

SPECULATION ON THE NEW YORK
STOCK EXCHANGE

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SEPTEMBER, 1904—MARCH, 1907 GIPE-PUNE-007859

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2-137 in the "Studies in History, Economic
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SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS
FOR THE DEGREE OF DOCTOR OF PHILOSOPHY
IN THE
FACULTY OF POLITICAL SCIENCE
COLUMBIA UNIVERSITY

NEW YORK

1913

X651.7311-No7

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ALGERNON ASHBURNER OSBORNE

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to
THE MEMORY
OF
MY FATHER AND MOTHER

PREFACE

THERE are, broadly speaking, three accepted methods of discussing the modern stock exchange in general or any single exchange in particular. One consists in picturing the stock exchange as an institution which is indispensable to the conduct of present-day business; the stock exchange is held up before us as attaining a degree of success in performing certain services for society generally, such as no other human institution has ever reached. Another condemns the workings of the New York Stock Exchange and denounces everybody actively connected with it as a thief or a gambler or both. Still a third recognizes the usefulness of the stock exchange, while it deplores evils that are incidental to it. But, because of the weaknesses of unchangeable "human nature", these evils are depicted as ineradicable or well-nigh so.

The present monograph is not an attempt to achieve mere originality. The New York Stock Exchange, in itself, is not idealized, those operating on it are not sweepingly characterized as either dupes or knaves, and possible remedies for such evils as were glaringly apparent during 1906 and 1907, for example, are briefly considered, and are set forth as quite practicable. But, if discussion can be diverted from the well-trodden paths along the three main lines indicated, it seems as if a clear recognition of the evils and correctives for them may result from discussion with a new starting-point. Those who have beheld stock speculation from any one of the three viewpoints—which are almost mutually exclusive—appear to have accomplished little in the way of elucidating the subject or of curing the evils.

First of all, it seems probable that, by critical analysis of the functions of organized speculation, during a period when it was exceedingly active, we may discover the extent to which such speculation was a benefit to society. Criticism of certain wise saws applying to stock speculation seems a necessary first step in focussing attention on the evils of modern speculation. Accordingly the following monograph is largely critical of certain commonly accepted dicta regarding speculation, in the light of events briefly related in the narrative portion of the work. Constructive suggestion is brief. It cannot be otherwise in the present stage of discussion, where most minds are so hazy on the significance of speculation. The criticism is offered, along with the suggested correctives, chiefly with a view of revivifying and redirecting discussion. The adoption of the suggested remedial measures in the near future cannot perhaps be expected. But if discussion is drawn away from its conventional courses, a distinct step in advance will be made. The expectations and aims just set forth will serve as an *Apologia* for this monograph.

To Professor H. R. Seager for his valuable and helpful advice, and for undertaking the drudgery of reading the manuscript in its crudest stages and also the proof; and to Professor E. R. A. Seligman, who has helped in preparing the manuscript for publication, the author wishes to offer his heartfelt thanks. To both of them and to the other members of the Faculty of Political Science of Columbia University, under whom the author has studied, he wishes to extend his gratitude for many illuminating suggestions they have given him, often unconsciously. Their collective outlook on human activity, though comprehended only in part perhaps, has been refreshing and stimulating to a degree which cannot be measured or expressed.

CONTENTS

	PAGE
PREFACE	7
CHAPTER I	
Introduction	II
CHAPTER II	
Active Speculation: Urgent Investment Demand—September-December, 1904	21
CHAPTER III	
Changing Conditions of Investment: 1905	35
CHAPTER IV	
Tendencies toward Over-Speculation: Restricted Powers of Investment Absorption—January-June, 1906	49
CHAPTER V	
Over-Speculation and Liquidation on a Large Scale—July, 1906-March, 1907	63
CHAPTER VI	
The Assumed Investment Demand	79
CHAPTER VII	
Speculative "Anticipation of the Needs of the Market"	91
CHAPTER VIII	
Stock Speculation in 1906 and the Succeeding Economic Readjustment	118
CHAPTER IX	
Summary, General Conclusions and Remedial Measures	144

APPENDIX I

PAGE

Number of Shares Sold on the New York Stock Exchange, Each Month, 1900 to 1912 Inclusive	174
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APPENDIX II

Prices of Some Leading Speculative Stocks in the New York Stock Exchange, on the First of Each Month, September, 1904, to March, 1907, and on March 29th, 1907.	174
VITA	175

CHAPTER I

INTRODUCTION

“In striking contrast to the . . . legal position of the principal continental exchanges is the private and independent character of the New York Stock Exchange. This privacy has been intensified by the settled policy of the Exchange to keep its affairs as secret as possible, to attend strictly to its own business, and to resent any interference from without. It has resisted every effort toward incorporation. That an association which dominates the financial market, directs the course of investment, and settles the value of property for millions of people has for nearly a century maintained itself as a purely private organization, and will perhaps continue to do so for another hundred years, is a striking example of the confidence of people of the Anglo-Saxon race that, as fast as public wants develop, private activity will furnish the best means to satisfy them.”—H. C. Emery, *Speculation on the Stock and Produce Exchanges of the United States* (1896).

HOWEVER people of the Anglo-Saxon race have relied in the past on private activity as a means of evolving the system of selling securities that will be most advantageous to the parties directly concerned with the transactions and to the community, public opinion in recent years seems to have been directed toward reforming certain defects which apparently exist in the conduct of the New York Stock Exchange. Incorporation of the Exchange, in particular, has been discussed, both at Albany and Washington, as a method of rendering the sale of securities more amenable to governmental control. In order to examine the results

obtained under the régime of unhampered private control, it has seemed worth while to consider the activities on the New York Stock Exchange in a particular period. The 31 months, from September, 1904, to March, 1907, inclusive, have been chosen for this purpose, because of the sustained activity of stock trading—measured by the number of shares sold each month—which characterized them. The degree of that activity is indicated in the following table in which sales for the 31 months chosen are compared with those in the periods of equal length, immediately preceding and following.

MONTHLY RECORD OF SHARES SOLD ON THE NEW YORK STOCK EXCHANGE.

	<i>Feb., 1902–Aug., 1904.</i>	<i>Sept., 1904–Mar., 1907.</i>	<i>Apr., 1907–Oct., 1909.</i>
Maximum	26,567,743 (Apr., 1902)	38,512,548 (Jan., 1906)	24,966,326 (Nov., 1908)
Minimum	4,972,804 (June, 1904)	12,576,469 (June, 1905)	9,677,494 (Nov., 1907)
Average	13,249,121	23,554,097	16,147,272

The period, during which a relatively high degree of activity was maintained, seemed particularly worthy of study, since it coincided with a striking expansion of general prosperity—both commercial and industrial—in the United States and throughout the world. This growth of prosperity, in degree and extent, was hardly interrupted during the 31 months constituting the period which has been selected for study. But if we could plot on a chart the values of index numbers, showing respectively the degree of the general prosperity, the volume of trading activity on the Stock Exchange, and the general prices of stocks in which trading was active, we should not find that the three curves tended to conform closely with one another. As has been said, prosperity underwent continuous expansion. The monthly volume of transactions on the Stock Exchange varied over a wide range, extending from 38,512,548 to 12,576,469 shares. Prices on the Stock Exchange rose very perceptibly at the beginning of the period,

underwent numerous undulations during 1905 with an upward tendency, exhibited a downward trend with some interruptions in 1906, and finally, in the first three months of 1907, with which the period closed, fell sharply and profoundly.

The purpose of taking up in detail the activities of the New York Stock Exchange during this 31 months' period, is to discover what conclusions, if any, can be drawn legitimately from a study of the periodic data which are to be had in some abundance. Especially will attention be paid to the New York Stock Exchange, as its affairs were conducted in the 31 consecutive months chosen, with a view to ascertaining the way in which certain important functions of the typical modern stock exchange, as they are set forth in current economic discussion, were discharged. It is hoped that the general results of the investigation will show, in some degree, how effective is the organization of the New York Stock Exchange for the fulfilment of certain economic and social purposes, for which stock exchanges are, by assumption, peculiarly adapted.

The two functions most generally ascribed to a large stock exchange, and pre-eminently to that of New York, by economists, are,

1. Directing the flow of capital into investments.
2. "Discounting" future events—that is, indicating general economic prosperity or dulness by the course of Stock Exchange prices, thus causing those prices to serve as a barometer for the guidance of the business community.

An analysis of transactions, performed according to the rules and customs of the New York Stock Exchange over a comparatively limited period, will, it is hoped, throw some light on the degree of success with which these functions were discharged during the period in question; and also

will enable us to estimate the general effectiveness of Stock Exchange practice in discharging these functions at any other time.

If the rise of prices on the Stock Exchange, in the last few months of 1904, throughout 1905—with some interruptions—and in the first month of 1906, had continued until the growth of general prosperity was checked in 1907, we might fairly accept prices of stocks as trustworthy indices of general economic conditions. Or even if the rise had been continuous up to the autumn of 1906, followed by the sustained decline which endured through 1907 for the most part, we might regard the general movement of prices as having “discounted” the coming depression. But the conditions, under which the long decline began in October, 1906, we shall show, had existed throughout the earlier months of 1906. During the earlier period, however, they had not developed to the point where they would exert their fullest combined effect. The conditions to which we refer are:

1. The volume of speculation for the rise in stocks.
2. The strength of the investment demand for stocks.
3. The tendency of speculation to adjust the volume of its operations to the character and strength of the investment demand.

The power of making the adjustment indicated is usually ascribed offhand to speculators, even though they are not aided in bringing about this adjustment by the mechanism of the particular market in which they operate. It has never been shown either *à priori* or inductively that organized speculation in itself has the faculty of guiding investment. Unless the customs and formal rules of a particular stock exchange are established with this definite aim in view, it has never appeared that speculators will find it to their individual interest to direct or to guide investment;

although the collective interest of any body of speculators is intimately concerned with the activity of investors, as we shall show later.

In the economic transformations which followed the Spanish War, many huge new industrial corporations were formed, and many important railroad systems had been heroically reorganized. Some corporations, whose stocks were subject to frequent and heavy transactions in the market, and which had been firmly established before the present century, had not been seriously affected by the depression of the middle nineties. But in the following decade they operated under such novel conditions that their securities were on a basis much like that of the new industrial companies and of the reorganized railroads. Soon after the present century opened, there existed a huge mass of securities of uncertain value which were to be lodged ultimately with investors. The process of disposing of these securities was carried on to some extent in 1901 and 1902, and was briefly checked by a special concurrence of events in 1903. After many months of relative quiescence in the securities markets in 1904, the process was resumed in September of that year on a large scale; and, during the next few years the completion of this process was sought, partly by means of operations connected with the New York Stock Exchange. During that time, the task of those connected with that institution was chiefly to "direct the flow of capital" toward the large quantities of stocks which had been listed for dealing, but which were not yet finally absorbed by investors. To accomplish this, reliance was placed on the self-interest of the Stock Exchange's members and patrons, conducting their various operations under the conditions imposed by the customs and formal rules of that Exchange. Those members through whom the various patrons conducted their dealings were,

of course, brokers—in the strict sense. The patrons themselves have been classified, in the report of the Hughes Committee, as follows:

(1) Investors, who personally examine the facts relating to the value of securities or act on the advice of reputable and experienced financiers, and pay in full for what they buy.

(2) Manipulators, whose connection with corporations issuing or controlling particular securities enables them under certain circumstances to move the prices up or down, and who are thus in some degree protected from dangers encountered by other speculators.

(3) Floor traders, who keenly study the markets and the general conditions of business, and acquire early information concerning the changes which affect the values of securities. From their familiarity with the technique of dealings on the Exchange, and ability to act in concert with others, and thus manipulate values, they are supposed to have special advantages over other traders.

(4) Outside operators having capital, experience, and knowledge of the general conditions of business. Testimony is clear as to the result which, in the long run, attends their operations; commissions and interest charges constitute a factor always working against them. Since good luck and bad luck alternate in time, the gains only stimulate these men to larger ventures, and they persist in them till a serious or ruinous loss forces them out of the "Street."

(5) Inexperienced persons, who act on interested advice, "tips," advertisements in newspapers, or circulars sent by mail, or "take flyers" in absolute ignorance, and with blind confidence in their luck. Almost without exception they eventually lose.

For our purposes, the above detailed classification will not be necessary. We shall consider only investors—meaning those who buy outright, not only for purposes of assured income, but also for the sake of obtaining control

of corporate property—and speculators generally. Most of our observations will apply to classes (4) and (5), when we refer to speculators—that is, large operators and inexperienced traders. On manipulators, as such, and their activities we shall not touch. Accordingly the movement of stocks as between investors and speculators generally will be the aspect of Stock Exchange activity which will chiefly engage our attention. The nature and direction of this movement, as it was manifested on the Stock Exchange during the period chosen for study, determined the degree of success with which the process of the final disposition of stocks to investors was attended.

Incidentally it may be profitable to inquire, in the course of our investigation, whether prices on the Stock Exchange were determined by conditions actually existing at the time a given set of prices was quoted, or whether future events, foreseen but dimly by ordinary observers or quite unlooked for, were so clearly apparent to speculative foreknowledge, that they were more powerful in making prices than were existing conditions. Was the smoothness or difficulty of the shifting of stocks between investors and speculators more influential on price movements? Or did speculative “discounting” of future events constitute the predominant factor in making Stock Exchange prices? These questions have been answered repeatedly with provoking assurance and confidence, on the strength of *à priori* impressions. It is hoped that considering the events of 31 months of sustained activity on the Stock Exchange will afford fuller information on these points.

Mention has already been made of the wide variations in the volume of sales, month by month, on the Stock Exchange. By way of emphasizing further the significance of the 31 months' period under consideration, there is given below the number of shares sold during each period of the

18 SPECULATION ON NEW YORK STOCK EXCHANGE [18

same length, extending from each September, 1900 to 1909, inclusive, to the third succeeding March in each case, that is from 1903 to 1912, inclusive, and the average monthly number of shares sold for each of these ten periods of 31 months:

<i>31 Consecutive Months including</i>	<i>Total Number of Shares sold on the Stock Exchange.</i>	<i>Average Number of Shares sold each month on the Stock Exchange.</i>
Sept., 1900 and March, 1903 ...	558,508,621	18,016,407
Sept., 1901 and March, 1904 ...	445,188,567	14,360,922
Sept., 1902 and March, 1905 ...	493,762,756	15,927,831
Sept., 1903 and March, 1906 ...	579,724,721	18,700,797
Sept., 1904 and March, 1907 ...	730,177,023	23,554,097
Sept., 1905 and March, 1908 ...	615,149,487	19,843,532
Sept., 1906 and March, 1909 ...	524,678,046	16,925,098
Sept., 1907 and March, 1910 ...	519,249,312	16,749,978
Sept., 1908 and March, 1911 ...	487,034,946	15,710,805
Sept., 1909 and March, 1912 ...	401,953,127	12,966,230

It will be noticed at once that the period which will particularly claim our attention—extending from September, 1904, to March, 1907—was characterized by much the largest total number of shares sold, and the highest monthly average, of all the periods tabulated above. Most economic discussion treats speculation on the Stock Exchange as if events in connection with it had the same import and brought about the same results, no matter what volume of transactions took place in differing periods. The particular period to be studied by us in detail was attended by an abnormally heavy volume of sales. It seems as though the significance of a 31 months' period in which more than 730 millions of shares were sold might differ essentially in character from that of a period in which the sales of only 400 millions of shares were recorded.

The selected period might be characterized briefly as follows:

1. It began in a pronounced revival of speculative ac-

- tivity—as measured by volume of sales—after some months of relative quiescence.
2. It closed in a prolonged and thoroughgoing liquidation involving sales of a large number of shares.
 3. It coincided with a period of uninterruptedly expanding general prosperity, almost world-wide in extent.
 4. Its close shortly preceded a check to general prosperity; the severe and extensive liquidation in the stock market might either:
 - a. Have been a factor in the check to the general prosperity, or,
 - b. Have “discounted” that check to the general prosperity.
 5. Its duration was marked by a high degree of speculative activity as measured by average monthly sales of 23,554,097 shares, as over against 13,249,121 shares sold in the period of 31 months immediately preceding, and of 16,147,272 shares in the period immediately following.

In the succeeding chapters we shall pay special regard to the demand of investors, in response to which speculators, presumably, were conducting their operations. The events of the period, which are to be studied, were chiefly those which bore on the manifestations of the investment demand and the adjustment of speculative operations to that demand. After we have considered events in their chronological order from this aspect, we shall consider the general changes—qualitative or quantitative—undergone by the character of the investment demand; and also attempt to analyze the extent to which Stock Exchange traders modified the volume and character of their activities in accordance with those changes. Then the possible effects on general economic conditions, arising from the speculative

response to investment demand in the latter part of 1906, will be taken up. Finally, any modifications which may seem desirable in the practice of trading on the New York Stock Exchange—so far as the developments of the period may indicate the need of those modifications—will be discussed. But, whether the changes in Stock Exchange practice should be brought about by those having oversight of stock speculation in New York at present, or by governmental authority, is a question into which we shall not enter. The powers of either agency seem ample to enact and enforce any measures that may appear necessary, but the relative desirability of having either source of authority called upon, in preference to the other, will not come within the scope of our considerations.

CHAPTER II

ACTIVE SPECULATION: URGENT INVESTMENT DEMAND—

SEPTEMBER—DECEMBER, 1904

ACCORDING to the *Commercial and Financial Chronicle*, 1,273,623 shares were sold on the New York Stock Exchange Monday, September 12, 1904. Not since the preceding March 23d had the sales of one day been upwards of one million shares. Throughout the greater part of the spring and during the entire summer, trading on the Exchange had been relatively inactive. But, with the heavy sales of September 12th, a new era and a new series of movements in the stock market may be said to have begun. From that date until between two and three years later—in the closing days of March, 1907—ensued a period of public speculation in securities which has rarely been surpassed in sustained activity of long duration.

Everything appeared favorable for success in speculation for the rise—at least those factors which are ordinarily considered favorable. The surface of the money market—this too at a time of year when the western crop-moving demand should normally impose some strain—was quite untroubled. To be sure, the report of the Clearing House banks of New York issued September 10th, had shown a loss of more than \$9,000,000 in the combined surplus reserves. However, the amount of that item in the bank statement stood at \$38,438,250; the total reserves constituted 28.1 per cent. of the combined deposits. Loans were made on call at the Stock Exchange with interest

rates ranging from $\frac{7}{8}$ to 2 per cent. The gradual but steady revival of industry and commerce had not reached a point where it taxed the facilities of the money market. Whether or no the extremely low interest rates on call money served to stimulate speculation, may be doubtful; but, at any rate, those rates did not exert the repressive influence on speculative sentiment which they are supposed to do in the first month of autumn. Trade revival, after the setbacks of 1903, was becoming generally manifest. But, best of all from the brokers' viewpoint, there were many individuals with sufficient means to enable them to "discount" the prosperous future they foresaw by entering into speculative commitments for the rise. With the subsequent activities of these speculators we shall be most immediately concerned.

The rapid recovery from the depression of 1903 was most impressive to many superficial observers who recalled the dreary years which had followed the crisis of the preceding decade; the seeming inherent likeness of the two crises was emphasized by the fact that ten years, making up the conventional period which intervenes between successive crises, had elapsed between the two in question. The reaction from the later dulness appeared to prove that the old-time economic crisis had passed along with the nineteenth century—in this country, at least—and that, in the words of Jefferson Brick and Major Pawkins uttered many years previous, "we were a young lion", and "had revivifying and vigorous principles within ourselves", which would now serve to carry us through an indefinite period of unbroken prosperity.

It was further seen that the reorganizations of the railroads on a large scale, which had been effected in the late nineties, had attained more successful results than had been thought possible. Union Pacific, Atchison, Baltimore &

Ohio, Northern Pacific—all had been heroically reorganized, and had already shown the success of the transformation even before 1903. The stock market decline of that year, accompanied as it was by a pronounced slackening of trade activity, was regarded as a most trying ordeal, through which the railroads had passed without radical damage. A falling off in gross volume of railroad business was clearly perceptible during the dull period, but late in 1904 the revival and also the improved management of American railroads began to attract attention.

As a factor in a revival of Stock Exchange activity, there was, in addition to the relative ease with which American railroads and industry had withstood the overrated depression of 1903, a large class in existence which stood ready to "discount" the future of boundless prosperity, which it was thought lay ahead. Of this class, little can be said by way of general description or broad characterization, except that its members had no conscientious scruples to deter them from stock speculation, they had unlimited confidence in the country's prosperity and in their own judgment of speculative matters, and they individually possessed sufficient means to advance the varying amounts of margins required by their respective brokers, with which they could back their several judgments. From the ranks of the very wealthy and of those moderately well off, from every branch of business and from every profession, from the dwellers in cities, small towns and rural districts, the speculative class was recruited. The members of this class presented among themselves as wide variations in the degree of their abilities to engage in speculation as any quality denoting acumen and astuteness can display when it is distributed throughout a large number of such heterogeneous individuals. Among them might be found the operator who would not scruple to em-

ploy his knowledge of a corporation's affairs which he possessed by virtue of being an official in the company to manipulate prices or to guide his operations in the market; and there could also be found those who had the haziest ideas of the operations of the stock market or those who deposited their margins and entered into their commitments with the same blithe carelessness with which they would have placed their money on a whirl of the roulette wheel.

To some extent, that is, in numbers varying widely from time to time, speculators of the various sorts indicated are always present in the stock market—or in any other market where the routine is so simplified that the participant does not have any other function than to make necessary payments and to give an occasional order to his broker. In 1901 and the two succeeding years they had participated largely in the active markets of the Stock Exchange. Since occasional speculators of this sort usually buy for the rise, they had been generally unfortunate as a class because of the decline of prices during 1903. The ill-success of ventures on the long side in that year had not been so severe as to prevent their return to the market in September, 1904, with fresh accessions to their numbers.

A rising movement in prices generally did not start with the renewal of activity mentioned as having taken place on September 12th, 1904. The first week of general activity was not immediately productive of rich rewards for those speculators who returned to Wall Street in that week, attracted by the previous rise in prices. To take the high and low points respectively for the stocks in which during the week occurred the largest volumes of transactions, we find that those points from Monday, September 12th, to Saturday, September 17th, inclusive, were as follows:

<i>Railroads.</i>	<i>High.</i>	<i>Range</i>	
		<i>Low.</i>	<i>Sept. 12-17, 1904.</i>
Atchison	83½	80¾	2¾
Chicago, Milwaukee & St. Paul	159¾	156½	2½
Erie	32½	29½	3
Metropolitan Street Railway	123¾	120½	3¾
Missouri Pacific	99¾	96½	2¾
Pennsylvania	132¾	127¾	5¾
Reading			
voting trust certificates	68½	65	3½
Rock Island	30	27½	2½
Southern Pacific	57¾	55¾	2¾
Southern Railway			
voting trust certificates	34¾	32¾	2¼
Union Pacific	100	97¼	2¾
<i>Industrials.</i>			
Amalgamated Copper	59½	57	2½
American Locomotive	28¾	24½	3¾
U. S. Steel, common	185¾	14¾	3¾
U. S. Steel, preferred	69¾	64¼	5¾

Neither the high nor the low points here tabulated were registered on the concluding day of the week, except that, in the cases of the two classes of Steel stock, the high points were attained on Saturday. So that the first week of heightened speculative activity was not immediately profitable to the increased number of speculators, nor calculated to encourage further heavy commitments for the rise. In fact, the first week of revived activity showed such little decided tendency on the part of prices to move in one direction or the other, that, in the next business week, September 19 to 24, inclusive, transactions involving only 3,502,548 shares, as against 5,874,209 shares in the preceding week, were recorded. In the second week named, moreover, no day's transactions amounted to one million shares; in the earlier week there had been four days in which sales exceeding that amount had been made. Indeed, the market, during the remainder of September,

displayed no such volume of trading as had been shown in the business week which ran from the 12th to the 19th, inclusive. September was far ahead of the preceding months of the year in the volume of its sales, amounting to 18,767,264. This total is to be compared with sales of 12,474,789 shares in August and 12,462,393 shares in July. During the first half of the year speculation had been comparatively quiescent, except for a brief period in the latter part of March, following the Northern Securities decision in the middle of that month.

Accompanying the outburst of activity on the Stock Exchange, there occurred, in the course of the month, rises of prices of the stocks in which transactions were heaviest, indicated by the closing prices on September 1st and on October 1st, respectively, as follows:

<i>Railroads.</i>	<i>Sept. 1.</i>	<i>Oct. 1.</i>	<i>Change during the Month.</i>
Atchison	80½	83¼	+ 2¾
Chicago, Milwaukee & St. Paul	154	160½	+ 6½
Metropolitan Street Railway	119¾	122	+ 2¼
Missouri Pacific	96½	98¼	+ 1¾
Pennsylvania	125	132¼	+ 7¼
Reading			
voting trust certificates	61¾	69	+ 7¼
Rock Island	25¾	28¾	+ 2¾
Southern Pacific	56½	57½	+ 1½
Southern Railway			
voting trust certificates	28¾	33¾	+ 5
Union Pacific	97¾	102¾	+ 5
<i>Industrials.</i>			
Amalgamated Copper	56¾	58½	+ 1¾
American Locomotive	20¾	27	+ 6½
U. S. Steel, common	12¾	18½	+ 5¾
U. S. Steel, preferred.	61¾	74½	+ 12¾

One cannot always speak with certainty concerning the general tendency of stocks to move, at any given time, from speculators' hands into those of investors or in the

contrary direction—at least not with the confidence displayed by many financial writers. The process, by which stocks were gradually sold by speculative holders to investors, can only be inferred by watching the readily ascertainable manifestations of stock market phenomena. The heavy volume of transactions on the Stock Exchange was attended by rising prices, which would mean either that an appreciable effective investment demand, or else the speculative purchases in expectation of higher prices, was operative in bringing about the general advance of prices. If the latter had been chiefly instrumental in raising prices, some evidence of strain in the money market should have been apparent. But there was no such strain manifested. Call loans were still made at from 2 to 3 per cent., while at the same time the reported loans of the Clearing House banks were undergoing heavy reductions. That purchasing investors were present in considerable numbers and well supplied with funds was clear from the readiness with which many large bond issues were absorbed when they were offered for subscription. From the mere report of sales on the Stock Exchange and the course of prices registered there, one can only draw the vaguest inferences. But the continuous rise of prices and sustained heavy volume of sales—both taken in connection with the low call rates, diminishing volume of loans shown in the weekly reports of the Clearing House banks, and the readiness with which bonds were taken by investors—seem most reasonably explained by the inferred tendency of investors to take large amounts of dividend-paying stocks out of speculative hands.

November was likewise a month characterized by heavy sales and rising prices on the Stock Exchange. The activity there was quite as intense as it had been during October. The result of the Roosevelt-Parker presidential elec-

tion had been clearly foreseen for some time, and caused little interruption in the course of Stock Exchange events.

Many issues of new securities were announced during November, by way of taking advantage of the easy money market and the vast investment resources which had been apparent for some time. Many of the bond issues—whether new or now finally “digested”—bore the rate of $3\frac{1}{2}$ or 4 per cent. interest, rates of return which were not to prove so alluring a short time afterward. Apparently any kind of securities, issued under moderately respectable auspices, appeared certain of a market; the investment demand seemed limitless in its absorptive capacity.

Toward the latter part of the month, however, the attainment of a 4 per cent. level by the Stock Exchange call rate, followed the substantial diminution, during the month, of surplus reserves held by the Clearing House banks from \$16,793,650 to \$8,539,075—this, too, in spite of concurrent reductions of deposits and loans. To a large extent, the decreases in those items could have been ascribed to gold exports, amounting to \$20,500,000. Regarding this it was said, “A demand to remit for American securities bought in London for New York account was at times noted and there was likewise a demand to pay for New York City revenue bonds placed abroad the previous spring and now being returned.”¹

Although the investment market still displayed a readiness to accept all offers of securities made to it, and likewise was absorbing large amounts of securities from the open market, the advance of the call rate to 4 per cent.—quite striking in view of the 2 and 3 per cent. rates which had prevailed for a long period preceding—the large exports of gold, and the return of American securities from

¹ *Commercial and Financial Chronicle*, “Retrospect of 1904,” Jan. 7, 1905, p. 87.

abroad, all served as indications of the definite limits to the investors' absorptive capacity and the consequent strain to which the speculative body might be subjected. However, these possibilities found little reflection in Stock Exchange prices, which rose to the very end of the month. In the movement which had proceeded through the first two autumn months, money market conditions had been so easy as to be negligible factors in Stock Exchange calculations.

Although everything during November—except the rise of the call rate to 4 per cent. already mentioned—had betokened the presence of purchasing investors with sufficient means to relieve the speculators for the rise from carrying too heavy a burden, the first serious check to the prolonged bull movement occurred on December 8th. Amalgamated Copper, particularly, was in a strategically weak market position in that it was heavily sold and purchased by speculative traders for the most part, and the conduct of the company's business was not on such a stable basis as to attract investors. Fierce magazine attacks on the management of that company and the weak position of those who were speculating in it, together combined to depress the price of that security. The speculation for the rise in many other stocks had been quite out of proportion to the investment demand for them, and they also declined in their respective prices. December 8th was the date on which occurred a panic of a minor sort, accompanied by the quotation of a 5 per cent. call rate. The next few days saw the reaction from the severe general decline of the 8th in the form of rising prices, but a pronounced fall recurred on the 12th. This latter decline was followed by a week of relative inactivity; but, after the 20th, the general rise of prices which followed the break of the 12th was accompanied by a renewed outburst

of activity—that is, by an increased volume of daily sales; the latter, however, were not on the tremendous scale observed in October and November. On the last two business days of the year the sales on each day, the 29th and 30th, amounted, respectively, to 1,112,986 and 1,103,689 shares.

The declines in prices, which occurred on December 8th and 12th, acted so as to offset the steadily rising tendency shown in the stock market during the remainder of the month—particularly the latter half of it—so that prices of the leading stocks did not display the “buoyancy”—to use a figure of the financial reporters—which was so evident in September, October and November, when the prices of those various stocks recorded on December 1st were compared with prices established on the opening business day of the following month, January 3, 1905. Nevertheless the rising tendency of prices was clearly in evidence at the close of the year 1904; the last four months of this year may be regarded as constituting the early stage of the three years' market movement we have set out to consider.

The most prominent aspects of this four months' period have already been mentioned—a sustained heavy volume of transactions on the Stock Exchange, generally rising prices, and the prevalence of low call rates throughout the four months, except for the rates quoted on a few days. Whether these three striking phenomena conclusively pointed to the presence of a large body of purchasing investors may be questioned. Taken all three together, they constitute strong negative evidence in contravention of the hypothesis that speculative commitments for the rise were out of all proportion to the capacity of investment absorption. The ready investment in large issues of new railroad and industrial securities which were taken during the autumn of 1904, indicated the presence of a number of

complaisant investing purchasers; although, in itself, this readiness did not necessarily mean that the same body of investors was engaged in lightening the load of speculators on the Stock Exchange.

In the last three or four months of 1904 there was seen a speculative stock market of intense activity and wide extent. If speculation for the rise was active and its aggregate transactions were on an exceedingly large scale, that large volume of transactions was carried on without accompanying disturbance in the New York money market. There were ample funds available for call loans, with which speculative purchases could be financed; and those loans were made at the traditionally low rates of interest which are usually a distinct characteristic of Wall Street call loans. Speculative transactions, moreover, presented a larger aggregate in October and November than they did in December, toward the end of the movement. On two days in December, the general declines in the stock market appeared to indicate either an over-extended speculation for the rise, in the face of a satiated investment demand, or else they showed that speculators were entering into commitments for the rise more rapidly than purchasing investors were disposed to withdraw the stocks from speculative hands. Such halts in a prolonged rising movement are perhaps inevitable.

The characteristics of the New York Stock Exchange speculative market in the concluding months of 1904 were typical of a normal market during a time of expanding prosperity—such as are assumed in a discussion of speculation in general. In such a discussion, the values of the securities involved in the speculation and their desirability from the investors' viewpoint, are reckoned the chief factors in determining prices. The desirability of investment securities, by assumption, becomes evident to speculators

before investors perceive it. The forehanded speculators, accordingly, either purchase stocks at comparatively low prices or continue to hold those they have already purchased, and sell out finally to investors at higher prices than those at which the several speculative purchases have been made. Before the securities are sold by speculators to investors, their investment desirability is clouded with some uncertainty which, however, is gradually dispelled; until, at last, the soundness of the securities in question becomes so evident that they are almost entirely absorbed by investors. A few unfortunate speculators, however, are entrapped into making their purchases at the topmost prices. At these prices, comparatively few investment purchases are made. Therefore, those speculators who bought at the top are compelled to sell with great or slight losses. The number of those injudicious speculators is assumed to be negligible—at least, as compared to the number of successful speculators, who have sold to investors on the preceding rise of prices. Moreover, the recession in prices, which accompanies the liquidation by the unsuccessful speculators, is supposed to attract investors who are ready enough to buy at prices somewhat less than the maximum, at which they were not disposed to make purchases. To a great extent then, stocks of demonstrated worth to investors are absorbed by the latter. They pay the increased prices to speculators for carrying the stocks over a period of uncertainty.

Those who assumed that speculation for the rise and investment, during a period of growing prosperity, follow the course outlined above, might have pointed to the events of 1904 in the New York stock and money markets, as affording confirmation of their assumption. Prior to September, in relatively small numbers, and after the 12th of that month in growing numbers, speculators were coming

to perceive the investment demand which would soon manifest itself. Speculative appreciation of stocks kept in advance of investors' recognition of their desirability; not, however, so far in advance that speculators were left with stocks on their hands which investors would not purchase—at least, not for any length of time. Early in December, to be sure, it seemed as if speculators had over-estimated the urgency of the investment demand. The latter, apparently, again exerted itself after a few days' quiescence, and speculative evaluation ran only slightly in advance of investment absorption. This tendency was noticeable up to the very end of December, 1904, and bade fair to continue indefinitely into 1905.

In connection with the tendency, observable during the later months of 1904, of investment buying to lag only slightly in the rear of speculative activity, and in connection with issues of new securities, the American correspondent of the *Economist*, writing December 20, 1904,² made the following observations:

One of the most encouraging features now observable is the more moderate volume of business and the continued demand from abroad for the better class of American shares and bonds. There is evidence also that many non-professional traders have left the Street, and it is an excellent sign that some of them have been transferring their accounts from speculative to investment securities. In no other way is the confidence in the general situation better shown than by the ease with which the public absorbs issue after issue of new bond flotations—Japanese, New York City, Rock Island, Mexican, Missouri Pacific, Atchison, Cincinnati, and others—not to mention the extraordinary volume of municipals which have been taken up by trust companies, savings banks, and investors generally during the entire year.

² *Economist*, Dec. 31, 1904, p. 2138.

The very general comment is that stocks are now in stronger hands, and that the irrational dealings in purely speculative non-dividend payers having been eliminated, the outlook is for a gradual and healthful recovery in the stock market. Whether the little traders who were burned in the conflagrations of last week and the week before will be able to extract any comfort from the reflection that stocks, once held by them expectantly, on margins, are now owned by strong interests, who bought and paid for them when they were near the lowest in the recent crashes, may best be left to the small traders themselves to decide.

It is, however, a matter of some comfort to realize that the situation in the Street is such that it again seems practicable to estimate the probable values of securities by analyses of their earning power, the condition of general trade, and the financial situation. Reference to the latter gives an encouraging view, for the heavy inflow of funds from the West has been enough to add to the cash held by the New York banks over and above the drafts on the latter to supply the gold which has gone abroad.

CHAPTER III

CHANGING CONDITIONS OF INVESTMENT—

1905

AT the beginning of 1905, speculative activity—measured by volume of transactions on the Stock Exchange—did not maintain the height it had displayed in the closing months of 1904. The movements of the stock market did not possess quite the same significance which could have been ascribed to them in the preceding year. But if developments in connection with the stock market were not of a nature to encourage speculation on a very large scale—as in October and November, 1904—no events occurred which would lead to the general discouragement of speculators or to the general diminution of the aggregate funds they might be willing to employ in “anticipating the needs of the market.” And certainly the almost unchecked expansion of general prosperity in itself seemed to offer stronger and stronger inducements to investors as the year went on.

The attitude of investors toward various stocks listed on the Exchange was not revealed with any clearness. The slight declines of prices, in March and August, and also the pronounced general fall occurring in April, might have pointed to the tendency of speculators to over-estimate the effective investors' demand, and to base their operations on the erroneous judgments they had formed on the basis of excessive estimates on this point. But, on the other hand, the extensive and appreciable net advances of prices, be-

tween January 3rd and December 30th, showed that investment buying did not apparently lag far behind speculative operations. The monthly records of sales on the Stock Exchange were heavier than the average records for corresponding months in the preceding five years; but investment buying, which always operates to some extent, was not apparently in very much lighter volume than it had been in 1904—so far as this could be ascertained directly.

In the general investment market, however, striking changes took place in the course of the year. The qualitative nature of these changes was manifested in the character of securities offered directly to investors—both as to the terms on which the securities were issued and the prices at which investors were asked to purchase them. These changes mentioned, of course, pointed to the prevailing opinion among bankers that the investment situation had undergone transformation of some sort; they did not indicate directly a transformation in the character or extent of the investment demand for listed stocks. However, if we may regard the terms on which investors were invited to take various issues of bonds and other securities, as indicative of an investment demand that differed from the one revealed in 1904, we may consider in detail a number of issues of new securities which were announced in 1905, with a view to ascertaining the significance attached to them.

Of the Japanese government loans, through which the *ex post facto* financing of the Russian war was arranged, two allotments to American investors were brought out during the year. The total of the two allotments presented for public subscription in this country amounted to £25,000,000; they were readily taken, in fact oversubscribed in large amounts. Each loan bore interest at $4\frac{1}{2}$ per cent. and the bonds representing it were offered at $87\frac{5}{8}$.

The extent of the oversubscription may have indicated an error on the part of the bankers engaged in putting out the loans, in that they made the terms unnecessarily favorable to the subscribers. Possibly then the outcome of the subscription to these bonds might, at that time, have shown that the bankers had merely under-estimated the capacities of investment absorption. But the significance of these loans, in another respect, was obvious enough. If the capacity of investment absorption had any reasonable limitations at all, the total amount of this country's available investment funds had been reduced by more than \$100,000,000 in order to finance a foreign war. This consideration too was aside from the evident fact that European investors' resources—a main reliance of American dealers in securities—were concurrently restricted by heavy offerings of the same loans abroad. Whatever then might have been the other effects of the Russo-Japanese war on the general conditions, which speculators had to consider in making their forecasts, the financing of that war necessitated a substantial reduction in the total investment fund on which speculation ultimately depended for its general success.

Not all financial authorities, however, seemed to think that the time had passed when $3\frac{1}{2}$ or 4 per cent. bonds would attract investors. The Pennsylvania Railroad announced an issue of $3\frac{1}{2}$ per cent. bonds, amounting to \$100,000,000, to which its stockholders were invited to subscribe. This issue was announced in March, but in May it appeared that stockholders had valued the privilege of subscription so lightly that they had applied for only 10 per cent. of the proposed issue. In spite of this railroad's ill-success with securities of this particular nature, the Delaware & Hudson announced an issue of $3\frac{1}{2}$ per cent. convertible bonds, amounting to \$10,000,000. There

were put out also \$10,000,000 of 3½ per cent. 1st mortgage bonds of the Washington Terminal Company, guaranteed jointly by the two roads directly interested in the projected construction, the Baltimore & Ohio and the Philadelphia, Baltimore & Washington. That 3½ per cent. bonds had a definitely restricted market was indicated by the conditions and results of the issues named above.

Early in 1905, at any rate, difficulties in marketing 4 per cent. bonds had not become manifest. Large issues of 4 per cent. bonds, of the Southern Pacific and Missouri Pacific in particular, were sold by bankers in February. In March the American Telephone and Telegraph Company also announced an issue of 4 per cent. bonds amounting to \$25,000,000. But some months later—in June—there was announced another issue, consisting of \$23,859,000 4 per cent. bonds of the Chicago, Burlington & Quincy Railroad, Illinois Division. At the time and throughout the remainder of the year, the ordinary observer would have regarded the success of this issue as a matter of course. Not until the following year was it reported that these bonds could not be sold to investors in their entirety and that the underwriting had been attended with losses to those who participated in it. To this matter we shall refer later. But, at this point, we may compare the ultimate result of this bond issue with that of the Missouri Pacific's \$25,000,000 issue of 4 per cent. bonds sold in February; the amount of the subscriptions to the latter issue was reported to have run as high as \$200,000,000.

Early in the year long-term bonds bearing interest at 4 per cent. were marketed with the same ease as in the latter part of 1904. Although the impossibility of selling the Burlington bonds did not appear during the year 1905, the fact that it was eventually reported serves to emphasize the change which many bankers had appar-

ently observed taking place in the nature of the investment demand. The change might have consisted of a quantitative restriction or in the growth of a demand for a higher rate of return on investment funds. The issue of securities, bearing higher rates of interest than the traditional $3\frac{1}{2}$ or 4 per cent., might have served to bring into a restricted class of investors some who were not ordinarily to be found there, if the apparent change arose from a diminished power of investment absorption. Or if the change in the investment market sprang chiefly from a general demand for a higher rate of return, putting out bonds at $4\frac{1}{2}$ per cent. would operate to meet that demand. Accordingly the diminishing number of 4 per cent. bond issues in 1905 and the number of $4\frac{1}{2}$ per cent. issues which appeared might have indicated a general demand for higher rates of return by an investing class that was just as well equipped to present an effective demand as it ever was, or it might have been regarded as an expedient for attracting funds from individuals to whom ordinarily such investment issues would not be expected to make any appeal.

The Interborough Rapid Transit Company had recourse to three-year 4 per cent. notes as a means of obtaining \$10,000,000 of new capital in May. In the more stringent period of 1903, and within two years following this time, the expedient of short-term notes was quite common; but in 1905 it was not at all generally employed. The usual adjustment to the changed character of investors' requirements was to increase the rate of interest borne by new issues of bonds, or, as in the cases of the Japanese bond issues, to offer the securities at prices well under par.

In January a decision was rendered by the United States Circuit Court of Appeals in Philadelphia, which finally determined the disposal of the railroad stocks owned by the Northern Securities Company. One party to the suit that

elicited the decision was composed of Mr. E. H. Harriman and the allied Union Pacific interests. Since they held a controlling interest in Northern Pacific, at the time the Northern Securities Company was formed and the railroad stocks in question handed over to that company, they contended that the distribution of the assets of the dissolved holding company should consist of returning the stocks to their original owners. In this way the control of Northern Pacific would again be lodged in those hands where it had lain before the Northern Securities Company was formed. The Hill-Morgan interests, however, stood out for a strictly pro-rata distribution of the company's assets; and the decision favored their contention.

The practical result of this decision, from the standpoint of Stock Exchange speculation, was eventually to throw a large portion of Northern Pacific's stock upon the open market, and later much of Great Northern's also. Thus the speculative class was to be burdened with the task of carrying large blocks of comparatively high-priced stocks until investors saw fit to purchase them in large part—if they ever should see fit to do so. The Union Pacific interests no longer had any inducements to withhold a large amount of Northern Pacific stock from the open market, as throughout this period they did with \$90,000,000 of the common stock and \$37,000,000 of the preferred stock of Southern Pacific. And finally, both Northern Pacific and Great Northern became at times prominent in the general speculative movement; in their cases, speculators were called upon to forecast the investment demand as best they might. And moreover investors generally had their attention drawn more or less effectively to these two stocks and possibly distracted from others which they might have been led to purchase. The final release of these two stocks from the custody of the illegal holding company meant that

speculators, on the one hand, had an increased burden, and that the test of investors' powers of absorption, on the other hand, would be made harder within a short time.

Rumors, which had to do with a possible railroad merger involving the Union Pacific and the so-called Vanderbilt system, had been responsible for sharp rises in the prices of Union Pacific, New York Central and Chicago & Northwestern, early in the year. Whatever may have been the basis for this rumor, it was pretty thoroughly dispelled in a short time, followed by the collapse of speculation based on it, and resulting in temporary declines in the prices of the stocks concerned in the proposed merger. Another rumor, of the same sort, of a combination of Southern steel and iron properties was widely believed and consequently speculation for the rise was active in certain stocks—notably Tennessee Coal & Iron—on the strength of its possible truth. This rumor, however,—in respect of the immediate formation of the merger at least—also proved to be quite baseless, with disastrous losses to unfortunate speculators who had acted on it.

Quite aside from the checks imposed on speculation in some directions when these vague rumors were shown to have no foundation, the matter of these rumors was significant in that it indicated one expected outlet for the general retirement of speculative commitments. If either of the projected mergers had come into being, many stocks would probably have been withdrawn from the market incidentally to the formation of these mergers. But since these combinations were not formed, the final withdrawal of the stocks in question from the hands of speculators would have to be effected through the purchases of individual investors operating on a relatively small scale. At times scattered throughout the decade certain stocks had been absorbed in various mergers. Chicago, Burlington

& Quincy, for example, was jointly owned almost completely by the Great Northern and Northern Pacific, as a result of extensive purchases in the open market. And, in their turn, the latter two roads had had their stocks withheld from the market during the brief existence of the Northern Securities Company. Prior to the dissolution of this holding company, absorption of this general character, in the cases of particular railroad stocks, constituted a process which always presented itself to speculators as an impending possibility. But the events of 1905 tended to make such possibilities more remote. As the general speculative movement assumed form toward the close of 1905, the participants in it were apparently depending on a multitude of small investors to come forward in the near future and purchase extensively so as to retire in large part the speculative commitments of which such a large volume had been created, particularly in the closing weeks of the year. The wholesale absorption of entire denominations of stock in speculative hands was no longer to be prominent in the protracted speculative movement which endured, with some halts, throughout the greater part of the decade, as it had been in the earlier years of this century. Chiefly to individual investors had the speculators to look to furnish them justification, and to render their operations generally and finally profitable.

The gradual change of character in securities which investors bought directly from bankers was one very striking development of 1905. The inferences one could draw from this, either as to the quantitative transformation of investment capacity of absorption or as to the general demand for increased returns on invested funds, were not clearly evident even at the close of the year. How far the change possessed importance only for bankers and others interested in putting forth whole issues of new securities,

instead of bearing on the general strength of the effective investors' demand, might have been regarded as an open question.

Speculation was still conducted as if the omnivorous and extensive investing class were present as it had seemed to be in 1904. The general course of prices during the year would not in itself lead us to conclude that general assumptions as to the extent of the investing power of absorption were wholly erroneous. It yet remained to be seen at the close of 1905 whether investors generally formed as numerous and well equipped a class as in the latter part of 1904, and whether perhaps they would be so desirous of higher rates of return that they would turn to stocks in which dividend increases seemed imminent, rather than purchase largely of bond issues bearing relatively low rates of interest. Of course also, the expected extensive and substantial increases of dividends might not be forthcoming.

The year in the New York securities market was characterized by large aggregate issues of new securities, as was the year 1904. But, whereas the investment capacity in 1904 to absorb any quantity of good bonds, bearing low rates of interest, seemed unrestricted, and although in 1905 it might not have been asserted with assurance that the limits of the investors' capacity in that direction had been reached; the appearance of $4\frac{1}{2}$ per cent. bonds—put forth by the Japanese government and by industrial companies—and the refusal of the Pennsylvania Railroad's stockholders to subscribe at par for more than 10 per cent. of a proposed issue of $3\frac{1}{2}$ per cent. bonds, together pointed to a more fastidious or restricted investors' demand. And, if continuous investment purchases and consequent withdrawals of stocks from speculators were not the main supports of the sustained rising movement on the

Stock Exchange—we have little direct evidence on this point—such action by investors did not avail, in April and in some other months, to prevent a sharp and continuous general fall of prices on the Stock Exchange.

During 1905, there occurred some striking signs of the demand of investors for higher income returns from their investments. The excessive subscriptions for the American allotments of the Japanese loans—bearing interest at the rate of $4\frac{1}{2}$ per cent. and sold far below par—pointed to the features which now appealed to large numbers of prospective investors. The latter either had ceased to lay so much stress on security alone as they had formerly done, regardless of the rate of income return; or else they thought that, in this new economic era, security could be taken for granted and income return might be constituted the chief object of their attention. At any rate, the traditional attitude of investors, which had been well-nigh crystallized in the frequent crises and depressions of greater or less extent and duration in the two closing decades of the nineteenth century, was undergoing a decided change during 1905. There were still many investors who would buy long-term 4 per cent. railroad bonds—of this there was plenty of evidence in the number of such issues put forth during 1905. But there was by no means an unlimited number of such investors. Toward the end of the year, the output of the traditional issues just mentioned had almost ceased.

To the presence of investors as the necessary final support of the market no closer attention was given by speculators generally than had ever been given. The cessation of large issues of bonds through banking houses and the earlier change in the character of such securities as were put forth, pointed to the growing difficulty of attracting investors. Bonds of the best character, possessing however slight attraction in the way of large returns, could

hardly be sold even with the employment of every device and facility at the command of experienced bankers. There seemed little to attract investors to active stocks listed on the Stock Exchange, in view of the relatively high prices to which they had been advanced in the speculative market and the consequent low income rates they offered the prospective investor. Of course many stocks, in which speculation was active, held out promises of paying higher dividends than they were yielding at the close of 1905. In December of that year, the continuous prosperity enjoyed generally by railroads and most branches of industry for the greater portion of the preceding two years, seemed to warrant the belief that a general rise in dividend rates would shortly ensue. The enhanced attractions to investors, resulting from higher dividends, would lead, it was assumed, to heavy purchases by persons to whom income yield was the primary consideration. That the investing class, upon whom dependence was placed to purchase the stocks at relatively high prices, had ability of indefinite extent to purchase any stocks which might appeal to them, was also assumed. The influences, to which speculators seemed most responsive, were those connected with the factors which had to do with the respective earning powers of the various corporations and the likelihood that stockholders would share directly in the increased profits which those corporations might obtain from their operations in times of prosperity. That investors desired higher income returns was the belief that finally guided the vast body of speculators on a small scale who followed the market in the last few weeks of 1905; the changing character of bond issues served to strengthen this belief. The current reports of corporate earnings, furthermore, went to encourage the expectation that higher dividends would be paid. Then, it was tacitly assumed, with the demands of investors

for increased income met by the general raising of dividends, there would be a general withdrawal by investors of stocks from the hands of the speculative class which had carried them through the period of uncertainty as to earnings and dividends.

The character of the investment demand was thus implicitly understood by speculators for the rise. The strength and extent of that demand were apparently thought to be limitless. The difficulty of putting out many bond issues during 1905—if speculators regarded it at all—was interpreted apparently as arising from the change in investors' wants, not from a possible narrowing of the investors' ability to purchase securities which might be desirable to them—or which speculators thought should be desirable to them. The continued expansion of prosperity appeared inevitable, and so likewise did the substantial distribution of dividends as a result of this abounding prosperity. The actual capacity of the investing class for absorbing the increasingly desirable railroad and industrial stocks was never made the subject of investigation or even of the most perfunctory inquiry. And yet, the high call rates quoted so frequently from September until the close of 1905, and the growing difficulty of marketing bond issues through bankers, together with the sustained intensity of speculation, might fairly have been regarded as concurrent indices of a large general volume of speculative commitments for the rise, out of all proportion to the aggregate investment demand, on which speculation for the rise depended for its ultimate success and justification; or else of commitments undertaken at a much more rapid rate than that with which investment buying could keep pace.

Speculation for the rise, it was recognized clearly enough as the year 1905 drew to a close, had been entered upon most extensively. But the straitened money market could

have been regarded, not necessarily as foreshadowing the ultimate discomfiture of speculators on the long side; it could also have been considered evidence of investors' holding off until the generally increased dividends, to which speculators confidently looked forward, became assured. When these dividends should actually be declared, then it was thought swarms of investors would purchase in sufficient amounts the stocks with which speculators were loaded to relieve the latter of their burdens. This expected action, which it was assumed investors would eventually take, serves to explain, in large part, the rising prices and active speculation based on still higher prices which prevailed in the face of the high rates for call money with which much of the speculation was financed.

During 1905 speculation on the long side had been successful on the whole. The higher prices of speculative stocks, which were so generally attained in the course of the year, had presented powerful inducements to that large class which was ready to enter into stock market ventures, equipped with funds sufficient for the required initial margins and undeterred by conscientious scruples as to the righteousness of speculation. From the viewpoint of this class, the rise of prices, which had gone along with growing prosperity in 1905, seemed likely to continue in 1906, since everything pointed to a still higher degree of business prosperity during the later year. By December, 1905, accordingly, a large portion of that class which could be attracted to the stock market, entered into it in the expectation of the higher prices which were looked for in 1906—the higher prices which, presumably, a large class of investors would be willing to pay for the stocks favored in 1905 by speculators.

The strain in the money market was clearly evident at the close of 1905. But on individual speculators this strain

did not bear directly. If some few brokers had to pay, on some of their loans for a few days, the inordinately high rates of interest indicated by the maximum call rates in the closing days of the year, they could not charge all their customers with interest at the same rates. And, moreover, the brokers were not all paying those excessive rates. The pronounced stringency of the money market was little regarded among the considerations affecting general speculative policy on the Stock Exchange. In view of the higher prices expected early in 1906, along with the increased desirability of railroad and industrial stocks, the temporary inconvenience of high rates for call money in December, even with the disquieting inferences that could be drawn from them, was ineffective in restraining the entrance of speculators into the market or in preventing the further rise of prices. Thus closed the year 1905, with speculators carrying large amounts of stocks, and with difficulty having loans obtained for their purposes; but the shifting of those stocks to investors was expected shortly to relieve the strain of speculation and to establish the final success of speculation for the rise, as that had been conducted ever since the autumn of 1904. The events of 1906, which speculators had undertaken to "discount", were to determine the general correctness of the speculators' assumptions, on which they had acted in 1905.

CHAPTER IV

TENDENCIES TOWARD OVER-SPECULATION: RESTRICTED POWERS OF INVESTMENT ABSORPTION—

JANUARY—JUNE, 1906

IN January, 1906, was recorded a volume of sales on the New York Stock Exchange, which has only been exceeded by the volume of one other month, April, 1901—the month which preceded the Northern Pacific corner of the following May 9th. This heavy volume of transactions in January was a natural accompaniment of the sharp, general rise of prices during the month. Whether the extensive speculative activity was out of proportion to investment buying, only the future could reveal. Offhand the advance of prices might have been ascribed either to an expansion of speculative purchases or of investment absorption. Even at the close of the month there was no striking indication of over-speculation. To be sure, the rates quoted for call money at the Stock Exchange in the first days of the month were noticeably high, so that there was indicated a volume of speculative purchases which temporarily taxed the available facilities afforded at that time by the call money market. However, a possible interpretation of the concurrence of these high rates with intense speculative activity was that investment absorption was rather lagging behind speculative expectations as it is normally supposed to do. After the first business week the high call rates were not again in evidence during January. Throughout the month, in fact, there were no unmistakable signs that

speculation had gone too far in anticipating the urgency and amount of the effective investors' demand.

Early in February, on the other hand, the pronounced fall of prices through the whole list showed conclusively that investment absorption, of the expected strength, had failed to retire the existing large volume of speculative commitments for the rise. The inadequacy of investment absorption could have been ascribed, with the knowledge then obtainable, either to the actual restriction of the estimated investment fund or to the lack of attractions, in investors' eyes, possessed by the stocks which had been bought so extensively by speculators. The latter explanation presented some degree of plausibility in that extensive and general increases of dividends, for which speculators had looked, had not taken place in January.¹ And if investment buying was proceeding at a slow rate and was not exerting itself to its fullest extent, many of those who had ventured into commitments for the rise were in no position to hold their purchases until more favorable conditions developed.

The decline of prices in February marked the first of several *cul-de-sacs* into which speculators were destined to thrust themselves during 1906. The events of January had shown that there was no inherent virtue in speculation itself, as it was conducted on the New York Stock Exchange, which would lead it to adjust the volume of its operations closely to the manifested strength of the investment demand. Like all the sharp general declines which occurred in 1906, that of February was accompanied by the expanding prosperity of general business, both in this country and throughout the world. There was foreshadowed no slackening in trade activity which the decline

¹ *Commercial and Financial Chronicle*, Feb. 24, 1906, p. 416.

of February might have been supposed to "discount." Speculation, on the scale attained in January, had been out of all proportion to the revealed power of investment absorption. If there was any satisfactory explanation of February's declines in the stock market, other than the maladjustment of speculative anticipation and investment buying on the Stock Exchange, it has never been offered. At a later point we shall discuss the possibility that speculation went too far in its anticipations.

In March prices rose again, either in response to fresh speculative purchases on a considerable scale, or as a result of increased investment buying. The lack of conformity between speculative operations and investment purchases was therefore not obvious, as it had appeared to be in February; and the extent to which, in the earlier month, speculation had gone too far did not appear to have produced permanently harmful results.

Toward the end of March, call rates attained high levels. As is the custom in the financial district, the prevalence of these high rates was generally ascribed to the need for large amounts of money with which the heavy dividend and interest payments of April 1st could be made. Accompanying the rise of prices, doubtless, which taxed the available facilities of the money market, there was outstanding a heavy volume of speculative commitments; but, on the other hand, there should have been a return to lower call rates after the requirements of April 1st had been met.

The expected recurrence of relatively low call rates was not observed, however, after April 1st. Maximum quotations of 30 and 25 per cent. were recorded respectively in the first two weeks of the month. The general prevalence of high rates was not encouraging to speculative sentiment. These quotations moreover were recorded before the San Francisco fire of the 17th.

Following the disaster in San Francisco there occurred a steep fall of prices on the Stock Exchange and the movement of currency, in large amounts, from New York to the Pacific Coast. Quite aside from the action on general sentiment and the vague consciousness that it involved an enormous destruction of capital, the wholesale destruction of property, if it was proved to be assignable to fire rather than to seismic causes, meant that many fire insurance companies would not only be eliminated as factors in the purchase of securities for some time to come, but would have to sell many of the securities in which their reserve funds had been invested. The prominence of the San Francisco fire in the unfolding of events on the Stock Exchange marks one of the rare occasions on which operators connected with that market have given thought to conditions which might affect the extent of the investment demand.

The fall of prices which continued through April was interrupted in May, when a rise set in along with a considerable volume of transactions on the Stock Exchange. Whatever immediate or remote results the San Francisco fire might bring about—which were clearly foreseen and widely discussed in April—they did not serve to check the rise of prices. Even after the events of April, it did not appear that over-speculation would tend to go unduly far in the face of a restricted investment demand.

Again in June recurred the fall of prices, which now seemed to have become a phenomenon revealing itself every other month in the stock market. But the decline took place at the same time that much fewer shares were sold on the Stock Exchange than in the preceding month; no extensive liquidation was in evidence as in April. On June 1st the legislation imposing restrictions on the financial activities of New York life insurance companies, in accordance with the Armstrong Committee's recommenda-

tion of the preceding February, went into effect.² Purchases of shares of any stock by these companies were expressly forbidden in the future, and the holdings which the companies then possessed were ordered to be sold within the next five and a half years. Underwriting participations of any sort, on the part of life insurance companies, were likewise forbidden. Just how much effect this legislation had on the price movements on the Stock Exchange during June may be indeterminate; but the restrictions on the activities of life insurance companies in the securities markets were regarded at the time as significant.

As we review the events of the first half of 1906, we can see indicated the absence of any revealed power of investment absorption to retire the large volume of speculative commitments into which operators on the Stock Exchange continually tended to enter. The events of the six months did not show that this combined power of investment buying existed to the extent which was generally assumed. No check appeared to have exerted itself on over-speculation except the temporary exhaustion, from time to time, of the resources of the speculators. The first half of 1906 could have been divided into three cycles, each consisting of two successive months. In one of these cycles, the first month was characterized by rising prices, the second by falling prices. Thus, while in January, March and May, prices rose appreciably, they fell in February, April and June. Although speculation was carried on in utter ignorance of the character and strength of the investment demand, it seemed to possess the power, of restraining itself at times before it went too far beyond the extent of investment absorption. But, on the other hand, the adjustment of speculation to the needs of the market was accomplished only by some degree of liquidation on the part of over-extended speculators.

² *Commercial and Financial Chronicle*, May 5, 1906, p. 1014.

In spite of the intermittent advances in prices, during March and May particularly, the high prices of January were not reached again in the succeeding five months. We reproduce a table, drawn up by the American correspondent of the *Economist*,³ which gives, for a selected list of stocks in which speculation was active, the highest prices of the first half-year and the closing prices of July 7th. We have added a column of differences to this table showing the declines severally undergone by the prices of these stocks from the high points of 1906:

	Highest 1906.	Closing July 7.	Total Declines Highest of 1906 To July 7, 1906.
Atchison	96 $\frac{7}{8}$	87 $\frac{3}{8}$	— 9 $\frac{1}{4}$
Baltimore & Ohio	119 $\frac{3}{4}$	117 $\frac{1}{8}$	— 2 $\frac{1}{2}$
Brooklyn Rapid Transit	94 $\frac{1}{8}$	75	— 19 $\frac{1}{8}$
Canadian Pacific	177 $\frac{3}{8}$	159 $\frac{1}{2}$	— 17 $\frac{3}{8}$
Delaware & Hudson	231	213 $\frac{3}{8}$	— 17 $\frac{3}{8}$
Erie	59 $\frac{7}{8}$	40 $\frac{3}{4}$	— 19 $\frac{1}{8}$
Great Northern preferred	348	296 $\frac{1}{2}$	— 51 $\frac{1}{2}$
Illinois Central	184 $\frac{1}{2}$	175 $\frac{7}{8}$	— 8 $\frac{3}{8}$
Louisville & Nashville	156 $\frac{1}{2}$	142 $\frac{1}{8}$	— 14 $\frac{3}{8}$
Missouri Pacific	106 $\frac{3}{4}$	91 $\frac{3}{8}$	— 15 $\frac{3}{8}$
New York Central	156 $\frac{1}{4}$	130 $\frac{1}{2}$	— 25 $\frac{3}{4}$
Northern Pacific	232 $\frac{1}{2}$	202 $\frac{1}{4}$	— 30 $\frac{1}{4}$
Pennsylvania	147 $\frac{1}{2}$	126 $\frac{1}{4}$	— 21 $\frac{1}{4}$
Reading	164	122 $\frac{3}{4}$	— 41 $\frac{1}{4}$
St. Paul	193	174 $\frac{1}{2}$	— 18 $\frac{1}{2}$
Southern Pacific	72 $\frac{7}{8}$	65 $\frac{5}{8}$	— 7 $\frac{1}{4}$
Union Pacific	169 $\frac{1}{2}$	144 $\frac{1}{8}$	— 25 $\frac{3}{8}$
Amalgamated Copper	118 $\frac{1}{4}$	99 $\frac{1}{4}$	— 19
American Locomotive	78 $\frac{1}{2}$	67 $\frac{1}{4}$	— 11 $\frac{1}{4}$
American Smelting	174	145	— 29
Colorado Fuel & Iron	82 $\frac{1}{8}$	49 $\frac{3}{8}$	— 32 $\frac{1}{2}$
Pressed Steel Car	64 $\frac{5}{8}$	46 $\frac{1}{2}$	— 18 $\frac{3}{8}$
Tennessee Coal & Iron	165	143	— 22
U. S. Rubber	58 $\frac{1}{2}$	45	— 13 $\frac{1}{2}$
U. S. Steel, common	46 $\frac{1}{4}$	35 $\frac{1}{8}$	— 11 $\frac{1}{8}$
U. S. Steel, preferred	113 $\frac{1}{4}$	101 $\frac{3}{8}$	— 11 $\frac{3}{8}$

³ *Economist*, July 21, 1906, p. 1215.

The declines set forth in this table afford evidence as to the weakness of investment absorption, from January to June, 1906, in that they show how little the latter availed to withdraw generally from the hands of speculators at relatively high prices the stocks in which that class of traders had been most interested. The only conclusive evidence that investment absorption had exerted itself, to the extent which was assumed to be possible, would have been the retirement of most of the stocks from the speculative section of the market. Speculators might, by using the supernatural penetration with which they are conventionally supposed to be endowed, have estimated with approximate correctness the actual extent of resources possessed by potential investors, even though data for that estimate were quite lacking. But they had been much mistaken in the estimate of the urgency of investors' desires to purchase largely on the Stock Exchange at the highest prices of the first half-year, the events of which made this clearly evident.

The course of trading on the Stock Exchange has just been briefly summarized, for the first half of 1906. It might be well to turn now to the consideration of evidence that is now available—and which was also available at the close of June, 1906—as to the character and extent of the investment demand. Inquiry into changes occurring in the nature of the investment demand can best be conducted by setting forth the terms on which certain typical security issues were offered directly to investors—just as we have done in the case of issues put forth in 1905.

The Pennsylvania Company in January sold an issue of 4 per cent. bonds, amounting to \$20,000,000, to a large banking firm; these bonds, however, had only 25 years to run. The Missouri, Kansas & Texas Railway also announced an issue of 4½ per cent. general mortgage bonds,

subject to the authorization of its stockholders, to be sought at a later date. \$10,000,000 of these bonds were to be offered to stockholders at 87½. The interest rate and the terms of the offering were strongly reminiscent of the Japanese 4½ per cent. loans put out in this country the preceding year. The Westinghouse Manufacturing Company presented to stockholders the privilege of subscribing to an issue of \$15,000,000 convertible gold 5s.

In February the result of New York City's sale of \$20,000,000 50-year 4 per cent. bonds by public bidding engaged the attention of financial writers. For many years previous, the City had been able to borrow at 3½ per cent. or less. But since an issue of outstanding 3½s was quoted in the market at 98, it was thought best to have the new issue bear interest at 4 per cent. The price obtained for the bonds was 108.052, which meant that the city borrowed the money at 3.65 per cent. This compared with the rates at which some prior issues had been put forth, as follows: ⁴

<i>Date of Issue.</i>	<i>Rate of Interest Paid by City.</i>
	%
Nov., 1905	3.4997
Apr., 1905	3.47
Nov., 1904	3.40
May, 1903	3.32
May, 1902	3.233
Feb., 1902	3.194

On the surface the significance of the bare data given above appeared to lie in a gradual decline in New York City's credit. But other interpretations of the relatively unfavorable terms of the issue were suggested, notably the fact that "the supply was greater than the demand", ⁵ so far as issues of general investment securities were con-

⁴ *Commercial and Financial Chronicle*, Feb. 24, 1906, p. 421.

⁵ *Economist*, Mar. 3, 1906, p. 356.

cerned. This bond sale possesses much more significance when it is compared with one in the following summer, with regard to the respective results.

The Boston & Maine Railroad, in March, sold to a syndicate of Boston bankers \$10,000,000 20-year debentures, bearing 4 per cent. interest; the proceeds of the sale were to be used for refunding certain maturing securities of subsidiary roads.⁶ Kansas City & Southern Railway stockholders authorized an issue of \$10,000,000 4½ per cent. 20-year bonds. \$6,000,000 of these were to serve as collateral security for \$5,100,000 5 per cent. 6-year notes, to which stockholders were permitted to subscribe at 95.

These issues named above, put forth in the first three months of the year, are fairly representative of the securities which the financial advisers of corporate enterprises thought best fitted to attract investors at that time. We shall bring forward two more examples of large security issues, put out respectively by the Pennsylvania Railroad and the Pennsylvania Company; one is significant in the method by which it was floated, the other in its magnitude and the character of the security by which it was represented. The Pennsylvania Railroad loan, amounting to \$50,000,000, was offered to French investors, on terms which made it bear 3¾ per cent. interest. The country to which recourse was had for obtaining this loan appeared to open up a new field for the sale of other American security issues. But it was pointed out at the time that the accumulated taxes imposed by the French government on foreign securities would narrowly limit the market France could offer to American stocks or bonds.⁷ In any case this particular outlet for new issues of securities was

⁶ *Commercial and Financial Chronicle*, Mar. 10, 1906, p. 567.

⁷ *Ibid.*, May 26, 1906, p. 1177.

not employed to any extent at that time except in the one instance mentioned.

The Pennsylvania Company put out an issue of 18-month 4½ per cent. notes, amounting to \$50,000,000. These it sold to its bankers at a price slightly less than par. This was the first instance in 1906 of an issue of short-term notes in any large amount; they became quite common the next year. This same company in January had been able to sell \$20,000,000 4 per cent. bonds, running 25 years, to a banking firm which presumably was able to dispose of the securities in question to investors with more or less readiness. But the passing of the 4 per cent. bond, as a readily marketable form of new security, which seemed indicated in May, was betokened more strikingly in the following month, by the reported failure to underwrite successfully the \$24,000,000 4 per cent. bonds of the Chicago, Burlington & Quincy Railroad, Illinois Division—an issue which had been advertised as an offering to investors in June of the preceding year, merely as a routine financial undertaking.⁸ The rumored ill-success of this underwriting provoked a lengthy comment from the *Commercial and Financial Chronicle* on "Apathetic Investment Markets and the Causes."⁹ We need not take the "causes" given too seriously; they consisted almost solely in the limitations imposed by legislation on the investing and underwriting activities of the life insurance companies. But the notice accorded the restricted character of the investment demand for bonds is significant in itself, to whatever causes the restriction may have been ascribed. Not only in the cases of those securities which bankers and corporations offered directly to investors, was the restricted demand of inves-

⁸ *Commercial and Financial Chronicle*, June 24, 1905, p. 2620.

⁹ *Ibid.*, June 30, 1906, p. 1468.

tors obvious. In the open market of the Stock Exchange, where speculators supposedly were intervening in the sale of stocks to investors, the long-continued declines in the prices of many active stocks from the high levels of January, along with heavy volume of transactions, proved that investors had not absorbed the floating supply of stocks in which speculation was active during the first half of 1906. This inadequacy of the investment absorption had been apparent as early as February, in the first general decline of the year. Of course the failure of investors in general to absorb many denominations of stocks at the high prices of January and early February, or even at prices much below them, might have been ascribed to the investors' disinclination, as much as to their inability, to purchase largely. Moreover, the increasingly onerous terms—to the issuing corporations—on which new security issues were put forth in the earlier months of 1906, might at the time have been laid to the world-wide increase in interest rates. This phenomenon has been marked in recent years—ever since 1904 indeed—as one of prolonged duration. It was especially prominent in the general activity of industry and commerce which characterized 1906. The rise in nominal interest rates, borne by new securities, and the shorter lives of the obligations, bearing fixed rates of interest, could all be explained plausibly by the general rise of interest rates. Whether the investors, who were clamoring for increased rates of return on their investments, would eventually display the power or inclination to retire speculative commitments to any considerable extent, was highly uncertain.

During June three increases of dividends were announced: on Baltimore & Ohio from a 5 to a 6 per cent. basis, and the same increase on Amalgamated Copper, while, on American Locomotive common, an initial divid-

end, at the rate of 2 per cent., was announced. These were the only instances of dividend increases between February and July—at least in the more prominent stocks favored at the time by speculators. It might still have been asserted then that investors were not attracted by stocks on which returns to their holders were not in proportion to the prosperity generally and severally enjoyed by the corporations represented by stocks listed on the Stock Exchange. The extent of the prosperity and its wide diffusion among various railroads, were displayed in a table drawn up by the American correspondent of the *Economist*,¹⁰ setting forth the increased gross earnings of 18 railroads—in this country and in Canada—which, in the cases of individual roads, had amounted to more than \$1,000,000, for the half-year ending June 30, 1906, as compared with the corresponding half-year of 1905.

INCREASE IN GROSS EARNINGS FOR THE FIRST HALF OF 1906 OVER 1905.

Canadian Pacific R. R.	\$6,946,727
Northern Pacific, Transcontinental	5,301,871
Baltimore & Ohio, Soft Coal Road	4,831,672 ¹¹
Great Northern System, Transcontinental	4,542,007
Southern Railway	3,697,429
New York Central	3,689,661
Louisville & Nashville	2,725,371
Illinois Central	2,490,076
Lake Shore & Michigan Southern	2,440,152
Missouri Pacific, General Division	2,040,186
Michigan Central	1,891,983
Grand Trunk System	1,669,692
Denver & Rio Grande	1,469,361
Wabash Railway	1,443,145
Minneapolis, St. Paul & Saulte Ste. Marie	1,373,070
Cleveland, Cincinnati, Chicago & St. Louis	1,131,495
Canada Northern	1,096,800
Colorado & Southern	1,086,524
Total	\$49,867,222

¹⁰ July 28, 1906, p. 1258.¹¹ Five months.

The tacit assumption of speculators in 1906 that investment buying—quite unsolicited and arising merely as a result of the wide diffusion of general prosperity—would ultimately act to relieve speculative interests of the burden of their commitments seems to have been quite obviously unfounded, and to have been so regarded by the end of June. And, even if a general rise of dividends throughout the stocks listed on the Stock Exchange were to take place, it was by no means certain that complaisant investors possessed aggregate funds sufficient to purchase the floating supply of stocks which were either held for speculators' accounts or were incessantly passing from the hands of one speculator to another. In 1905 it had become fairly evident that purchases by corporations of large blocks of stock in other companies would no longer be the relatively common event it had been in the preceding few years. Institutional or corporate activity in outright buying, as a means of relief to over-extended speculators, was further limited by the San Francisco fire and by the elimination of the life insurance companies from the stock market as a result of legislative enactment, to which we have referred. Any "anticipation of the needs of the market", which speculators might undertake would refer to the wants of the body of individual investors. Moderate rises of prices, accompanied by a relatively light volume of speculation, as in March, had manifested an over-estimate of the investors' inclination or power to purchase on a large scale during a brief period. Even this slight volume of speculation for the rise in March had been followed by strained conditions in the money market and a certain amount of unwilling liquidation—even before the San Francisco fire on the 17th of the following month.

If speculators generally had any illusions as to the numbers and resources of the expectant investors, bankers and

corporations which had to put forth securities during the early months of 1906 displayed in their actions little share or part in those illusions. The terms on which most new securities were issued implied not only a recognition of the general rise of interest rates, but also of a restricted investment class which needed much stronger inducements to attract its bids for new securities than had, for example, the investors in the last few months of 1904.

CHAPTER V

OVER-SPECULATION AND LIQUIDATION ON A LARGE SCALE—

JULY, 1906—MARCH, 1907

SPECULATIVE activity, denoted by the monthly record of sales on the Stock Exchange, reached its lowest level for any month of 1906 in July. Few more than 16,000,000 shares were sold. In the middle of the month prices generally began to display a rising tendency; so that in the second half-year there started apparently another of the two months' cycles in price movements which had been characteristic of the first half-year. The course of prices and of call rates, at any rate, appeared to show that speculation was adjusting itself and keeping its operations within the bounds set by the investment demand.

Further evidence as to the restricted character of the general investment demand was furnished in July by the outcome of a bond sale by the Comptroller of New York City. This official attempted to dispose of \$12,500,000 4s by public sale. Only \$11,029,100 of these bonds were sold. The average price obtained made the interest rate paid by the city 3.94 per cent. This compared with an interest rate of 3.65 per cent. on the \$20,000,000 issue sold in February—a rate that was considered unfavorably high at the time of the earlier sale.

The relatively onerous terms on which alone New York City was able to borrow less than \$12,000,000, afforded a further indication of the restrictions on the investment demand which were acting in July as in the preceding months.

Whether the assumed timidity of investors—so far as railroad securities, even of the highest character, were concerned—would apply also to New York City bonds, because of the many new regulative enactments by the states and the federal government—a sequence of cause and effect indicated by some financial writers¹—may perhaps be questioned. But the considerations which kept investors from bidding in large numbers for these bonds unquestionably operated in the same way, though not to the same extent, as they had done in the case of the Chicago, Burlington & Quincy 4s; the latter we have already mentioned as an issue which, as had been announced the preceding month, had brought losses upon its underwriters. The investment demand, for reasons about which it is well not to be dogmatic, was highly restricted, so far as it applied to 4 per cent. bonds, either of railroads or of New York City. By inference there seemed little ground for assuming that the investment demand for stocks paying steady dividends was practically limitless, even under the most favoring conditions. The result of the bidding for the first issues of 4 per cent. bonds New York City had put out in many years, pointed to a limited investors' demand—just as the New York life insurance legislation and the heavy losses thrown upon fire insurance companies by the San Francisco fire, pointed to positive restrictions which had been placed upon the absorptive capacity of investors generally. However, a superficial consideration of the difficulties encountered in marketing 4 per cent. bonds, railroad or municipal, might, in the early summer of 1906, have led to the conclusion that the general demand of investors was for higher returns than 4 per cent. on their investments. If the dividends on stocks, in which transactions day after day on the Ex-

¹ *Commercial and Financial Chronicle*, July 28, 1906, p. 180.

change were especially heavy, were raised substantially, it might have been argued, investors with ample funds might be attracted in sufficiently large numbers to take out of speculative hands the stocks which had been subject to so much uncertainty as to their investment value.

Still clinging to this expectation apparently, speculators passed through July; the volume of their transactions was not relatively large, but prices rose generally. After the first few days of the month, when a call rate of 8 per cent. was quoted, the range covered was from $1\frac{1}{2}$ to 3 per cent. On the last day of the month the quotations lay within the narrow compass of $2\frac{1}{4}$ and $2\frac{1}{2}$ per cent. And on this last day the directors of the United States Steel Corporation, by declaring a dividend of $\frac{1}{2}$ of one per cent. for each quarter of the current year, put the common stock of that company back on a 2 per cent. dividend basis. In spite of the disquieting indications of the New York City bond sale, it appeared in July as if speculation for the rise and investment absorption were adjusting themselves to each other more closely than they had done in the first half of 1906. The decreased volume of sales on the Stock Exchange—which may be taken as a rough measure of speculative activity—the restoration of dividends on a stock in which speculation had been heavily concentrated, the prevalence of low call rates, and the general rise of prices, all betokened, on the surface, a decreasing tendency on the part of speculative commitments to outstrip the possibilities of investment buying.

The month of August opened with the declaration of resumed dividends on Steel common and an immediately preceding month of rising prices still fresh in speculators' minds. Prices continued on their upward course throughout the first ten days or so, with some slight interruptions. Along with the continuation of the rise went a degree of

speculative activity somewhat more intense than it had been during July. From August 1st to the 16th inclusive, a period embracing fourteen business days, 11,198,478 shares were sold on the Stock Exchange. If this rate of activity had been maintained throughout the rest of the month, sales for August would have amounted to slightly more than 20,000,000 shares—not an excessive number, as records of sales had been regarded in the preceding months of 1906. Over-speculation in the first half of August, if it was in operation, was not conspicuous. The announced resumption of dividends on Steel common was one of the favorable events which speculators had been engaged in “discounting” for some time. The tone of the reception given that announcement by the market was distinctly good; but it is uncertain whether the “buoyancy” manifested proceeded from speculators, who assumed that the volume of investment buying would increase as a result of the resumed dividends, or from investors who saw a prospect that other such actions on dividends would be taken in the near future.

Call rates remained at a moderate level during the first half of August. On only one day, the 9th, was the rate as high as 5 per cent.; and the minimum of 2 per cent. was frequently quoted. These rates, it should be borne in mind, were quoted in August when the interior demands on New York for crop-moving funds usually begin to be felt. Nevertheless the relatively low level of rates accompanied the first signs of the crop-moving demands and moderately active speculation.

August 17th marked the beginning of the second part of the month which was sharply distinguished from the first part in the course of prices and in speculative activity. On that day the declarations of dividends on Union Pacific and Southern Pacific were announced by their re-

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spective boards of directors. The rate of Union Pacific's dividend was raised from 6 to 10 per cent., and that of Southern Pacific resumed at the rate of 5 per cent. Along with the published declaration of these dividends there was an immediate outburst of wild speculative activity. On the 16th sales for the day had amounted to 1,220,068 shares. They attained a total of 2,529,422 shares on the 17th. During the week of six business days following the 17th, 10,527,161 shares were sold on the Stock Exchange. In the thirteen business days of that part of August which included and followed the 17th, 20,606,418 shares were sold. During the entire month sales of 31,804,816 shares made up a monthly total, which had only been exceeded in two months of 1901—April and May—in October, 1904, and in January, 1906.

During the week which preceded the dividend declarations mentioned, Union Pacific had advanced about seven points in price, Southern Pacific four or five points. On the 17th the high and low prices of Union Pacific were, respectively, $179\frac{3}{4}$ and 163; so that the price moved through a range of more than 16 points in the course of the day. Southern Pacific's range, from the highest to the lowest price, extended only from 89 to $82\frac{7}{8}$ —little more than six points. In the six days including and preceding the 17th, 6,402,213 shares were sold; 2,341,185 shares, 36.6 per cent. of this total, were made up of the stocks of the two Harri-man roads—1,315,550 Union Pacific and 1,025,635 Southern Pacific.

On the 17th and thereafter during the month, the entire aspect of the stock market was changed from that displayed in the early part of August. A tremendous volume of transactions went along with the general meteoric rise of prices; the latter characterized almost every stock in the list to a striking degree, not alone the shares of the

two Harriman roads. The closing price of Union Pacific August 1 was $153\frac{1}{4}$; on September 1st it was $191\frac{1}{4}$. The closing prices on the same two dates for Southern Pacific were, respectively, $74\frac{5}{8}$ and $90\frac{3}{4}$. Atchison advanced during the month, from $92\frac{5}{8}$ to $106\frac{1}{2}$, and Pennsylvania from $130\frac{1}{2}$ to $141\frac{3}{8}$. Among the industrial stocks, American Smelting and American Sugar secured the largest gains in price—that is, of those stocks in which speculation was extensive.

The revival of speculation for the rise on an enormous scale was not followed by an immediate rise of the interest rates on call loans to unduly high levels. In the week ending August 17 the range of rates quoted at the Stock Exchange extended from 2 to $4\frac{1}{4}$ per cent. A maximum rate of 6 per cent. was reached the following week; and on the last day of the month, a 12 per cent. rate was quoted. The slowness with which stringency developed in the money market, following the heavy volume of speculation for the rise, might have been explained by the common report that the large operators who were engaged in promoting the bull movement had had their operations financed by loans from foreign bankers. If this report was true, and if the distribution of the bigger speculators' holdings to small outside speculators had not been carried far up to the end of August, the demands on the general call money market would not have been especially urgent.

Subsequent events showed rather conclusively that the dividend declarations, on the part of the Harriman roads' directors, had not aroused investment buying at once so that it would denude the speculative section of the market of Union Pacific and Southern Pacific stocks. The extent to which the shifting of stocks from speculators to investors was in evidence or absent was to afford the final test of Stock Exchange speculators' success in "anticipating the needs of the market" during 1906.

With the call funds available in the local money market, brokers had increased difficulty in aiding those of their customers, who were speculating for the rise, to carry their commitments during September. In the four weeks of the month the successive maximum call rates were respectively 40, 12, 10, and 7, per cent. These relatively high rates were not effective in curbing speculative activity very decidedly or in preventing the quotations of higher prices for most speculative stocks in September than in August. However the stringent conditions in the money market affected speculative sentiment sufficiently to bring about a general halt in advancing prices throughout the month. Union Pacific lost eight points in its price between September 1st and October 1st; but a dividend of 5 per cent. was deducted during the month, thus accounting for a large portion of the decline.

The dependence on foreign loans as a means of financing the rising movement by its promoters had made the stock market sensitive to developments in the local and foreign banking situation. The aid of Secretary Shaw was invoked to extend the facilities of the money market. He employed the device of placing temporarily Government deposits with banks to which gold engaged for import was in transit. Municipal bonds were accepted as security for Government deposits also, provided that the Government bonds, for which the municipal securities were substituted, were used as a basis for additional banknote circulation.

This encouragement given by the Secretary of the Treasury to gold imports drew the attention of the larger European banks. On October 10th the Reichsbank's discount rate was raised from 5 to 6 per cent. The following day the Governors of the Bank of England raised that institution's minimum rate from 4 to 5 per cent.; at a special meeting, October 19, the rate was raised further to 6 per cent. In

November, the Bank of France and many other French banks refused further to discount American finance bills. Those French banks, which remained complaisant in affording this kind of accommodation, did so at rates of from 4 to $4\frac{1}{2}$ per cent., while the regular discount rate in the Paris money market ranged from $2\frac{7}{8}$ to 3 per cent.

The unmistakable evidence of a heavy volume of speculative commitments, a relatively light volume of investment absorption—practically imperceptible indeed—and conditions in the money market which rendered the long continuance of speculative accounts inconvenient—all combined to bring about declines in prices on the Stock Exchange, although these declines individually were not profound in October.

In November the declines in many stocks, which had proceeded through October, were checked to some extent. The prices of many stocks made positive net advances in the course of the later month—among them, St. Paul, Louisville & Nashville, New York Central, Northern Pacific, Reading, Southern Pacific, Union Pacific, and Colorado Fuel & Iron, in which speculation had been concentrated. Pennsylvania, in spite of having its semi-annual dividend raised from 3 to $3\frac{1}{2}$ per cent., suffered a slight fall of price between November 1st and December 1st.

Liquidation, which was halted in November, was resumed in December and the declines in prices which accompanied it were pronounced and general. Investors were not impelled to absorb stocks in any large amounts even at the prices which had fallen below the relatively high levels of September or early October. As the month of December and the year drew to a close, the declines increased in sharpness and magnitude. The year 1906 closed then with prices falling as sharply as they had risen in the opening month of the year.

Almost at the end of the year there was unfolded an event, in connection with railroad financing, which rather increased the alarm and uncertainty with which speculators regarded both the stock and money markets. The railroad management and financiers concerned in this development were much criticized for the haste with which they proposed to put their plan into operation; but the exigencies of the money market and the necessity for raising fresh sums of large amount appear to have dictated the details of the plan, rather than the desire for illicit gains through the possession of advance information.

The railroads, in their efforts to effect the fresh financing which the congested state of their traffic handled with inadequate facilities required, not only resorted to short-term notes; but those roads whose stocks were quoted at levels well above par hit on the device of inviting their stockholders to subscribe to new issues of stock at par. At the close of 1905 the Chicago, Milwaukee & St. Paul Railway had announced its intention of pushing its lines to the Pacific Coast. By way of raising funds for this purpose a large increase of the capital stock was proposed. In December, 1906, apparently, the St. Paul's management did not cherish any illusions—whatever the speculators still retained—as to returning ease in the money market and a widening of the extent of the general investment demand. The sudden announcement, December 17, ran to the effect that certificates of rights to subscribe to new stock would be issued to stockholders at once; December 19th was named as the last day on which assigned rights could be transferred by the stockholders and an initial payment, amounting to \$10,000,000, was called for to be made December 31. The amounts then outstanding of common and preferred stocks were, respectively, \$58,183,900 and \$49,654,400. The amount of the new issue was to con-

72 SPECULATION ON NEW YORK STOCK EXCHANGE [72

sist of \$33,164,300 of new common stock and of \$66,-328,500 preferred. The magnitude of the proposed new issue and the imminent date of the relatively large initial payment required, proved rather staggering and violently affected the prices of other stocks on the list. St. Paul, for about a week prior to the announcement and for the two days immediately succeeding, was the last stock which, in the long market movement, displayed a sharp upward tendency in its price. The prosperity of the road, the high price of its stock at that time, and the announced amount of the new issue, all served to make the rights extremely valuable. Below are given the high and low prices of St. Paul common, recorded on the Stock Exchange from December 8th to the 21st inclusive—indicating the general course of that stock's price in a two weeks' period of general liquidation and increasing speculative timidity:

	<i>High.</i>	<i>Low.</i>		<i>High.</i>	<i>Low.</i>
Dec. 8	183 $\frac{3}{8}$	182 $\frac{1}{4}$	Dec. 15	197 $\frac{5}{8}$	195 $\frac{1}{2}$
Dec. 10	183 $\frac{3}{8}$	181 $\frac{5}{8}$	Dec. 17	199 $\frac{5}{8}$	196 $\frac{7}{8}$
			(New issue announced.)		
Dec. 11	189 $\frac{1}{4}$	184	Dec. 18	194	183
Dec. 12	189 $\frac{5}{8}$	187 $\frac{3}{8}$	Dec. 19	154	147
			(Sold ex-rights.)		
Dec. 13	192 $\frac{3}{4}$	188	Dec. 20	152 $\frac{7}{8}$	150
Dec. 14	198 $\frac{1}{2}$	192	Dec. 21	152 $\frac{3}{4}$	151

Following the announcement of the St. Paul's issue of new stock, there was no such sharp rise in prices generally as had followed the Harriman roads' dividend declarations in the preceding August. The stringency of the money market, which had been apparent for some months, and the dawning understanding, on the part of the speculators, of the lack of investment demand, prevented any renewal of a bull movement. The briefly enduring rise in St. Paul, immediately before and after the announcement of its financial plans, was the last gasp of the general speculative

movement which had its birth in September, 1904. In the last week of 1906 began the general almost uninterrupted decline which continued into 1907 and formed the leading feature of the stock market in that year. The chief result of St. Paul's closing rally was to add to the disquieting sum of imminent events which were to impose fresh strains on the financial markets.

When the second half of 1906 opened, it was clearly evident that, in the first place, no power of investment absorption had been manifested which had shown itself able to withdraw from speculators on the Stock Exchange the large quantities of stocks they had carried. It was idle to assume that an investing class, well supplied with funds, stood ready to relieve the speculators of their burdens. And whatever might have been the total extent of investors' resources, the San Francisco fire and the life insurance legislation had made it plain that two groups of corporations, which together made up an important section of the investing class, would be eliminated as factors in the outright purchase of stocks. The restrictions imposed on the investing capacity of both classes of insurance companies constituted the only definite body of facts on which estimates of investing powers could be based. And certainly the increased inducements which were held out to investors to subscribe to new issues of bonds and notes did not point to any belief, on the part of experienced bankers and financiers, in the existence of an unrestricted omnivorous class of investors. Nor did the respective results of the two issues of New York City bonds, whether compared with each other or with the results of preceding sales of the same character, indicate an extensive demand for investment securities.

In view of the positive restrictions on general investment buying power and the failure of investors in large

numbers to appear in the first half of the year, either when prices were high or when they were low, it is difficult to see how the heavy speculation for the rise in August and September could have met with ultimate success. Of course individual speculators could sell, on a rising market, to other speculators at a profit. But this process would be brought to a halt when no more speculative purchasers appeared. This check to a general speculative movement for rising prices had occurred repeatedly throughout 1906, attended apparently with no consequences of a serious nature in the first half of the year. In that period, when speculation for the rise and an advance of prices had been followed by a general decline and a certain amount of liquidation, the latter were halted in turn by renewed speculative purchases, which did not intervene to arrest the decline with which the year came to an end.

The general decline, which immediately followed the sharp rise of August and September, was interrupted by no prolonged rise during October, November and December. In November, as we have noticed, the progress of liquidation was stayed for a short period. But neither general investment buying nor heavy speculative purchases intervened to bring about any relatively prolonged rising movements such as were in evidence during the preceding March and May, for instance. The stock market, in the last three months of the year, was characterized by liquidation which varied in its rate of progress but scarcely in its nature. The only uncertainty at the close of the year related to the low points to which prices would fall in 1907 before the elimination of weaker speculators and investment buying would act to bring an end to the general decline.

Liquidation continued with renewed force in January, 1907. So clearly was it under way, with no likelihood of

its being halted before running its full course, that two great European banks apparently thought it safe to reduce their respective discount rates. The Bank of England's rate was lowered from 6 to 5 per cent., January 17, and the Reichsbank's from 7 to 6 per cent. on the 22nd. When the rising movement had been stayed the preceding October, it will be recalled, each bank, by raising its rate, had most effectively prevented gold imports by New York interests from England and Germany, with which further speculation for the rise might have been assisted. Throughout November and December the high rates were maintained at London and Berlin. The unmistakable liquidation, however, which set in during January, removed the danger of any drain of gold to the United States, at least for the time being, and it was therefore thought safe to lower the foreign discount rates.

Following the course which, in the preceding month, the Great Northern, Northern Pacific, and St. Paul Railways had adopted as a means of obtaining fresh capital, the Chicago & Northwestern announced an issue of new common stock, amounting to \$24,403,000, for which stockholders could subscribe at par by paying for it in full on the following March 16th. This was the last of the large stock issues, which played so prominent a part in the last few months of the declining market; and which Mr. E. Meyer, Jr., has characterized as "the practical assessment of stockholders."²

Another device was employed to raise capital in the shape of three-year 5 per cent. note issues which were put out by the Southern Railway, the New York Central—together with some of its subsidiary companies—and the American Telephone & Telegraph Company, in the re-

² *Yale Review*, "The New York Stock Exchange and the Panic of 1907," May, 1909, p. 44.

spective amounts of \$15,000,000, \$50,000,000 and \$25,000,000. The New York, New Haven and Hartford also announced issues of obligations of differing kinds, to the amount of \$26,000,000.

As we glance at the table of closing prices, on January 2nd and February 1st, of those stocks in which speculators had been most interested, we see that for Southern Pacific and Steel preferred alone were gains recorded between the two dates named—and in both cases, those gains were only fractional. The losses sustained by the prices of other stocks ranged from one or two points to slightly more than thirty points—this latter amount was the decline in price suffered by Northern Pacific. The number of shares sold on the Stock Exchange, 22,702,760, exceeded that recorded for any of the three preceding months in which liquidation had been in operation.

This first month's burst of unmistakable liquidation was continued in February; in the latter month the sales on the Exchange amounted to 16,470,972 shares—a volume of transactions which indicated some slackening in the urgency of forced selling, when it is compared with the records for January. The declines in the prices of the more speculative stocks were not so sharp as they had been in January. The prices of Atchison, American Locomotive, and American Sugar rose slightly between February 1st and March 1st.

The Pennsylvania Railroad announced in February that its issues of new securities would be concluded after it had sold \$50,000,000 three-year 5 per cent. notes. For the railroads generally this issue was the last which had been put forth with some reluctance under the pressing necessity which weighed upon so many of the roads.

Of the \$30,000,000 New York City 4s offered in February, \$26,000,000 falling due in 1956 were taken by bidders in their entirety; but of the remaining \$4,000,000, having

shorter maturities—\$1,500,000 falling due in 1926 and \$2,500,000 in 1916—only a part was taken. For municipal bonds, as for railroad securities, the investment market was still restricted.

In March liquidation became more urgent and was accompanied by sales on the Stock Exchange of 32,208,525 shares. The volume of transactions thus represented exceeded even the extraordinary total of the preceding August, and was the heaviest recorded since January, 1906. April and May, 1901, were the only other months which have surpassed March, 1907, in this respect. On the 13th there were severe general declines; and on the 14th—the date of the so-called "Silent Panic"—transactions amounted to 2,571,516 shares, against 2,183,867 on the 13th. These two days were also those on which British Consols in London attained successive low records in the quoted prices of many years. The quotation of $84\frac{11}{16}$ on the 13th was the lowest price since 1866, and that of $84\frac{5}{16}$ on the following day marked the lowest price since 1848. Although the low points reached March 14 on the Stock Exchange attracted the widest attention, that day's low prices were by no means the lowest reached in the general liquidation of the month. On the 25th, prices reached still lower levels than those at which they were quoted on the 14th.

With the month of March, 1907, the period of Stock Exchange activity selected for study was concluded. This month was chosen as the concluding one, because the profound declines and panics, which characterized it, appear to have marked the end of the period of public participation on a large scale in the stock market, which had begun in the autumn of 1904. Throughout the remaining nine months of 1907, the volume of sales on the Stock Exchange—measuring roughly the degree of speculative activity—presented a monthly average, amounting to 13,-

895,185 shares, which is much below that of the 31 months' period—running from September, 1904, to March, 1907—amounting to 23,554,291 shares, and even less than the monthly average of 16,149,954 shares for the thirteen years, 1900 to 1912, inclusive. It appears, therefore, as if public speculation on the Stock Exchange on a relatively large scale ended for the time with the close of March, 1907.

Of course the general decline in the stock market was not ended for 1907 by the end of March. But the declines which occurred later in the year, particularly those of October, were accompanied by disturbances having no immediate internal connection with the Stock Exchange. The protracted fall of prices and the liquidation which ran through the last three months of 1906 and the first three months of 1907, on the other hand, took place in a period of generally expanding prosperity and economic activity; so that the liquidation and depression of those six months appeared to have arisen from internal conditions in the stock market, rather than from conditions outside it.

We may not fully agree with Mr. Meyer, when he writes in the article already cited that over-speculation for the rise on the Stock Exchange had been completely liquidated early in 1907, and that the declines of later months represented Stock Exchange liquidation "for the industries and businesses of all the country, months after [the Stock Exchange] had liquidated for itself." But much of the liquidation subsequent to March appeared to arise from other conditions than over-extended speculation for the rise on the Stock Exchange. The difficulty of analyzing the conditions under which liquidation in the latter part of 1907 was conducted, together with the considerations we have briefly set forth, have led us to conclude the period of Stock Exchange activity selected for study with March, 1907.

CHAPTER VI

THE ASSUMED INVESTMENT DEMAND

IN the preceding narrative of events, connected with Stock Exchange speculation in 1906, repeated reference has been made to the ingrained assumption of financial writers and speculators that a large class of investors existed, possessing in the aggregate a huge fund with which that class stood ready to purchase any issue of securities that might demonstrate its desirability for investment purposes, whatever market price the stock of that issue might have attained when its desirability became clearly evident. Many financial writers, who undertook to interpret the events of 1906 and 1907, founded their arguments on this assumption. After the first severe decline of 1906, in February, it was declared that¹ investors had not been inclined to buy stocks generally after the rise of January because the extensive and substantial increases in dividends, for which speculators had looked and on which they based the conduct of their operations, had not been forthcoming. A former railroad president asserted later in the year that investors had been repelled by the way in which various managers of corporations, both railroad and industrial, had juggled the finances of the companies under their direction.² We might quote, at this point, the story of the large stock issues which many of the great railroads put forth in the closing days of 1906 and early in 1907, as it

¹ *Commercial and Financial Chronicle*, Feb. 24, 1906, p. 416.

² *Ibid.*, Jan. 5, 1907, p. 2.

was told, both by Mr. E. Meyer, Jr., and by Senator LaFollette—two men who beheld the events in question from viewpoints that differed from each other as widely as was possible. Speaking from a Wall Street man's standpoint, Mr. Meyer gave the following brief account of the issues of new stock and the circumstances which led up to them:

[In the latter part of 1906] the railways of the country, staggering under a load of traffic which exceeded the capacity of their equipment, cried aloud to the investing public for funds. But railway investments had been made unattractive by radical anti-railroad legislation, by the imposition of new and onerous burdens upon railway operations, by the increased cost of operation, owing to a general advance in the prices of wages and materials, compared with a decrease in freight and passenger rates which was legislated upon the railroads—the whole thing creating a situation which resulted in the undermining of confidence in railway values generally.

. . . In spite of all the handicaps, the railroads endeavored to increase their facilities to handle properly the abnormal business, and their only recourse in many instances to make these needed extensions was the practical assessment of stockholders through the issue of new stock. Is it, therefore, any wonder that "far-sighted investors" withdrew from the situation, causing the first stage of liquidation which culminated in March, 1907? . . .³

The following account of these events was given by Senator LaFollette:

. . . The master organizations put forth all their efforts to stay the downward trend in Wall Street and to stimulate a lagging market.

³ *Yale Review*, "The New York Stock Exchange and the Panic of 1907," May, 1909, p. 44.

This is history, Mr. President. They forced dividend payments. They made them extravagant. The Baltimore & Ohio, the Pennsylvania, the Santa Fe, the New York Central, the Union Pacific, the other companies, declared dividends lavishly. It was not so difficult. The traffic of the country paid for it all. The stock market responded and stocks took new high records. Determined to outface appearances, the groups ordered a new issue of stocks. In the last half of 1906 not less than \$500,000,000 of railway stocks alone were thrown upon the market, dividend issues keeping step with stock issues. It was designed to betoken a carnival of prosperity. It was expected that the country investors would respond in the old way and their money be drawn into this financial center to prop it up. But the public did not come in. Railroad securities had fallen into disrepute. Watered when the roads were built, watered when they were merged into systems, watered again when the systems were grouped, railroad stocks and bonds were regarded by the public with a suspicion bordering on contempt. Morgan and Rockefeller and Harriman and Hill were almost daily making some new move in the great game, but the public had one answer: "It is water; more water."⁴

We need not stop to reconcile the discrepancies in these two narratives of the same events, or to question the accuracy of statements made by either author. Both agree, at any rate, on the fact that large issues of new stock were put out by various railroads; and also they take for granted the existence of an expectant class of investors who would have been able to buy the stocks if they had felt inclined to do so; their not doing so, according to each author, arose from the fact that the new issues presented no attractions to them, because of distrust awakened by causes which differed according to the account read. This dis-

⁴ *LaFollette's Weekly*, "The Truth about the Panic of 1907," March 15, 1913, p. 5.

trust—whether it sprang from the dreaded consequences of governmental regulation of railroads or from the public's conviction that these new issues of stock were "water; more water"—had been the unique cause for the investors' refusal to buy the stocks in question and to withdraw them from the market. Both the Stock Exchange apologist and the radical Western Senator are at one in assuming the presence of an investing class with available money resources of indefinite extent.

The two interpretations, given above, of events leading up to the panics of 1907—like all the differing forms of these two types of interpretations—point with emphasis to the distrust of investors. But we may seriously question the validity of the assumption which the authors of both accounts almost explicitly state. Was there any evidence that throughout 1906 a large investing class continually stood ready to purchase any securities which came up to certain requirements—with respect to security or the prospect of steady income yield—formulated by speculators? We certainly have no direct evidence that any such class existed during that year and 1907, at any rate. Most of our indirect evidence—on which our chief reliance must be placed—of the attitude of prospective investors and of the strength of the demand they could present, was furnished by the size of various bond issues, the rates of interest they bore, and the terms on which they were offered to investors; and also by the ultimate results of the offerings where these were ascertainable. This indirect evidence pointed to a steady contraction of the general investment fund which was applicable to the purchase of securities in the New York financial markets.

At the beginning of the period we undertook to consider—running from September, 1904, to March, 1907—investors appeared willing to take up any issue of bonds with the

utmost readiness. So striking was the omnivorous character of investment absorption in the latter part of 1904 and early in 1905 that it drew the attention of the financial press. In the *Economist*, December 31, 1904, there appeared a comment on this tendency, as displayed in the New York financial markets; and as a further indication of the strong investment demand, for bonds at least, we quote the following:

The extremely active demand for bonds of the better class still constitutes one of the noteworthy features of the situation. After the set-back experienced in 1903, a marked revival occurred, it will be remembered, during 1904. Indeed, the avidity with which new bond issues were taken up in this last-mentioned year was one of the most striking characteristics of that period. Month after month one new loan after another was brought out, and not the least difficulty was experienced in finding purchasers for these enormous additions to the investment list of securities; about the only point insisted on, apparently, was that the new obligations should be of undoubted character. The short-term notes issued by the railroads during the last two years have almost disappeared from the market. This demand for the better grade of securities has continued up to the present time, and whenever a new loan is brought out the whole offering is quickly absorbed.⁵

The investment demand did not apparently, however, retain the omnivorous character, so noticeable in the last of 1904, through the following calendar year. It was thought best in 1905 by the bankers who had charge of two American allotments of Japanese government loans, to offer the securities representing those loans, which bore interest at the rate of $4\frac{1}{2}$ per cent., to subscribers at $87\frac{5}{8}$. The large extent to which both allotments were oversubscribed may

⁵ *Commercial and Financial Chronicle*, Jan. 21, 1905, p. 185.

indicate the possibility that more favorable terms for the borrowers could have been obtained. But the issue by several railroads of bonds, on terms almost exactly the same as those of the Japanese loans, pointed to a certain change in the character of the investment demand. To be sure, neither of the railroads, issuing the securities we have mentioned, enjoyed such prosperity as to establish its credit on the highest possible plane beyond peradventure. But the rates of interest on the new securities and the low prices at which they were offered stand out strikingly as over against the 4 per cent. bonds which had been so common up to a short time previous. There was a tendency to shorten the lives of bonds and to raise the rates of interest which they bore.

Not only the bonds of railroads and other corporations were put forth at interest rates which gradually rose, but the same tendency was observable in New York City bonds. Shortly before 1906, New York City had been able to put out abundant issues of $3\frac{1}{2}$ per cent. bonds. Early in 1906, an issue of 4 per cent. bonds was sold by the city at a price which netted 3.65 per cent. interest, allowing for the length of that issue's maturity. Another issue in July of that year, amounting to only \$12,500,000, could not be sold in its entirety, and those of which the Comptroller was able to dispose were sold on an average interest basis of 3.94 per cent. The results of this sale were subjected to wide comment. Thus, by the middle of 1906, the Comptroller of New York City, in putting out new issues, was beset with difficulties, much the same, in kind though not in degree, as those encountered by railroad managers who at this time desired to make new issues of securities. In June the reported failure to underwrite successfully the marketing of \$24,000,000 Chicago, Burlington & Quincy Railroad, Illinois Division 4s had shown the limitations placed on the investing market in some directions.

Although the difficulty of selling the best classes of railroad bonds to investors directly may have indicated the distrust aroused by proposed governmental regulation, the decreasingly favorable terms of successive New York City bond sales, throughout the period, can hardly be ascribed to that distrust. The physical restrictions which had been imposed on investment powers of absorption along certain lines by the San Francisco fire and the life insurance legislation, had been mentioned in the spring of 1906 as factors which might lead to disturbance. Attention, after being drawn most powerfully to these quantitative restrictions on the investment market, was apparently diverted to other phenomena. It was felt that, because an apparently limitless and omnivorous investment absorption had manifested itself in 1904, it must always exist, potentially at any rate, so long as the country's prosperity endured.

As a matter of fact, nothing whatever was known by speculators of the nature and extent of the investment demand throughout the entire period we have considered—that is, the possibility that this demand would extend to stocks listed on the Exchange. The individual speculator for the rise—whether he sold to obtain a profit or to limit the extent of his losses—cared little, nor has he ever cared, whether the buyer was another speculator or an investor. His eyes were fixed on the course of prices. Those prices might express concretely an extensive and effective investment demand; or they might merely reflect the collective effort of speculators to “anticipate” an assumed investment demand. The future course of prices, at any time, would be determined, in the speculator's mind, by the increasing or diminishing worth of a given stock to investors; that worth in its turn would depend on the general prosperity of the country, the company's earnings, and the amount of those earnings paid out in the form of

dividends. Doubtless, some data with regard to the rate of investment buying could have been obtained—or with regard to the extent of investment selling—in connection with the several stocks which were either attracting or repelling investors; but no such information was ever forthcoming. It was much more convenient, even if it was a course subject to a high degree of risk, to assume the existence of a huge investment fund which would be applied to the outright purchase of stocks which fulfilled certain formal requirements, at prices considerably in advance of those at which most of the speculative commitments had been entered upon.

But there was a factor in operation which would have tended to weaken the powers of investment buying in 1906, aside from the cramping of the fire insurance companies by the San Francisco fire and life insurance companies by state legislation, with regard to the part they could play as purchasers of stocks in the open market; and quite aside from the huge capital issues of the preceding two years, or from the losses incurred in the Russo-Japanese war. It is a platitude of English financial markets that the prices of investment stocks and the general activity of trade tend to take divergent courses. This arises from the inducement offered many investing business men to sell their securities, when trade is active, and to employ the money they obtain from the sales in more profitable ways. Of course this tendency is obscured by the likelihood that investment securities will have a tendency to rise as the companies they represent share in the prosperity usually going along with active trade. When trade rather tends to become less active, investment purchases are made on an increased scale.

This varying tendency of investment buying, a British financial truism, is hardly recognized in this country. Pos-

sibly this is due to the fact that many holders of American investment securities are foreigners whose only interest in American business activity has been to draw dividends and interest from the securities which are favorably affected by that activity. Thus the tendency, which in England acts so as to obscure the inverse relation between trade and security prices, had been prior to 1906 more prominent in this country than the main tendency expressed in the "axiom" of the financial market, as the *Economist* denominates it.*

So long as expanding prosperity and heightened commercial activity proceeded at a much more rapid rate in this country than in Europe, foreign investors would not have presented to them the strong inducements to sell that concurrent activity in their own countries would offer. But, when the maximum capacities of industry and commerce were undergoing a world-wide strain, as in 1906, the urgency of an effective investors' demand would be much weakened. And in view of the widespread and intense business activity of that year, the tacit assumption, on the part of speculators generally and of many financial writers, that a practically unlimited investors' demand existed for stocks paying steady dividends, with little regard for prices, appears to have been additionally unwarranted. The narrowing of the general investment market was quite clearly indicated throughout 1905 and 1906 in the diminishing volume of bond issues and in the increasing rates of interest they bore. It is difficult to see how, in the face of the perceptibly decreasing capacity for absorbing new bond issues and the increase in economic activity of every sort, the assumption mentioned could have been regarded seriously. The events, which would tend to weaken faith in it, were apparent to all by the middle of

* *Economist*, Feb. 22, 1913, p. 408.

1906 and were discussed very widely; but speculators, for the remainder of the year, and others who have since discussed their activities, still adhered to the belief that the investing class possessed sufficient means to take off speculators' hands the large amounts of stocks in the market, had they so desired, and that the condition which prevented investors' buying on a large scale had been their unwillingness to do so. Upon the causes of this assumed unwillingness much of the discussion has since hinged.

It must not be supposed that all of the sales made on the Stock Exchange during 1906 represented merely the interchange of stocks among speculators, and that investment buying was quite lacking. The latter doubtless operated in some degree pretty steadily throughout the whole year and during 1907. But investors revealed not the slightest tendency to increase their purchases of those stocks which were advanced in price as a result of speculative buying or possibly of manipulation. As to the extent and nature of outright purchases on the Stock Exchange for the account of investors at any given time nothing was known or has ever been known by the general body of speculators.

If little information was to be obtained concerning investment purchases, nothing more was known of investors' selling. If, for example, the rise of the Union Pacific's dividend from 6 to 10 per cent. in August, 1906, might have acted as a lure to investors, causing them to purchase in large amounts, the rise of 22 points in price, which followed in the course of a few days after the increase of the dividend, offered equally strong inducements to those investors who might have bought at prices below the low point of August 17th, to sell at a profit.

The sum of general expectations in 1906 consisted in assuming the existence of investors possessing in the aggregate a huge volume of resources; to those imaginary

investors—they may fairly be so considered since they never once furnished evidence of their existence—was attributed the formulation of certain requirements which the stocks they bought must possess, such as financial stability and a satisfactory rate of return to their respective possessors. Underlying any thought which speculators for the rise bestowed on their operations in 1906, was the assumed existence of the investing class. Not only did speculators abstain from seeking direct evidence that this class existed to the extent that the speculators, and some superficial writers on these matters, imagined; but they were given abundant evidence that the powers of the actually existing investment class had been greatly weakened. All this information—somewhat indirect in its bearing on Stock Exchange investments perhaps, but still quite worthy of attention—although accessible to the speculators, was disregarded; an extensive general rise of prices occurred in August and September, and a large body of speculators entered the market, utterly unmindful of the restrictions on investment powers generally. The course of prices, in the leading dividend-paying stocks, from September, 1906, to the subsequent March, and the volume of transactions in those months, indicated the degree of correctness with which speculators had estimated the intensity and effectiveness of the investment demand. In order to justify the general course of speculation in the summer of 1906 and to establish the approximate correctness of its forecasts, it would be necessary to show that most of the dividend-paying stocks, which speculators particularly favored in August, were absorbed shortly afterward by investors at the prices to which they had advanced. But was this the case? In the protracted general decline, extending over a number of months, the stocks in which transactions maintained a large volume, were those which advanced most sharply in August



and September, supposedly in response to an investment demand which, during those months, was presumably anticipated by speculators. The expectations of speculators were not shown to have been wholly incorrect by the rates of dividends in subsequent months or years—not even in 1908, the year of general depression. Dividends on Union Pacific, Southern Pacific, and Reading have not been lowered since August, 1906. Nevertheless the prices of these three stocks, and of many of the same class, underwent tremendous declines. It is difficult to see how any other explanation of the fall of prices than a speculative overestimate of the investment demand during the autumn of 1906 and the following winter, can be regarded as satisfying.

President Hadley writes, "When speculation anticipates an actual demand, it is of great service to the community",⁷ and further, "Legitimate speculation involves anticipation of the needs of the market and a power to assume risks in making contracts to meet these needs. A failure to fulfil either of these requirements makes the operation an undesirable one for the public to tolerate."⁸ If we accept President Hadley's test of the legitimate character of speculation—that it "anticipate the needs of the market"—and then recall to mind the events on the New York Stock Exchange during 1906 and up to March, 1907, we may decide whether speculation, as it manifested itself in those fifteen months, in the words of Professor Emery, "consisted in assuming the inevitable economic risks of changes in value"—his definition of speculation—or in "placing money on the artificially created risks of some fortuitous event",⁹ as he defines gambling to distinguish it from speculation.

⁷ *Economics*, p. 110.

⁸ *Ibid.*, p. 124.

⁹ *Speculation on the Stock and Produce Exchanges of the United States*, p. 101.

CHAPTER VII

SPECULATIVE "ANTICIPATION OF THE NEEDS OF THE MARKET"

THE disastrous outcome of Stock-Exchange speculation in 1906 and the unsoundness of the assumption that an unlimited investment power existed in that year which, through no fault of the speculators, was not exercised, make it appear that the volume of speculative commitments for the rise went far beyond the actual powers of investment buying. Indeed it seems as if speculation was carried on without any regard to the extent and character of the restricted investment demand. In the earlier months of 1906 speculation for the rise showed little tendency to adjust the volume of its operations to investors' capabilities; and in the late summer and early autumn, speculators on the long side of the market seemed to have extended themselves beyond the utmost possibilities of any investment absorption which might have set in. No evidence that this absorption exerted itself has been produced, either at the relatively high prices on the Stock Exchange in September, 1906, or during the period of falling prices from September to the subsequent March — in sufficient strength, at any rate, to withdraw from speculators the stocks in which they had traded most extensively. Speculation in 1906 seemed to reveal a tendency to advance prices far beyond the levels at which investors would buy, and finally brought general disaster on those who acted on the assumption that an unlimited investment demand existed.

This brief summary of speculative activity in 1906 does not accord with the conventional conception of that phenomenon. Engaged in this form of activity, according to traditional economic supposition, are traders of preternatural acumen and foresight. It seems almost inconceivable that traders endowed with such rare qualities could seriously miscalculate the urgency of the demand or the extent of the resources at the command of the investors to whom the final sale of speculative stocks, it was expected, would be made. If those who participate in speculation possess generally such a high degree of sagacity, it does not seem possible that they should have been guided in their activities by a belief regarding the possibilities of investment buying, both as to its strength and characters which proved to be so wide of the truth.

In order to ascertain the possibility that speculation can go far beyond the capacity of investment absorption in such a market, we may first of all consider the business of a Wall Street commission house—that is, a firm of brokers in the strict sense—and the motives which would lead the members of one of these firms to act in such a way as to conduct its business most profitably.

Any person who is not a member of the Stock Exchange, desiring to deal in securities on that Exchange, must do so through a broker who is a member of that institution. The principal of this broker may be an investor or belong to any one of the four classes into which speculators—except floor traders—are divided in the report of the Hughes Committee.¹ That is, if a purchase of stocks, for example, is desired, the principal may either have his broker buy them and then pay to the broker the full purchase price and the commission—that is, purchase for in-

¹ *Vide* ch. i, p. 16.

vestment; or else he may deposit only a part of the purchase price and becomes a speculator on margin for the rise. Thus a broker, conducting a general commission business, has two classes of customers, speculators and investors.

It is to the Stock-Exchange broker's immediate interest that he have more speculators among his customers than investors. This is due to the prevalent rate of commission on Stock-Exchange purchases and sales. The authorities of the Exchange have prescribed a minimum rate of commission which the broker must charge for services rendered on behalf of customers who are not members of the Exchange; and the enforcement of this minimum rate is rigorous and inflexible. This rate—amounting to one-eighth of one per cent. of the par value of the shares bought or sold, as the case may be, or $12\frac{1}{2}$ cents on each share of \$100 par value—is the same on a transaction whether it be for the account of a speculator or an investor. A higher rate may of course be charged, but practically the minimum prevails, with few exceptions, among brokers in Wall Street.

The actual cost to the broker of executing a speculative order for a customer is much less than that of carrying out an investment order. Speculative transactions are usually in 100-share lots of stocks or multiples thereof; and the sales and purchases of such lots can be made to offset each other on the Stock Exchange Clearing House sheet. On this sheet, the tickets, the books of the firm, and the blotters, comparatively few entries altogether need be made. Since only the balances of stocks, as they appear on the Clearing House sheet, need be delivered or received, the handling of securities for an individual speculator is almost entirely avoided. The only details connected with margin transactions are the purchase and sale on the floor of the Exchange, some routine correspondence and a few

bookkeeping entries. Since the prevailing unit in a transaction on margin consists of one hundred shares, the commissions for the purchase and sale, both of which are necessary to the completion of the usual speculative operation, amount to twenty-five dollars for each hundred shares.

In carrying out the order—whether it consist of a purchase or a sale—of an investor, much more routine work is necessary. Moreover, each transaction requires separate individual attention, which is not necessary in the same degree for speculative orders. If the transaction involves an odd lot, that is a number of shares less than one hundred—and most investment orders are of this character—it cannot go through the Clearing House. The transaction, after the sale or purchase on the floor is reported, must be “compared”, that is, it must be confirmed by the respective office forces of the two brokers who enter into the transaction. Since odd-lot sales are not cleared, the delivery and receipt of the stock involved in the transaction must be performed separately in each case. Then, finally, if the investor be a purchaser, his broker must usually arrange for the transfer of the stock into the principal’s name, with all the care in clerical work and in handling the securities which that series of operations requires. All these routine details are as necessary for the purchase and transfer of one share as for the same operations applied to ninety-nine shares. But the prevailing charge, in the case of one share, is one-ninety-ninth of that exacted in a purchase of ninety-nine shares. For small odd lots, indeed, it is doubtful whether the commission, $12\frac{1}{2}$ cents for each share, yields any profit to the broker when allowance is made for the cost and trouble involved in the series of acts outlined above.

The prevailing rate of commission is charged, irrespec-

tive of the character of the transaction—speculative or investment—and without regard to the greater or less number of shares. It is therefore obviously to the individual broker's interest that he should have as great a number of speculative orders as possible—involving 100-share lots of stock—and not too many odd-lot investment purchases to carry out. As for the latter, it may be said that orders of this nature have, so far as is known, never been generally discouraged by brokers; but from individual brokers this relatively unprofitable class of business meets with only a passive reception. Of course, it is handled diligently and honestly, almost without exception, by brokers on the Stock Exchange. But such encouragement to trade in stocks as the rules of the Exchange, the ethics of the business and the conscience of the broker permit him to extend to his customers, is directed toward speculation rather than investment—that is, with regard to transactions in those stocks which are listed on the Exchange. The following of customers which a broker may have, and to which he desires to add continually fresh accessions, consists chiefly of speculators rather than of investors; and whatever efforts he is permitted to put forth in attracting new customers are bent toward having them speculate.

Thus in 1906, as will always be the case under the prevailing rate of commission, those numerous members of the Stock Exchange who were chiefly occupied in acting as brokers, in the strict sense, each for a greater or less number of principals, were interested in having their respective customers engage, for the most part, in speculation on margin; they did not seek to stimulate investment. Each broker probably knew in a general way that many other brokers' respective interests were identical with his, as regarded the character of their customers' transactions, and that every other broker presumably would strive to at-

tract speculative orders and would be, at best, coldly receptive toward orders from investment purchasers. None of these brokers could know—since each kept the details of his business to himself—what the extent of speculative commitments in various stocks might be; nor could he know of the rate at which investment absorption or unloading was generally proceeding, except insofar as he could draw inferences from the character of his own particular business. The broker's chief concern was to have as large a volume of speculative orders given him as possible. If he was not interested in encouraging investment, and knew that few other brokers were doing so, he looked to the attractions offered by many stocks from time to time on the Exchange to draw investing purchasers. The latter presumably would retire the speculative commitments into which his own customers and those of other brokers had entered. Brokers generally held to the common belief that investment buying of unlimited extent would set in toward any stock that displayed the qualifications which presumably appealed to investors, in the way of yielding a steady income.

The class which constitutes the general speculative "public", in such a year as 1906, is as hard to characterize particularly as is the imaginary swarm of investors assumed to have been hovering over the market during that year. As has been said, the speculators came from every walk in life occupied by those who have at hand several hundred or a few thousand dollars apiece—business or professional—and possessing every possible degree of intelligence. Perhaps classes (4) and (5) of the patrons of the Stock Exchange, as those were designated by the report of the Hughes Committee, furnish as close a description as we shall ever obtain; these are:

(4) Outside operators, having capital, experience and knowledge of the general conditions of business. . . .

(5) Inexperienced persons, who act on interested advice, "tips," advertisements in newspapers, or circulars sent by mail, or "take flyers" in absolute ignorance, and with blind confidence in their luck. . . .

As was pointed out, the large body of speculators for the rise in 1906—or at any other time, for that matter—were not primarily concerned with the character of the purchasers to whom they finally sold in completing their several trades—whether investors or speculators. Such attention as they gave to the advice of others, to the earnings of the corporations in whose stocks they were severally interested and to the general prosperity of the country, together with the extent of their respective resources, guided them in the conduct of their operations. Inquiry into the soundness of the assumption as to the extent of the investment demand for particular stocks did not appear necessary to them. Probably this class shared the generally foggy apprehension of the economic transformations which had taken place since the Spanish War, and had also shared the rather wide diffusion of prosperity which went along with those transformations. For the most part, the individual members of the speculative class were not entirely occupied in following the course of the stock market. Such men as were living on independent incomes frequently had numerous interests outside Wall Street. Those speculators "on the side," who were engaged in various occupations removed from the stock market, found much in the active period of 1906 to divert their attention from events in the financial district. And, moreover, if most of them did not risk all their property or any very considerable part of it on the success of their different ventures, they were rather inclined to limit the extent of their possible losses

by placing "stop orders" with their brokers. Few of them stood ready to abide by their commitments in the event of a prolonged decline in prices. They were of the class which would buy heavily on a sharply rising market, tending by the extent of their combined purchases to raise prices still further, and would sell freely on a sharp decline, making it still sharper.

However undesirable the above class of speculators may be, from the standpoint of the common interest, they were sufficiently acceptable as brokers' customers. Throughout 1906, as at times for several years previous, their orders were taken in large volume, and executed with striking effect. In such months as October and November, 1904, March, April and December, 1905, January and August, 1906, these outside speculators were particularly prominent and numerous in the stock market, and in March, 1907, was beheld their final manifestation in large numbers during the period we are considering.

In actually bringing these speculators to the market in such hordes, the brokers could not of course be the prime movers. The effect on the popular mind of the striking economic and financial phenomena previous to 1904, and the rise of prices, which was occasionally so striking, had acted upon many people in such a way as to direct them toward stock speculation. As it happened, many persons inclined in that direction in 1906 had the means to gratify their inclinations. The brokers, whom they had to employ in order to engage in speculation, were of all things loath to discourage speculation among their customers. In fact, the chief activities of brokers in 1906, as at other times, consisted in getting in touch with just such a class as the potential speculators made up and in encouraging them to undertake ventures in the stock market.

The brokers, it has been said, played a part in the pro-

motion of speculation which was not very active. The existence of a large class of potential speculators depended on conditions largely beyond the control of the commission houses. But these houses naturally extended every facility at their command to welcome the coming of the large class of speculative customers. Since the prevailing rate of commission and the differing characters of transactions for speculative and for investment purposes made the investors much less profitable than the speculators to the brokers, speculative customers were more welcome to the brokers than were investing purchasers. Provided then that speculators came forward in sufficiently large numbers and the investing class did not, of its own accord and without active encouragement, manifest itself by heavy purchases which would keep step with speculative commitments, over-speculation was inevitable.

Over-speculation, arising as we have indicated, does not necessarily impose checks upon itself, as it was conducted in 1906. As the volume of speculative commitments, accompanying the rise of prices, expands, it may far exceed the extent of investment buying so long as fresh speculative purchases continue to be made. Of course the process must end, when the speculators cease their purchases through lack of further means or from disinclination to venture further, and general investment buying does not step in to retire the heavy aggregate of commitments for the rise which have been made. When the limits of the resources, which speculators are willing or able to devote to providing their requisite margins, have been reached without the intervention of investment buying, prices will inevitably fall, whatever may be the supposed attractions of various stocks to hypothetical investors. And the extent of the ensuing decline will depend partly on the excess of the speculative commitments for the rise over the actual

investors' purchases at the highest price levels, and partly on the amount of investing purchases which are made as prices fall.

It may be objected that the growing need of funds for speculators, which would be manifested by a rise of call rates if the speculators unduly over-estimated the demands of investors, would tend to act as a corrective to over-speculation by bringing about a rise in the level of interest rates on call loans. As the stock market in New York is organized to handle public speculation, however, the rise or fall of call rates does not directly affect outside speculators. The interest, which they are charged by their brokers, is computed on the basis of a fixed rate, say 6 per cent., in times either of ease or of stringency in the money market. In such months as September, 1904, the interest rate with which customers are charged is not generally lowered to 2 per cent. Nor in such months as November, 1906, is the rate of interest charged customers as high as 25 per cent. The brokers themselves are the parties to stock speculation upon whom high interest rates bear heavily in times of stringency. But since all brokers are not charged the maximum rate each day by lenders, and since those who pay the highest rates are comparatively few in number, this direct pressure of high call rates on the brokers does not operate very effectively to check speculation on the part of their customers. About the only action these high rates can exert is in the nature of inducing the brokers to persuade some bullish customers to reduce their commitments. This action is neither generally immediate nor very effective in reducing the volume of speculation.

Furthermore, we can hardly regard the prevalence of low call rates as a very powerful stimulant to speculation. Mr. Horace White has pointed to low rates, which endure for

extended periods, as tending to "incite speculation."² It is implied, both in his direct statement to that effect and in two passages of the Hughes Committee's report,³ that low call rates act immediately and directly to swell the volume of speculative commitments. We have seen that, because of the incidence of the high rates upon the brokers, the rise of call rates does not act as a direct check on the operations of outside speculators. And since the brokers do not lower the rate of interest charged their customers when the call rate falls very low, the quotation of low rates does not serve directly to encourage speculation on the part of the outside "public." If the general body of speculators were commonly charged the quoted rates on their margin accounts, they would doubtless prove quickly responsive to changes in those rates by extending their commitments as call rates fell and reducing them appreciably as those rates rose. But the brokers intervene between the lenders of call money and the general body of speculators, gaining all the advantage of low rates and bearing all the burden of high rates, so that the operations of the speculators are not in general affected directly by changes in call rates. Only to the extent that brokers, who are able to obtain call funds at prevailing low rates, undertake to speculate on their own account, do low rates incite speculation directly. But

² *Annals of the American Academy of Political and Social Science*, vol. xxxvi, p. 565.

³ Extracts from the *Report of the Hughes Committee*—

"... There almost annually recurs an inordinately low rate for 'call loans', at times less than 1 per cent. During the prevalence of this abnormally low rate speculation is unduly incited, and speculative loans are very largely expanded. . . .

"... The repeal of the statute [exempting demand loans of \$5,000, or more, secured by collateral, from the scope of the New York State usury law] would affect only the conditions when high rates of interest are exacted, and not those of abnormally low rates, which really promote excessive speculation."

brokers' operations of this sort have played relatively slight part in periods of pronounced over-speculation. The sustained heavy volume of speculative transactions, during the period we are studying particularly, had its rise in a widespread participation in the market of a large class of outside speculators. These speculators, unable to gain any advantage from relatively low call rates, were not incited to speculation by the latter. At least the universally customary practice of brokers in maintaining the constancy of the interest rates they charge their customers does not appear to offer a direct incitement to speculation. And no inductive study of call rates and speculative activity—or over-speculation—has shown that any correlation between the two exists.

It is in the collective emotions of the general body of speculators, and in the resources which they feel inclined to risk on the course of the stock market, that the volume of speculation takes its rise. If the stories of vast fortunes made in financial operations and the movement of prices on the Stock Exchange seem, in the popular opinion, to present opportunities for successful speculation, we may look for a heavy volume of speculative commitments for the rise; provided that there are many persons of ample means, as we have indicated, who will respond readily to such stimuli as the events of 1906 and the few preceding years furnished.

In a market where many outside speculators are present, prices reflect primarily the general strength or weakness of the speculative position. This position is determined by the correctness or the falsity of the estimate, which speculators make and on which they act, of the investors' demand, existing or prospective; and also by the extent to which fresh speculative commitments for the rise are tending to raise prices or by the point of time at which the volume of new ventures is appreciably reduced with more or less sud-

denness. Speculators in such a market can do little more than indicate, by their operations, the secure or perilous state of their own separate situations with respect to the concurrent state of the market; they are hardly able to "discount" events many months in the future, as Professor Huebner asserts that they did in the latter part of 1906.⁴ His summary interpretation of the speculators' actions at that time runs as follows:

. . . Not only does the stock market afford a valuable protection to the holder of securities and direct the flow of capital, but it also serves a most useful purpose to all business men by "discounting the future" and by thus affording a register of prospective values for property other than that listed on the exchanges. It is this discounting process which has given our stock exchange the appellation of "barometer of future business conditions." As pointed out in other papers of this volume, speculation deals with the future and not with the present or the past. The stocks and bonds of our corporations aggregate so large a proportion of the world's wealth, and represent such a variety of industries, that a marked rise or decline in the general level of prices is the surest indication—in fact, an almost unfailing index of coming prosperity or depression. And the all-important fact is, that such changes of prices on the exchanges always precede, that is to say, discount the event, and do not follow, or occur concurrently. Without an exception, every business depression in this country has been discounted in our security markets from six months to two years before the depression became a reality.

The financial and business panic of 1907 serves as the latest illustration of the significant fact. The business conditions of 1906 were the best that this country has ever enjoyed. Mills were running overtime, railroads were congested with traffic, and real estate operations were booming. The press was filled

⁴ *Annals of the American Academy of Political and Social Science*, vol. xxxv, p. 13 (494).

with the most roseate "write-ups" and predictions, yet, despite the good news, security prices showed little gain following the month of August. The earmarks of coming financial and business distress were at hand. The stock market was serving its purpose as the pivotal point where thousands of the brainiest men of the world were acting on judgments which had reference to the future and not to the present. Stocks were for sale by those who reasoned correctly and knew, and were purchased by those who did not know so much. They were even sold at a sacrifice, and as knowledge of the coming state of business affairs percolated from one stratum of investors to another, the selling movement became more violent, and in March of 1907 we had our first stock-exchange panic. A rebound in prices occurred, but stocks were still for sale, and in July we had our second panic. In the meantime, however, business was excellent, and the press of nearly the whole country wondered what all the trouble was about, and why the Wall Street gamblers were thus losing their senses. The business depression, however, followed, and when it was a reality to even the most ignorant, the stock market had clearly discounted the event, and prices of securities refused to yield further. When business was at its worst, and the public press blue as indigo, stock-market prices were again merrily ascending. The exchange was again the pivotal point where thousands of the best minds of the country were expressing their judgment of the future, and were willing to convert their cash into securities, because of the anticipated increase in value.

This ascription of the "discounting" faculty—founded on the familiar saying, of doubtful accuracy, "Wall Street discounts everything"—to the operations of speculators, throughout the autumn of 1906 and the greater part of 1907, is rather obscure in its implications. What was "discounted", for instance, in the decline of Union Pacific's price from 195 $\frac{3}{8}$, its highest point recorded September 13,

1906, to $120\frac{1}{4}$ in the following March, and later to 100, October 24, 1907? On this stock a dividend at the annual rate of 10 per cent. had been earned the previous fiscal year, ending June 30, 1906, with a comfortable margin of surplus. Ever since that year, Union Pacific has continued to pay 10 per cent. dividends and to earn them with the utmost ease. If we are to assume that the market price of a stock represents the collective opinion of its capacity for paying steady dividends, the "discounting", reflected in the fall of price, amounting to $75\frac{1}{8}$ points in six months, seems rather puzzling. If 1908 had been characterized by the general passing of dividends on stocks listed on the Exchange, which suffered enormous declines of price between the summer of 1906 and the following spring, we might be willing to ascribe preternatural foresight and intelligence to the speculators who were active in September and October, 1906. But the objective qualifications, possessed by most of the dividend-paying stocks, which it was assumed in 1906 would render them highly desirable for investment purposes, were retained in large part by those stocks during 1907 and the succeeding year of depression. As to the barometric service rendered by the general decline, which began in the autumn of 1906, it seems to have been rather costly to those who provided it, and little appreciated by those whom it was assumed to have benefited.

The whole conception of "discounting", as one of the stock market's chief functions, is based on the hypothesis, commonly accepted without question, that "a slight fluctuation in the value of a product tends to produce a violent fluctuation in the value of the establishment producing it."⁵ This principle is currently believed to explain fully the movements, over a long period and to a wide extent, of

⁵ T. N. Carver, "A Suggestion for a Theory of Industrial Depressions," *Quarterly Journal of Economics*, vol. xvii, p. 497.

prices in the stock market. Even accompanied by the qualifications Professor Carver imposes in his statement of this principle, as it is given above, we cannot regard the "general law" as an adequate explanation of stock market price movements or as a safe foundation on which to erect the theory of the "discounting" function. At best it can only be true when investors in a market far exceed the speculators in numbers and in the volume of their transactions, and also when the speculators have at their command resources ample to protect them against slight or serious miscalculations in their forecasts. This principle can only hold good also when all the profits of a railroad or of an industrial corporation are distributed periodically among the owners. When the owners, for example a multitude of stockholders, generally receive annually a fixed amount on each share of their stock holdings, and the company almost always earns more than is needed for the distribution of these dividends, slight fluctuations in the excess of profits over dividends should hardly be reflected in the capitalized amounts of those fluctuations in the price of the stock. For instance, the Great Northern Railway earned in the successive fiscal years, from 1909 to 1912 inclusive, respectively, 8.33, 8.47, 8.34, and 10.31, per cent. on its capital stock, in amounts available for dividends. But, during each year, it paid only 7 per cent. dividends on its one class of stock. If its practice had been to distribute the entire surplus among its stockholders each year, without harm to its equipment, slight fluctuations in the amount of net earnings would probably have been followed by relatively violent fluctuations in the market price of its stock.

However, the practice of distributing among stockholders only a part of the sums available for dividends serves to weaken the operation of the tendency indicated by Professor Carver. As he, moreover, presents the qualification,

"the fluctuations in the value of producers' goods are never actually so violent as the foregoing illustrations have supposed, mainly for the reason that not every rise or fall in the value of products is believed to be permanent." Unless the "general law"—in its unqualified form—operates to its fullest extent, "discounting the future" by speculators will not in general be very effective. And, furthermore, unless the general decline of prices on the Stock Exchange, which proceeded quite steadily from September, 1906, to October, 1907, can be shown to have foreshadowed a general, sweeping reduction of dividends, which was to have a certain character of permanence, the explanation of the prolonged decline in question cannot be obtained by recourse to speculative "discounting."

So far as the individual outside speculator is concerned, his immediate interest, as he sees it, is not closely bound up with having a pressing investment demand act upon the market. If he purchases a given stock and afterward other speculators purchase the same stock in sufficient aggregate amount to advance the price beyond the point at which the first speculator bought, he can, if he desires to convert his gains, sell to another speculator at an advanced price, just as much to his immediate advantage as if he sold to an investor. When the speculator, whose account shows a profit on his purchase, decides to sell and obtain his profit, the chief focus of his attention is the price at which he can sell—regardless of the purchaser's being another speculator or an investor. He may of course consider the possibility of manipulation's part in fixing the price of his particular stock. But the actual strength of the investment demand is never considered a factor which may be potent in determining the price of a given stock at any one time.

Those banking institutions or other agencies which lend

money on demand to Stock-Exchange speculators are not directly interested in the correctness of the speculative anticipation of the market's needs. The Stock-Exchange market for call money is primarily a convenience to lenders. When the bankers, individually or collectively, have in their hands funds which will remain with them for an undetermined period, the demand for loans, readily payable on demand, furnished by the speculators, provides lenders with the means of employing those funds profitably for as long or as short a period as the funds in question are left at their disposal in whole or in part. Thus the national banks, trust companies, private banking houses, agencies of foreign banks—all the various lenders of funds in the form of Wall Street demand loans—regard that part of the money market, in which such loans are made, as chiefly a convenience to themselves individually and collectively. The relatively secure basis for the great bulk of demand loans does not necessitate a very careful scrutiny of the investors' effective demand as compared with the aggregate volume of open speculative accounts. The lenders generally assume the existence of a speculative demand for call money which is practically without limit. Although the supply of available funds may be very extensive as compared with the speculative demand so that the call rates may fall as low as 1 per cent. at times, the assumption of a limitless speculative demand is in general a safe one to make for practical purposes—at least the level of call rates at any time will afford a sensitive index of its soundness.

Since, with the more conservative lenders, the call money market is only a convenient field in which funds, that otherwise would have to lie idle, may be employed, those who lend greater or less sums on call have no immediate interest in checking or in inciting speculation. The interests of any one banking institution differ from those of others to

such a degree as to prevent the banks, or any considerable number of them, from combining to seek the repression of over-speculation if the latter manifests itself. The development of the mechanism for lending money on the Stock Exchange has gone so far that, even in such a panic as that of March 14th, 1907, the lenders have slight occasion to fear that they will incur losses on their outstanding loans. So that the prospect of an excessive over-estimate of the investment demand, on the part of speculators, which may be clearly indicated to careful observers, and the likelihood that such an over-estimate will end in a severe panic, do not tend to bring about the curbing of speculation by those who are accustomed to finance speculation by means of call loans. Lenders in the money market need have no close oversight of the tendency of speculative anticipation to go far beyond the investment demand.

There is no factor, as far as the organization of the New York Stock Exchange and the conduct of sales under its rules of procedure have been developed, which would act as a restraint on over-speculation. The essential condition for excessive speculation on a large scale lies in the presence and participation of a number of individuals, each one convinced of his ability to gain by speculation or rather careless of the amount he may lose in that form of activity. If the utility to each speculator of the amount he risks on his ventures is not very large, he may not make any careful study on which he will base his forecasts. However the amounts, which individual outside speculators stand to lose, are limited—partly by the fact that most speculators of the kind mentioned have absorbing interests removed from the stock market. They have not the strong inducements to carry stocks, which they have bought on margin, over a period of falling prices and depression, that would be presented to those who are speculators by profession. Individ-

ual speculators' losses, in 1906 and 1907 at any rate, have not of late amounted to great sums. Only when the number of speculators becomes exceedingly large and remains so throughout an extended period of falling prices, will the aggregate of losses sustained by unfortunate speculators for the rise attain a considerable volume. A period of the sort indicated will follow either an excessive speculation in the face of restricted buying—which may conceivably occur in a time of abounding prosperity—after further speculative commitments for the rise tend to decrease in amount, or else it may follow a high degree of speculative activity which is interrupted by the occurrence of some event that renders a given security or all those of a certain class undesirable for investment purposes. In the latter case, the distrust will be shared by speculators with investors, so that the former will retire their commitments much more rapidly than they would do if the decline of prices followed excessive speculation in a period of apparently boundless, expanding prosperity. But where general prosperity persists, along with the decline of stock market prices, speculators tend to retire very slowly from the market. For the value of most stocks, according to the objective tests which the speculator applies, should increase in a period of general prosperity; and, by Wall Street conventions, these are the only criteria of value—particularly were they emphasized in 1906. The power of investors themselves to make an effective evaluation and to manifest it by extensive purchases, was disregarded. And, as in 1906, this is the usual course of Stock-Exchange speculators. It is assumed that the state of general business conditions and the success, with which the operations of the corporations represented by particular stocks are conducted, determine the extent to which a limitless investment fund will be employed in acquiring those particular stocks. The individual specula-

tor, through the ready possibility of selling to other speculators if he wishes to do so, has no immediate interest in the actual existence of an adequate investing class. Accordingly the assumption of this class' existence is quite satisfying to speculators generally.

There is then no internal agency or factor existing in the New York stock market itself to prevent extensive over-speculation. Nothing whatever tends to bring the volume of speculation in different stocks into approximate conformity with investment buying or selling. The individual speculators themselves do not feel the pressing importance of rather full information with regard to the volume and rate of investment absorption. As we have shown, a speculative class, of large numbers and means for the deposit of an enormous aggregate of margins, may enter into extensive ventures on the Stock Exchange, and, by heavy speculative buying, raise prices sharply to very high levels; in fact, this process will not cease except through exhaustion of the speculators' resources for further margins. And all this can go on without intelligent reference to the actual investment demand. In 1906, indeed, we have seen that any judgment on this demand, which was founded on an assumption of its limitless extent, might be quite erroneous and yet constitute the underlying basis of speculative expectations and actions generally. The individual broker's chief interest—at that time, as always—lay in having the buying orders, which were entrusted to him, so far as possible, of a speculative character and as little as possible consisting of odd-lot investments. The banks and other agencies which, primarily as a matter of their own convenience, assisted speculation by advances in the shape of demand loans, were not interested in the adjustment of speculation and investment in their relative volumes. The rules of the Stock Exchange and the customs of conducting the

operations subject to them had been developed in the pursuit of the end, or "ideal", which, Mr. Meyer writes, "is freedom for the transfer of securities in the most simple and convenient manner, with the least possible friction and the fewest possible restrictions consistent with the protection of the rights of the owners and dealers in securities." Simplicity in the conduct of routine transactions, together with inflexible mechanical honesty, had been attained to a very high degree by those associated with the New York Stock Exchange in 1906, especially by those who were chiefly engaged in buying and selling. However much had been accomplished in the efficiency of clerical routine and the adherence to a lofty standard of business integrity, no provision was made for adjusting the volume of speculative commitments to that of investment transactions or to the character of the latter. And if no action by the authorities of the Exchange had been taken to obtain the needed adjustment, the interests of the brokers or bankers, as a whole or individually, would not lead them to enter upon any such action. Nor was the automatic operation of the prevailing level of call rates effective in compelling speculators to give attention, in spite of themselves, to the investment demand or to the relative volume of their own aggregate commitments.

To the fortuitous advent and retirement of speculators, and also of investors, was left the final outcome of the general course of the market. Investors' operations arose out of their own effective desires and the objective qualifications of the stocks they proposed to purchase. Speculators had in mind the same qualifications and acted without proper regard for the extent of the investment demand—the "needs of the market", which President Hadley says speculation must "anticipate", in order to be accepted as legitimate. In view of the considerations which apparently

moved speculators in 1906, and the changes in the extent and character of the investment demand, which had taken place in the two previous years, the close accordance of speculation and investment would have been a highly improbable event. The unknown financial capabilities of the speculative class alone imposed restrictions on the extent to which its operations might outrun the effective investors' demand. Perhaps they will constitute the only check on over-speculation so long as "capital's freedom of movement" on the Stock Exchange, as that is understood at present, must be regarded as inviolable against interference of any sort.

We may not look for the frequent recurrence of speculation on a large scale, quite out of proportion to the possibilities of investment absorption. Only at the end of such a period as followed the Spanish war in this country, would speculation be likely to be conducted on a scale sufficient far to outdistance investment buying. In a relatively prolonged period of general economic activity, the general investment fund becomes appreciably contracted, when there is a heightened demand for liquid capital to finance the increased activity. An active period of considerable duration had preceded the summer of 1906. The financing of the Russo-Japanese war, after its conclusion, the San Francisco fire's effect on the investing capabilities of fire insurance companies, and the life insurance legislation in New York State, had directly and definitely acted so as to restrict the total investment fund which could be devoted to purchases on the Stock Exchange. Since the emotions of speculators responded most readily to developments which would doubtless have been effective in attracting an unrestricted investing class, if the latter had existed, there were inevitable out-breaks of speculation for the rise in 1906 as the expansion of prosperity became more and more generally obvious.

It was to the immediate interest of no influential class concerned with Stock Exchange activity that speculation's volume should conform to the extent of investment buying. As is always the case under existing conditions, speculation could go beyond investment capacity to any extent, with no curb on its excessive "anticipation of the needs of the market", except the eventual exhaustion of its devotees' resources. This exhaustion was manifested temporarily in some of the earlier months of 1906—such as February, April and June. Finally in August and September, it appeared as if almost every potential speculator had been lured into the stock market and had ventured all of his resources that were available for speculation. The decline, which sooner or later was inevitable in the presence of the inadequate investment demand, set in. Unlike the situations in the preceding March or May, no body of speculators reappeared in sufficient numbers to arrest the declines from the high prices of September and to bring about a renewed rise of prices. Speculation for another expected rise of prices could only avail to make the general decline of prices, from October to March inclusive, more gradual than it might have been. But however useful operations of this nature may have been, from the standpoint of the common interest, the individuals who participated in them incurred a large aggregate of losses. Individual speculators for the rise during the six months' decline were, of course, not interested in making the decline gradual; they desired to profit by the expected turn in the general course of prices. Had the insignificant power of investment buying been generally apparent to speculators by the middle of 1906, they probably would not have entered the stock market to the extent that they did from August to the end of the year. But no definite information regarding the extent of investment purchases was accorded them; and

they did not inquire concerning it. When they proceeded to act on the assumption of the unlimited investment demand and to go far beyond the actual extent of that demand, there was no agency in the New York financial markets, as they were organized in 1906—and are now organized for that matter—to adjust speculation to investment; and it has never appeared that speculators, despite the high degree of sagacity attributed to them by tradition, had the power in 1906, or at any other time, to estimate the strength of any movement in the market, such as the rate of investment absorption, on which data were quite lacking. The fall of prices which followed September, 1906, seemed then to represent the liquidation of commitments for the rise in large volume, based on an excessive overestimate of the investment demand or "the needs of the market"—not the "discounting" of a comparatively remote depression.

Distinguishing stock speculation from speculation in commodities subject to world-wide demand, Professor Emery wrote in 1896:

An article must be the subject of a general world-wide demand before extensive speculation in that article is possible. A more limited demand may allow of a limited amount of speculative trade, but, in general, speculation will arise only where the commodity is one of the staples of the world market. . . .

. . . Securities . . . offer a field of great speculation because of their fluctuating values. They differ from speculative commodities in that they are of a fixed, not an uncertain, supply. Their values, however, are uncertain, since they depend on a fluctuating demand. The demand itself is determined by the market estimate of earning capacity.

Allowing the possibility of a "limited amount of specula-

tive trade" in articles subject to a limited demand, implies that stock speculation should be conducted with constant regard to the urgency of the investors' demand and its variations from time to time. On this conformity of the operations of speculators with those of investors the whole question of the legitimate nature of stock speculation appears to turn. If it can ever be shown that Stock-Exchange speculators for the rise have consciously adjusted their operations to the manifested power of investment absorption, their operations may fairly be said to have been legitimate at that time. But when the activity of speculation has varied with no attention to investors' actions except such as was required in assuming the existence of a class of investors with unlimited resources, speculation would conform to investment only as a result of pure chance. The consideration of Stock-Exchange events in 1906 leads to the conclusion that the advent of a large number of speculators in 1906 brought about a sustained activity of speculation, which ran far beyond the "needs of the market", that is the effective wants of investors. And it further appears that speculation, based on an excessive over-estimate of the "needs of the market", was not restrained by the individual members of the Stock Exchange, by the authorities of that institution, or by any other agency in the New York financial markets. In fact the only action, apparently, having in view the restraint of over-speculation on the Stock Exchange, was taken in the autumn of 1906 by certain large European banks which raised their respective discount rates or refused to discount American finance bills any further. This action only served to check certain phases of speculative activity, and was applied some time after speculators had effectively over-estimated the investment demand. Accordingly it was not effective in checking incipient over-speculation, much less did it avail to pre-

vent that form of mischievous activity. So long as speculators in large numbers, partly on the strength of the unwarranted assumption as to the capacity of investment absorption, and partly in the expectation of selling at advanced prices to other speculators, entered into commitments for the rise, no close scrutiny of the existing investment demand was made by them. And, moreover, if a large class existed, having the inclination and the resources to venture into speculation, no restraint on their activities was ever imposed aside from the wane of their inclinations or the exhaustion of their resources. Possibly we shall not soon witness such a concurrence of conditions as brought about the high degree of speculative activity manifested in 1906 and in the sixteen months which preceded that year. If, however, those conditions ever again concur, we may look for a period of over-speculation on the Stock Exchange which will only be checked by the crippling of those who engage in it. This, at least, seems the only means by which over-speculation can be brought to an end, so long as the brokers' interests remain the same as in 1906, and the Stock-Exchange authorities confine the exercise of their extensive powers to maintaining an exalted standard of mechanical honesty in the dealings of its members with each other and with their customers. Utter disregard for the actual strength of the "needs of the market", which speculation supposedly "anticipates", may be looked upon as a factor in bringing on inevitable disaster. Just how costly and wasteful it is to hope for the checking of over-speculation by the financial weakening of those involved in it, may be a question which cannot be discussed very fully at this point; but in the next chapter we shall consider some possible effects of over-speculation on such a large scale as was apparent in 1906.

CHAPTER VIII

STOCK SPECULATION IN 1906 AND THE SUCCEEDING ECONOMIC READJUSTMENT

“Je mehr Zwischenhände an einem Produktions- oder Absatzprozesse teilnehmen, desto weiter muss das Ausbleiben der schliesslichen Zahlung seinen störenden Einfluss ausdehnen, desto mehr namentlich den Konsumtionsmut des Publikums lähmen.”—W. Roscher, *Nationalökonomik des Gewerbfließes*, 8. Auflage.

A DECLINE of prices on the Stock Exchange which accompanies or precedes a general financial panic and commercial depression, is conventionally ascribed either to general “liquidation of the businesses of the country”—which are supposed to have become over-extended—or to speculative “discounting” of the depression. Upholders of either view consider prices of stocks either merely symptomatic of existing general conditions or as affording barometric forecasts of future conditions. And if over-speculation on the Stock Exchange is clearly manifested for a considerable time before the panic occurs, it is said offhand that speculation in other directions was also overdone. The aggregate losses incurred in Stock-Exchange speculation, during a year or a shorter period, are not regarded in the conventional treatment of panics and their connection with speculation of that sort. Even if more than 133,000,000 shares of stock, of more than \$11,100,000,000 total value, are sold during a profound and steady decline over a relatively short period of six months, the losses incurred in the

speculation involving that volume of operations are disregarded in discussing the conditions which gave rise to the general depression. The number of shares sold and their total value as given above were both exceeded in the six months' decline on the Stock Exchange, which ran from October, 1906, to March, 1907, inclusive. We have already noticed Professor Huebner's explanation of this decline as an example of speculation's "discounting" the coming depression. We may now give attention to the view of over-speculation in 1906 and 1907 as an interesting incident but a negligible factor in the violent economic readjustments of 1907 and 1908.

It is maintained that the thoroughgoing liquidation and tremendous declines at the end of 1906 and early in 1907 cannot be dismissed as important factors in bringing about the disturbances of 1907 and 1908. Perhaps if only 10,000,000 shares had been sold on the New York Stock Exchange in the six months of falling prices, one might disregard the losses suffered by the speculators for the rise who participated in those sales. But the volume of transactions which accompanied the declines on the Stock Exchange seems to make the liquidation worthy of consideration as a factor in the later disturbances of a more general character.

A typical "proof" that Stock-Exchange speculation in itself had no part in bringing on the panic of October, 1907, is contained in Mr. Meyer's article in the *Yale Review*, which has already been cited. This article is to be considered in some detail, since it presents a widely accepted view of stock speculation's place in the readjustments of 1907. In itself the article need not be taken seriously any more than most of the reflections on stock speculation that litter economic texts and periodicals. However, the position of the writer as a member of the Governing Committee

of the Stock Exchange, the respectability of the periodical for which he wrote, and the approval of the chairman of the Hughes Committee which was placed on Mr. Meyer's "proof",¹ have led us to turn our attention to this article.

In connection with the panic of October, 1907, and the events which led up to it, Mr. Meyer wrote:

. . . This panic, with its great excitement and the tremendous liquidation which marked the closing months of 1907 on the Stock Exchange, which was simply a manifestation of the contraction and liquidation of the business of the country, was looked upon as a Wall Street "gamblers' panic." As a matter of fact, Wall Street, the Stock Exchange, had quietly liquidated many months before.²

Thus asserting that "the Stock Exchange had quietly liquidated many months before", Mr. Meyer dismisses with a wave of his hand the possibility that over-speculation in the stock market could have had any influence in bringing on the panic of October, 1907, or the succeeding depression of 1908. What degree of belief is accorded his statement or other statements to the same effect arises from the widely accepted fallacies bound up with the theory of the stock market's "discounting" faculty. One of those fallacies consists in regarding prices on the Stock Exchange as mere barometric forecasts of coming events. The number of speculators, the general extent of the resources they might have devoted to speculation, and the volume of their transactions, are not considered. Price movements in such a

¹ "In the *Yale Review* for May, 1909, Mr. Eugene Meyer, Jr., has shown conclusively that speculation on the stock exchange was not the chief contributor to the collapse of 1907, but that speculation on a much wider scale, through the length and breadth of the land, was the exciting cause." Horace White, "The Hughes Investigation," *Journal of Political Economy*, vol. xvii, p. 528, note.

² *Op. cit.*, p. 45.

month as June, 1904, when the sale of 4,972,804 shares was recorded, are taken to have just as much importance as in January, 1906, when 38,512,548 shares were sold. According to the "discounting" or "barometric" theory, the two bodies of speculators, who were respectively active in both months, were equally intelligent and foreseeing, and their judgments, expressed in the quoted prices, were just as valuable in one month as in the other. Speculators of all classes, and at all times, are preternaturally acute and fore-knowing, whether they are present in such numbers as to give rise to average transactions each day of 100,000 or 1,000,000 shares.

And moreover it appears to be the common belief that months of panic and depression are equally significant, whether, as in March, 1907, 32,208,525 shares were sold, or 17,333,793, as in October of the same year. Accordingly, if early in 1907 severe declines of prices occurred in a month which was characterized by extensive liquidation by speculators, liquidation on the part of general business was predominant during other months later in the year. Therefore, the usual argument runs, with more or less cogency, general business in 1907 was "over-extended", concurrently with speculation for the rise on the Stock Exchange, and to the same extent. The upholders of this view quite ignore the circumstance that the profound declines of prices in March, 1907—when internal liquidation of the stock market was supposedly in progress—were accompanied by a volume of sales in excess of that which went along with the declines of October, taken to represent liquidation by general business interests, by 86 per cent. Mr. Meyer, however, does take into account the records of sales on the Stock Exchange. What use he makes of them will appear from the following passage:

One of the proofs that stock-exchange expansion and con-

traction had run their course before the panic of the autumn, is the exhibit of transactions on the Exchange for a series of years preceding the breakdown. The following table gives the number of shares sold on the New York Stock Exchange and their total value from the years 1903 to 1907 inclusive, together with increase or decrease as compared with the previous year:

	<i>Transactions in shares, Millions.</i>	<i>Increase or Decrease, %.</i>	<i>Total Value, Millions of Dollars.</i>	<i>Increase or Decrease. %.</i>
1903	161		11,000	
1904	187	+ 6.1	12,061	+ 9.1
1905	263	+ 40.2	21,295	+ 76.8
1906	284	+ 8.0	23,393	+ 9.9
1907	196	- 31.0	14,757	- 36.8

From the year 1903 to the year 1906, the total number of transactions increased from 161 to 284 million shares, a gain of 76.4 per cent. The total value represented by these shares was, in 1903, 11,000, and 1906, 23,393 millions of dollars, a gain of 112.6 per cent.

From 1906 to 1907 a great contraction took place, reducing total transactions from 284 to 196 millions, equivalent to 31 per cent., and the total value from 23,393 to 14,757 millions, equivalent to 37 per cent., approximately. The significant fact is, however, that this shrinkage had already begun early in the year and would have been much greater but for the number of shares thrown over in the March panic. The sales in January fell from 38,500,000 shares in 1906 to 22,700,000 shares in 1907, and in February from 21,700,000 to 16,500,000. Then came the heavy transactions in mid-March, which advanced the record for that month from 19,500,000 shares in 1906 to 32,200,000 shares in 1907. Even with this phenomenal increase, which can certainly not be ascribed to speculation for the rise, the first quarter of the year showed a decline in dealings from 79,900,000 shares in 1906 to 71,400,000 shares in 1907. The second quarter, ending June 30, showed a de-

cline from 68,700,000 shares in 1906 to 44,800,000 shares in 1907, and the third quarter showed approximately the same decline from 74,200,000 in 1906 to 40,600,000 shares in 1907.

Note that all these changes took place before the trouble in the Mercantile National Bank, which led to the general panic. In other words, liquidation had been effected upon a large scale in the Stock Exchange without causing serious failures, and the market may be said to have been at a level even below the normal and indicating no sort of speculative expansion. If the general business of the country had been sound, the stock market would probably have remained for a time quiescent and begun to move slowly upward under the beneficial effects of the liquidation—as in 1904.⁸

The chief point advanced in the first part of the passage quoted is that stock speculation, as measured by yearly records of Stock Exchange sales, was much less active in 1907 than in 1908; therefore over-speculation in 1907 could have had little to do with bringing on the October panic of the later year. But the differing characters of the two years are not taken into account. Over against 1907, with its first ten months given over to well-nigh unchecked liquidation, is set 1906, during which speculation for the rise at times achieved certain degrees of temporary success. In the same way, the comparison drawn between the respective first quarters of 1906 and 1907, with regard to speculative activity, is quite misleading. In 1906, January was characterized by rising prices going along with intense speculative activity, and in March also prices rose generally although speculation was not so active as it had been in the first month of the year. The intervening month of February had witnessed a sharp general fall of prices following the active speculation with which the year had opened. In the first three months of 1907, however, the character of the

⁸ *Op. cit.*, p. 36.

general stock market movement was clearly one of unrestrained liquidation. Mr. Meyer is quite correct, if he means to imply that there was less hopeful speculation for the rise early in 1907 than in the corresponding period of 1906. But a widespread distribution of losses incurred by mistaken speculation on the long side prevailed in 1907, as against the sustained fortunate speculation for the rise which manifested itself in January and March of 1906. The total actual values of the shares sold on the Stock Exchange during the first quarter of 1906 amounted to \$6,756,000,000, for the first quarter of 1907, \$5,706,000,000. Therefore, following the line of Mr. Meyer's argument, the total activity of speculation in the first quarter of 1906 exceeded that of 1907. But the sales of shares possessing the aggregate value of \$5,706,000,000 from January to March, 1907, were attended by severe general declines of prices. We may be sure that most speculators for the rise—the category to which most outside traders belong—lost heavily during these three months as a result of their ventures. That is, so far as the 71,400,000 shares sold early in 1907 represented speculation for the rise—either in the purchases or in the liquidating sales—it was almost uniformly unsuccessful. This could not be said of speculation for the rise in the 79,700,000 shares sold, January to March, 1906. Generally rising prices throughout January rewarded most speculators for the rise who ventured into the market and retired in that month. The month of falling prices and of liquidation, February, had a record of 21,699,800 shares sold on the Exchange—slightly less than that of January, 1907, and far below the record of March, 1907.

The liquidation, which was not halted from January to March, 1907, continued a movement which had set in during the preceding October—although the last three months of 1906 had not been characterized by the pronounced and

severe fall of prices which marked the later three months named. Not only from January to March, 1907, did speculative commitments for the rise inflict heavy losses, almost without exception. Losses also attended this class of operations throughout October and December, 1906—and to a slighter degree, perhaps, in the intervening month of November.

We may fairly assume that the sales of stocks, having an aggregate value of \$5,706,000,000, during a period when the prices of those stocks were generally declining, would result in a large total loss if speculation for the rise was important at all at the time. A violent readjustment and transfer of property rights would follow the speculators' purchases and subsequent forced sales. That the losses incident to the liquidation and the accompanying decline could be so insignificant that they could have no connection with a shortly succeeding financial panic and general economic depression, seems hardly believable; and it does not appear that Mr. Meyer has established the impossibility of any such connection.

Nor does he seem to be any more successful in his efforts to show that "over-extension was general" in other lines of economic endeavor than in stock speculation, and that declines in Stock Exchange prices were only barometric indications of the coming depression. He attempts to do this by appealing to the increased number of building permits in New York and other cities, and also of mortgages recorded in Manhattan and the Bronx, in the years preceding 1907. Mere volume of operations or transactions, however, does not necessarily betray over-speculation in any degree—much less is it an index of over-speculation's extent. For instance, in October and November, 1904, very large volumes of sales on the New York Stock Exchange were recorded. Prices nevertheless continued to rise; not

for months did the obvious signs of over-speculation make their appearance. We are told by Mr. Meyer that in Greater New York during 1906 and 1907, the amounts of recorded mortgages stood, respectively, at \$723,000,000 and \$519,000,000, and that, for the same years, the building permits amounted to \$205,900,000 and \$175,500,000. But these statements give us no convincing evidence of any over-speculation in real estate. The building and speculation may have been conducted in response to an adequate demand, so far as that was ascertainable during the years in question. Our information concerning the force of final demand and the extent of speculative over-estimate of it on the Stock Exchange is more abundant and fuller. During 1906 it was evident that the possible extent of the final absorption of securities in the New York market had been narrowly restricted by a combination of conditions. Moreover it was seen that speculative "anticipation" had repeatedly displayed a tendency to go far beyond the revealed power of this absorption, even before August, 1906. A general entrance of speculators into the stock market took place in that month. These speculators in effect undertook to anticipate an assumed urgent and extensive investors' demand, which never revealed itself. Throughout the decline of prices which followed September, 1906, the volumes of transactions in stocks, which had advanced most sharply in price during the summer, maintained records of transactions proportionate to the total volumes of sales of all shares on the Stock Exchange. Accordingly we concluded that investment absorption at the higher price levels had failed to operate, and had likewise not operated to the expected extent through the protracted declines from those levels.

The continued recurrence of weekly transactions in Union Pacific, for example, aggregating more than 500,000 shares,

from October to March inclusive, afforded a rough indication of speculators' over-estimate of investors' wants. And, resulting from the action of speculators, based on this over-estimate, heavy losses were suffered, distributed among a large body of speculators on a small scale. There has never been offered any evidence of real-estate speculators' going so far ahead of ultimate demand in 1906, as did the speculators on the New York Stock Exchange.

Certainly there are no inherent tendencies in urban real-estate speculation, as it is conducted at present, to proceed unchecked without reference to the character of the final purchasers' numbers or their powers; this tendency, on the part of Stock-Exchange speculation, has already been pointed out. Individual borrowers on mortgage must in general submit to an examination by the prospective lenders or mortgagees as to the nature of their operations and intentions, and their abilities also must undergo some scrutiny. The possessors of funds available for investment in mortgages or real-estate loans have inducements to conduct a preliminary investigation. Such an investigation does not appear necessary to the lender of funds to brokers in Wall Street, that are readily payable on demand, as to the ends which are sought by means of the credit he is asked to extend. Nor in the case of building construction, has this sort of operation a tendency to proceed without any regard to the existence of the ultimate purchasers or users. The demand by investors or users of buildings is, in its extent and urgency, frequently apparent to casual observers, and much more so to those who make real-estate dealings their occupation.

Stock speculation in 1906, as we have seen, was carried on without attention, on the part of those engaged in it, to the actual conditions of the investment demand or to the nature of its manifestations. Neither the brokers, who acted

as agents of the speculators, nor the various lenders of call money, who financed stock speculation, were interested in checking over-speculation. And there were no mechanical checks, such as the rise of the call rates, which would avail to curb over-speculation, except a diminishing flow of the speculators' resources into fresh commitments. If then we desire to prove the comparative insignificance of the extent of stock speculation in 1906 and 1907, we must show that speculators in those two years lost a relatively slight aggregate as compared with the total losses incurred in speculative building and in real-estate operations.

So far as the monthly index number of the *Economist* threw any light on the demand for commodities generally, its attainment of a maximum for the period at the end of May, 1907, and its subsequent decline indicated a slackening of that demand some months before the October panic. In fact the decline of the index number after the end of May pointed to a relaxed demand soon after the completion of the Stock-Exchange liquidation—that is, if we regard that liquidation as having run its course by the spring of 1907. The lessened demand and the prospects of relaxed economic activity were noticed also in the *Economist*—with particular reference to this country—as early as April and May.⁴

Over-extension of world-wide extent, to which the panic of 1907 and subsequent disturbances are vaguely ascribed, means—if it means anything—that the facilities of industry and trade had generally been so multiplied as to furnish more of their products and services than the general needs of the community required for their satisfaction. But in 1906 and early in 1907 there was slight indication that over-extensive capitalization had gone beyond the manifested general demand. Indeed all indications pointed to the diffi-

⁴ *Economist*, April 27, 1907, p. 730. *Ibid.*, May 11, 1907, p. 823.

culties of satisfying the expanding effective demand of consumers and of those who availed themselves of such facilities as the agencies of trade could place at their disposal. Putting out issues of bonds in large amounts had become so difficult of accomplishment and so onerous that railroad and industrial corporations had well-nigh desisted from attempts in that direction long before the end of 1906. Mills and factories were working over-time in the efforts to fill the heaped-up orders with which they were almost overwhelmed. Railroads were finding their chief difficulty in attempting to move the freight with which their lines were congested. The railroads, late in 1906 and early in 1907, were compelled to raise fresh supplies of capital either by means of large issues of new stock or by floating short-term notes bearing relatively high rates of interest. Whether we regard the stock issues in question as "the practical assessment of the stockholders", or as "water: more water", and the issues of notes as the raising of funds on an "insecure and temporary basis" * and direct our criticism toward these expedients accordingly, it is difficult, as we look back, to see what other courses lay open to the railroads. They could either obtain funds by the means they adopted, or else continue their attempts to handle the enormous volume of traffic offered them with the existing inadequate facilities. That the agencies of transportation and of commerce had been equipped to an extent beyond that required for the satisfaction of the existing urgent demand, there was not the slightest evidence as 1906 drew to a close. The indicated form of the crisis and of the depression was rather that of under-consumption than of over-capitalization of the equipment for production.

Had speculators on the Stock Exchange, who purchased

* A. D. Noyes, *Forty Years of American Finance*, p. 360.

stocks at relatively high prices in September, 1906, been operating in an easy world money market, they might have maintained the high level of prices with the aid of foreign loans until investment absorption, proceeding at a comparatively slow rate, had exerted itself to its full extent. But large market operators, who were interested in maintaining prices, could not obtain the funds to carry out their purposes, either in this country or abroad. The task of maintaining prices, if that were feasible, was left to the body of outside speculators, each operating on a small scale, and swayed by the actual extent of his own resources and by his emotions, and each working for his own individual interests. This unorganized class proved to be quite unable to prevent the fall of prices, which lasted from October, 1906, to March, 1907. If the number of speculators and the aggregate of their commitments had been comparatively insignificant, the necessary liquidation in the stock market might have been accomplished without its being in itself an occasion for disturbance. But the large volume of speculative ventures that were still open in the early autumn of 1906, and the number of them which appeared to have been made during the prolonged decline, meant that the aggregate losses of unsuccessful speculators might eventually play an important part in determining the form of the economic readjustment which would be necessary in the near future. That readjustment might assume the form of a financial panic, a general depression and prostration of industry, or merely an orderly, thoroughgoing liquidation of ventures more or less speculative in character. If the general Stock-Exchange decline, which set in early in the autumn of 1906, had signified speculative liquidation, it remained to be seen whether the losses incidental to its completion and to the more or less violent readjustments which accompanied it, would be sufficient to impinge on other lines of economic

activity. Probably liquidation and declining prices, with a volume of transactions such as was recorded in 1907, from April to October, would not have had sufficient weight to affect general business on the side of demand. But speculation for the rise of the volume observed in August and September, 1906, which ultimately turned out to be unsuccessful since it was undertaken in the face of an utterly inadequate investment demand, and which was persistently carried on even during the progress of the decline—might conceivably have had a most powerful effect on general conditions. It makes considerable difference, in estimating the aggregate losses incurred during a decline of some months' duration, whether 50 or 100 millions of shares were sold while the decline lasted. If the lower number of shares were sold in the course of a prolonged decline, the accompanying liquidation might be an almost wholly unmixed benefit to the community, attended by no serious consequences. But this would not mean that a decline in which more than twice that number of shares changed hands would indicate a wholly desirable and beneficial liquidation. The losses in the latter event might be of such aggregate volume as to constitute a mighty factor in affecting the extent of the general consumers' effective demand. In current discussion, the course of prices on the Stock Exchange is regarded as the same sort of barometric index, no matter whether the transactions, performed while the prices are recorded, attain a volume of 100,000, 500,000, or 1,000,000 shares. But if, in furnishing an index of approaching conditions by means of Stock-Exchange prices, a very large number of persons are supplying the power for the recording mechanism, and very large sums are devoted to that purpose also, the general good or ill fortune of those employed in providing this barometric service may play an important rôle in determining the future conditions which the speculators are supposed to "discount."

As a suggestion, the possibility is offered that the losses sustained by unsuccessful speculators for the rise in the decline of six months' duration—October, 1906, to March, 1907, inclusive—on the Stock Exchange, involving sales of 133,133,566 shares, might readily amount to a total which would seriously affect the character and strength of the effective consumers' demand for commodities generally. The total number of shares sold, which has just been given, might be compared with the total of 112,742,583 shares sold, April to October, 1907, inclusive; during the latter seven months, we are told by Mr. Meyer, the Stock Exchange was engaged in liquidating for the over-extended business interests of the country. Even if we felt prepared to accept this arbitrary division into periods, one of completed internal liquidation by stock speculators from October, 1906, to March, 1907, and the other one of liquidation by the Stock Exchange for outside interests, from April to October, 1907—we should feel that stock speculation had been much more over-extended in the autumn of 1906 and in the first few months of 1907, than general business had been in the later months of 1907. We reach this conclusion by noting the declines in prices and volumes of sales in the two periods, during which liquidation for stock speculators and for general business interests, respectively, is said to have taken place. Prices on the Stock Exchange reached lower levels in October and November, 1907, than those to which they had fallen in the preceding March. But the extent of declines of prices and the volumes of transactions, in those stocks most subject to speculation, in the period extending from October, 1906, to March, 1907, far exceeded almost without exception, the declines and volumes of transactions in the same stocks during the seven months, April to October, 1907, inclusive. If then the liquidation in general business was severe enough to account in part for the panic

of October and the depression of 1908, it seems as if the Stock-Exchange over-extension and liquidation might be considered factors of importance. If we are to estimate the extent of over-extension and the necessary liquidation by declines of prices and volumes of sales on the Stock Exchange—and it does not appear that Mr. Meyer has applied any more rigorous tests—we should conclude that in Stock-Exchange speculation, during the latter part of 1906, was centered a degree of over-extension, at the very least, equal to that apparent in general business.

Had speculative activity, from October to March—that is, volumes of sales in various speculative stocks—shown a progressive diminution as the liquidation proceeded, the losses of speculators for the rise might have been regarded as negligible in considering the developments that led up to the later panics of 1907 and the general depression of 1908. If investment absorption had not operated to the expected extent at the higher price levels, it might have appeared that it had operated when prices fell somewhat below those levels, in the event that speculative activity decreased as the decline went on. The extent to which speculation was maintained in seven of the more prominent speculative stocks is shown in the tables given below. In the seven stocks chosen—five railroads and two industrials—aggregate transactions, amounting to 65,294,365 shares, constituted 54.8 per cent. of total sales on the Stock Exchange during the six months' decline of 1906 and 1907, which presumably represented Stock-Exchange liquidation. Except in the cases of Baltimore & Ohio and Southern Pacific, the volume of transactions in each of the stocks selected, relatively to total transactions, showed little diminution in the later months over the earlier months of the decline. Not only did investment buying fail to act extensively in these stocks, so as to withdraw them from the speculative market; but a

large portion of each issue was left in the hands of speculators. Although the readiness with which these stocks could be sold and shifted from one speculator to another lessened the probability that individual operators sustained heavy losses, the large number of these stocks sold during the profound general decline would inevitably result in heavy losses scattered among a large number of speculators. The significance of the volume of sales and fall of prices may better be comprehended by taking up the trading activity in each stock of the seven selected.

Below are the tables to which we have referred:

NOTE.—The number of shares of Reading, as given in the tables below, is one-half that given in the records, taken from the *Commercial and Financial Chronicle*. Dividing by 2 the published volume of transactions seemed best, in order to make the volumes of sales in Reading, the stock of which is made up of shares having par values of \$50 each, comparable with sales in the other six stocks entering into these tables, each of which is made up of shares having a par value of \$100. One-half the published volume of sales in Reading is likewise subtracted from the total volumes of sales of all stocks on the Exchange, thus making those totals differ from the totals which are given in the Appendix.

NUMBER OF SHARES SOLD MONTHLY, AUGUST, 1906, TO MARCH, 1907, INCLUSIVE, OF THE FOLLOWING STOCKS ON THE NEW YORK STOCK EXCHANGE.

	<i>Atchison.</i>	<i>Balt. & O.</i>	<i>Reading.</i>	<i>So. Pacific.</i>	<i>Union Pac.</i>
<i>1906.</i>					
August	1,321,250	333,521	1,530,450	3,180,195	4,881,650
September ..	910,090	739,173	3,266,610	1,502,957	2,930,950
October	601,355	248,405	2,143,625	932,870	2,851,760
November ..	357,945	109,040	2,226,815	669,440	2,896,175
December ...	670,660	146,750	2,558,140	420,764	2,643,600
<i>1907</i>					
January	1,058,700	112,360	2,285,237	936,795	2,589,315
February ...	501,480	95,787	1,955,808	497,280	2,055,370
March	1,386,945	239,812	2,917,545	1,063,540	4,203,735
Totals	4,577,085	952,154	14,087,170	4,520,689	17,239,955
(Oct., 1906-Mar., 1907.)					

	<i>Amal. Cop.</i>	<i>U. S. Steel.</i>	<i>Total Stocks Selected.</i>	<i>Total All Stocks.</i>
<i>1906.</i>				
August	2,865,600	3,136,598	17,177,264	30,274,366
September	2,611,795	2,061,900	14,023,475	22,751,660
October	2,091,275	2,772,060	11,641,350	19,750,505
November	1,175,965	1,236,074	8,671,454	17,173,315
December	1,437,450	1,300,220	9,177,584	17,898,912
<i>1907</i>				
January	2,601,990	2,200,785	11,785,182	20,417,520
February	1,205,182	1,227,628	7,538,535	14,515,164
March	3,103,878	3,564,805	16,480,260	29,290,980
Totals	11,615,740	12,301,572	65,294,365	119,046,396
(Oct., 1906-Mar., 1907.)				

We have repeatedly shown that the good or ill success of a speculative movement which accompanies a rise of prices can be determined by the evidence of investment absorption at the topmost prices attained as the result of speculative buying. If, after the highest price levels have been attained, recorded dealings in stocks which have been advanced to those levels display only insignificant proportions, we may conclude, provisionally at least, that investment absorption has operated to the extent anticipated by speculators. As illustrations, we may consider the recorded volumes of transactions and the price movements, from July, 1906, to March, 1907, inclusive, in Atchison, Baltimore & Ohio, Reading, Southern Pacific, Union Pacific, Amalgamated Copper, and United States Steel common, respectively. Atchison's yearly dividend rate was increased from 4 to 5 per cent. in October, 1906, Baltimore & Ohio's from 5 to 6 per cent., in June. Reading's dividend rate of 4 per cent. was not changed, but this stock is representative of a class of securities, including among others Amalgamated Copper, perennially favored by speculators. The dividend increases of Southern Pacific and of Union Pacific, as we have seen, gave the signal for the outburst of intensely ac-

tive speculation in August, 1906. On the last day of July, dividends at the rate of 2 per cent. on Steel common were resumed. On none of these stocks, with the exception of Amalgamated Copper, have dividends been subsequently lowered below the levels of 1906, and on some of them those paid at that time have been increased.

Atchison's price, after reaching a maximum of $110\frac{1}{2}$ in September, suffered a net decline from that point to $89\frac{3}{4}$, March 29, 1907, amounting to $20\frac{3}{4}$ points: the low price in March was $82\frac{5}{8}$. During this pronounced decline, extending from October, 1906, to March, 1907, 4,577,085 shares were sold.

Baltimore & Ohio's price in September reached $125\frac{1}{8}$. During the six following months of liquidation it underwent a net decline of $27\frac{5}{8}$ points—to $97\frac{1}{2}$, March 29: $90\frac{7}{8}$ was the lowest price on March 26th. This fall of price in six months was accompanied by the sales of 952,154 shares.

Reading's price declined from the maximum of September, $156\frac{3}{4}$, to $104\frac{1}{2}$, March 29: in the panic of March 14th a low price of 91 was reached. This drop of $52\frac{1}{4}$ points occurred, during the course of sales amounting to 14,087,170 shares.⁶

From Southern Pacific's maximum price $97\frac{1}{2}$, attained in September, there was a net decline of $16\frac{3}{4}$ points to $80\frac{3}{4}$, March 29. A low price, $69\frac{3}{4}$, was recorded on March 14th. In the six months of falling prices, 4,520,689 shares were sold.

The six months' liquidation in Union Pacific, involving a net loss—from $195\frac{3}{8}$, the maximum price of September, to $134\frac{7}{8}$, March 29—of $60\frac{1}{2}$ points, took place while 17,239,955 shares were sold. The low price of March was $120\frac{1}{4}$.

⁶ Actual recorded sales of shares, having a par value of \$50 each, amounted to twice this number, that is 28,174,340 shares.

The maximum price of Amalgamated Copper, $117\frac{1}{2}$, was reached in October. By March 29th the price had fallen to $88\frac{7}{8}$ — a decline of $28\frac{5}{8}$ points. From October to March, 11,615,740 shares were sold.

United States Steel common's maximum price of October was $50\frac{1}{4}$. A fall of $14\frac{5}{8}$ points to $35\frac{5}{8}$ took place in this stock's price up to March 29th, along with sales of 12,301,572 shares.

We may ask whether the sales of 17,239,958 shares of Union Pacific and the 60-point decline in its price, would be more significant in the widespread losses distributed among speculators, or in "discounting" a depression of relatively short duration which had no effect on the dividends paid holders of this particular stock. In connection with "discounting" future events, it might be pointed out that Amalgamated Copper alone, of the seven stocks, had its dividends reduced as a result of the depression of 1908. The percentages of declines from the maximum prices in September or October to March 29th were, respectively, for Atchison 19, for Baltimore & Ohio 22, for Reading 33, for Southern Pacific 17, for Union Pacific 31, for Amalgamated Copper 24, and for United States Steel common 29.

In the case of Reading, we may consider whether sales of 28,174,340 shares—amounting to the equivalent of 14,087,170 "full" shares—during a period of six months, while the price fell $50\frac{1}{4}$ points or 33 per cent., would have brought upon speculators an insignificant aggregate of losses—an aggregate which could not have been a factor in the declining urgency of the general consumers' demand late in 1907 and in 1908.

The mechanism of Stock-Exchange routine and brokers' clerical facilities, together with the diligence that brokers displayed in pursuing their individual interests, had been so efficient in conducting the liquidation, that the latter, as

Mr. Meyer writes, "had been effected without causing serious failures." This fact—the general absence of failures on the part of Stock-Exchange members—testifies merely to the sound development of routine procedure in the conduct of speculative operations; the efficiency of brokers' procedure could not avail to prevent declining prices and heavy speculative losses.

Further to set forth the inadequacy of investment absorption as a means of protecting speculators from the losses incident to the prolonged decline from October to March, the following table has been drawn up, showing the percentages of total transactions formed, respectively, by the volumes of transactions in each of the seven stocks that have been selected for our particular consideration:

	<i>Aug. 1906- Sept. 1906.</i>	<i>Oct. 1906- Dec. 1906.</i>	<i>Jan. 1907- Mar. 1907.</i>	<i>Oct. 1906- Mar. 1907.</i>
Atchison	4.2	3.0	4.6	3.9
Baltimore & Ohio	2.0	0.9	0.7	0.8
Reading	9.0	12.6	11.1	11.8
South, Pac.	8.8	3.7	3.9	3.7
Un. Pac	14.7	15.3	13.8	14.5
Amal. Cop.	10.3	8.6	10.8	9.8
U. S. Steel	9.8	9.7	10.9	10.3
7 Stocks	58.8	53.8	55.8	54.8

In Baltimore & Ohio and in Southern Pacific, the volumes of transactions during the first three months of the general decline, October to December, 1906, diminished appreciably, as compared with the volumes of transactions during August and September, the two months in which a general rise of prices took place. This is particularly evident when applied to the proportion of total transactions formed by the respective volumes of transactions in those two stocks, as shown in the table of percentages. A slighter diminution in the relative speculative activity centred in Atchison and Amalgamated Copper is also indicated by that table for the

last three months of 1906. But in Reading, Union Pacific and United States Steel, no diminution of activity, relative to activity of trading in all stocks, is noticeable; in fact, relative activity in the first two named rather increased. So that, although this table indicates the possibility that investment absorption had acted in Atchison, Baltimore & Ohio, and Southern Pacific, rather more than it had in all stocks on the Exchange, it had not acted, so far as Reading and Union Pacific, were concerned, in the direction of relieving speculators of the burden of carrying those stocks through those months of pronounced decline. And absorption by outright purchasers or by strong speculative interests did not avail to relieve speculators of their involuntarily assumed task from January to March, 1907, in the cases of Atchison, Reading, Union Pacific, Amalgamated Copper, and United States Steel—three months in which the general decline of the preceding quarter was continued with increased force.

The task of carrying the more prominent speculative stocks was undertaken and distributed among a multitude of speculators, on whom fell an aggregate of losses which, it is maintained, cannot be considered negligible as a factor in the general disturbance in the latter part of 1907. At any rate, the contention that the total losses incurred by speculators for the rise may be disregarded appears to involve the assumption of a heavy burden of proof. Consider the transactions in Union Pacific for the first three months of 1907 alone. While, in this quarter, 8,848,420 shares were sold, the price fell between 40 and 50 points, and reached a price on March 14th almost 60 points below that of January 1st. There seems no ground for asserting that the losses incident to transactions in this particular stock during the three months were negligible. When the respective volumes of commitments for the rise and for

the decline, together with the amounts of sales and purchases by investors, are still unknown—as they always have been—no assertion as to the effect, or lack of effect, produced by the losses of speculators in Union Pacific, can have any sound basis. It seems, however, much more conceivable that the speculators' losses, in the few months preceding April, 1907, constituted a factor of considerable importance in determining the form of the subsequent general economic readjustment. And in connection with Reading also, of which the equivalent of 14,087,170 "full" shares was sold while a six months' decline took place amounting to more than 40 points, the same observations should hold good.

The tables show incidentally how far investment absorption fell short of the strength anticipated by speculation from August, 1906, to March, 1907. But with that matter we are not immediately concerned at this point. We obtain from the tables some conception of the volume of liquidation and of its severity, which was necessitated by over-speculation and slight absorption, both of which were manifested in the latter part of 1906. The losses brought upon speculators who operated during the prolonged liquidation, if they are ever revealed by a monumental process of accounting research, will probably be thought worthy of consideration, along with "an excessive shortage of money which . . . was because of extraordinary business 'booms' in this country, Great Britain and Germany, as well as adventitious and enormous wastes of capital such as had been caused by the San Francisco fire and the Russo-Japanese War", as factors "which intensified the distressful conditions in October, 1907,"⁷ and which served to bring about

⁷ Letter of J. P. Morgan & Co., Feby. 25, 1913, to the Honorable A. P. Pujo, Chairman Committee on Banking and Currency, House of Representatives.

in part the diminished consumers' demand that was a feature of the depression in 1908. Speculative attempts to anticipate an imaginary investment demand for stocks appear to have constituted one of the most important lines of economic activity during 1906 in this country. It was a business which ran steadily at a loss for a number of months. If one of the country's most important divisions of business can be run at a heavy loss, without having the loss play some part in a shortly succeeding financial panic and general depression, it would be well to have an explanation of its absence of effect on general conditions that would be fuller and more convincing than the explanation advanced by Mr. Meyer. This explanation has been accepted by most of those who believe that the action of Stock-Exchange prices is purely symptomatic, reflecting general conditions, or that the "discounting" faculty is possessed by speculators on the Stock Exchange.

If conditions, under which organized stock speculation is carried on, permit the creation of speculative commitments entirely out of proportion to the powers of final absorption, it might be well to know how far over-speculation can proceed before the inevitable losses it brings on individual traders will affect general economic conditions. That speculative operations, in other fields than that of the stock market, were of a large volume, at a time when over-speculation existed on the Stock Exchange, does not prove that speculative over-extension also existed in them to the same extent. And that over-speculation on a much smaller scale than that revealed in 1906 has not apparently affected general economic conditions, does not prove that the speculative "anticipation" of the market's imaginary needs in 1906 had no part in bringing on the panic of October, 1907, and the depression of 1908.

It cannot very well be maintained that over-speculation

on the Stock Exchange was the "cause" of the panic of October, 1907, or of the depression which followed. But if information ever becomes available concerning the extent of speculative losses sustained in the autumn of 1906 and in the winter and early spring of 1907, it might be employed in a serious effort to ascertain the possibility that those losses attained a volume sufficient to bring about a pronounced restriction of the general demand for the products of industry and the services of commerce—a restriction which was the most striking feature of the depression of 1908. Premonitions of a lessened demand were voiced as early as April, 1907, in an English financial journal, with reference to this country.⁸

We may obtain convincing evidence at some future time that speculation in real estate, or in any other goods which permit that form of activity, had been carried on with the same blithe disregard, on the part of its participants, for the ultimate demand, that was shown by Stock-Exchange speculators in 1906, and on an equally large scale. Then we may consider all speculators' accumulated losses as constituting a factor in bringing on the general depression which set in shortly after the completion of the Stock-Exchange liquidation. As we have suggested, evidence on these points is more readily available with regard to speculation on the Stock Exchange than in other fields of activity. But the difficulty of financing extensions of industrial and commercial facilities, which were urgently required in 1906 by an insistent consumers' demand, rather indicates that the general business of the country had not gone too far in preparing to satisfy the existing wants of consumers. We have no evidence that any other class of traders had generally so far over-estimated the capacity of the community to re-

⁸ *Economist*, April 27, 1907, p. 730. *Ibid.*, May 11, 1907, p. 823.

ward its services, as had Stock-Exchange speculators in the summer and early autumn of 1906. Although we may not be able to establish the connection between over-speculation of this particular sort and the panic of October, 1907, we may look for some future investigator, with fuller information at his command, to discover some degree of likelihood that such a connection existed.

CHAPTER IX

SUMMARY, GENERAL CONCLUSIONS, AND REMEDIAL MEASURES

“Unfortunately the question of the social expediency of dealing in futures is mixed up with the wider question of the expediency of stock and commodity speculation as it is now carried on in the financial centres of the country. It is notorious that this speculation is not confined to men who make it a business and are trained for it in the hard school of experience, but that it is also indulged in intermittently by a great army of men and women whose only qualifications are a taste for gambling and the consciousness of having money to invest. . . . How to confine speculation to those who have aptitude and training for it and to discourage stock and commodity gambling is one of the economic problems of the day.”—Prof. H. R. Seager, *Introduction to Economics*.

THE events which attended Stock-Exchange speculation during the months from September, 1904, to March, 1907, have now been considered. The attempt has also been made to analyze the conditions under which stock speculation in those months was conducted. Two important functions, conventionally attributed to stock exchanges, were mentioned in the opening chapter. These were, first, the direction of the flow of the investment fund, and, second, the “discounting” of future events by the course of prices recorded in organized trading on the Exchange. The extent to which operators on the Stock Exchange and the governing authorities of that institution performed those functions has already been noticed at some length and with

some repetition. We concluded that the New York Stock Exchange, acting through the speculators who deal in accordance with its rules and customs, is not fitted for the performance of those two chief functions which are conventionally ascribed to organized speculation under all conditions. This conclusion was derived from *à priori* considerations based on analysis of the motives which impelled the Stock-Exchange authorities, the brokers and the individual speculators. Moreover, our study of speculative activity in 1906 and 1907 has not led us to admit that speculators in those years, incidentally to the pursuit of their individual selfish interests, either guided the flow of capital into investment or "discounted" the October panic of 1907 and the depression of 1908.

In 1906 particularly and the preceding few years, we concluded that the New York Stock Exchange, as an institution, and its individual members had played no active part in "directing the flow of capital" into investment. A broad market was provided in which investors could buy or sell, according to their several desires. But, since the attraction of investors and the execution of their orders offered little prospect of gain to the brokers, the latter were quite passive in taking orders from investors. The brokers, indeed, rendered honest and capable services, almost without exception, to those investors who sought them out. So inert, however, were the Stock Exchange and its individual members—that is, those members who were acting strictly as brokers—with regard to investment orders, that they could not be said to have played any part whatsoever in "directing" the disposal of the investment fund with any conscious purpose to do so. Slight attention, throughout the brief period we considered, was paid to the strength or character of the investment demand—so slight that no information was ever sought on these points, much

less obtained or published—by those connected with the Stock Exchange. The conventional assumption that there existed a numerous class of investors, having unlimited funds on hand, satisfied the speculators and also, apparently, those who acted as their brokers.

We have considered the “discounting” of future events by speculators, especially the “discounting” of the panic of October, 1907, and the subsequent depression by the prolonged general decline of prices which set in after September, 1906. “Discounting” did not appear to furnish an adequate explanation of that decline, or of the revealed tendency of speculative activity in the autumn of 1906 and for some months afterward. Probably the unsatisfactory nature of the “discounting” theory arises chiefly from the lack of detailed information as to the mechanism through which it works. For example, why should severe falls of price have occurred in stocks whose dividends were not lowered during the depression which those falls of price were supposed to “discount”? From the high prices of September, 1906, Baltimore & Ohio, Reading, Union Pacific, and United States Steel common suffered declines by the end of the following March, which ranged from 22 to 33 per cent. The dividends on none of them have been lowered since 1906, not even during 1908, the year in which the depression was felt most keenly. Amalgamated Copper, on the other hand, declined in price only 23.1 per cent. from its high price, September, 1906, to March, 1907; and yet its dividend rate was reduced shortly afterward by 75 per cent.—from 8 to 2 per cent.—as a result of the depression which particularly affected the copper market. The slight degrees of dependence shown between the extent of the declines in individual stocks and their subsequent value to investors make us loath to accept the “discounting” faculty as an attribute, either of speculators or of Stock-Ex-

change prices. If, in 1906 and 1907, the declines in separate stocks had borne some quantitative relation to subsequent changes in dividends, or if all stocks in the list had fallen in price to nearly the same extent—expressed either absolutely in dollars per share or in percentages—the “discounting” theory might deserve a serious and painstaking investigation in the belief that it might be verified inductively. The violent rises in prices, however, from the end of June to various dates in September would tend to make us skeptical with regard to the superhuman quality of speculative foreknowledge; for what event which occurred in September did all these advances in price “discount”? Most certainly they did not forecast general investment absorption in that month or during the six following months. Nor has it ever been shown why the autumn of 1906 should have been the mystic season when speculators began to “discount” a panic and depression more than a year in the future. These considerations led us to seek other explanations of the general decline of Stock-Exchange prices, from October, 1906, to March, 1907, than those offered by the “discounting” theory.

It has been shown that speculation on the New York Stock Exchange was seriously hampered in discharging the two functions just mentioned, and is still hampered under the conditions that persist at the present time. In the first place, the Stock Exchange, as such, and brokers exercise little control over the volume of speculation at any given time. We may not know precisely the conditions which gave rise to prolonged and intense activity of speculation on the part of the “public”, such as was witnessed during the 31 months’ period we undertook to study. Few of these conditions, however, can be affected by the Stock Exchange or by its members. If general economic conditions—or even broader causes—lead many outsiders to

speculate in the stock market, brokers can only provide facilities for the reception of these outside speculators. They cannot whip up speculation during a dull season, and they do not find it to their interest to restrain it when it goes too far. All that can be done is to establish connections in districts where speculators are to be found, and to treat speculative customers, when they enter the market, in such a way as to encourage them in their activities. Brokers and others connected with the Stock Exchange cannot take a much more active part in arousing speculative activity than can a fisherman who uses a pound-net in attracting the fish he desires to catch.

It has already been said that brokers, of all things, are not desirous of restraining over-speculation, for reasons which have been indicated in preceding chapters and which will be further set forth. If outsiders, desiring to engage in speculation, seek to indulge their inclinations through a broker, the latter will throw no obstacle in their way. Excessive speculation conceivably might go so far as to shift a large proportion of existing property rights in the community from one set of owners to another, and carry on this shifting to any extreme, without any brokers' action interposing to check it. When any number of persons, no matter how large, wishes to enter into speculative ventures, there exists no force, either in Stock Exchange procedure or in the self-interest of brokers, which will at least prevent their making the initial purchases or sales, as the case may be, by which they individually commit themselves to speculation on one side of the market or the other. The emotional state of the outsider who undertakes speculation, and the difficulty of comprehending the underlying philosophy and the process of short selling, explain in part perhaps the proneness of such a speculator as the outsider to commit himself to a rise of prices rather than to a fall. In periods

of great speculative activity, accordingly, aggregate commitments on the long side far outweigh the volume of speculation for the decline.

The ease with which a sale or a purchase can be made in a broad market, such as a large modern stock exchange provides, and the fact that Stock-Exchange routine conceals the respective identities of both parties from each other, account largely for the disregard shown by speculators for the actual or prospective state of the investment demand. This demand determines ultimately the "needs of the market" which speculators are supposed to "anticipate." The speculator accordingly does not know the source from which he buys or the purchaser to whom he sells, and this ignorance tends to make him disregard general investment buying or selling. The considerations moving the speculator help to an understanding of the almost unbelievable recklessness of the speculators in 1906. As at other times, they did not trouble themselves to inquire into investment operations, or else they rested content with the easy belief in the existence of an investing class, possessing unlimited funds in the aggregate, but varying in the strength of its inclinations to buy or sell on the Stock Exchange. At any rate, a vague reliance on that belief was the only form of attention paid by speculators to the investment demand in 1906 and 1907.

Moreover, it has been seen that the brokers individually were interested in having a much heavier volume of speculative business than of investment orders, since the former was far and away the more profitable. Every facility which the broker was permitted to provide for the enlargement of his business was applied to inciting speculation. Orders for investment purchases were received without enthusiasm by most brokers. The wideflung connections with other cities and towns, and the extensive system of branch offices

had the purpose of making speculation convenient and easy for those outsiders who were brought into touch with the New York stock market by these means. Accordingly the advent of a large body of speculators, creating a volume of commitments out of all proportion to the possibilities of the investment demand, met with no restraint on the part of the brokers—nor on the part of the Stock Exchange acting through its governing authority.

It was pointed out that the relative profitableness of speculative and investment orders to brokers rested on the prevailing rate of commission charged by them. This rate depended on the number of shares involved in a given transaction, and was charged uniformly either on a purchase or on a sale made on the Stock Exchange. It did not make any difference in general, where the shares were sold or purchased in hundred-share lots or multiples thereof, whether the shares purchased were afterward carried on margin or transferred to the buyer. But the differing character of the orders executed meant widely varying degrees of trouble and expense to the broker. One-eighth of one per cent. of the par value of the stock, the minimum rate of commission prescribed by the rules of the Stock Exchange, was the prevailing rate, almost without exception. In the case of small odd lots of stock bought and transferred for investors, it is highly doubtful whether the commission exacted covered the expense which the complete series of transactions brought upon the broker who performed them.

The authorities of the Stock Exchange did not exert the despotic power which they have over the activities of the individual members, in seeking to adjust the volume of speculative operations to the strength of the effective investors' demand. Apparently those authorities were and are guided by the idea that the play of self-interest of

speculators, brokers and investors will serve to bring about the desirable adjustment. The powers of the Governing Committee were invoked chiefly to maintain a high standard of honesty in the dealings of members among themselves and with their customers. It seems to have been the prevalent conception of "capital's freedom of movement" that those having control of capital at any given time should be allowed to dissipate it in over-speculation at their pleasure. Restraint of any widespread tendency toward over-speculation would not only interfere with "capital's freedom of movement", but would also tend to restrict in volume the most profitable portion of the individual Stock-Exchange member's operations as a broker. Since adherence to the *laissez-faire* policy, with regard to restraint of over-speculation, appeared most advantageous to the brokers' interests, no action was taken by the Stock Exchange to bring speculation into conformity with investment. The Stock-Exchange authorities, in 1906 and ever since, have been diligent in seeking to attain the "ideal" of their institution, to which we have already referred, as it has been formulated by Mr. Meyer. It consists of "freedom for the transfer of securities in the most simple and convenient manner, with the least possible friction and the fewest possible restrictions consistent with the protection of the rights of the owners and dealers in securities." It was pointed out, when this "ideal" was previously cited, that its fullest attainment would not necessarily lead to any adjustment of operations, on the part of speculators, to the "needs of the market"—that is, to the effective investment demand. Certainly in 1906 and 1907, there was no relaxation in the pursuit of this "ideal", and yet there was abundant evidence that all the energy expended in that pursuit had not aided in restraining over-speculation.

Another direction in which the powers of the Stock Ex-

change were exercised was in that of enforcing the prescribed minimum rates of commission, and in seeing that no rebate or deduction was made from the commission applying to any particular transaction. Punishment for departures from the ordained rates of commission was inflicted inexorably and heavily. But the enforcement of the prescribed minimum rates of commission, to which so much effort was devoted, would not do much toward adjusting the volume of speculation to that of investment.

Any tendency then that speculation for the rise might have shown in 1906 to go far beyond the requirements of the investment demand would encounter no check from the authorities of the Stock Exchange. They devoted themselves to the pursuit of ends quite removed from those of curbing over-speculation. It may appear a digression to have treated at such length the purposes which the Stock-Exchange authorities have had exclusively in view. They have been considered, however, because any criticism of Stock-Exchange procedure is met frequently by its defenders' pointing to the diligence which has been shown in simplifying the routine and enforcing a high standard of integrity among those who follow that routine. The simplifying of routine and mechanical honesty have not proved to be very effective in the restraint of over-speculation.

As was said in a preceding chapter, those whose interest in the speculative field lies in regarding it as a province of the money market in which funds temporarily in hand can be lent on demand, are not concerned with the restraint of over-speculation. The machinery for lending on call has been so perfected that a high degree of over-speculation does not threaten those who lend to speculators' brokers with losses through the default of the borrowers. And the ease with which one speculator can trade with another and the ignorance of either party to a sale on the Stock Exchange

of the other's identity—not to speak of the other's purposes—have tended to make individual speculators careless of the urgency and character of the investment demand.

Public opinion, when it does not consider speculation—of any volume and bearing any proportion at all to the investment demand—as discharging some vaguely useful social function, so long as its routine is conducted honestly, looks upon it as a means of parting fools from their money with least inconvenience to anybody else. Aggregate losses in the stock market are regarded by the average man as negligible. If “the stupid money of stupid people” is lost in the performance of socially useful functions by speculators, the value of the service appears to be well worth the cost. No attention is given to a system of organized speculation that conceivably may heap an aggregate of losses upon those who engage in it, necessitating a general economic readjustment throughout the whole community. Speculative prices, in the public mind, are vaguely symptomatic of general economic conditions, either existing or soon to exist. The operations of speculation also are thought to be mere incidents in the general economic life. These operations are not supposed, according to tradition, to constitute a volume of transactions that may form an important factor in determining conditions, according as their general success is good or ill.

Public attention, as expressed in legislative acts, is usually concentrated upon phases of speculation which distinguish its conduct from that of other business. The re-hypothecation of securities particularly excites the suspicion of the business man or lawyer whose comprehension of Stock-Exchange practice is rather hazy. Perennial efforts are put forth to make this practice accord with the usages of ordinary business. Manipulation also has drawn the unfavorable notice of political speakers and of legislators.

Objections to this abuse seem to rest partly on the medieval predication of a "just price" for every economic commodity and service, and partly on the conception of speculation as a game of chance which should be played fairly. The manipulator, accordingly, is viewed in much the same light as is the gambler who uses a roulette wheel with an electro-magnetic attachment or who plays with marked cards.

Those manifestations of speculative activity which are obvious and picturesque, or else which differ most strikingly from those observed in ordinary business, draw most attention. It appears to be taken for granted that speculators should carry on their operations in utter ignorance of the investment demand. Every other attempt to "anticipate the needs of the market", on the part of industry and commerce, is made with the fullest knowledge of the market and its needs that can be obtained. That speculators should be quite without knowledge of their ultimate market and that all their operations should be shrouded in secrecy, is commonly accepted. Possibly this is because of the general vague idea, to which reference was just made, that after all speculation is a game of chance. In such a game too much foreknowledge of the probabilities of success would be undesirable, from the sportsman's viewpoint.

Thus it has come about that no effort has been made by legislators, by the authorities of the Stock Exchange, by bankers connected with Stock-Exchange activities, or by members acting in concert, to make the volume of speculative transactions conform to the investment demand, even so far as the latter could be estimated approximately. Adjusting the volume of speculation to the extent of the investment demand would tend to interfere with "capital's freedom of movement"—as that is conceived. This adjustment would also be prejudicial to the immediate inter-

ests of brokers, as those interests are understood at present. Moreover the tendency of speculation to exceed investment in volume of operations is either accepted as a platitude or else to speculation is ascribed the faculty of adjusting its transactions to those of investors, merely by virtue of the superhuman sagacity commonly attributed to those who engage in it.

It seems difficult to accept the tendency of speculation to go beyond the "needs of the market" as inevitable. At least we cannot content ourselves with the belief that it is inevitable. And the activities of speculators in the period we have considered do not lead us to believe that speculators always have the inherent power of adjusting the volume of their operations to the demands of investors. So long as speculative purchases are made in the face of an inadequate investment demand, speculators for the rise can hope to gain by selling, most probably, to other speculators. If the rate and volume of investment absorption is quite generally unknown, the process of speculators' selling at a profit to other speculators will end when no more speculators come forward to buy. When that point will be reached no speculator in a broad market can foretell. With no knowledge either of the investment demand or of the available speculative resources, speculators on the Stock Exchange conduct their operations in the greatest uncertainty. Nevertheless if speculators for the rise were in general prepared to abide by their commitments when the market, for a time, goes contrary to their expectations, they could not perhaps be regarded as merely gambling on the state of the unknown investment demand or on the uncertain continuation of speculative buying. But, even when they do not place definite "stop-loss" orders with their brokers to limit the extent of their possible losses, most outside speculators either have only limited amounts to lose in the market,

or else they do not desire to lose more than certain sums, varying with the individuals. The usual venture for the rise made by an outside speculator takes the form of wagering that investment absorption, speculative buying, or both together, will raise prices to a point where he can obtain a satisfactory profit before either investment or speculative buying will be exhausted so that prices will fall to a point where he must sell in order to confine his loss to the amount which he can afford, or is willing, to lose. The amount of the loss he can sustain may be well determined in the speculator's mind at the time he enters the market. But the extent of the investment demand and the duration of speculative purchasing are so enshrouded in mystery for him that his venture is little more than a gambling transaction. And the raising of prices to relatively high levels, as a result of speculative purchases in heavy volume—such as was witnessed in the summer of 1906—where investment absorption fails to exert itself, and the decline of prices afterward, accompanied by an insignificant volume of investment buying, appear to constitute a service of doubtful utility to investors or to the community. It seems, therefore, as if it might be worth while to curb any system of speculation in which separate transactions are carried out on a basis little different from that of gambling, and which appears to render no useful economic or social service. Indeed, over-speculation and the resulting liquidation, it has been seen, might conceivably go to the extreme of constituting a powerful factor in a violent economic readjustment and depression. We shall therefore consider in conclusion certain measures which might possibly assist in changing conditions so little conducive to the general well-being.

REMEDIAL MEASURES

Repeated reference has been made to the prevailing rate of commission charged by New York Stock-Exchange members, and the part it plays in leading the brokers to promote speculation, so far as they are able, rather than investment in stocks listed on the Exchange. We are concerned with measures that may tend to bring about the adjustment of speculation to investment demand. We shall therefore consider possible changes in the commission rate which would presumably make investment purchases, on the part of their principals, more desirable to brokers, as compared with transactions performed for speculators, than they are under the present rules.

As we have seen, the brokers' interest in encouraging speculation rather than investment buying, in such a year as 1906, by every permissible means, rests on the rate of commission which has prevailed for many years on the New York Stock Exchange. With this fact standing out as it does, it is puzzling to account for the passage in the report of the sub-committee of the House Committee on Banking and Currency, popularly known as the "Money Trust" committee, which recommends specifically that commission rates on the stock exchanges be left unchanged.¹ Perhaps this can be explained by the usual action of most similar governmental investigators, which consists in inquiring into the more epic and picturesque manifestations of organized speculation, such as manipulation; certainly the subject of commission rates does not possess the striking qualities which would readily attract the attention of a Congressional investigator. Any body of investigators, having little acquaintance with a restricted portion of the field it

¹ "[With regard to stock exchanges it is recommended] that the present rates of commission . . . be not now disturbed."

is called upon to cover, might easily pass over such a point as the rates of commission, which would seem to have little importance to eyes that are intent on the more striking aspects of Stock-Exchange speculation.

Since the prevailing rate of commission—exacted without distinction on transactions for either speculators or investors—makes investment orders much less profitable and desirable to brokers than are speculative orders, the principle on which revision of commission rates should rest appears to be that of making rates of commission higher on investment orders than on orders of speculators. The particular application of this principle might consist of lowering the existing prescribed minimum rate—12½ cents per share of \$100 par value—for speculators in 100-share lots. However it appears that the commission, computed on the basis of the rate named, possibly fails to cover the expense where it is exacted for the purchase and subsequent transfer of small lots of stock. For smaller lots, the relatively low charge of 12½ cents might very well be raised to a point where it would cover any expense incurred by the broker and yield him a rate of profit comparable to that at present obtained from speculative orders. In fact, the system of charging 12½ cents on the sale or purchase of each share stands out as quite illogical when the question of investment transactions in small lots is considered. Particularly in view of the fact that the actual sale and the handling of the securities involves as much trouble in the case of one share as in that of 99 shares, does the unreasonableness of charging a relatively low commission uniformly for each share seem glaring. So that a revision of the prescribed commission rates must tend to make the execution of investment orders more attractive to brokers as compared with carrying out speculative orders. A revision should also assure the broker a larger payment for

his services on the purchase for an investor of a few shares and on the transfer of the stock. These two considerations must be kept prominently in mind.

The London Stock Exchange, during the past few months, has put in force a prescribed scale of commissions, after permitting its members for many years to charge according to their individual discretions, which was confirmed in its revised form, February 12, 1913. The rates prescribed vary according to various classes of securities—British Government, Indian Government Stock, shares transferable by deed, shares passing by delivery, etc.—but our concern is with the rates prescribed for shares in the American market. These rates are given in the following table, reproduced from the *Economist* of February 15th, 1913:²

SHARES OF \$50 OR \$100 DENOMINATION DEALT IN IN THE AMERICAN MARKET.

	s.	d.
Price \$25 or under	0	6 per share.
Over \$25 to \$50	0	9 per share.
Over \$50 to \$100	1	0 per share.
Over \$100 to \$150	1	6 per share.
Over \$150 to \$200	2	0 per share.

With 6d. rise for every \$50, or portion thereof, in price.

Of course Stock-Exchange practice in London differs from that in New York in that the fortnightly clearing of sales involves much trouble for the broker in the "carry-over", when speculative commitments remain open during the process of clearing. The market prices of stocks therefore enter more prominently into the question of the commission rates than they would do in New York. Nevertheless the rates lately adopted in this case recognize the fact that transactions in two different securities may vary

² P. 332.

in the cost of service to the broker if the respective market prices vary markedly from each other. And while the prescribed minimum rate of one-eighth of one per cent., irrespective of market price or of the number of shares, in New York does not duly recognize the relatively slight increase in the cost of the broker's services with the increase in number of shares passing in a given transaction, the following exceptions to the prescribed rates of the London Stock Exchange, as they are given below, accord with that principle:

A broker may, at his discretion, when in his opinion the value of any principal's business justifies it, but only in the case of a transaction in which the consideration exceeds £1,000, charge that principal a reduced commission on any transaction, but in no case shall such reduced commission be less than one-half of the minimum scale as laid down. . . .

A broker may, at his discretion, when in his opinion the value of any principal's business justifies it, charge that principal a uniform commission of 1s. 6d. per share on shares passing by delivery when the price exceeds £25,⁸ and at his like discretion a uniform commission of 6d. per share on shares dealt in in the American Market on any order for not less than 50 shares.

Permission is thus given brokers, by the above exceptions; to charge reduced commissions on orders where the consideration money exceeds £1,000 or to charge a uniform commission of sixpence on each share for transactions in not less than 50 American shares. It is recognized that there is a lower cost of service per share on large orders than on small. Disregard of this principle and also of the

⁸ On "all other shares passing by delivery", the prescribed minimum commission is computed at the rate of one-quarter of one per cent. of the consideration money.

likelihood that on small orders the commission of one-eighth of one per cent. of the par value may not suffice to cover the trouble and expense brought upon the broker, has allowed the prevalence of that rate in New York to continue, so that orders for speculators on margin have proved to be much more profitable to brokers than are investment purchases followed by transfer of the stock to the principals buying it.

Even before the adoption of the official commission rates in London, when the rates were subject to private contract between the broker and his principal, the higher cost of services rendered investing purchasers, as over against the cost of transactions on margin, was an accepted truism on the London Stock Exchange;⁴ and it was the practice to charge a higher rate on the former than on the latter class of transactions. Until the same procedure is adopted by members of the New York Stock Exchange, either by general voluntary action on their part, or in compliance with a formal rule of the Stock Exchange, brokers will always find it to their interest to have their business largely made up of speculative orders and commitments rather than of the relatively costly and troublesome investment transactions. And, if ever speculation tends to extend its operations far beyond the needs of the investment demand—as it did in 1906—the over-speculation will probably meet with no general restrictive action on the part of the brokers. Nor will investment be encouraged so as to relieve speculation of its load. Most assuredly the practice of the London Stock Exchange in distinguishing rates of commission on speculative transactions from those for investors has not always availed to prevent over-speculation. But a revision of the commission rates in New York, in

⁴ *Economist*, July 9, 1904, p. 1153.

accordance with the principle indicated, might lead the brokers, in periods like that of 1906 and 1907, to encourage investment more actively and to incite speculation less persistently than they have done in the past ten or twelve years. In conjunction with other measures, looking to the adjustment of speculation's volume to that of investment, a revision of the commission rates or a change in the prevailing practice might serve the same purpose as those other measures.

Conditions call particularly for a revision of rates of commission on purchases of small lots of stock for investment purposes, followed by transfer to the buyer—and possibly on sales of small lots. The prevailing rate of $12\frac{1}{2}$ cents for each share seems illogical in that it possibly does not cover the cost of the service, when the number of shares purchased amounts to five or less. A minimum commission, for example \$2.50, might be charged on each transaction of this nature, where the number of shares amounts to twenty or less. Then the anomaly of brokers' charging generally, on transactions which, from the standpoint of the common interest, are most desirable, a rate that is not remunerative, would be removed. Or else the revision might take the form of charging a prescribed rate for each share—varying either according to market price, as in the present scale of the London Stock Exchange, or on some other logical principle—and also imposing a fee for the transfer of stock, irrespective of the number of shares.

It is most desirable that the present discrepancy in the respective rates of profit to the broker, arising from speculative and investment transactions, be overcome. It might even be expedient to permit a lower rate than one-eighth of one per cent. of the par value, or \$12.50 for each hundred shares, to be charged on speculative transactions. This might be accomplished by prescribing, for example,

a minimum rate of $\frac{1}{16}$ of one per cent. of the par value, or even as little as one-sixteenth of one per cent. These alternative rates would amount to \$9.37½ and \$6.25, respectively, on each transaction in one hundred shares, as over against the present amount of \$12.50. It does not appear that conditions in New York imperatively require the laying down of rates that vary according to the market price of the security involved, such as those recently prescribed by the London Stock Exchange. But if the raising of rates of commission on investment orders should not suffice to remove the present wide variation in the rates of profit on orders for speculators and for investing buyers, some permitted reduction in the rate of commission charged for orders executed on a margin basis might be advisable.

Lowering the commission rate for orders executed on margin does not appear calculated to furnish any incitement to speculation. The difference between one-quarter of one per cent.—the rate of the commission on both purchase and sale which are necessitated in a speculative transaction—and say one-eighth of one per cent. would hardly tempt the average outside speculator, who is usually led to trade by the prospect of gaining by a rise or fall in price of two or three points at least. No more probable is it that small investing purchasers would be repelled by the minimum fixed charge of \$2.50, the amount we have suggested merely as an example—it might be made more or less than this particular amount to advantage. The most important consideration, in revising the rates of commission laid down by the New York Stock Exchange, is to shift the brokers' interest from that of encouraging speculation by every means within their power and of giving investment orders only a passive reception, to the point where orders from investors will present to them some measure of the attraction now possessed exclusively by

orders from speculators on margin who deal in hundred-share lots.

An intelligent and logical revision of commission rates might make brokers less interested in arousing speculation to a point where it would far exceed the needs of the market. In order to concentrate the attention of banks and bankers, and others who are called upon to finance the operations connected with Stock-Exchange speculation, it might be advisable to have the offsetting of sales through the Stock Exchange Clearing House performed weekly instead of daily, as has been done since this method was adopted in 1892. This at any rate would stimulate the quest of banking devices in this country by which funds temporarily in bankers' hands for undetermined periods might be profitably employed. Moreover at present speculators and brokers are wont to assume the unrestricted capacity of the New York money market to provide any amount of call funds which speculation may require to carry its commitments over from day to day. Weekly clearings of sales would, for one thing, remove the advantage of ready convertibility which Stock-Exchange call loans possess in this country to the exclusion of other banking assets, by rendering them less capable of being liquidated any day, on a few hours' notice, at the lender's or borrower's pleasure. The additional benefit might be secured of causing all concerned in Stock-Exchange operations — brokers, speculators and money lenders — to give more heed to the possible demands of speculators, the available facilities of the money market, and the adjustment of each to the other. The question of weekly or fortnightly clearings of sales, as over against the present system of daily clearings, cannot be treated here with any thoroughness. Weekly clearings are suggested tentatively with particular regard to the adjustment of speculative volume of operations, not only to the investment

demand, but also to the supply of call funds in the money market.

Even more important than weekly clearings would be the requirement that weekly reports should be made by each member—firm or individual—of the Stock Exchange, giving the volume and nature of speculative commitments outstanding for customers' accounts. And also a detailed report of investment orders received and executed each week should be made by the members. The authorities of the Stock Exchange could then publish the totals in some detail, both of speculative commitments outstanding among its members and also of the investment orders received and executed. The details of individual members' business would not have to be published generally, even in summary form. The present general ignorance of speculative operations and also of the volume and rate of investment buying or selling, might in this way be dispelled to some extent. As the situation now stands, the slightest scrap of information on either point would be a valuable addition to general knowledge.

Such reports as are suggested might be made to some designated official or standing committee of the Stock Exchange and the summary totals published. With these reports in hand, the authorities of the Exchange could proceed intelligently if they ever took it upon themselves to bring about the adjustment of speculation to investment and to enable the former to "anticipate the needs of the market." The previous supineness of the Stock Exchange as an organized body in dealing with over-speculation might be excused on the ground of insufficient knowledge. But the broad powers of the authorities over members individually would enable them with little difficulty to obtain the information outlined above. This could enlighten them as to the necessity for repressive or regulative action on their

part and guide them in taking such action, should they decide on that course. Reports of the sort mentioned would be more useful than would be the periodic examinations of individual brokers' books, such as, we are told, were discussed in the sessions of the Hughes Committee.⁵ These proposed examinations, however, had chiefly the purpose of maintaining oversight of the individual brokers' financial stability. The relatively infrequent failures of brokers, to which defenders of the Stock Exchange insistently point, appear to make this oversight a reform of slight urgency. In any case, examinations conducted "with the view of preventing or minimizing failures", would not necessarily aid in adjusting the volume of speculation to the investment demand, which is the purpose of the suggestions now under consideration.

Another recommendation of the Hughes Committee that was incorporated in its report—and also of the Pujo Committee—that at least 20 per cent. margin be required on every transaction, would probably act effectively in curbing over-speculation to some extent. In that it would keep out of the stock market those who were not able or willing to deposit that amount of margin, it should *à priori* inevitably reduce the volume of speculative commitments below the point it would reach if this requirement were not enforced. At times, as we have seen, the volume of those commitments far exceeds the investment demand. The requirement in question should therefore act to correct any tendency toward over-speculation that might reveal itself. But a careful inquiry into the relative degrees of sagacity

⁵ "Differences of opinion arose in the committee as to the advisability of requiring periodical examinations of the books of brokers, corresponding to the examinations of national banks, with the view of preventing or minimizing failures."—Horace White, "The Hughes Investigation." *Journal of Political Economy*, vol. xvii, p. 540.

possessed respectively by those who would put up at least 20 per cent. margin and those who would not do so, might be necessary in order to determine the approximate amount of benefit to be obtained from the enactment and enforcement of the requirement. In 1906 and 1907, for example, we do not know how many of the speculators were forced to liquidate their holdings by actual exhaustion of the resources they could devote to speculation, and how many were led to do so by unwillingness—aside from their ability to deposit additional margin—to stand by their commitments through a prolonged decline. Doubtless the demand for a margin of at least 20 per cent. would serve to exclude a particularly undesirable—from the standpoint of the common interest—type of “shoestring” speculator. For that reason, it seems entirely worthy of adoption; even though we do not know, in times of heavy over-speculation, just what proportion of those ill-fitted to enter into stock market ventures are formed by speculators who are unable or unwilling to put up a margin of the amount suggested.

Below is a brief outline of the measures which have been suggested with the aim in view of restricting any tendency toward over-speculation on the Stock Exchange in such a year as 1906. These are as follows:

1. Revision of the rate of commission.

To make investment orders more profitable to the brokers than they have been relatively to speculative orders, by

- a. Prescribing a fixed minimum charge—covering the broker's trouble and expense—on investment transactions in 20 shares or less; with perhaps an additional charge for the transfer of stock at the buyer's direction.
- b. Reducing the prescribed minimum rate to be charged on speculative transactions.

- c. Prescribing minimum rates which would vary with the market price of the securities involved in a given transaction.⁶
 - d. Permitting the charging of lower rates on larger orders.⁶
2. Weekly clearings of sales through the Stock Exchange Clearing House.

To draw closer attention to the volume of speculation at a given time, and to the facilities of the money-market, on the part of

- a. Speculators.
- b. Brokers.
- c. Lenders of call money.

To lessen the advantage of Stock-Exchange call loans, in point of ready convertibility, over other forms of loans.

3. Weekly reports by individual members to the Stock Exchange of outstanding speculative commitments and of investment orders received and executed.
Also publication by the Stock Exchange of summaries of above reports.

To give information regarding relative volumes of speculation and investment to

- a. Speculators, assisting them to conduct their operations more intelligently.
- b. Stock-Exchange authorities, enabling them to ascertain the need for any regulative action on their part. Data to guide them in any action which may seem advisable.

4. Requiring at least 20 per cent. margin—recommended by the Hughes Committee and also by the Pujó Committee.

⁶ c. and d. are suggested by the recently adopted rules of the London Stock Exchange. Their effectiveness in view of New York Stock-Exchange practice might be questioned.

To curb mischievous over-speculation by

- a. Reducing the absolute volume of speculation, since it would presumably exclude from the market a numerous class of speculators.
- b. Making the speculative class largely consist of operators better able to endure a relatively severe decline—however it might affect their willingness to do so.

No one of the above measures alone could have been depended on to repress such overmastering tendencies in the direction of over-speculation as were revealed in the earlier years of this century, especially in 1906. For instance, the public's proneness to speculate in that year could hardly have been restrained by a body of brokers who, because of commission rates adjusted to that end, might have been indifferent as to whether their customers were mostly speculators or mostly investors. But had a logical scale of commission rates then prevailed, had weekly clearings of sales through the Stock Exchange been the rule instead of daily clearings, had the existing volume of speculative commitments and of investment buying been made known generally by periodic reports at frequent intervals, and had a requirement of 20 per cent. margins been rigorously enforced—it seems highly unlikely that a volume of over-speculation for the rise, such as was reached in August and September, 1906, would have occurred. Of all four suggestions, that of revising the commission rates seems most fundamentally important. But it might not be of much avail in such a year as 1906 unless it were accompanied by the other measures proposed. The prevailing rate of commission—making speculative orders profitable to a much higher degree than orders executed in small lots of stock for investors—will make it to the brokers' interest to incite speculation

rather than investment, so long as it is maintained. The continued maintenance of this rate has brought about those developments in the business of the broker by which the routine of his operations and the provision of facilities for his customers are all devoted to the encouragement of speculation and to the economical and simple performance of transactions in connection with it. And so long as this rate persists, all that a broker can do in protracted dull periods is to sit idle and wish for a revival of speculative activity. Under this rate the individual members will never find it to their interest to assist in performing that basic function of the modern stock exchange, "directing the flow of capital into investment"—that is, in the stocks listed on the Exchange. An adjustment of the commission rates, along the lines suggested, might make the New York Stock Exchange a more effective agency in this "direction of the flow of capital", than it has been in recent years. Certainly in the period studied its efficient performance of this function, we concluded, was not in evidence at all, except insofar as it provided a broad market wherein any investor might buy or sell on his own initiative.

As to the periodic reports on the volume of speculation and on the investment demand, it seems entirely desirable that speculators should have some definite information on which they can base their "anticipation of the needs of the market." In failing to provide this information, the New York Stock Exchange has not been remiss above all other institutions of that type. It seems to be commonly accepted that speculators should carry on their operations in the densest ignorance of the general needs of the market and of the activities of other speculators. This apparently has arisen from the attitude of the public and of many persons connected with speculation, which we have shown seems to govern objections to manipulation, and which

consists in regarding speculation as a game of mingled skill and chance. To afford any information regarding the ultimate market on which speculators depend for success, in the minds of many, would be like permitting a whist player to look over his opponents' hands at the beginning of play. Carried on without the aid of the information indicated, which could be readily obtained, speculation can never adjust itself closely to investment needs, nor can it "consist in assuming the inevitable risks of changes in value." One can hardly predicate "inevitableness" of risks that arise from speculators' failing to equip themselves with the knowledge of fundamental conditions which is readily accessible. And so long as it is carried on thus blindly, speculation will never consist in anything else than in "placing money on the artificially created risks of some fortuitous event." But if all readily ascertainable manifestations of the investment demand are brought to their attention, speculators may intelligently undertake the useful economic and social service of "anticipating the needs of the market."

The necessity for any regulative action to be taken by the Stock-Exchange authorities in the future, looking to the adjustment of speculation and investment, as a result of the fuller information they may then obtain, will depend on the strength of the general inclination to speculate. It may be uncertain as to how far the publication of weekly reports, such as have been suggested, and the requirement of 20 per cent. margins will restrain undue eagerness to venture into the stock market. Possibly developments having no internal connection with the Stock Exchange may prevent any such tendency from manifesting itself again to the extent that it did in 1906. But if a general desire to speculate blindly on the ~~New York~~ Stock Exchange again seizes a numerous class in the community, the organization of that market and the conduct of its

routine, as they stand at present, will play little part in correcting or restraining the mischievous fulfilment of that desire. Measures such as those that have been suggested, and possibly some others, should make the New York Stock Exchange an efficient agency in "directing the flow of capital into investment"; and prices registered in the course of operations carried out by speculators having some knowledge of their ultimate market, might very possibly serve to "discount" future conditions.

APPENDIX

II. PRICES OF LEADING SPECULATIVE STOCKS ON THE NEW YORK STOCK EXCHANGE, ON THE FIRST OF EACH MONTH, SEPTEMBER, 1904, TO MARCH, 1907, AND ON MARCH 29, 1907.

RAILROADS.	1904.				1905.												1906.												1907.			
	Sept. 1.	Oct. 1.	Nov. 1.	Dec. 1.	Jan. 3.	Feb. 1.	Mar. 1.	Apr. 1.	May 1.	June 1.	July 1.	Aug. 1.	Sept. 1.	Oct. 1.	Nov. 1.	Dec. 1.	Jan. 2.	Feb. 1.	Mar. 1.	Apr. 1.	May 1.	June 1.	July 2.	Aug. 1.	Sept. 1.	Oct. 1.	Nov. 1.	Dec. 1.	Jan. 2.	Feb. 1.	Mar. 1.	Mar. 29.
Atchison	80½	83¼	86	88	88½	88½	89	88	83¼	80¼	83¾	87½	90¾	90½	88¾	87	89¼	93⅝	89½	94⅝	89¾	89⅝	88	92⅝	106½	105⅝	100¾	104¼	104⅞	101⅝	102¾	89¾
Balt. & O.	86⅝	90½	93½	98⅞	105⅞	102½	107¾	108½	104½	108½	113⅝	114¾	111¾	112⅝	112½	112½	113½	115⅝	110⅞	112	107⅞	107¾	116⅝	121	117¾	123¾	118¼	119¾	120½	116½	110⅝	97½
Reading	61¾	69	73	78¼	80	88¼	95	94⅝	90½	93½	100	105¼	116	123⅞	128½	137	139	141½	136¼	137	123¼	140⅝	121½	131¾	136½	150¾	138¼	147⅝	134¼	122¾	115¾	104½
South. Pac.....	56½	57⅝	61	67⅝	65¼	66⅝	70⅝	67½	60⅞	62⅞	64	65¼	65⅞	69½	70¾	68⅞	66¼	69¾	65¼	69½	64⅞	66¾	67	74⅝	90¾	93¾	90½	94¼	93⅞	93½	91½	80¾
Union Pac.....	97¾	102¾	110½	116¼	114½	122	133	130⅝	119½	123	127¼	131	131⅝	133¼	133¾	135¾	150½	155¼	149½	157¼	147¼	150	143	153¼	191¼	183¾	180¾	187	180	172½	171½	134⅞
INDUSTRIALS.																																
Amalgam. Cop.	56¾	58⅝	69½	81	72	74⅝	76¾	80¾	78¼	80¾	82¼	84¾	82¼	84¾	83⅝	90½	111½	116	107½	109½	104½	108	97½	102¼	109⅞	111⅞	109⅝	113¾	115⅞	112½	110⅞	88⅞
Steel, common.....	12⅞	18⅝	20½	32¾	30¾	31	34⅝	35⅞	30¾	27¼	31¾	35¾	36⅞	38½	38	37¼	43½	45	40⅝	42	41	40⅞	34¾	41½	46⅞	45¾	46	47⅝	48¾	44¾	44½	35⅝

VITA

THE author was born in Sandusky, Ohio, September 10, 1882. He was a student at Harvard College from 1900 to 1903, and also during the academic year, 1904-5; where in 1905 he received the degree Bachelor of Arts (as of 1904). He did graduate work in Teachers College, Columbia University, in the academic year, 1908-9. His period of study in the School of Political Science, Columbia University, was made up of the academic years, 1909-10, 1911-12, and 1912-13. During those years he studied under Professors J. B. Clark, E. R. A. Seligman, H. R. Seager, H. L. Moore, V. G. Simkhovitch, H. R. Mussey, F. A. Fetter, F. H. Giddings, J. H. Robinson, W. A. Dunning, and J. T. Shotwell. For three years he was enrolled in the Seminars conducted by Professors Clark, Seligman, Seager and Fetter.

I. NUMBER OF SHARES SOLD ON THE NEW YORK STOCK EXCHANGE, EACH MONTH, 1900 TO 1912, INCLUSIVE.

	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912
January	9,843,716	30,285,055	14,779,223	16,001,222	12,262,624	20,792,558	38,512,548	22,702,760	16,594,895	17,275,500	24,538,649	10,416,526	10,906,138
February	10,195,392	21,902,822	12,986,943	10,922,017	8,787,259	25,239,088	21,699,800	16,470,972	9,839,706	12,337,199	16,012,626	10,194,217	7,086,544
March	14,446,782	27,060,968	11,957,409	15,095,306	11,440,956	29,138,838	19,467,684	32,208,525	15,939,255	13,650,595	14,988,179	6,823,868	14,552,052
April	14,772,973	41,719,086	26,567,743	12,293,058	8,205,529	29,298,456	24,330,919	19,235,652	11,648,123	19,055,618	14,089,639	5,639,350	15,959,338
May	9,519,473	35,292,203	13,532,353	12,467,588	5,290,110	20,517,560	24,026,049	15,827,245	20,975,022	16,495,230	11,918,978	11,115,578	13,662,747
June	7,308,687	19,795,612	7,834,768	15,396,741	4,972,804	12,576,469	20,340,391	9,749,415	9,652,437	20,322,230	16,292,870	10,508,400	7,219,721
July	6,230,493	16,024,668	16,352,231	14,903,758	12,462,394	13,273,655	16,346,221	12,811,354	13,857,563	12,806,965	14,254,713	5,476,559	7,158,324
August	4,020,654	10,772,021	14,314,627	14,370,943	12,474,789	20,205,735	31,804,816	15,561,583	18,881,265	24,637,783	10,392,788	14,994,533	8,952,358
September	5,169,966	13,990,195	20,972,253	10,795,453	18,767,264	16,012,044	26,018,270	12,223,541	17,582,499	19,981,675	7,673,529	17,395,957	10,107,204
October	10,895,083	14,036,082	16,361,124	12,896,893	32,574,449	17,674,807	21,894,130	17,333,793	14,266,901	21,739,514	13,452,381	10,936,901	14,166,896
November	22,565,336	18,314,962	17,126,062	10,730,979	31,981,066	26,823,550	19,400,130	9,677,494	24,966,326	18,769,870	10,713,469	14,919,486	8,725,317
December	23,411,629	16,750,985	15,718,667	15,228,143	28,092,821	31,528,396	20,457,052	12,636,490	23,002,354	17,560,015	9,822,240	9,055,883	12,631,786