shown below. In each case, the cost of living is expressed as a percentage of the index of wholesale prices at the same period.

	France	Netherlands (1929 = 100.)	Switzerland		France	Netherlands (1929 = 100.)	Switzerland
Average 1931 .	128	118	120	December 1934	165	134	127
Average 1932 .	139	129	125	June 1935 . . .	167	132	126
Average 1933 .	147	132	126	December 1935	152	130	124

The absolute height of these figures obviously depends upon the relationship between the cost of living and wholesale prices in the year chosen as base. In 1929, the cost of living was very low in relation to wholesale prices in France, having failed to adapt itself to the low level at which the franc had been stabilised. This natural adaptation, which proceeded in subsequent years, accounts in part for the very high level of the figures for France. As the relationship between the cost of living and wholesale prices was not in equilibrium in the base period, attention should be concentrated on the movement rather than on the absolute height of the above figures. The figures show that deflation in the gold-standard countries was unsuccessful in securing an internal price equilibrium, though they do not, of course, measure the degree of disequilibrium. In contrast, the margin between wholesale prices and the cost of living narrowed in the countries pursuing an expansionist monetary policy, as the cost of living rose much less than wholesale prices.

The decline in incomes resulting from the deflation seriously affected the equilibrium of the State budgets of these countries. On the one hand, revenues fell with the decline of economic

activity ; and increases in taxation were disappointing in their yield, and at the same time raised costs and ate still further into the profit margin. On the other hand, expenditure was difficult to reduce and was in some instances even increased through subsidies to particular industries, etc. The difficulty in balancing budgets does not date only from 1933, the period with which this analysis is particularly concerned. Deficits in the gold countries were already serious in 1931 and 1932, and gave rise to heavy borrowing. But, in 1931 and 1932, the funds at the disposal of the markets were increased through the inflow from abroad and interest rates remained low in comparison with other countries.

	France		Netherlands		Switzerland	
	Discount rate on Treasury bills	Yield on <i>Rentes perpétuelles</i> 3%	Private discount	Yield of Government bonds	Three-months bills	Yield of Federal Railways 3½% bonds
1929 . . . .	.	3.98	4.82	5.16	3.31	4.38
1930	2.32	3.44	2.06	5.11	2.01	4.07
1931	1.41	3.48	1.42	5.15	1.44	3.78
1932	1.00	3.84	0.85	4.98	1.52	3.62
1933	1.76	4.38	1.08	4.75	1.50	3.84
1934	2.11	4.14	0.87	4.37	1.50	4.05
1935	3.30	3.88	3.15	4.11	2.20	4.56

The Netherlands was the most successful of the three countries in reducing State expenditure after 1932 and, in spite of an increase in the total domestic debt from 2,861 million gulden at the end of 1931 to 3,363 millions at the end of 1934, it was possible, through refunding and conversion operations, to reduce the average rate of interest paid on Government bonds. In Switzerland, the estimates of expenditure of the Confederation in 1935 were nearly 10% higher than in 1932, compared with a reduction of nearly 30% in the Netherlands. Besides the deficits of the Swiss Confederation, it was necessary to cover the deficits of the railways through borrowing. The fiscal position¹ was, however, most serious in France, where the public debt was increased by over 70 milliard francs between 1931 and 1935. The ordinary budgetary deficits were between 7 and 10 milliards each year and, in addition, the State borrowed large sums for purposes not covered by the ordinary budget. The attempts to balance the budget were frustrated through a steady shrinkage of taxable incomes ; in 1934, the State borrowed 20 milliard francs and in 1935 an equal amount, despite the decree laws of that year which aimed at balancing the budget at 40½ milliard francs.

Budgetary deficits and hoarding were both cause and effect of each other. The precarious state of the public finances created doubts regarding the stability of the currency and led to funds being withdrawn from circulation and either transferred abroad or held in the form of notes and gold ; and this withdrawal of funds from active circulation resulted in a general slowing-up of economic activity, a contraction in taxable incomes, a fresh decline in revenues, further budgetary deficits, renewed hoarding and so on in a vicious spiral.

The 3.88% yield on French *rentes* in 1935 may be compared with an average yield of 2.7% on American Government bonds ; the discount rate of 3.3% on short-term French Treasury bills compares with virtually no yield in the United States. The contrast between the American and the French figures is particularly remarkable when account is taken of the fact that the American budget, like the French, was severely out of balance and the State borrowed large sums to meet current requirements. In 1935, the American Federal Debt increased by over \$2 milliard or 30 milliard francs — *i.e.*, by half as much again as in France. During the whole period 1930-1935, the American debt increased by over \$8 milliard, or about twice as much as the French.

¹ The data regarding the fiscal position are based upon figures published in *L'activité économique*, 1st year, No. 4, January 31st, 1936, of the Institut de statistique de l'Université de Paris et l'Institut scientifique de recherches économiques et sociales.

The contrast between these figures raises the very important question : why did budgetary deficits have an inflationary influence in the United States and a deflationary influence in France and the other countries of the gold *bloc*? In the United States, the deficits were largely covered by the sale of securities to the banking system. As the sums so borrowed were spent, they made the whole economic system more liquid ; the funds put into circulation flowed back to the banks and the growth of bank deposits available for investment kept money rates at very low levels. In the gold-*bloc* countries on the other hand, the deficits were financed to only a limited extent through the banking system ; for the greater part, they were covered by the sale of securities to private investors. This meant, of course, that budgetary deficits in the gold *bloc* resulted in the creation of new means of payment only to a very limited extent ; what they did primarily was to transfer resources from the disposal of the private investor to the disposal of the State. Moreover, as these funds were spent, they did not flow back to the banking system as in the United States, but to a considerable extent were withdrawn from active circulation into private hoards. The recurrence of budgetary deficits also caused transfers of capital abroad, another influence exercising deflationary pressure.

Two further questions now arise : why was the deficit financed chiefly through the banking system in the United States and principally through the private capital market in France and why did an unbalanced budget give rise to hoarding in France and not in the United States ?

The answer to the first question lies partly in the differences in banking technique and practice in the two countries and partly in influences of a psychological nature. In France, tradition is (or has until recently been) opposed to the central bank's extending credit on the basis of Government securities, while the Federal Reserve system is subject to no such limitation. As a result of the exigencies of war finance, open-market operations in Government securities were carried out by the Federal Reserve banks from the very inception of the system in 1917, and the tradition of these operations persisted and broadened in subsequent years. In 1932, an amendment to the Federal Reserve Act made Government securities legal cover against Reserve Bank liabilities. More important still, recent banking legislation makes it possible for the commercial banks to borrow against their holdings of Government securities by pledging them as collateral at the Federal Reserve banks. As these securities can be readily converted into cash, their purchase involves no impairment of bank liquidity.

In 1932 and 1933, the Federal Reserve banks increased bankers' cash by large-scale purchases of Government securities in the open market. Bankers' cash was also increased in 1934 and 1935 by gold imports from abroad. This increase in cash reserves enabled the banks to buy Government securities and yet maintain a high degree of cash liquidity, and the banks were willing to invest large sums in Government paper, as they knew that they could immediately convert it into cash by borrowing against it at the Federal Reserve banks. In France, on the other hand, the central bank took no steps to ease the money market through open-market operations. The banks were much preoccupied to maintain a high degree of cash liquidity and, in view of the tradition against expansion of central bank credit on the basis of Government securities to which reference has been made, the purchase of Government securities involved some impairment in their cash position.

Certain data illustrating the essential differences in the development in the two countries are summarised below :

	<i>United States of America</i>				<i>France</i>			
	Federal Reserve Banks		Member Banks		Banque de France		Four large Deposit Banks	
	Gold	U.S. Govt. securities	Reserve balances	U.S. Govt. securities	Gold	Discounts and advances	Cash, etc.	Discounts of Treasury and commercial bills
	\$(000,000's)				Francs (000,000's)			
December 1929 . .	3,997	511	2,355	3,863	41,359	10,603	2,827	21,064
December 1932 . .	4,226	1,855	2,509	6,540	82,222	5,643	9,945	21,932
December 1935 . .	10,125 ^a	2,431	5,587	10,501	66,102	14,150	5,434	16,030

^a Including revaluation profit of \$2,800 million.

It is not possible to segregate the French deposit banks' holdings of Treasury and commercial bills, but the above figures make it clear that Treasury bill holdings could not have increased in nearly the same proportion as did the American commercial banks' holdings of Government securities between 1929 and 1932. The figures suggest that the French banks' holdings of Government paper may even have declined between 1932 and 1935. In addition to the technical banking factors already mentioned and to the fact that the banks — in spite of heavy borrowing at the Banque de France — suffered a serious depletion of their cash reserves through withdrawals of deposits during the latter period, other factors were operative in preventing the French commercial banks from buying Government securities.

The most important of these was the lack of confidence in Government credit. As already mentioned, the deficits were even larger in the United States than in France, and this did not prevent the commercial banks from bidding actively for Government securities. But the burden of previous borrowings was much lighter in the United States than in France. At the end of 1935, the *per capita* State debt of France was roughly twice as great as in the United States. The Federal debt in the United States was about 60% of the national income of 1934, while it was at least twice the estimated national income in France. Moreover, taxation pressed more heavily on industry in France than in the United States. Increases in rates of taxation were accompanied by declining yields in France, while, in the United States, the limits of taxable capacity had not been so closely approached. In these circumstances, the French commercial bankers, like other investors, were unwilling to put large sums into Government securities, and the urgency of the Government demand for credit combined with the slackness of the offer naturally kept interest rates at a relatively high level.

It has been suggested above that one reason why budgetary deficits exercised a deflationary influence in France is that they gave rise to hoarding and the question has been put : why did budgetary deficits cause hoarding in France and not in the United States ? The short answer to this question would appear to be that in France the currency remained linked to gold at the old parity, while in the United States it was — during the period of the most important budgetary deficits — depreciated by 40%. Recurrent budgetary deficits in France, though immediately deflationary in their influence, involved the risk of inflation and currency depreciation : there was a danger that the State would at some period be unable to cover further deficits by orthodox means, but would be forced to borrow at the central bank. To guard against the contingency of depreciation, individuals hoarded gold or transferred funds abroad. The hoarding of notes is more difficult to explain in these terms, as there is little apparent reason for hoarding a currency whose depreciation is feared. But the small hoarder finds it is difficult to buy gold or foreign currencies, and it is likely that the desire to have funds on hand for the immediate purchase of commodities in case of currency depreciation was a contributory factor, along with a certain distrust of the banking system, in currency hoarding in France during this period.

Mutatis mutandis, similar influences account for the fact that budgetary deficits exercised an inflationary influence in such countries as Germany and Japan and a deflationary influence in countries of the gold bloc. In Germany and Japan, the central banks took over considerable quantities of the deficit-securities, thus increasing the liquid resources of the commercial banking system, and the knowledge that the paper could be used as collateral for borrowing at the central bank made financial institutions willing to take it over. In the gold countries, on the other hand, the central banks played no part in financing the deficit. Moreover, in the other countries where State expenditure had an inflationary influence, the currency was either depreciated or controlled, so that there was no possibility of capital flight.

As in other countries, the yield on Government securities in France determined the general level of private interest rates, which remained in consequence very high. The rate of capitalisation of new bonds in France has exceeded 6% during most months since 1933. Even these high rates are largely nominal, as the progressive narrowing of the market has rendered the issue of new securities very difficult. In 1934 and 1935, the gross nominal value of the issues floated by

private companies in France was 4 milliard francs and less than 3 milliard francs respectively, compared with State issues of 20 milliards in those years, and private issues of 22 milliards in 1930. With the rates prevailing, the inducement for *entrepreneurs* to invest was very slight and there was even little opportunity of reducing the burden on past borrowings through conversion operations.

By decree law, the interest on French State bonds was reduced by 10% in 1935. The fall in the price of *rentes* was so heavy during November, when capital was leaving the country, that, in spite of this cut, the yield at the end of that month was 4.15% compared to 3.94% a year earlier. In the same month, the yield of Swiss Railway bonds was 5.07%.

The Banque de France and the Bank of the Netherlands tried to protect their gold reserves against the flight of capital in 1935 by means of the Bank rate. The French bank established a record in its history by changing its rediscount rate eleven times, the range being from a minimum of 2½% in May to maxima of 6% later in that month and again in November. In the Netherlands, Bank rate was changed no fewer than fifteen times. At the same time, the Bank rate in England was kept at the level of 2% to which it had been reduced — for the first time in thirty years — on June 30th, 1932, and the Federal Reserve Bank of New York established a record by keeping its rediscount rate at 1½% throughout the year.

Even more striking, perhaps, than the contrast between the difficult state of the money market in the gold-*bloc* countries and the continued easy money conditions in the United States and the sterling *bloc* is the contrast between the use made of bank rate in France and the Netherlands on the one hand and Switzerland on the other. Compared with fifteen changes in the Netherlands and eleven in France, the Swiss rate was changed but once in the course of 1935, when it was raised from 2 to 2½% at the beginning of May. The Swiss central bank was none the less equally successful in defending the gold parity.

The explanation of this apparent anomaly would appear to be twofold. In the first place, the Swiss money market is very narrow: the outstanding volume of francs is limited and was, moreover, restricted by arrangement between the central and commercial banks. But in the second place, the forward discount on the various gold currencies during the periods of capital flight rose to levels which seriously limited the influence of Bank rate. The annual rate of discount on the three currencies, calculated on the basis of the three-month forward rate compared with spot, is shown below for the end of each quarter:

% per annum discount	March 31st	June 30th	Sept. 30th	Dec. 31st
France	2½	7½	5	10
Netherlands	5	6	11½	6
Switzerland	14	9½	8	8

At their highest, the forward discounts on these currencies ranged between 30 and 40%. It is clear that, with the forward discount on a currency ruling at the rate of 8-10% per annum, even a bank rate of 6% may be no inducement to foreigners to invest funds in the country or to holders of liquid funds to leave them there to earn the relatively high rate of interest offered; for an even higher rate of interest is to be earned by selling the currency spot and buying it forward, and these spot sales add to the immediate pressure on the currency. In these circumstances, Bank rate may cease to be effective except in so far as it has a psychological influence in persuading the domestic population that the gold parity will, in fact, be maintained and so limiting the domestic capital flight.

During the latter part of 1935 and the first months of 1936, there were certain signs of a re-orientation of French financial policy. Hitherto, as already indicated, the budgetary deficits were financed without any recourse to central bank credit, and they therefore resulted in higher interest rates and exerted a general deflationary effect on the French economy. More recently, part of the new issues of Treasury bills appear to have found their way, directly or indirectly, to

the Bank of France. The relevant financial series are shown below :

	Bank of France				Commercial bank deposits	Savings bank deposits
	Gold	Domestic discounts	Note circulation	Private deposits		
	(In milliards of francs)					
End of :						
March 1935 . . .	82,635	3,969	83,044	15,975	31,670	62,481
December 1935 . .	66,296	9,473	81,150	8,497	27,553	62,064
March 1936 . . .	65,587	11,877	83,197	8,168	27,243	61,549
May 1936	57,022	19,289	84,705	6,839	...	60,906 ^a

^a April.

These figures point clearly to renewed hoarding and capital exports on a large scale : bank deposits have fallen, while at the same time the note circulation has risen during the first months of 1936 and the Banque de France has suffered a steady loss of gold. In the fourteen months ending May 1936 the Bank lost 25½ milliard francs (about \$1,650 million), or over 30% of its gold reserve. The drain on the commercial banks' cash reserves is reflected in the fall in private deposits at the Banque de France. At the same time, rediscounts with the Banque de France have risen very sharply and, although no direct data are available, it is commonly assumed that the whole of this increase consists of Treasury bills. Early in 1936, the limit to the issue of Treasury bills was raised by 6.3 milliard francs. The expansion of central bank credit was accompanied by an uninterrupted rise in wholesale prices, the index of the *Statistique générale* rising from 51.4% of its 1929 level in July 1935 to 60% in March 1936, or by 17%. During the same period, the Board of Trade index for the United Kingdom rose by less than 5% and the American wholesale price index by less than 2%. As shown in an earlier table, the under-valuation of the Anglo-Saxon currencies was considerably increased as a result of these divergent price movements. Moreover, in spite of the 10% cuts in rents, etc., made by the decree-laws of May 1935, the cost of living in France rose by almost 2% in the last quarter of the year. This expansion of central bank credit and rise in prices was accompanied by a slight revival in industrial production, the general index rising from 66.7% of its 1929 level in July 1935 to 71% in February 1936. On the other hand, as a result chiefly of a fall in the value of exports, the adverse trade balance was increased from 2.4 milliard francs during the period August 1934-March 1935 to 4.5 milliard francs from August 1935-March 1936. Capital flight, hoarding and loss of confidence were responsible for a fresh impairment of Government credit ; the price of 3% *Rentes* fell from 79.40 at the end of August 1935 to 66 at the end of March 1936.

Comparison of Belgium and Czechoslovakia.

Until March 1935, the experience in Belgium ran along the same lines as the group of countries just analysed. The hoarding of an over-valued currency, continued pressure of deflation, a grave discrepancy between wholesale prices and the cost of living, business losses, budgetary difficulties, credit restriction and relatively high interest rates — these were the essential characteristics of the economic situation. Between March 1935, when the currency was devalued, and the end of the year, the general index of industrial production rose from 66.9 to 78.8 (1929 = 100) and the percentage of workers wholly unemployed fell, according to the unemployment insurance statistics from 21.8 to 17.9. To bring out clearly what factors were responsible for this improvement, it will be useful to compare developments in Belgium, not only with those in the gold bloc, but also with those which followed the devaluation of the Czechoslovak crown in February 1934. It is not suggested that the two cases are completely comparable, but they have enough elements in common to justify a comparison. In particular, both countries are highly industrialised small States which are largely dependent on foreign trade.

Before attempting to appraise the results of devaluation in the two countries, it is essential to realise that the motives for which devaluation was undertaken differed. These differences are

reflected in the technique used and in the monetary policy subsequently followed. In Czechoslovakia, the sole purpose of devaluation was to adjust Czechoslovak prices to world levels. The deflation had not been successful in accomplishing this end, and it could not be persisted in for social and economic reasons. The rate of devaluation, $16\frac{2}{3}\%$, was regarded as sufficient to eliminate the existing disparity between the internal and external purchasing power of the crown, and thus to restore the competitive power of Czech exporters in relation to the sterling *bloc* and countries, such as Germany, which subsidised exports while remaining on the gold standard at nominal parity. As the rate was just sufficient for the purpose, according to official statements, it was necessary to prevent any considerable internal rise of prices lest the competitive capacity of Czech exporters be again impaired.

In Belgium, on the other hand, the devaluation was essentially regarded as a measure which would put an end to deflation, restore profits to business, stimulate the domestic market and relieve the banking crisis. It was desired that wholesale prices should rise sufficiently to eliminate the abnormal disparity between them and retail prices which had developed during the deflation, and the rate of devaluation chosen, 25-30%, was regarded as sufficient, not only to restore the competitive power of Belgian export industry, but also to allow margin for a sensible rise of wholesale prices.

The policies pursued immediately after the devaluation must be interpreted in the light of these different objectives. In Czechoslovakia, the whole of the profit on the revaluation of the gold reserves of the National Bank (422.3 million crowns) was used to redeem State debt to the bank. This debt, a relic of the war inflation, was non-interest-bearing, and throughout the depression it had been amortised according to schedule, falling from 3,761 million crowns at the end of 1929 to 2,593 millions at the end of 1933. The effect of this procedure was, of course, to cancel the profit on the revaluation, which therefore had no effect on the monetary circulation. In Belgium, on the other hand, part of the profit was spent and thus placed at the disposal of the Belgian economy. Of the total profit of 3,705 million francs, less than 800 millions were used for the repayment of State debt (345 millions to the National Bank, 133 to the Grand-Duchy of Luxemburg as its share of the revaluation profit, and 300 millions to the Dutch banking group which advanced 15 million florins in 1934). Of the remainder, 100 millions was used for budgetary purposes, a *Fonds des rentes* was constituted with 800 millions to support the *Rentes* market, an Exchange Equalisation Fund¹ was set up with 1,125 millions, and 900 millions remained unallotted at the end of 1935. According to a private estimate,² the *Fonds des Rentes* had bought, up to December 1935, *rentes* to a value of 600 million francs, of which about half from Belgian holders. This is obviously equivalent to open-market policy.

In Czechoslovakia, the National Bank was given some margin for credit expansion through the reduction of its legal minimum cash reserve from 35 to 25%. On the other hand, it was required to hold this reserve exclusively in gold, where previously it had been allowed to include foreign currency. In any case, no use was made of this margin, as the bank's legal cash reserve remained above 40% after the devaluation.

In both countries, a special credit institute was created under Government auspices after the devaluation. An examination of the functions of these institutes again reveals the same difference in monetary policy. In Czechoslovakia, the main purpose of the Institute of Rediscount and Advances is to grant credit to financial institutes against bills of exchange and securities. In Belgium, the Institute of Rediscount and Guarantee may also lend directly to industrial commercial and agricultural enterprises. Moreover, the limit to which the Czechoslovak Institute

¹ This fund was liquidated with the definite stabilisation of the belga on April 1st, 1936, and its resources handed over to the Office de Redressement économique.

² Professor BAUDHUIN, in *Bulletin d'information et de documentation de la Banque nationale de Belgique*, December 25th, 1935.

might rediscount at the National Bank was fixed at 350 million crowns, while in Belgium no limit was set.

The result of these policies on the monetary circulation in the two countries is reflected in the following figures :

	<i>Czechoslovakia.</i>			<i>Belgium.</i>		
	Bank notes	Metallic currency	Current accounts at National Bank	Notes in circulation	Private current accounts at National Bank	
	Crowns (000,000's)			Francs (000,000's)		
January 1933 . . .	5,616	963	907	December 1934 . . .	17,650	975
January 1934 . . .	5,449	927	874	February 1935 . . .	18,237	889
January 1935 . . .	5,028	927	1,317	March 1935 . . .	18,851	910
January 1936 . . .	5,208	937	920	December 1935 . . .	20,583	4,839

The improvement in the foreign trade of Czechoslovakia did not lead to a rise in the note circulation, as the exporters used the crown proceeds of the foreign bills to repay bank loans, and the banks in turn increased their own deposits at the National Bank. In Belgium, the monetary circulation increased both as a result of the measures already described and as a result of the inflow of capital from abroad. The gold reserves of the National Bank increased by 2.6 milliard francs between the devaluation and the end of 1935, and it is likely that the greater part of the increase of 2.4 milliards in its bill portfolio represents foreign bills.

Thus, in Belgium, the devaluation was followed by monetary expansion, while in Czechoslovakia this was not the case. Moreover, in Belgium, definite steps were taken immediately after the devaluation with a view to reducing the long-term rate of interest, while in Czechoslovakia no special effort was made to secure this end until the end of 1935. Belgian *rentes* were converted to a 4% basis in May 1935 and the Czechoslovak funded debt to a 4½% basis in December. The movement of interest rates in the two countries is shown below :

	Central Bank Rate		Open-market Rate		Yield of <i>Rentes</i>	
	Belgium	Czechoslovakia	Belgium	Czechoslovakia	Belgium	Czechoslovakia
1933 . . .	3.5	3.57	2.42	3.57	4.54	6.06
1934 I . . .	3.5	3.5	2.09	3.5	4.27	5.90
II . . .	3.0	3.5	2.06	3.5	4.00	5.75
III . . .	2.67	3.5	2.22	3.5	3.86	5.96
IV . . .	2.5	3.5	2.28	3.5	4.18	5.75
1935 I . . .	2.5	3.5	2.38	3.5	4.06	5.34
II . . .	2.17	3.5	2.12	3.5	3.86	5.31
III . . .	2.0	3.5	1.88	3.5	3.86	5.12
IV . . .	2.0	3.5	1.88	3.5	3.91	5.08

Finally, the devaluation in Belgium was almost immediately followed by the abolition of the foreign-exchange restrictions which had been imposed during the critical period of flight from the franc, while in Czechoslovakia these restrictions were left intact. Exporters must surrender foreign exchange proceeds to the National Bank and, except for certain articles, importers still require previous authorisation for purchases abroad.

The following table summarises the recent economic development in Belgium and Czechoslovakia. In reading this table, it must be borne in mind that the Czechoslovak devaluation took place in the first quarter of 1934 and the Belgian in the first quarter of 1935.

(B. = Belgium C. = Czechoslovakia.)

Quarterly averages	Industrial production (1929 = 100.)		Building activity (1929 = 100.)		FOREIGN TRADE.						Wholesale prices (1929 = 100.)		Cost of living (1929 = 100.)	
					Imports		Exports		Balance in millions					
	B.	C.	B.	C.	In milliards of national currency		B. C.		B. C.		B.	C.	B.	C.
1933	71.4	60.2	92.6	51.9	3.71	1.46	3.51	1.46	-198	+ 6	58.9	72.2	82.6	90.7
1934 I	67.5	62.2	76.5	30.6	3.65	1.42	3.56	1.47	- 83	+ 29	56.7	72.1	80.9	89.3
II	65.1	69.8	92.4	65.1	3.34	1.59	3.30	1.67	- 41	+ 76	55.5	73.6	77.0	89.9
III	64.6	67.9	77.0	49.9	3.16	1.56	3.14	1.97	- 22	+405	55.4	75.4	79.1	90.4
IV	67.5	66.1	62.0	30.7	3.56	1.79	3.44	2.17	-115	+382	54.9	75.8	80.5	89.4
1935 I	66.5	64.8	76.1	27.3	3.23	1.35	3.30	1.58	+ 62	+233	54.9	76.5	76.9	89.3
II	71.5	67.4	133.1	44.4	4.32	1.54	3.83	1.70	-492	+160	64.2	77.8	77.1	90.9
III	71.2	69.4	105.6	51.5	4.31	1.64	3.96	1.85	-347	+208	65.2	77.1	80.9	92.8
IV	79.4	78.1	82.3	...	5.14	2.21	4.76	2.29	-380	+ 83	68.0	77.6	85.0	91.9

In so far as these statistics can be taken as reflecting the results of the different monetary policies analysed above, they can be summarised briefly by saying that the result of the policy of expansion and cheap money in Belgium was a notable revival of the home market, while in Czechoslovakia the effects of the devaluation were largely confined to the export trades. No measure of production for the home market is available; the trend is probably reflected in the indices of building activity, which moved sharply upwards after the devaluation in Belgium, while they continued to fall in Czechoslovakia. In both countries, the value of exports in terms of national currency rose immediately after devaluation, but in Belgium the value of imports rose at once and more sharply than exports, while in Czechoslovakia the value of imports did not rise considerably until the end of 1935. In Belgium, an effort was made to restrain exports to the gold bloc, while at the same time the revival of domestic industries and in particular the textile industry led to an increased demand for foreign materials, for which higher prices had to be paid. In brief, the devaluation in Czechoslovakia was followed by an improvement in the balance of trade and in Belgium by a deterioration. This shows that the expansion in monetary demand in Belgium reflected in all the economic series shown above was not due to any direct shift of means of payment from abroad resulting from the improved competitive capacity of the country. It was due rather to the spending of the gold profit, to the return flow of capital from abroad and — perhaps most important of all, but unfortunately impossible to measure — to the dishoarding of notes with the revival of confidence in the internal financial structure.

The general economic situation, as reflected in the indices of industrial production, shows a much more rapid improvement in Belgium than in Czechoslovakia. The initial stimulus to production in the latter country was not sustained and, one year after devaluation, the general index was less than 5% higher than in the first quarter of 1934; in Belgium, the index was about 20% higher in the last quarter of 1935 than in the corresponding quarter of the previous year. These developments should be considered in conjunction with the movement of prices. In Czechoslovakia, the restrictive credit policy pursued after the devaluation limited the rise in prices; during 1934, the general index of wholesale prices was, on an average, only 2½% higher than in 1933 and the cost of living was lower. In Belgium, on the other hand, a considerable rise in prices occurred after the devaluation, and this rise served to restore some degree of equilibrium to the general system of prices. This is illustrated in the following table:

	Prices of industrial products (1933 = 100.)			Index of wholesale prices (1929 = 100.)	Cost of living
	Raw materials	Semi-manufactured	Finished goods		
January 1935	94	94	89	56	79
April 1935	121	107	98	62	76
January 1936	145	116	105	68	85
% Increase January 1935- January 1936	54	23	18	23	8

The prices of industrial raw materials rose by the full measure of the devaluation, but the rise was progressively less important in the higher stages of manufacture and distribution, where domestic costs form a large fraction of the total. A 54% increase in the prices of raw materials during 1935 produced a rise of only 8% in the cost of living. In so far as the rise in prices was exclusively due to the necessity for paying higher prices for imported materials, it can hardly be considered a wholly favourable symptom. But, as shown above, there was an increase in the monetary circulation and demand, and fixed costs could now be spread more thinly over a larger volume of output and goods sold at prices which ensured the *entrepreneur* higher profits than before, even though his profit per unit sold may have fallen.

* * *

Some General Conclusions.

The preceding analysis of the monetary evolution of a number of representative countries points to certain general conclusions. The first of these is the great influence that changes in the rate of turnover of the monetary supply exercise over the demand for goods in terms of money. In every country which has been examined, the average velocity of circulation of bank deposits fell more during the depression phase of the cycle than did bank deposits themselves. In other words, the deflation was characterised less by a contraction of the supply of money than by a fall in the efficiency with which the existing money supply was used. The evidence regarding the upward phase of the cycle is less clear. In all countries where production and other economic indices have improved, the improvement was accompanied by a rise in the total demand for goods in terms of money, but the means by which this demand became effective were not uniform. In the United Kingdom, for example, the increase in monetary demand which occurred after 1932 was the result of a rise in both the volume of bank deposits and (later) in their average velocity of circulation; in the United States, the recovery of April-July 1933 was financed entirely by an increase in the rate of turnover of bank deposits; but, on the other hand, the increase in production beginning in 1934 (after the relapse of August-November 1933) was financed chiefly by a rise in deposits, with the average rate of turnover remaining at a very low level.

A comparison of the part which changes in the rate of money-turnover have played in different countries is rendered complicated by the fact that the relative importance of bank deposits in the total monetary circulation varies widely, and therefore the significance of changes in the velocity of circulation of bank deposits (the measure hitherto used) differs in different countries. In the United States, for example, bank deposits normally constitute some 90% of total means of payment, and notes and coins only 10%, while in France notes are several times as important as bank deposits. It is not possible to measure directly the changes in the velocity of circulation of notes, but an indirect attempt may be made to estimate roughly the changes in the velocity of circulation of the whole money supply.

In the previous edition of this volume, figures were compiled for the "net quantity of money available" in all the countries covered. These figures include, not only notes and coins in actual circulation (*i.e.*, excluding those held by banks), but also sight deposits with commercial banks, and the deposits of Governments and private individuals with the central bank. If the movements of this series were compared with the changes in the money value of goods produced, the difference could be taken as roughly attributable to changes in the efficiency with which money was used in buying goods. If, for example, over a certain period the money value of production fell by 30% and the total money supply by only 10%, it is a reasonable inference that the frequency with which the average unit of money was turned over against goods fell during the period and that the decline in the rate of turnover was something of the order of 20%.

Unfortunately, indices of the money value of production are not generally available. For some twenty countries, however, indices of the quantum of industrial production are available

and these have been converted roughly into value indices by multiplying them by a mean of wholesale and retail prices. The result has then been divided by the index of "net quantity of money available", as shown in Table I of *Commercial Banks, 1929-1934*, and the quotient taken as a rough measure of the velocity of turnover of the whole money supply.¹ The results are shown in Diagram XVIII on the opposite page.

Indices computed in so rough a manner are obviously nothing more than approximate indications. These indices do, however, give additional confirmation to the conclusion that, during the depression, the fall in velocity was quantitatively more important than the decline in the quantity of money. This is particularly striking in France and the Netherlands, where the monetary supply remained consistently above the 1929 level, while the rate of turnover of the average monetary unit fell by as much as 50 or 60%. But it was not only in countries where notes were hoarded that velocity fell more than the quantity of money: the phenomenon was universal, and occurred even in such countries as Canada, Italy and Poland, where the contraction in the means of payment itself was particularly sharp.

Velocity fell during the depression because business-men and private individuals preferred holding cash to investing or spending it. They accumulated liquid resources, and the withdrawal of these funds from active circulation naturally reduced prices and incomes. The motives which induced business-men and corporations to build up abnormally large cash balances are complex; the most potent, however, was probably a pessimistic outlook regarding the future course of prices and incomes. So long as it was anticipated that prices would continue to fall, a fortuitous risk was attached to investment and a fortuitous gain (in the form of the lower prices which, it was anticipated, would have to be paid for the goods representing the real investment — machines, etc.) might be expected from delaying investment. For similar reasons, individuals postponed certain purchases so long as it was anticipated that prices would continue to fall.

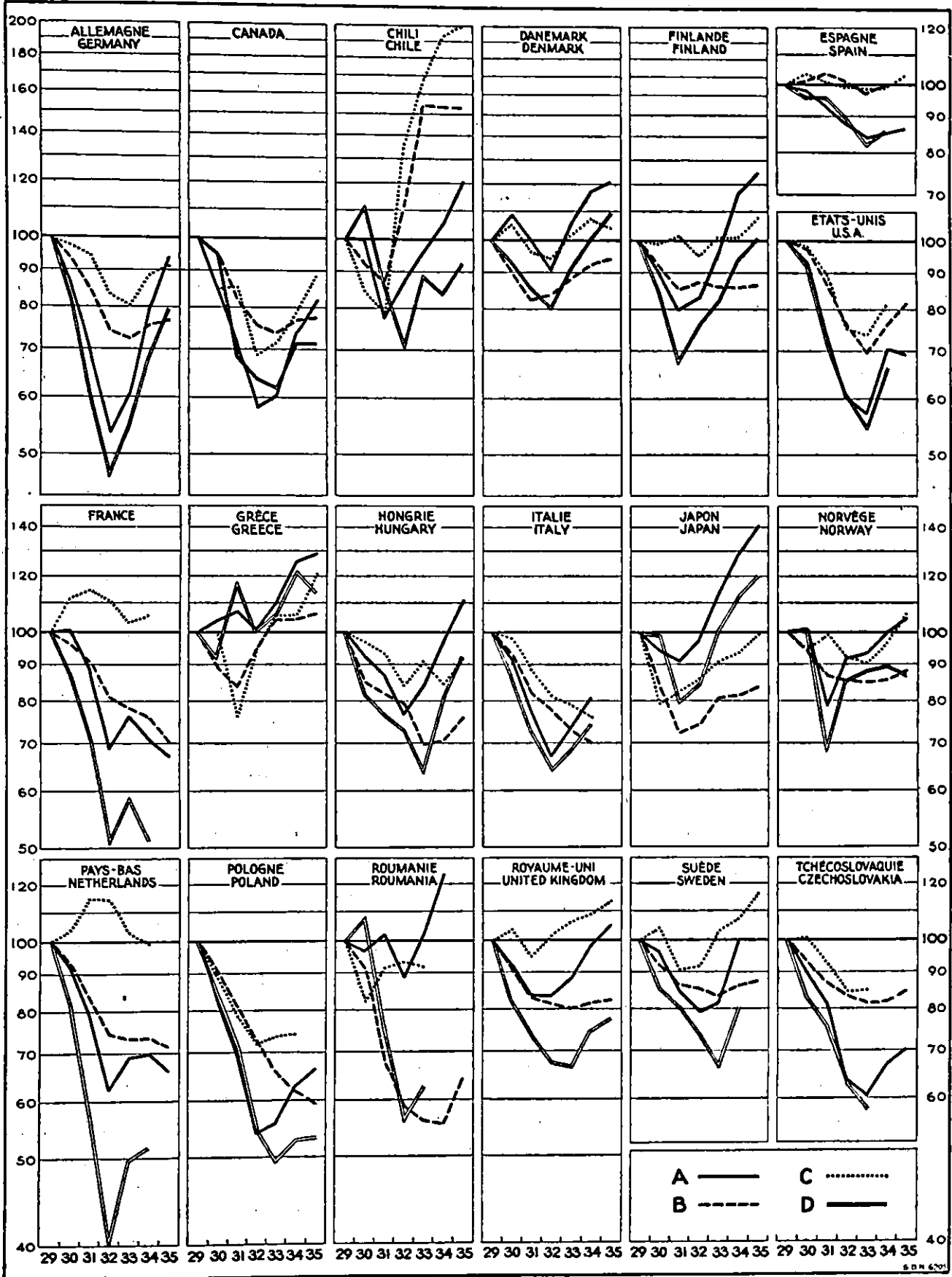
During the period 1929 to 1932, velocity fell *more* than the quantity of money in most countries, whereas in some years the movement of the two curves was even in *opposite* directions. This lack of parallelism between the movements of velocity and the changes in the quantity of money suggests some reflections of a general nature. The first of these is connected with the limitations of monetary policy. The broad aim of such policy is to control the demand for goods in terms of money. This demand is the product of the quantity of means of payment available and the rapidity with which they circulate. Monetary policy can control the first element, but the second (sometimes quantitatively more important) is subject to other influences as well. While it is true that factors subject to at least some measure of monetary control — such, for example, as the rate of interest over short periods — play a part in determining velocity, non-monetary factors are also important. The international outlook, domestic legislation and apparently irrational waves of mass sentiment — optimism and pessimism — have all played an important part in changing the rate of turnover of the money supply in the period covered by this volume. The effect of a given change in the monetary supply can therefore be either intensified or counteracted by changes in velocity.

A second general reflection, suggested by Diagram XVIII, is this: once the contraction in the means of payment and decline in the rate of turnover of the money supply got under way in 1930/31, it tended to be cumulative in its effect. Individual and institutional hoarding reduced incomes by drawing funds from active circulation; prices declined sharply and there was a general search for liquidity; money came to be used as a store of value rather than as a medium of exchange; bank loans were called in and deposits cancelled. An examination of Diagram XVIII shows that, where this spiral was broken and the demand for goods increased, the improvement was in most cases due, in the first instance, to an increase in the money supply, and it was only later that the average rate of turnover of the money supply rose. Once velocity did rise, however,

¹ It will be at once apparent to the reader conversant with the theoretical literature that the basis of the above process is the Fisherian Equation of Exchange $MV = PT$, rewritten as $V = \frac{PT}{M}$.

Diagram XVIII.
MONEY, VELOCITY, PRICES AND PRODUCTION.
 (1929=100.)

A ——— Quantity of money.
 B - - - - Velocity of circulation.
 C Industrial production.
 D = = = Average of wholesale and retail prices.



its increase was frequently proportionately greater than the increase in the quantity of money. In other words, just as hoarding was the principal monetary counterpart of the fall in the demand for goods in terms of money which characterised the depression period, so, in many countries, was dishoarding the principal counterpart of the increase in the demand for goods in terms of money which characterised the revival. As already mentioned, the turning-point from depression to revival was in most cases characterised by an increase in the supply of money. Germany and Italy appear to be important exceptions, as their velocity curves in Diagram XVIII rose before the money curves. But these countries can hardly be considered real exceptions, as large State expenditures covered by internal borrowing were made in both cases; the resulting increase in bank deposits was, however, largely confined to special public credit institutes and hence excluded from the figures for money supply used in Diagram XVIII.

It must be recorded, as a matter of historical fact, that, in those few countries which did not either depreciate their currency or use the protection afforded by exchange control to pursue an expansionist monetary policy, no considerable measure of economic improvement had taken place by the end of 1935.

It would, of course, be misleading to attribute the relative stagnation of affairs in the countries remaining on gold at old parities entirely to the domestic monetary policy pursued. It has been shown above, in some detail, that currency hoarding was primarily responsible for the low level of monetary demand; and this currency hoarding was due in large part to the depreciation of foreign currencies, their continued fluctuation and the resulting fears regarding the stability of the currencies remaining on the gold standard at the old parities. It is necessary in this respect to draw a distinction between the effect of the depreciation of minor and major currencies. In the case of the former — such, for example as the Swedish crown — the domestic results are the most important, while in the case of the latter — particularly the pound sterling and the American dollar — the repercussions abroad of currency instability have also to be considered. In addition to the indirect deflationary effect on the gold *bloc* produced through the intensification of currency hoarding, a direct deflationary influence resulted from the failure of domestic prices in the expansionist countries to rise to the full extent of the currency depreciation. The result was a fall in the world level of gold prices; the domestic price systems of the countries of the gold *bloc* remained attached to the restricted international price system, and it was necessary to cut domestic costs and prices to meet the increased competitive power of foreign countries. In the event, the adjustment was made by direct quantitative restrictions of imports and subsidies to exports, but this policy intensified the strain on the State finances through reducing Customs revenues and enlarging expenditures, and so was a contributory factor in the relatively high level of interest rates prevailing in the countries remaining on the gold standard.

The connection between changes in the supply of money and the level on interest and money rates is illustrated in Diagram XIX opposite, which shows for twelve countries the quarterly changes in the note circulation and (where available) current account deposits with commercial banks and in the yield on public bonds and on short-term paper. The first two series are based on 1929 as 100 (except for the current accounts with Swiss commercial banks, where the earliest available figure, relating to the end of 1931, is taken as base) and the scale is shown on the right of the diagram; the last two series are plotted on an absolute scale, which is shown on the left of the diagram.

Since the beginning of 1933, it is easy to discern in most countries a correlation between the movements of the quantity of money and the price of capital. Where current account deposits and the volume of notes in circulation have gone up, interest rates have tended to fall, and where current accounts have fallen, as in France and Switzerland, the tendency of interest rates has, on the whole, been upwards.— The correlation is by no means perfect and it would not be reasonable to assume that the price of capital can be indefinitely controlled by varying the quantity of means of payment available. The valuation set by the lender on the risk involved in the loan is another factor of great importance in the short period with which the present analysis is concerned. The

Diagram XIX.

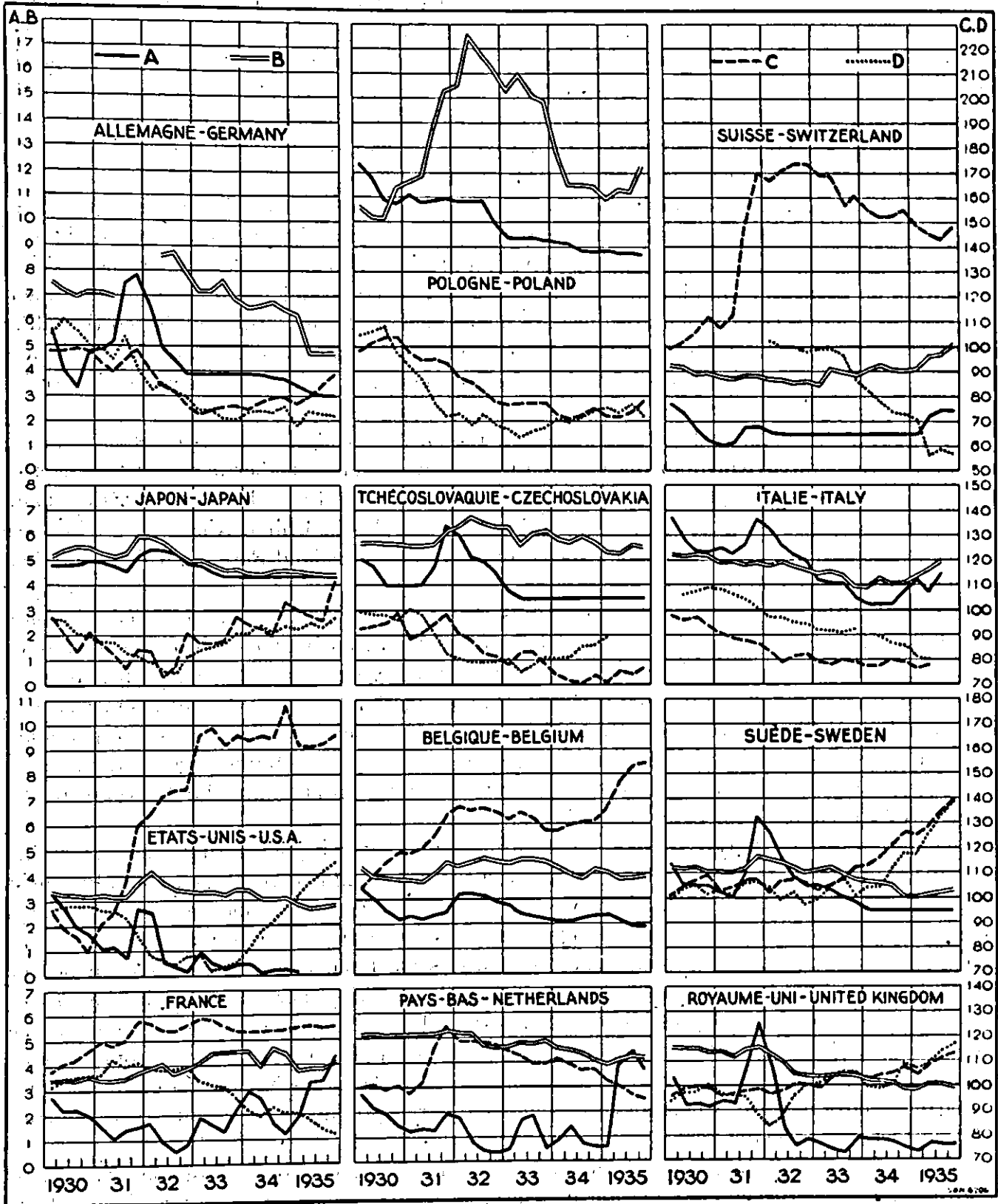
MONEY SUPPLY AND MONEY RATES.

A Notes in circulation.

B Current accounts with commercial banks.

C Yield on Government bonds.

D Short-term money rates.¹



¹ Commercial paper rate in Belgium, Japan, Switzerland, Poland, Italy, Sweden ; Treasury bill rate in France, United Kingdom, United States ; private discount rate in Czechoslovakia, Germany, Netherlands.

diagram reveals, however, a clear difference between the downward trend of interest rates in such countries as the United Kingdom, the United States, Sweden and Germany, where a policy of monetary expansion in one form or another has been pursued, and their maintenance at a relatively high level in the countries — France, Switzerland, the Netherlands — where deflation continued. The fall in interest rates in the former group of countries stimulated investment, while the maintenance of rates in the latter group discouraged it.

The policy of monetary expansion pursued in the former group of countries involved, of course, costs and risks of its own. In Germany, for example, the large State expenditures went hand-in-hand with a progressive tightening of the exchange control and depreciation in the unofficial value of the various categories of Reichsmarks. Moreover, the service of the foreign debt was cut down and blocked balances accumulated. These balances were used, in part, for State purposes, so that foreign creditors paid part of the cost of credit expansion in Germany. In the United States, the most obvious cost of the monetary expansion was a considerable increase in the public debt, and its most obvious danger a large increase in the potential of inflation through high bank deposits and huge excess cash reserves. Within the sterling *bloc*, certain signs of strain were becoming evident in 1935, though it is still too early to assess their importance. With the increase in monetary circulation, the rise in money incomes and the revival of investment opportunities, there was a considerable increase in the demand for investible funds and the fall in interest rates appears to have come to an end. Details have already been given regarding the loss of foreign currency reserves of Australia, and the concomitant decline in the commercial banks' cash reserves and increase in their advances to industry.

In Sweden, there was a slight but persistent rise in the yield of Government bonds during 1935, and in the United Kingdom the yield on Consols was slightly higher in the last quarter of 1935 than in the corresponding quarter of the previous year. In both these countries, bank deposits and the note circulation rose considerably in 1935. In the United Kingdom, the increase in the note circulation took place at the expense of the Bank of England Reserve, which had fallen to a low figure at the end of 1935.

Increase in the demand for investible funds in the United Kingdom is reflected, not only in the figures for capital issues which have been quoted previously, but also in the figures for advances of the London clearing banks, which rose from £763 million in September 1935 to £824 million in March 1936 (compared with £767 million in March 1935). The banks met part of this demand by selling Government securities (their investment portfolio was £614 million in March 1935, £618 million in September 1935 and £605 million in March 1936). At the same time, they let their cash reserves run down, the ratio falling from 11.1% in March 1935 to 10.3% in September 1935 and March 1936.

The sterling exchange rate was kept practically stable against gold during the year ending March 1936. In the light of the evidence adduced in the preceding paragraphs, this stability must be largely attributed to the fact that there was a net inward movement of short-term capital, which was offset by acquisitions of gold and foreign currencies by the Exchange Equalisation Account.

The increase in the supply of money in most countries which pursued an expansionist monetary policy did not lead to a proportionate increase in wholesale prices nor, *a fortiori*, in the cost of living. The bottom of the depression was characterised by large unemployed resources in the form of labour and idle machines, and a greatly increased output could be obtained from industry without a corresponding rise in prices. This is illustrated in Diagram XX opposite, which shows the quarterly movements of wholesale prices and industrial production in twenty-two countries from 1930 to 1935. The diagram is drawn on a logarithmic scale.

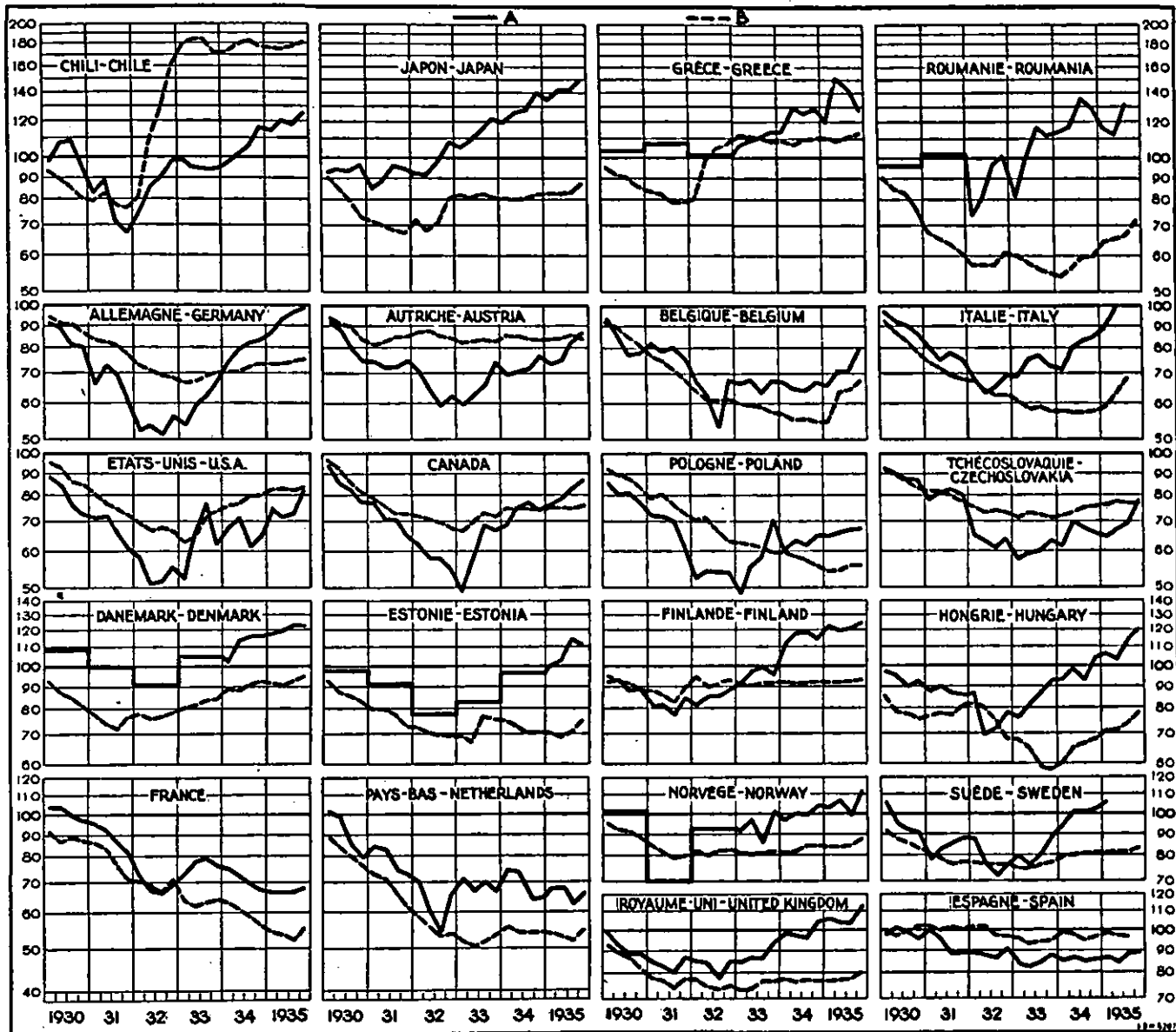
A comparison of this diagram with the preceding one will show that, in most countries where current accounts and the note circulation increased after 1932, wholesale prices rose much less. In Sweden, for example, current accounts rose, between the second quarter of 1932 and the last quarter of 1935, from 97 to nearly 140% of their 1929 average and the note circulation from slightly over the 1929 level to 140%, while wholesale prices began to rise only in the third quarter

Diagram XX.

WHOLESALE PRICES AND INDUSTRIAL PRODUCTION.

A Wholesale prices.

B Industrial production.



of 1933 and from then until the end of 1935 increased from 75 to less than 85% of the 1929 average.

In practically all cases, the turn in industrial production preceded the turn in wholesale prices. The price curve then flattened out and only later showed a rising tendency. This strongly suggests that a rise in industrial production need not wait upon a rise in the general level of wholesale prices. The experience of France, the Netherlands and Belgium in 1932/33, however, where an incipient revival of industrial production was cut short and the indices again fell or at least failed to rise further, suggests that, unless those conditions prevail which enable the increased money requirements resulting from the revival of production to be satisfied — *i.e.*, enable the price curve to flatten out — the revival in production is itself likely to come to an end.

Geneva, August 10th, 1936.

MONNAIES ET BANQUES 1935/36, Vol. I : APERÇU DE LA SITUATION MONÉTAIRE
 MONEY AND BANKING 1935/36, Vol. I : MONETARY REVIEW

CORRIGENDA

Les légendes des graphiques XV, XVII, XVIII, XIX et XX figurant aux pages 41, 44, 60, 63 et 64 respectivement doivent se lire comme suit:

The legend to diagrams XV, XVII, XVIII, XIX and XX, pages 37, 40, 55, 57 and 59 respectively, should read as follows:

GRAPHIQUE XV, page 41:

Prix de gros	= D -----	Production industrielle	= C
DIAGRAM XV, page 37:			
Wholesale prices	= D -----	Industrial production	= C

GRAPHIQUE XVII, page 44:

Biens de consommation	= B -----	Biens de placement	= A -----
DIAGRAM XVII, page 40:			
Consumption goods	= B -----	Investment goods	= A -----

GRAPHIQUE XVIII, page 60:

A - Quantité de monnaie	=	C - Production industrielle	= -----
B - Vitesse de circulation	= =====	D - Moyenne des prix de gros et de détail	= -----
DIAGRAM XVIII, page 55:			
A - Quantity of money	=	C - Industrial production	= -----
B - Velocity of circulation	= =====	D - Average of wholesale and retail prices	= -----

GRAPHIQUE XIX, page 63:

A - Billets en circulation	= -----	C - Taux de capitalisation des fonds d'Etat	= =====
B - Comptes courants dans les banques commerciales	=	D - Taux d'escompte à court terme ¹	= -----

DIAGRAM XIX, page 57:

A - Notes in circulation	= -----	C - Yield on Government bonds	= =====
B - Current accounts with commercial banks	=	D - Short-term money rates ¹	= =====

GRAPHIQUE XX, page 64:

A - Prix de gros	= -----	B - Production industrielle	= -----
DIAGRAM XX, page 59:			
A - Wholesale prices	= -----	B - Industrial production	= -----