INVESTING FOR PROFIT

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PREFACE

THE following chapters first appeared as a series of articles in THE MAGAZINE OF WALL STREET. They are republished in book form in response to a considerable demand for information of this character.

It is believed that Chapters VIII. and IX. contain the most thorough explanation of the relation between bank deposits and loans that has as yet appeared.

G. C. SELDEN.

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I—Some Underlying Principles

INVESTMENT is defined as "the placing of capital in a more or less permanent way, mainly for the income to be derived therefrom."

In the very nature of the case the definition of investment cannot be rigid and clear-cut, because the idea itself is not rigid or clear-cut. Like nearly all the terms used in finance or in the marketplace, the word is used in a variety of ways and has several gradations of meaning:

(1) The placing of capital for income only, the risk of loss being so slight as to be considered negligible. The income from such an investment is necessarily small, because the element of risk is almost eliminated.

(2) The placing of capital for income only, but in a security which contains a slight possibility of loss—or a "business man's risk," as it is commonly called. In this case, the investor depends to a certain degree upon his knowledge of

financial or business conditions in forming his opinion as to the safety of his investment. He therefore obtains a somewhat higher rate of interest, the additional per cent. being in payment for additional risk or for the degree of judgment which he has exercised in making the purchase.

(3) The placing of capital for income, but also with the expectation of an increase in the value of the principal—in other words, investment for profits as well as for interest.

Whether investment for profit should be called a science or an art is a mere quibble over words. Investment for income is commonly called a science, and scientific principles may certainly be applied to investment for profits, but in its main features it might perhaps better be called an art.

It is doubtful if the intelligent investor for profit, who works on sound principles and with deliberate judgment, takes any greater risk than the investor described under (2) above, who accepts the business man's risk.

For example, in 1902 Minneapolis & St. Louis 1st & Refunding 4's of 1949, selling at 106, were considered at least a

business man's risk, if not better, yet they dropped to 61 in 1912; while American Beet Sugar preferred, paying 6 per cent. and selling around 80 in 1902, would have been ranked somewhere between a business man's risk and a speculation, yet in 1912 it was selling at par, after having yielded 7½ per cent. interest during the entire 10 years on an investment made at 80.

It is intelligence that commands the large income returns, whether in the investment business or any other business.

This example also illustrates another important fact, namely, that the careful investor for profit often gets, in addition to his profits, a larger income return than the investor for income only. This is because the securities which are most likely to increase in value are generally those of growing companies and have not yet become "seasoned." For this reason such securities sell at a low price compared with their interest return.

The investor for profit does not primarily aim at a high interest yield. He tries to get merely an ordinary income return, coupled with an increase in value. But he is likely to find himself, without any special intention, receiving

a relatively high rate of interest in addition.

The distinction between investing for income and investing for profit is not so great as might at first appear. The first consideration in an investment for income is usually said to be safety. This means, of course, safety against the loss of any part of the principal. But this includes a consideration of future prices, just as truly as though the investment had been made with the expectation of an increase in value.

The investor for profits tries to select a security that will grow, while the investor for income tries to select one that will not shrink.

The difference is in degree rather than in kind. The element of risk can never be entirely eliminated. Even if we were to assume that the U. S. Government is indestructible, so that the holder of a Government bond is certain to receive the full par value of the bond at maturity, there is still to be considered the risk involved in the changing value of money. A rise in the cost of living means a fall in the value of money, and consequently a shrinkage in the real value of the bond,

which can only be truly measured by what the bond will buy.

This view of the matter has been forced home upon investors within the past few years by the rapid rise in all prices. Investors have supposed that they were taking little or no risk because for every $1,000 invested they were sure to get back $1,000 at maturity of the obligation. They have awaked to discover that the $1,000 at maturity would buy only two-thirds or three-fourths as much of any useful or desirable article as when the investment was made.

Safety, then, can never be absolute; it is a question of degree. The investor for profit seeks a growing margin above the line of safety which will yield him additional capital. The investor for income only must likewise study to avoid any shrinkage below the line of safety which will encroach upon his principal.

There are many who look upon the art of investing for profit as a mysterious and difficult "knack." They say of an unusually successful man, "He is a natural money-maker," or "Everything he touches turns to money."

Perhaps one-tenth of the returns obtained by a successful investor for profit

should be charged to natural bent or talent for money-making; but the other nine-tenths would certainly be found to be due to his first learning the business, then making a careful and painstaking investigation of every proposition before putting capital into it, studying all the conditions surrounding the business of the company, comparing prices with conditions, and in general applying to the investment the same degree of thought, caution and mature consideration that he would apply to the active management of any business enterprise in which he was engaged.

How many losing investors can truthfully say that they have done all this? In ninety-nine cases out of one hundred they invested "on the recommendation of a friend," or on the strength of alluring advertising matter, or because of some half-considered notion, never carefully investigated, or for some other equally inadequate reason.

Only three qualifications are necessary in order to learn the art of investing for profit:

(1) Ordinary common sense.
(2) Willingness to make industrious

and constant use of your powers of observation, reasoning and inquiry.

(3) Patience to go slowly until actual experience has confirmed the soundness of your judgment and of your methods.

These three requirements are not easy, but they are not dependent upon any special talent and they are within the reach of most persons who are willing to make an effort proportionate to the results they hope to achieve.

As to the opportunities for this kind of investment, they are almost innumerable. The inexperienced investor is likely to argue with himself somewhat as follows:

"Look at the millions of dollars owned by great capitalists or piled up in banks awaiting good opportunities for investment. A large part of this money belongs to men who are themselves directors in the big corporations, or to bankers who know every development in all the money markets of the world. What chance have I in comparison with these men? They are bound to skim the cream from every proposition before they let us little fellows in. They simply use us to unload on when they want to stand from under."

Now there is a point of view from which this is at least partly true. The great banking and corporation interests certainly have better opportunities for knowing future developments than the average small investor and they will usually be able to get more profitable results.

But the special advantages of the large investor as compared with the small are very much over-estimated. The most essential facts in regard to the money market and the condition of important corporations are public property. Certain companies pursue a policy of secrecy, and these the outside investor must leave severely alone; but so far as the big railroads and many of the important industrials of this country are concerned, the main facts about their condition, earnings and prospects are spread broadcast. An officer or director may have more exact knowledge than the public as to the date on which a dividend will be raised or lowered, but the public may, if it wishes, know very nearly as much as he about the earnings which underlie the dividend—and that, after all, is the important thing.

Moreover, the fact that leading bank-

ing interests can make their money earn a larger return than you can get on yours, does not prevent you from making a moderate profit. They are a long way from usurping the entire field. There is still plenty of room left for you.

Facts are the best answer to this argument of the pessimist. For example, in 1903 United States Steel preferred sold at 49¾. It was then paying and has continuously paid ever since 7 per cent. on par or over 14 per cent. on a price of 49¾. In 1909 it sold at 131.

If inside interests knew all the facts and had abundant capital, why didn't they buy *all* the Steel preferred that was offered between 50 and 60? Why was the small investor given the opportunity to pick up this bonanza at 50? Similar examples might be taken from the history of any well-known stock or bond.

Whatever advantages inside interests may have compared with the ordinary investor, there are plenty of opportunities left over for him.

While there are many different kinds of securities, which vary in innumerable details in regard to legal rights of the holder and the exact character of the

obligation, all may be included under three general heads:

(1) *Promises to pay*, such as bonds, mortgages, notes, or loans on collateral. All of this class of securities entitle the holder to a specified amount of cash at a certain fixed future date, with interest at a predetermined rate, payable at regular intervals throughout the term of the security.

(2) *Equities*, representing a fractional part of the ownership of the company. The English term for these, *shares*, expresses their standing accurately. In America such securities are commonly called stocks.

(3) *Convertible securities*, which may be changed from one of the above forms to the other under certain conditions which are specified in the face of the security.

It is to be noticed that the character of a security is not always fairly indicated by its name. Income bonds, for example, are entitled to interest only when earned. If the income of the company is sufficient to pay the interest on such bonds, it is paid; but if the interest cannot be paid, this does not necessarily throw the company into the hands of a

receiver, as would be the case if the interest on any other bonds were defaulted.

Likewise the debenture bond is practically nothing but a note, as it carries no lien on any specified property of the company, but is merely a general obligation. When such a bond runs for a short term only, it is called a note in the ordinary parlance of the Street.

In the case of a guaranteed stock, it is necessary to ascertain just what the guarantee covers; but in most cases such a stock is equivalent in safety to a debenture bond except that it has no date of maturity.

Equipment bonds deserve special notice, because they are really stronger than their name indicates. The security behind them consists of specified railroad equipment, as locomotives, cars, etc. The company might go into the hands of a receiver without affecting the security of these bonds, as that depends solely upon the equipment. A certain fraction of such an issue of bonds is retired each year, while the railroad usually obligates itself to keep the equipment in good repair and to replace such as may be worn out or damaged within the term of the bonds. Hence the amount of bonds out-

standing keeps decreasing in proportion to the security behind them.

Since the investor for profit desires to select securities that will increase in value, he will be chiefly interested in stocks and in bonds or notes which are selling below par. It is rare that he will wish to purchase bonds above par, because the possibilities of higher prices for such securities are very limited.

Equipments or any kind of serial bonds selling below par are especially attractive because the bonds to be retired each year are usually drawn by lot, so that each holder has a chance of getting par for his bonds whenever any are retired.

The investor for profit must select securities which have a ready market. When he sees a good profit in his investment, he wishes to be able to take it without sacrificing two or three points because of difficulty of finding a buyer at the moment.

II—Distribution of Investments for Profit

ONE of the standard warnings commonly given to the investor is that he should never "put all his eggs in one basket." On the other hand, Andrew Carnegie, who may be supposed to know a thing or two about investment, has revised this adage to read, "Put all your eggs in one basket and then watch the basket."

Mr. Carnegie has the very great advantage of having made a phenomenal success of his method, but it is to be observed that he did so by watching the basket very closely indeed. He did not set the basket on a wall and say, "That looks pretty safe—I'll just step over in the back lot and pick a few strawberries."

None of that for canny Andrew. He hung onto his basket with both hands. Not even a circus parade could distract his attention from that precious basket.

The ordinary investor does not have the opportunity of watching the basket

as carefully as it needs to be watched if all the eggs are to be put in it. An example of this occurred some years ago when a large part of the funds of the Johns Hopkins University was invested in Baltimore & Ohio stock. Undoubtedly the trustees of the university thought they knew the situation of that railroad and that the investment was entirely safe. Yet Baltimore & Ohio went into the hands of a receiver and the work of the University was for a time seriously crippled. Fortunately the embarrassment of the company was only temporary and after reorganization it soon regained its former standing.

As a general rule, therefore, it is decidedly better for the investor for profit to distribute his holdings among a number of different securities. This distribution will ordinarily come about in an entirely natural way, as the investor sees first one opportunity and then another of which he wishes to take advantage. When a certain amount of his capital becomes available for reinvestment, he begins to look for a suitable security and it will usually not be long before something turns up suited to his purpose.

The average man will not care to in-

vest all his surplus funds for profit; he will wish to hold part of them as a sort of reserve by investing that part for safety only, without consideration of any possible profit above ordinary interest rates.

An excellent plan is to divide your capital into two equal parts, a "reserve fund" and a "profit fund." The reserve fund is permanently placed with a view to safety of both principal and income. The investor does not expect to encroach upon this reserve fund unless in case of unexpected disaster, illness, or something of the sort.

In placing this reserve fund, interest returns will receive but very little consideration. The investor will expect to get only the current rate of interest available in cases where the element of risk is so far as possible eliminated. At present that rate would be four to five per cent.

Standard bonds and mortgages afford a natural outlet for the investment of such a reserve. For those not wishing to assume the responsibility of arranging and managing an ordinary real estate mortgage, guaranteed mortgages are easily available. Any good bond

house will recommend a suitable list of conservative bonds. For small sums, the savings banks and good local building and loan associations are often the most convenient.

With one-half of your capital thus securely provided for, you are then free to invest the other half so as to secure, if possible, a profit in addition to ordinary interest. As such profits accumulate you will transfer half of them to your reserve fund, so as to keep the proportion between your two divisions about equal.

You are not warranted in taking any more risk on profits than on your original capital. It seems to be a common failing to risk profits in some highly speculative venture where the investor would not have thought of placing his original capital. There is no logic in this. All money is alike, no matter how you come by it.

The next question is, how shall the investor distribute that part of his fund which he set aside to invest for profit? Shall all this be put into stocks, or some into bonds? Shall he divide it between preferred and common stocks, or be-

tween railroads and industrials, or in some other way?

It is of interest to see how some of the men who have accumulated great wealth through successful investment have divided their capital. An instance of special value is found in the investments of the late Marshall Field of Chicago. He was one of the wealthiest merchants in the country and was well known for his safe and conservative methods of doing business and of handling capital. He died suddenly, leaving his investments just as he had arranged them in the expectation of continued activity. A careful study of his estate was made by E. S. Meade, of the University of Pennsylvania, and is on record.

Mr. Field's investments totaled over $43,000,000 and were as shown in the table herewith:

Marshall Field's Investments.

Money		$4,301,378
Open accounts		9,280,084
Syndicate subscriptions		1,616,450
Notes:		
High grade commercial paper	$1,500,000	
Miscellaneous notes	818,269	2,318,269

Bonds:		
Gov., State and municipal	$472,500	
Railroad	3,888,000	
Public Service	1,502,000	
Industrials	928,000—	6,790,500
Stocks:		
Marshall Field & Co.	$3,400,000	
Industrials	3,291,950	
Railroads	8,336,200	
Public service corporations	1,431,650	
Banks and trust Cos.	809,510	
Miscellaneous	891,000—	18,160,310
Grand total		$43,069,524

The open accounts resulted from his business connections, being almost entirely composed of a debt of Marshall Field & Co. and of money advanced to the Field Museum. The syndicate subscriptions were the leavings of various underwritings, and have no special interest for the investor.

The investments in bonds were all of a highly conservative character. It will be noticed that only a small amount of industrial bonds were included, and the quantity of municipal bonds was still smaller. The first were evidently avoided because of undesired risks, and the second on account of the small yield.

The investment in Marshall Field & Co. was of course of a special character and was undoubtedly profitable. The other industrial stocks were all those of prosperous companies and were practically all dividend payers, with the exception of $1,494,000, which was equally divided between the preferred and common stocks of certain of the newer industrials. These were evidently the leavings of syndicate subscriptions, and it is probable that the common stocks cost Mr. Field but little. Some of these companies have since become very prosperous, but others, such as American Can, Corn Products and Railway Steel Spring, have yet to prove their permanent dividend-paying capacity.

The investments in railroad stocks were divided between the preferred and common stocks of eighteen of the principal railroads of the United States. Nearly all were dividend payers.

His public service corporation holdings were mostly of Chicago Edison and of the Chicago Elevated Railways. It is highly probable that these were secured by participation in the original underwritings.

Holdings of bank and trust company

stocks were relatively small but highly profitable. Probably many of them were acquired years before, and under more favorable conditions than such purchases could now be made.

If we eliminate, so far as possible, Mr. Field's direct business and personal relations and his participations in underwritings, we find about half his fortune invested in commercial paper and in railroad and industrial stocks and bonds, as follows:

Commercial paper.....	$2,318,000	12%
Railroad bonds	3,888,000	21%
Railroad stocks	8,336,000	44%
Industrial bonds	928,000	5%
Industrial stocks	3,291,000	18%
Total	$18,761,000	100%

But a part of the industrial common stocks were doubtless acquired at merely nominal prices.

Of course, no profit above interest was expected on the commercial paper and, in view of the character of the bonds included, this statement was evidently true of nearly all of the bonds also. Bonds can be selected which contain a possibility or probability of profit in addition to interest, but hardly any bonds of this

character were found in the Field Estate.

On the other hand, it is highly probable that Mr. Field hoped for a natural increase in value in addition to interest on nearly all of the stocks which he owned. The growth of the country would tend to bring this on the railroad stocks, and the industrials were of a character to indicate this expectation on his part.

We may say roughly, then, that about 38 per cent. of the above investment fund was placed with a view to interest return only, while the remaining 62 per cent. contemplated also the probability of an additional profit. Such a distribution of investments was conservative for a man of Mr. Field's wealth. Undoubtedly most millionaire capitalists place a larger proportion of their money in more speculative channels. Perhaps they are induced to do this by the feeling that even if the whole of any investment should be lost they will still have plenty left.

For the small investor the conservative course is the only safe one, and he could scarcely go wrong by imitating the general plan followed by Chicago's most successful merchant.

In considering this question of dis-

tribution of investments for profit, it may be asked whether there are certain lines of business which should be favored and certain others which may well be avoided. Are the opportunities better in some kinds of business than in others?

There is room for a great deal of shrewdness and of judgment in the interpretation of public tendencies, wants and tastes. Bell Telephone is the commonly mentioned example of a stock which could have been bought for a song by the investor who was far-sighted enough to see the possibilities of the invention. The telephone was at first regarded as merely a curious toy. The man who then foresaw its general business use would have been esteemed a wild and visionary enthusiast.

Doubtless never a year passes by without the appearance of extraordinary opportunities for the investor who can combine sound judgment with an active imagination; but those having this combination of talents are very few, and most of the so-called investments whose promoters appeal to the imagination result in disaster to the holders of the securities.

As a general thing it is best to stick to established companies and avoid pro-

motions. It is the rule rather than the exception that a new business enterprise has to go through receivership before getting on a permanently sound basis. "Getting in on the ground floor" is apt to prove a gamble.

The ordinary investor for profit should either avoid mining enterprises entirely or put into mining stocks only a small fraction of his capital. This is because there is always doubt as to the future of a mine. Its assets are hidden away in the earth where they can only be guessed at.

An exception should perhaps be made of the porphyry copper companies, whose ore lies so close to the surface of the ground that it can be estimated with considerable precision. Coal mining also is on a different basis from the precious metals, as some of the big companies have such extensive holdings of coal lands that supplies are secure for many years ahead.

Transportation stocks are especially to be recommended to the investor for profit, because it is usually not very difficult to form some idea of the probable growth of the territory in which they are located. A new country, with great

natural resources, is bound to develop as population grows, and for that reason the securities of its best transportation companies will have good prospects. On the other hand, in the older sections the greatest growth will be in industrial enterprises, as transportation has already been well provided for.

Among industrial companies, the stocks of those whose products enter into wide and general consumption are to be preferred to those manufacturing articles for an exclusive trade or for a few large consumers, as the latter will be more subject to the caprices of fashion, to interference by new inventions and to the ups and downs of business activity.

Public service corporations, such as street railways, electric companies, gas and water companies, etc., are, like transportation companies, subject to the growth of the communities in which they are located. In the past they have sometimes suffered from unexpected competition, which had to be either met or bought off. That era is undoubtedly past for good and municipal control is now the chief danger to profits. As a rule, however, it may be assumed that such control will be reasonably exercised.

III—When Should Bonds Be Bought for Profit?

WHILE either bonds or stocks may be bought for profit as well as for interest or dividends, the opportunities for this form of investment are naturally fewer in bonds than in stocks. Under ordinary circumstances the stock of a corporation bears the burden of risk, and as a compensation it also has all the chances of increased profits.

Interest on the bonds must be paid as long as the corporation is solvent, but is fixed at a definite rate for the entire term of the bond. Dividends on the stock may be discontinued whenever necessary or desirable, but they may likewise be increased to any desired rate.

Such a legal division of risks and income naturally limits the possibilities of profit on the bonds, since they never can participate in the prosperity of the company beyond their fixed rate of interest.

An effort to straddle the situation is

often made by issuing convertible bonds, which bear a fixed rate of interest but may be turned into stock at a specified price. Such bonds are especially desirable from the point of view of the investor for profit, because his interest and principal are secure, while at the same time the price of his bonds will follow the stock in any advance above the conversion limit; but this very desirability is usually discounted in the price, so that it may be difficult to buy convertible bonds low enough to suit. Such issues are always worthy of careful watching, however.

On the other hand, the investor for profit will often prefer bonds to stocks, because his principal is assured at maturity—provided, of course, the company remains solvent. If his bonds were well selected in the first place, he need not be disturbed by any decline in price. The worst that could happen to him under such circumstances would be that he might have to hold his bonds, receiving the interest thereon, until maturity or until improved financial conditions brought the price up again. This fact might contribute to the investor's peace of mind in times of unexpected trouble—

a point always worthy of consideration.

Moreover, there is usually a time in the development of any business enterprise when the bonds afford the investor for profit a better opportunity than either preferred or common stock—better because safer and because including assured interest as well as possibilities of profit.

The investor will often ask, "Should I confine myself entirely to listed bonds or should I consider also especially attractive issues of unlisted bonds?"

The answer must be that he should confine himself to bonds having a fairly active and satisfactory market, whether listed or unlisted. The mere fact of listing is of little value, except as guaranteeing the legality of the bonds, and in nearly all cases this can be easily ascertained in regard to any unlisted bond also. Otherwise, an inactive listed bond has no advantage over an inactive unlisted bond. As a rule, listed bonds are likely to have a better market than unlisted, other things being equal; but the question of a good market is the one to be considered, regardless of listing.

Large and well-known corporations, whose business and accounts receive the fullest publicity, are especially desirable

in investing for profit, and their bonds will usually be listed and will naturally be found to have a satisfactory market. A bond on which the bid and offered quotations are more than one point apart will generally be undesirable for this purpose.

In buying any bond, the first subject to be considered is security. In investigating this, the situation of the company, as a whole, must be gone over. The personnel of the management, the affiliations of the corporation with other companies, property owned, total bonded indebtedness, capitalization and its relation to income, the physical condition of the property, are all to be looked into carefully. This information may be easily obtained from various monthly and yearly manuals.

The most important consideration is the "margin of safety," or the excess of earnings applicable on the bond over the interest requirements for that bond. Earnings are more important than assets, because the assets behind a bond generally get the greater part of their value from their connection with the company as a going concern.

The next question is the rank of the

bond, or its priority of claim as compared with other issues by the same company. The general principles in regard to the relative positions of various bond issues are briefly stated as follows by Chamberlain in "The Principles of Bond Investment":

"The secured obligations of a corporation are superior to the debenture; lien security is surer than guaranty; lien on realty is stronger than lien on personalty; realty that is merchantable, or that has its own independent earning, makes a better lien than realty that cannot readily be sold or that has earnings dependent upon the cohesion of the entire property. A first mortgage has a better claim than a second; a second than a third; primary liens anticipate secondary liens, and secondary liens anticipate junior liens."

In the considerations of earnings applicable on a bond or other security to be purchased, the investor for profit will naturally pay more attention to probable *future* earnings and may often be satisfied with a smaller margin of safety in current income as compared with current interest requirements, than would the investor for income only.

The investor for profit is seeking to identify his interests with a growing property. A bond issue by such a company showing only a moderate excess of earnings over interest will prove actually safer, if the investor's ideas in regard to the future of the company are correct, than the bond of another company upon which much larger current earnings are applicable, but which runs a risk of a falling off in earnings during subsequent years.

At the same time the bond of the young and growing company will sell at a lower price than that of the company which has reached its fullest development, as the latter will be considered a "seasoned" investment and will be more actively sought by investors for income only, who constitute far the largest class. The investor for profit credits himself with ordinary business judgment in estimating the prospects of the corporation whose securities he buys. He studies probable future earnings just as carefully as he does present earnings.

This subject will be more fully discussed later in connection with investments in stocks. The particular question I am now leading up to is, Under

what conditions are bonds more desirable than stocks as investments for profit?

Long term bonds are, as a matter of plain necessity, the issues to show wide fluctuations. If a 5 per cent. bond is to be paid off next year, a decline of only two points below par would place it on a 7 per cent. basis, while an advance of two points above par would reduce it to a 3 per cent. basis. Under such conditions only slight fluctuations are possible.

The longer the term, the greater the fluctuation; but beyond fifty years the influence of the time of maturity upon the basis of yield becomes so slight as to be unimportant. A 60-year 5 per cent. bond on a 4½ per cent. basis costs 110.34, and a 100-year bond, 110.98—an addition of only .64 of a point for the 40 years additional term.

If, however, a bond is bought at a discount below par, as will nearly always be the case in investing for profit, the shorter the term the better, if other conditions are satisfactory; for the approach of maturity will then work in favor of the investor.

For example, if a satisfactory 5 per cent. bond having ten years to run can be bought at 90, the price will advance

(other factors remaining the same) one point each year during ten years. Thus if the investor holds the bond throughout the entire period, he will get a shade over 5½ per cent. interest on his investment and an additional profit of ten points. In the meantime, if more favorable conditions bring his bond to par before the ten year period is up, he has the option of selling the bond and looking around for another equally good opportunity.

In figuring bond values the investor will naturally consult the bond tables, which show at a glance the actual yield at different rates of interest for all maturities. In the case of a stock, as it has no maturity, the yield is figured by simply finding what per cent. the annual dividends are to the price paid. A 6 per cent. stock bought at 87 yields 600 divided by 87, or 6.9 per cent. It does not matter what the par value of the stock may be, as this does not affect the yield on the investment.

With the bond, the question of yield is complicated by the fact that the purchaser is to receive par at maturity, while he may have bought his bond above or below par. If he bought below par, he

makes a profit, so to speak, at maturity, which in the bond tables is distributed throughout the entire period between his purchase and date of maturity, thus raising the yield on his investment. Likewise, if he paid more than par, the premium thus paid is distributed over the whole time, reducing the yield on his investment.*

One or two practical examples will show most clearly the circumstances in which the investor for profit would choose bonds instead of stocks.

When the Norfolk & Western Railway was reorganized in 1896, a study of the map of the road and of the plan of reorganization showed great possibilities of earning power. Its lines tapped the rich soft coal and coke section in the mountains of western Virginia and the southern part of West Virginia, giving direct and easy transportation to tidewater at Norfolk, westward to Cincinnati and Columbus, and northward up the fertile Shenandoah Valley to eastern Pennsylvania. The road also formed one direct line for through traffic from

*For a thorough discussion of the mathematics of bond values see Chamberlain's "Principles of Bond Investment," page 405 and following.

Growth of Norfolk & Western Ry., as Illustrated by Prices and Dividends.

	First con. 4% bonds		Preferred stock			Common stock		
	Low.	High.	Low.	High.	Div.	Low.	High.	Div.
1897.....	67½	80⅛	22½	48½	1%	9	17¼	....
1898.....	74¾	90	42½	63⅞	3%	11½	19⅜	....
1899.....	87½	96	61⅜	74¼	4%	17⅜	28⅝	....
1900.....	90½	100	67	83	4%	22⅝	45¾	....
1901.....	99½	104	82	92¼	4%	42	61⅜	2%
1902.....	99	104½	90	98	4%	55	80¾	2½%
1903.....	94⅝	101⅞	85	93½	4%	53¾	76¼	3%
1904.....	96½	102¾	85	95	4%	53½	80½	3%
1905.....	100	104⅜	91⅛	96	4%	76	88½	3½%
1906.....	98⅜	102⅞	90	96	4%	84	97⅝	4½%
1907.....	86	99¾	70	90½	4%	56	92¼	5%
1908.....	90	99½	74	88	4%	58	86¼	4%
1909.....	98	100½	85⅛	92½	4%	84¼	102	4½%
1910.....	96½	100	87½	91¼	4%	88½	108⅝	5%
1911.....	97¼	99¾	85¾	91¼	4%	99¾	111¼	5¼%

the great Eastern cities to Chattanooga and beyond, and another from Virginia and North Carolina to Cincinnati and the West.

At this time, of course, neither the preferred nor the common stock was paying any dividends, but the interest on the first consolidated 4 per cent. bonds had every appearance of being secure. Nevertheless, owing to the recent reorganization of the company and to the general dullness of business at that time, these bonds sold as low as 67½ in 1897.

Here was a suitable opportunity for the investor for profit who could take an unprejudiced view of the future of the company, as well as of the current outlook. The table herewith shows the development of the company as indicated by prices of the bonds and prices and dividends on the two classes of stock.

In 1897, dividends on the preferred stock, though probable, could not be said to be assured. Hence it was a medium for the speculator rather than the investor. But the bonds, bought at or below 75, yielded a safe 5½ per cent. with good prospects of improvement.

In 1900, the bonds reached par, at which price the opportunities for profit

United States Steel—Prices of Bonds and Stocks Compared.

	Sinking of 5% bonds		Preferred stock			Common stock		
	Low.	High.	Low.	High.	Div.	Low.	High.	Div.
1903.....	65	87⅝	49¾	89¾	7%	10	39⅞	3½%
1904.....	68¾	95⅞	51¼	95⅝	7%	8⅜	33⅛	....
1905.....	92	99¾	90¾	107	7%	24⅞	43¼	....
1906.....	95¾	101⅛	98¾	113¼	7%	32⅝	50¼	1½%
1907.....	78½	99	79⅛	107¾	7%	21⅞	50⅜	2%
1908.....	85½	103⅜	87½	114⅝	7%	25¾	58¾	2%
1909.....	102⅛	108¼	107	131	7%	41¾	94⅞	2¾%
1910.....	101½	105½	110½	125⅜	7%	61⅛	91	5½%
1911.....	100	106¼	103	121⅞	7%	50	82⅛	5%

had practically disappeared and the investor for profit would naturally dispose of them. In the meantime, the preferred stock, 4 per cent. non-cumulative, had reached a permanent dividend basis. As it was not yet "seasoned," it could have been bought as low as 67 in 1900, the year when the bonds would probably have been sold. In two years more the preferred stock sold at 98. The investor might naturally have considered 95 a suitable price on which to take profits on a 4 per cent. non-cumulative stock.

By this time, 1902, the common stock had begun to benefit from the company's large earnings, being placed on a 3 per cent. basis in the middle of that year. In the panic of 1903, however, it sold at 53¾, and at 53½ in 1904, giving the investor ample opportunity to switch into that issue at a satisfactory price. Earnings on the common have increased steadily ever since, with the growth of the section served by the road and the constantly increasing demand for soft coal and coke. It is now on a 6 per cent. basis, and its high price, including July, 1912, was 118½.

An investment of, say, $750 in a bond at 75 in 1897, sold for $975 in 1900 and

reinvested in preferred stock at 75, closed out again at 95 in 1902 and put into the common at, say, 60, in 1903, would now be worth over $2,300, in addition to having earned interest varying from 5 per cent. to 6 per cent. throughout the entire period. And at no time did the investor hold any security of a lower grade than that ordinarily designated as a "business man's investment."

Another interesting example may be found in the sinking fund 5's of the U. S. Steel Corporation, as illustrated herewith in the second table. These bonds, placed on the market in 1903, sold as low as 65. The preferred stock was then paying regular dividends of 7 per cent., but its low price of 49¾ in that year showed plainly that investors regarded it doubtfully. It would not be selected by the investor for profit, but would be left to the speculator.

There was no serious doubt at that time that the sinking fund 5's would be easily taken care of. If the investor for profit had bought them at 75 in 1903, he could have realized par for them in 1906. It may be assumed that he would do this, as par for a 5 per cent. industrial bond

does not leave much chance for further appreciation.

By this time the preferred stock was on a sound basis, and in 1907 an opportunity was afforded to buy it at as low as 79⅛. It touched 131 in 1909, but the investor would doubtless have taken his profit before that figure, which was evidently pretty high for a 7 per cent. industrial stock.

Whether these profits should have been reinvested in Steel common would be open to debate. That issue is almost too highly speculative for the purposes of the genuine investor for profit, yet many conservative business men have bought and are now holding it. Its partial dependence upon the tariff is, of course, an unfavorable feature.

These examples, which might be multiplied almost indefinitely, serve to show the period in a company's development when its bonds may be bought for profit as well as interest. In a word, the bonds are to be purchased at the time when the preferred stock has not yet reached an assured position in the matter of regular dividends.

In the growth of the company, the bonds are the first to be brought up to

the point where they are nearly independent of earnings and their price is chiefly determined by the condition of the money market; next the preferred stock comes up to a similar position; and finally the common stock arrives at the same plane, as has long been the case with such stocks as Chicago & Northwestern, Delaware & Hudson, Lackawanna, etc.

IV—The Selection of Growing Railroad Stocks

RAILROAD stocks afford the investor for profit what should perhaps be called his best opportunity, when all the various factors in the situation are taken into consideration.

In the first place, the business of a railroad is, of necessity, publicly performed. Its tracks and equipment are visible to everybody, its location is known, the business along its lines can be estimated and often may be computed from current statistics, and evidences of good or bad management are plain enough to any experienced railroad man, and in many cases to the inexperienced likewise.

Again, the system of railroad accounting, as enforced by the Interstate Commerce Commission, is now uniform and definite, so that only a small knowledge of bookkeeping is necessary in order to judge of the prosperity or adversity of a road. An industrial company may put

its stockholders off with a brief statement that the gross business for the year was so much and the net profit so much, without any further explanations or details; but the railroad company cannot do this. It is legally required to set forth an intelligible statement of its earnings and condition in a certain definite and prescribed form.

Still another advantage of railroad securities, as compared with others, is that the business of the company is so largely dependent upon growth of population and development of general industry. Even a poorly managed, over-capitalized road will make money in a rapidly growing and prosperous section, while the best and most conservative handling may not avert a deficit in a region where business is stationary or declining.

This matter of population will be the first to be considered by the investor for profit in selecting railroad stock. It is quite true that a good road may, under certain conditions, make rapid progress and build up its income in spite of only a small growth in population along its lines, but the investor for profit wishes to get the advantage of a combination of favorable conditions. He can select any

road in the country for his investment. There is no reason why he should not select one where the condition of growth of population is in his favor.

For example, the census figures show that the State of New Hampshire gained only 4 per cent. and Maine 7 per cent. in the 10 years from 1900 to 1910; while Oregon increased 62 per cent., California 60 per cent., Arizona 68 per cent, and Texas 28 per cent. Other things being equal, therefore, the investor for profit would choose a road running through the latter states, as the Southern Pacific, instead of one operating in New Hampshire and Maine—the Boston & Maine. A railroad cannot do a big business unless the business is there to be done.

The next important point to be investigated is whether the business of a road is diversified, embracing a great number of different industries and products, or dependent to a large extent upon a single industry.

The roads report the character of their traffic under six heads, as prescribed by the Interstate Commerce Commission:

(1) Products of agriculture, such as grain, flour, cotton, hay, etc.

(2) Products of animals—livestock, dressed meats, wool, etc.

(3) Products of mines—coal, coke, ore, etc.

(4) Products of forests, that is, lumber and allied products.

(5) Manufactures of all kinds.

(6) Merchandise and miscellaneous.

The ordinarily well informed man generally knows enough about the character of the section through which a road runs to form an idea of the nature of its traffic. With the growth of large systems, most of the roads handle a widely diversified business, so that this subject is not as important as when there were numerous small disconnected lines, each one serving a restricted territory. Even the "grangers," which formerly handled a very large percentage of agricultural products, now carry a diversified business as a result of the increasing prosperity of the farmers and the growth of manufacturing in the sections served.

If a road is largely dependent upon one industry—as for example, Lehigh Valley, nearly two-thirds of whose tonnage is anthracite coal—its prosperity will vary with the activity of that indus-

try. This may be a favorable or an unfavorable feature, according to circumstances. In the 80's, when the price of coal fluctuated violently and the business was generally disorganized, the hard coal roads were at a disadvantage; but in recent years since conditions of partial monopoly have been established in the anthracite industry, the roads have flourished because they participated in the profits resulting from higher prices for coal.

The next question is, Is the road being managed strictly for the benefit of stockholders or is it in the hands of speculative interests? Now that the railroads of the country have been gathered into a few large groups under the control of great banking interests, most investors know the general character of the management of the leading lines, or if they do not, can easily find out.

The days of deliberate wrecking of a railroad, as Erie was wrecked by Gould and Fisk, are undoubtedly over for good and all; but there is a great difference between capable, efficient, economical management, and careless, wasteful methods, or management with one eye on the stock market. Strong banking con-

nections are practically a necessity to a railroad under present conditions. Its income is also materially affected by its relations with connecting and with parallel lines. "Community of interest" often puts a relatively weak road in a position to make money, when it could hardly keep its head above water under strictly competitive conditions.

The fact that a road is controlled by Morgan interests, or financed by Kuhn-Loeb, or is under Hill management, is not, taken alone, a guaranty of success; but other things being equal, the identification of a road with interests having abundant resources and wide influence is to be reckoned as an important asset.

When we come to the question of capitalization, it is little use to figure on the capital issues per mile of road. The question to be considered is, Are the earnings large enough to pay interest on the entire capital and leave a reasonable balance? Where a heavy business must be handled, a large capitalization per mile is necessary; while in a sparsely settled agricultural district, the capital needed may be very much smaller.

It is clear that the amount saved from earnings will depend to a considerable

extent on expenditures for maintenance of way and of equipment. A road can make its earnings show a fictitious increase for a year or two by cutting down its normal expenditures for new rails, new locomotives and cars, grading, repairs, etc. Equally, it can include under the heading of maintenance, expenses which have actually been made for permanent improvements, thus causing its earnings to appear much smaller than they would be naturally.

No definite figure can be set for proper maintenance. The necessary expenses for this item vary so greatly for different roads and under varying conditions that the average investor is obliged to depend on the opinions of experts in forming his judgment on this subject. When the annual reports of the principal companies appear, the question of maintenance comes in for careful study by statisticians and financial experts, and the discussions of the subject in leading financial publications generally give the reader a fair idea of the situation. Of course, an actual physical examination of the line by a competent railroad engineer is the best possible information. It is only occasionally that this is available,

but nevertheless a knowledge of the real condition of the various roads gradually percolates through financial circles.

Net income, or the amount left over from total receipts, after all expenses of operation and maintenance have been deducted, is of course the main reliance in judging the value of the stock. Net income should always be figured on a per mile basis in comparing results of one year with another, or of one road with another. An increase of 500 miles within any year in the length of lines operated, would naturally increase net income for the system as a whole, but this might not represent any improvement in earnings per mile.

After arriving at net income, the next thing is to deduct the fixed charges, or interest on bonds, notes, guaranteed stock, etc. The amount of this item is always given in the annual report. An issue of new bonds or notes during the year will increase the fixed charges in the next annual report, and to that extent weakens the position of the stock, which cannot be credited with any earnings until after all fixed charges are met.

The sum remaining after fixed charges are paid is called "surplus" and the per

cent. of this surplus to the fixed charges is called "margin of safety." If the fixed charges are $20,000 a mile and the surplus above fixed charges is $10,000, the margin of safety is 50 per cent.

Perhaps it is the use of terms like "margin of safety," which sound technical, although the idea they express is exceedingly simple, that leads the average investor to take all his information about conditions and earnings of a railroad at second hand from the newspapers or from circulars of brokerage houses.

In point of fact, it is nearly as easy to figure the earnings on a railroad stock as it is to reckon up your personal cash account. You earn so much in a year, you spend so much, and whatever is left over represents your savings. Just so a railroad has certain gross earnings, certain expenses, a certain amount of interest to pay on its debts, and whatever is left represents surplus, which may be distributed as dividends on the stock if desired by the management.

All these figures are very easily accessible. *The Investor's Pocket Manual* (monthly), *Moody's Manual, Poor's Railroad Manual, Moody's Analyses of*

Railroad Investments, The Manual of Statistics, and other similar publications tabulate railroad earnings and expenses so plainly that any one can understand them.

The simplest and clearest way of getting at this subject will be to take some railroad as an example and show just how the investor for profit would have proceeded and why he would have done as he did. We will take a road which has not had an uninterrupted growth, but which has passed through a period of bad management, resulting in the temporary suspension of dividends. We shall thus be enabled to see just what advance warning the investor had which would have permitted him to sell out his stock before the dividends were suspended.

We will select Southern Railway. Taking up first the question of location, we find that this road gridirons the South Atlantic and Gulf states. The last census shows that the value of farm lands and buildings in the 16 Southern states increased from $4,077,000,000 in 1900 to $8,964,000,000 in 1910, or about 125 per cent. The value of farm buildings alone doubled during the decade—a

Earnings, Prices and Dividends of Southern Railway Preferred.

	Per Mile. Gross Earnings.	Per Mile. Net Earnings.	Per Mile. Surplus.	% Oper'g Expenses.	Earned on Pref.	Paid on Pref.	Price Range of Pref.
1897.....	$3,975	$1,278	$93	69.35	0.7%	1%	23-38
1898.....	4,305	1,417	205	68.41	1.7%	1%	23-43
1899.....	4,695	1,545	388	68.46	3.5%	2%	41-58
1900.....	4,952	1,538	463	69.98	4.9%	3%	49-73
1901.....	5,252	1,639	536	69.86	5.9%	4%	67-94
1902.....	5,592	1,791	533	71.19	6.0%	5%	89-97
1903.....	5,941	1,761	520	73.18	6.4%	5%	69-96
1904.....	6,297	1,870	584	73.41	7.0%	5%	77-97
1905.....	6,688	2,008	717	72.87	8.6%	5%	95-102
1906.....	7,274	2,084	709	74.15	8.7%	5%	93-103
1907.....	7,507	1,800	303	78.89	3.8%	4%	29-94
1908.....	7,072	1,750	102	79.11	0.7%	...	25-63
1909.....	7,298	2,337	575	71.83	6.0%	...	60-75
1910.....	8,127	2,647	817	70.89	9.6%	...	43-75
1911.....	8,569	2,751	948	71.49	11.1%	2%	61-75
1912.....	.....	.....	...	.....	.....	...	68-86

strong evidence of increasing wealth; and the value of twelve leading crops also doubled. Value of manufactured products increased 120 per cent. and total wages in manufacturing industries 157 per cent. Population gained over 20 per cent.

There is no doubt, therefore, that the Southern Railway is located in a rapidly growing section. In regard to the character of its business, the breadth of territory covered assures a diversified traffic. The rapid growth of manufactures is an especially favorable indication in this direction.

The road was incorporated in 1894 under Morgan leadership and that house has continued to be the banking representative of the company.

Now, coming to the question of income, the table herewith shows annual earnings, per cent. applicable on the preferred stock, dividends paid, and range of prices from 1897 to 1912. Gross and net earnings and surplus are shown on a per mile basis.

The only figures that may not be fully understood by all are those under "per cent. operating expenses." This means the per cent. of the total operating ex-

penses of the road to its total gross earnings. These figures are commonly reduced to a per cent. so as to show by comparison whether a road is being economically operated—whether a larger or smaller part of its gross earnings is being eaten up in the cost of handling the traffic.

The attention of the investor for profit would naturally begin to be attracted to this road when in 1899 it earned 3.5 per cent. on its preferred stock against 1.7 per cent. the preceding year, and declared 2 per cent. dividends. Looking into the matter further, he would see that both gross and net earnings were rising year by year, and that the surplus had increased from $93 per mile in 1897 to $388 per mile in 1899. He would also notice that the per cent. of operating expenses to gross earnings had fallen from 69.35 in 1897 to 68.46 in 1899.

All this looked very favorable, and as the road was in a growing territory and backed by strong interests, the investor would be warranted in buying some of the preferred stock, which even with a dividend of only 2 per cent. would return him a satisfactory income on the investment, while prospects of an in-

creased dividend seemed good. The price in 1899 ranged from 41 to 58.

Year by year he would have the pleasure of seeing earnings and dividends increase and prices rise. Up to and including 1902, the only fault he could find would be that the road was paying out nearly all of its yearly surplus in the form of dividends, and was not building up a reserve against the possibility of dull times.

In 1903, there was a falling off in net earnings and in surplus per mile; also the per cent. of operating expenses rose to 73.18, from a low point of 68.41 in 1898. However, 1903 was a somewhat depressed year, when a railroad could not be expected to make the best possible showing, and the decline in net earnings was perhaps no more than would reasonably be expected under the circumstances. A better record would be probable as soon as business recovered its normal activity.

This happened in 1905, and in that year there was also a slight decrease in the per cent. of operating expenses to gross. But in 1906, our investor received a jar. At that time, general business was booming. Every railroad ought

to be able to make as good a showing as ever it could. Gross earnings for Southern Railway jumped from $6,688 per mile in 1905 to $7,274 in 1906—nearly double 1897.

But net earnings showed only a trifling gain, surplus per mile declined, and the per cent. earned on the stock was only 0.1 per cent. greater than the previous year. Something was checking the growth of net earnings. What was it?

The key was found in the per cent. of operating expenses to gross, which had risen from 72.87 in 1905 to 74.15 in 1906. For some reason the road was not handling its business economically.

The reason was discovered quickly enough by the reader of financial publications of that date. The Southern's train service in 1906 was a joke throughout the states it served. Passenger trains were late, accidents were frequent, and freight moved uncertainly. Yards were clogged with waiting cars, and the inadequate equipment was constantly breaking down. The company had paid out in dividends money which should have been expended for improvements; consequently, when a big volume of busi-

ness came, it could not be handled satisfactorily or economically.

In the meantime, April 18, 1906, the stockholders had authorized a "development and general mortgage" of $200,000,000 in gold bonds, of which $15,000,000 was to be issued immediately for the "refunding of payments for equipment heretofore made and charged to capital," for advances to subordinate companies, and for double tracking, revision of grades, etc.

The issuance of these bonds showed the pinch the company was in. The price of the preferred stock for 1906 ranged from 93 to 103, or high enough for a 5 per cent. non-cumulative stock even of a thoroughly prosperous company. The investor would take warning. His company had stopped growing. Hence it was time for him to get his money out of it and to place his investment where he might hope for a profit in addition to his interest.

In fact, the investor might well have set his limit at par in the first place, on the principle that 100 was high enough for a stock of that character, in which case he would have got his figure in the previous year, 1905, when the high point

touched was 102. In this instance, however, I wish to show how a brief consideration of a few simple figures, available to everybody and readily understood, would enable the investor for profit to perceive the development of unsatisfactory tendencies in the earnings of the road.

In 1907 came the panic, and dividends on Southern Railway preferred were discontinued. This took the stock out of the class adapted to the investor for profit, as his cardinal principle is to get interest on his money first and then to add profits, if possible.

In April, 1911, dividends were begun again, with all conditions affecting this road apparently favorable. Earnings on the preferred had risen from 0.7 per cent. in 1908 to 9.6 per cent. in 1910, and when the 1911 report came out it showed 11.1 per cent. The price range for 1911 was 61 to 75, giving the investor a suitable opportunity to repurchase at a much lower price than he sold, if the investment was to his liking at that time. The high price for 1912, down to this writing, has been about 86, and dividends have been increased to 5 per cent.—the full amount that can be paid on this issue.

V—When to Buy Standard Rails

IN the preceding chapter, I endeavored to bring out the general principles by which growing railroad stocks may be selected without any special difficulty, even by the investor who has only such slight knowledge of railroad statistics as can be readily obtained from the annual reports and from a cursory reading of a digest of current news perhaps once a month.

But the investor for profit is not necessarily restricted solely to the most rapidly growing companies. Opportunities will frequently appear when the stocks of standard, solid, well-conducted companies, whose business has been, and is likely to be, well maintained year after year, can be bought at prices which will enable the purchaser to add profits to his interest in the course of a few years.

The Pennsylvania Railroad, for example, has paid dividends regularly for

over half a century. It would not naturally be selected as a very rapidly growing company, as most of the territory through which it passes is already well developed. It will doubtless keep pace with the growth of population and business in the United States, but it could not possibly repeat the performance of Norfolk & Western as related in a preceding chapter.

Owing to the standard character of the road and the relative stability of its business, the price of its stock fluctuates less than that of almost any other American company. For the first nine months of the current year (1912), for example, the price of this stock moved over a range of less than four points, from 122½ to 126¼. Yet it sold from 99 in 1896 up to 142 in 1899; down to 124 in 1900; up to 170 in 1902; down to 111 in 1903; up to 148 in 1905; down to 103 in 1907; up to 151 in 1909; and down to 118 in 1911.

Here were plenty of opportunities for the investor to get a profit in addition to his interest, without the exercise of any extraordinary sagacity. Figuring out the yield on the investment at these

various high and low prices, we get the following:

	Price.	Divs.	Yield.	
1896	99	5	5.1	
1899	142	5		3.5
1900	124	6	4.8	
1902	170	6		3.5
1903	111	6	5.4	
1905	148	6		4.1
1907	103	7	6.8	
1909	151	6		4.0

A brief examination of this result shows that during the easy money markets and big bull speculation of 1899 to 1902, the interest yield on an investment in Pennsylvania stock was 3.5 per cent. at the highest prices; in 1905 and 1909, when the supply of surplus funds for investment was noticeably smaller, the yield at highest prices was practically 4 per cent.; and that the yield at lowest prices was about 5 per cent., with the exception of 1907.

In the last mentioned year, the dividend rate had just been raised to 7 per cent.—a figure at which it was found inadvisable to maintain it. Also, the low price of 1907 was made in the midst of the sharpest money panic the country every experienced. These special con-

ditions resulted in an abnormally low price in proportion to dividend returns.

The investor who simply shut his eyes and bought when Pennsylvania was on a 5 per cent. basis and sold when it reached a 4 per cent. basis, would have found two opportunities for adding a good profit to his interest, as follows:

	Bought at	Sold at	Profit
1896	100		
1899		125	25
1903	120		
1909		150	30

His money would have been in use during nine years, three years on the first investment and six years on the second. It would have yielded him 5 per cent. throughout, plus a profit of 55 per cent. on his first investment at par, or an average interest of about 11 per cent. for the whole period.

To get still better results, he would need to mix only a small amount of judgment with his rule. In 1900, in view of the abundance of capital, the easy rates for money and the general soundness of business conditions, the average business man would not expect Pennsylvania to sell as low as a 5 per cent. basis. He would be much more likely to set his

figure at 4½ per cent. Likewise in 1902 he would probably hold for higher than a 4 per cent. basis.

Again, in 1907 conditions were so threatening and the money market so disturbed all over the world that the fairly well informed investor would be almost sure to wait for a 5½ or 6 per cent. basis before purchasing, especially as Pennsylvania had at that time only just raised its dividend to 7 per cent.

Another practical method would be to buy part of the stock desired when the price reached a 4½ per cent. basis, more at a 5 per cent. basis, and the last at 5½ per cent.; then to realize profits half at 4 per cent. basis and half at 3½ per cent. The past history of the stock, combined with an ordinary business man's knowledge of present conditions, would in any similar case enable the investor to lay out a common sense campaign.

Again, it is to be noticed that while the great standard companies which do a well maintained business year after year, are not in the same position as those companies discussed in the last chapter, which must grow as a necessary result of their location in growing territory, these standard companies nevertheless have

their growing periods, and these periods can often be distinguished by the watchful investor.

To take an example, which will be likely to bring out the point more clearly than a more abstract discussion, we will examine into the history of the New York, New Haven & Hartford Railroad since 1897.

I have selected this road because it is perhaps the least favorable for the investor's purpose of any of the leading American railways. It is located in New England, the oldest section of the United States, where natural resources are less bountiful than in most sections and have also been pretty thoroughly developed in the past. It is a road which has had to meet water competition on one side and trolley competition on the other. In order to hold its own it has been obliged greatly to increase its capital issues for the purpose of buying up steamships and electrics, which when acquired have added but little to its income. Its New York terminals have also been a source of great expense.

As a result of these various conditions. New Haven stock sold as low in 1911 as in 1907, and lower in every year from

1907 down to date than in the depression of 1896-7. We may take it for granted, then, that if the investor for profit could distinguish the growing periods in the recent history of this stock, he could do equally well or better in the stocks of other roads which have made greater progress.

In the accompanying table I have compiled, for each year from 1897 to 1912, the earnings on this stock, dividend paid, per cent. of operating expenses to gross earnings, and range of price. These figures show the salient facts in the condition of the company year by year. All are clear to every reader, with the possible exception of "operating ratio"—the per cent. of expenses to gross earnings, which was explained in the last chapter.

The novice, in calculating this per cent. on any stock, should be careful to distinguish between "net earnings" and "net income." Operating expenses may be obtained by deducting net earnings from gross earnings; but net income usually includes other items besides earnings from operation, such as interest on securities owned, etc.

Starting with 1897, we find the stock earning 8.2 per cent., and paying out

New York, New Haven & Hartford R. R., 1897-1912.

	Earned on Stock.	Div.	% Operating Expenses.	Price Range.
1897	8.2%	8%	67.6	160—185
1898	8.2%	8%	68.5	178—201
1899	8.4%	8%	68.8	198—222
1900	8.7%	8%	70.2	208—216
1901	8.7%	8%	70.2	206—217
1902	8.7%	8%	71.9	209—255
1903	8.4%	8%	73.9	187—225
1904	8.1%	8%	71.3	185—199
1905	8.4%	8%	71.2	192—216
1906	12.2%	8%	70.2	189—205
1907	9.2%	8%	65.6	127—189
1908	5.4%	8%	74.4	128—161
1909	7.4%	8%	66.4	154—175
1910	10.3%	8%	63.7	149—162
1911	7.1%	8%	65.8	127—151
1912	8.5%	8%	64.8	

practically the entire earnings in dividends. This was perhaps warranted because of the firmly established condition of the company and the stability of its business. The road was not at that time under the necessity of piling up a surplus for extensions and improvements, as would have been the case with a road in newer territory. The operating ratio was at a safe figure, 67.6 per cent.

At the price of 160 the stock was returning 5 per cent. on the investment, which was as large a return as could be expected from a stock of such high standing, and in view of the contracted state of general business in 1897, the investor might well conclude that if he bought the stock around that price, he would have ample opportunity to sell it higher when he found such action advisable.

For three years he would have been gratified to see a steady advance in the price, accompanied by slightly larger earnings on his stock and no important change in the operating ratio. By the end of 1901, however, he would have observed that the operating ratio was creeping up, while the earnings on the stock had stopped increasing and remained stationary at 8.7 per cent. Early

in 1902 he would have found his stock at the extremely high figure of 255, at which price the yield would be only 3.1 per cent.

Bearing in mind that our investor is planning to hold his stock only during the period of growth; that the per cent. of earnings on the stock has now ceased growing; and that the operating ratio has been gradually rising for four years; we may conclude that before the high price was reached, he would have been satisfied to take his profit and to look elsewhere for another investment.

When the annual report for the fiscal year ending June, 1902, came out, he would congratulate himself on the sale, for the operating ratio for that year jumped to 71.9 per cent.

In May, 1904, the price dropped back to 185, but the investor would not be willing to repurchase, for the operating ratio of the preceding year had been still higher at 73.9 per cent., and earnings on the stock lower at 8.4 per cent. These figures showed very plainly that the company was not yet down to an economical basis in the handling of its business.

The 1907 report, however, showed a marked improvement. Not only had

earnings risen to 12.2 per cent. for 1906 and 9.2 per cent. for 1907, but the operating ratio for the latter year was down to 65.6 per cent., the lowest for over ten years. This appeared to demonstrate that the company had put itself in a position to handle the very heavy business of that year in a successful and economical manner.

November, 1907, gave an opportunity to repurchase the stock at 127, and 128 was touched early in 1908. There were plenty of opportunities to buy all sorts of stocks at a bargain at that time; but if the investor had again selected New Haven, yielding 6.3 per cent. on an investment at 127, he would certainly have been warranted in sleeping soundly on his purchase.

When the 1908 report came out, however, he would have been shocked to learn that not only had the earnings dropped off to 5.4 per cent.—which was not unnatural in view of the depressed condition of business—but also the operating ratio had risen to the surprising figure of 74.4 per cent. An examination of the report showed that this was due to a large increase in expenses for "maintenance of way" and "maintenance of

equipment," both of which had been somewhat reduced in 1907.

The investor would naturally reach the conclusion that the very low operating ratio for 1907 had been achieved by letting the road and equipment run down, and that this deterioration had to be made up in 1908, a year of poor business. He would be dissatisfied and would get out of his holdings and look around for something else.

That investors did exactly this is shown by the fact that the high price for this stock was 175 in June, 1909, while the high price for the average of 20 standard rails was not reached until September of that year, and in some individual cases, not until December. Investors were availing themselves of the strong spots to get out of their holdings. But as the high price of the stock for 1908 had been only 161, our investor would have had ample opportunity to get a moderate profit even if he had delayed unreasonably long in purchasing in 1908.

By 1910, earnings were again up to 10.3 per cent., and the operating ratio down to 63.7 per cent., so that the investor might have been warranted in taking advantage of the very low prices of

1911, if New Haven stock still looked attractive to him.

The fact must again be emphasized that no sort of golden rule can be drawn from the figures given in the table, which can be applied to all conditions and circumstances alike. The earnings and operating ratio simply give in the most condensed form the same information that any business man would collect and study if he were running a business of his own—the relation between earnings and expenses, and the per cent. earned on the investment. It is merely a common sense proposition, yet many inexperienced investors seem to find themselves confused by it.

It is highly desirable for the student of investment conditions, who desires to profit from his investigations in a practical way, to keep a note book or some rough memoranda showing the progress of all the principal railroads. The form of table shown in the preceding chapter is the best for that purpose, as giving a more comprehensive view. The time required to compile the figures is unimportant, as the reports on which the table is based appear only once a year.

With these data at hand, the investor

at once notices any important change in the condition of any company, and by comparison with other companies he can quickly discover whether the change is due to special conditions affecting that company alone, or is a result of more general causes, which are affecting all the roads together.

When he has learned in this way to keep his finger on the pulse, as it were, of each railroad system, he will begin to see many opportunities for switching his capital from a road which has stopped growing to one which is apparently just beginning to grow, or from a road which has finished a growing period to one which has completed a movement of contraction and retrenchment and is again ready for a new forward swing.

Exact information, intelligently digested and broadly viewed, is the principal requisite for success in investing for profit.

VI—Buying Industrial Stocks

WE cannot apply all of the same principles to industrial stocks that we have applied to railroads, because hardly any industrials furnish the public with complete statistics as to their operations. In buying most industrials, the investor is always somewhat in the dark.

To be sure, he can form his opinion from current news reports, or from his knowledge of the activity of the business in which the company is engaged, or from deductions made from net earnings and dividends as given out in the annual reports. But this is a different thing from working on such definite statistics as are given out monthly and yearly by the railroads.

This fact need not discourage the would-be investor for profit. If there is one thing in the science of investment that needs to be emphasized more repeatedly than any other, it is that no rules can be laid down. We can only apply to every

proposition the same practical business intelligence that we would apply in the management of our own personal affairs.

In fact, the title of these chapters might almost as well be "The Application of Common Sense in Buying and Selling Securities," as "Investing for Profit." Each case must be considered on its own merits, on the facts that are available, and by whatever method is most practicable under the circumstances. That is the reason why I am to such a large extent following the plan of studying actual examples of different securities, rather than confining myself entirely to abstract principles.

The most prominent industrial company in the world is the United States Steel Corporation. How could the investor secure profits in addition to interest in buying its stocks? It will afford us a convenient and useful example.

First, what do we know about the steel business? We know—

That it has been enormously profitable, having made more millionaires than any other industry.

That its products are of a staple character, so that the consumption of them

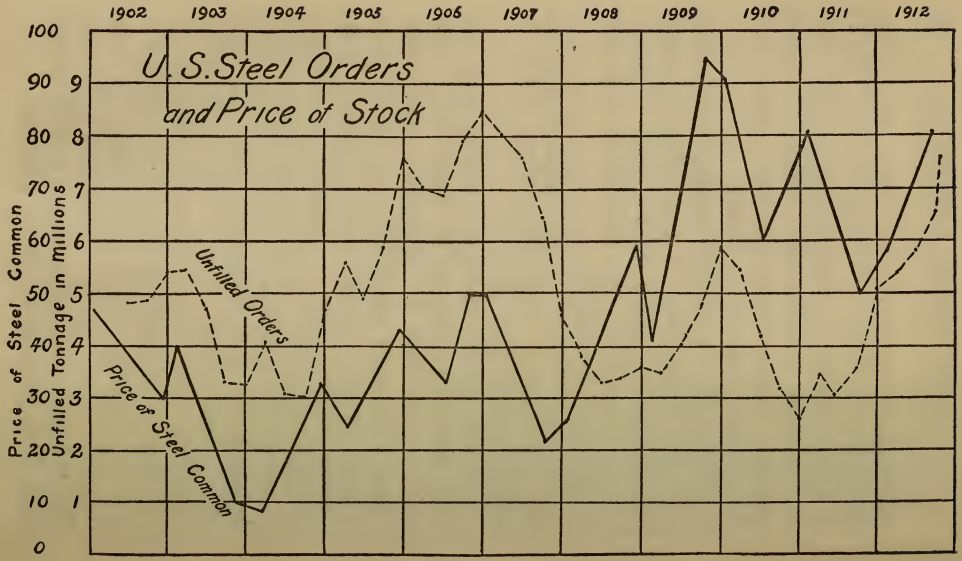
must continue and grow from decade to decade.

That stocks of raw material can be carried almost indefinitely, with but little expense beyond the loss of interest on the money tied up in them.

That in times of dull business at home, steel products can be exported in large quantities at prices which will at least keep the plants in operation, though profits may be small.

That in times of active business, profits are very large, probably larger than in almost any other line.

On the other hand, we know that the steel trade is always "a prince or a pauper," according to business conditions. Steel and iron products are used very largely in new construction of all kinds. Hence, when there is general confidence in business circles, and new construction is proceeding rapidly everywhere, the demand for steel is greater than the supply. But when new construction is checked, whether by financial stringency, political uncertainties, temporary exhaustion of capital, or for any other reason, then the demand for steel falls off very sharply and suddenly, and a considerable time may elapse before it revives.


U. S. Steel Orders
and Price of Stock
1902
1903
1904
1905
1906
1907
1908
1909
1910
1911
1912
100
90
80
70
60
50
40
30
20
10
0
9
8
7
6
5
4
3
2
1
Price of Steel Common
Unfilled Tonnage in Millions
Unfilled Orders
Price of Steel Common

Plainly, if the investor can buy steel stocks near the beginning of one of these periods of expanding activity, he is assured of a profit in addition to his dividends. If his purchase is made at such a time, he can sell out at his leisure, either when his stock is as high as he thinks it reasonably should be on the basis of the dividends it pays, or when the steel industry has reached such a degree of activity that he thinks the probabilities are against further gains. He will never get top prices, but should always get a fair profit.

Of the various steel companies, the United States Steel Corporation controls nearly half the business of the country and presents to the public far more complete and accurate statistical information than any other company. Its annual reports contain about everything one could ask for. Its earnings are given out quarterly. The amount of unfilled orders on hand were also published quarterly up to June 30, 1910, but since that date they have been given out monthly.

It is easily possible to figure out the operating ratio of this company, on the same plan as applied to railroads; but it is doubtful whether as good results could

be obtained as with the railroads, on account of the sudden fluctuations in the steel business.

Moreover, we have a much better class of statistics available for this company. The unfilled orders on hand represent *future* business, and a knowledge of the future business of the company is certainly much more valuable to the investor for profit than a study of past business.

Let us examine these unfilled orders for a period of years, and see if they afford any useful indications as to the probable future movements of the price of Steel stocks. Everyone understands, of course, that many other influences will enter into the making of the price. But the great thing, after all, with an industrial company, is getting the orders. It might reasonably be supposed that orders on hand would be so much more effective than any other considerations as to exercise a strong degree of control over the price.

In order to study the relation between unfilled orders and the price of the stocks, we must get the statistics before us in some intelligible form so that we can examine them in detail. The method here employed is that generally used by

statisticians. It is very quickly understood and can be applied by any one without any special knowledge, wherever several classes of contemporary statistics are to be compared and analyzed.

The first statement of unfilled orders was given out in 1902. Therefore, in the diagram herewith, we begin with that year and allow an equal space from left to right for each year up to 1912. Then we lay out a price scale on the left side of the diagram for the price of Steel common, and another scale for the amount of unfilled orders. When completed, the diagram shows the progress from year to year of both the price of the stock and the amount of unfilled orders, permitting a fairly close comparison of the general movements of these two factors.

We use the price of the common stock because it is, of course, more directly influenced by the prosperity of the business than the preferred stock, and therefore has fluctuated more widely. The common, however, did not pay dividends throughout the entire period shown on the diagram. For about two and one-half years, 1904 to 1906, dividends were suspended; and during that time the in-

vestor for profit would naturally have selected the preferred stock, which has paid 7 per cent. regularly. The price of the preferred has followed that of the common in a broad general way, but with somewhat narrower fluctuations. It is omitted from the diagram to avoid possible confusion.

During 1902 and 1903, we see that the price of the stock moved substantially in harmony with the rise and fall of the unfilled orders. In the middle of 1904, however, there is a further decline in orders, while the price of the stock continues generally upward. This was due to the fact that the price of the stock had been abnormally depressed in 1903 by the financial panic, and in 1904, with the return of easy money, a great part of the depression was soon recovered.

In other words, a great change in the money market caused this stock to move in some degree independent of any change in orders; but the variation is slight, and merely caused the stock to advance a little ahead of orders, since the orders rose very sharply at the end of 1904.

Throughout 1905, 1906 and 1907 the correspondence between the movements

of orders and stock is really surprisingly close. In 1908, we have a repetition of the conditions of 1904. A very easy money market, following the panic of 1907, caused the stock to rise sharply in advance of any increase in unfilled orders.

In 1909 and 1910, there is a general correspondence in the movement of the two lines on the diagram, but in 1911, following the severe liquidation of 1910, the price again precedes the upward movement of orders, though in this instance but slightly, because the depression of 1910 was not severe. In 1912 again a close correspondence is shown.

We see, therefore, that the changes in unfilled orders do have a very direct connection with the movement of the price of the stock. But it is one thing to see this fact and quite another thing to take advantage of it in a practical way.

In 1904 and 1908 the investor might well have bought Steel—or almost any other stock—as soon as the panic was over and easier money conditions began to return. In 1911, he probably would not do this, because we had no real panic in 1910. If the investor had the courage and wisdom to buy in these panics, he

could then be guided in part by the unfilled orders as to how long he should hold his stocks.

But let us assume temporarily that the investor has no knowledge of panics or of the money market and is depending solely on the company's unfilled orders in shaping his course. Could he, by this extremely simple plan, get a profit in addition to his interest?

In each of the three periods of depression shown on the diagram we note the following facts:

(1) Unfilled orders, after a sharp decline, remain at a low level for about one year.

(2) During the latter part of this year the price of the stock begins to advance.

(3) After the year is over the unfilled orders also increase sharply.

(4) In both 1906 and 1909, the high price of the stock and the high record of orders came at practically the same time.

(5) The diagram gave no positive indication as to when the end of these advances was imminent, but a very sharp advance in either the price or the volume of orders would naturally have been accepted as a warning of over-extension.

If the investor based his operations on

unfilled orders alone, he would naturally buy United States Steel stocks in 1904, after unfilled orders had remained at a low level for about six months, and the price had begun to show an advancing tendency. The price of the common stock was then about $20 a share.

In 1906 the rapid advance in orders and the sharp price movement, together with the excited speculation which then existed, would be likely to convince him that such a pace could not be maintained.

Moreover, in 1906, Steel common paid only 1½ per cent. dividends and sold at a high price of 50¼, while the preferred, paying 7 per cent., touched 113¼. These prices were evidently high for industrial stocks paying no greater dividends than those mentioned, which had sold within three years at 8⅜ and 49¾, respectively. Ordinary business prudence would counsel the investor that the period of growth for these stocks was near its culmination, and that the conservative course would be for him to dispose of them and look about for another opportunity.

Early in 1908, our investor, again applying the same principles, would buy Steel common at perhaps 40 or 45, and somewhere before the high price of 94⅞

in 1909, he must certainly have concluded that his stock was high enough for its dividends and prospects, especially as unfilled orders were following but sluggishly.

In 1911, he would perhaps have bought at about 60, and would have seen his stock decline to 50 on his hands; but it has since sold above 80 in spite of the government suit, proposed tariff reduction and the general scarcity of capital.

The principal point I desire to emphasize in this connection is the general method of study suggested. There are three steps in this method:

First, a careful consideration of the circumstances surrounding the business of whatever company you are studying.

Second, a systematic examination of the statistics which portray these circumstances most clearly.

Third, the working out of a common-sense way of taking advantage of the facts brought out by your study.

Such a method would never be fast enough to suit the speculator; but it will enable the conservative investor for profit to seize many favorable opportunities.

VII—Buying Stocks in Dull Times —Mining Stocks

WHERE complete statistics are not available in regard to the earnings of a stock from month to month, or even quarterly, it is more difficult for the investor for profit to see his way clearly. Yet if he is watchful for opportunities he will in many cases be able to form a sound opinion as to the early future of numerous companies.

The year 1908, for example, afforded many opportunities to buy industrial stocks at low prices. How could the investor select the best stocks for his purpose—that is, the stocks which were likely to have the best advances?

Turning to the "Bargain Indicator," which appears in every issue of THE MAGAZINE OF WALL STREET, we see that in 1908, a year of general depression, very few stocks earned more than in preceding years. In many cases the falling off was very sharp. United

States Steel common earned 15.7% in 1907 and only 4% in 1908; American Smelting & Refining, 12.8% in 1907 and 7% in 1908; National Enameling & Stamping, 6.7% in 1907, compared with a deficit of 2.1% in 1908, and so on with many others.

The exceptions to this rule of declining earnings are naturally worthy of particular attention. In some cases there may be special reasons for these exceptions; but as a general proposition we may say that any stock which could increase its earnings in a year when most other companies were showing sharp declines, would be likely to prove a good stock to own.

The first example in the current "Bargain Indicator" is American Malt Corporation preferred, which earned 10.6% in 1908, against a deficit of 4% in 1907 and earnings of 2.8% in 1906. Referring to any one of the standard investment manuals, we find that this company was incorporated in 1906 as a holding company to take over the stocks of the American Malting Company, which had been a non-dividend payer for years. The earning power of the corporation was not sufficiently

well established to warrant the investor in purchasing.

The International Harvester Company earned 7.8% in 1908, against 6.5 in 1907, and 5.1% in 1906. This was really a remarkably fine showing. We also find, on looking the company up, that it was setting aside yearly about one quarter of its income for various reserves—insurance, renewals, pensions, depreciation, contingent losses, etc. Dividends had not then begun.

We would be justified in assuming that here was an exceptionally good stock to buy. The annual reports were complete and satisfactory, and the gross business of the company was growing rapidly year by year. The large earnings must soon be distributed in dividends, or if not distributed they would pile up into a surplus which would result in much higher prices for the stock.

International Harvester Company sold as low as 52 in 1908 and 62 in 1909. In 1910 a 33⅓% stock dividend was declared, with a 4% cash dividend on the whole capital, thus increased. In April, 1911, the stock was put on a 5% basis. The high point

for the stock was 129⅜ in 1911, and 126⅞ in 1912.

The next stock on the list to show increased earnings in the depressed year of 1908 was United States Realty & Improvement—7.7%, against 6% in 1907 and 4.8% in 1906. The company was incorporated in 1904 and controls the George A. Fuller Construction Company, Plaza Hotel Operating Company, and various other New York realty enterprises. In 1908 it was a standard company and doing a growing business. Dividends of 4½% were begun in 1908, 4¼% was paid in 1909. and 5% from 1910 to date. The stock rose from 36¼ in 1908 to 86½ in 1912.

Here was another stock which had exceptionally good prospects, as shown by its annual earnings and general business outlook. All that the investor needed was our old standard prescription, common sense.

Corn Products, then a new company, earned 8.5% on its preferred stock in 1908, against 7.2% in 1907, but was not well enough established to be attractive. Also, this company's fiscal year ends February 28, so that 1908 earn-

ings were all made in 1907, with the exception of two months.

National Biscuit earned 8.1% in 1908, 7.6% in 1907, and 7.1% in 1906. The fiscal year ends January 31, so that 1908 earnings were mostly made in 1907, but the following year showed up almost equally well at 7.4%. Dividends were 4% in 1905, 5% in 1906, 5¾% in 1907, and 6% in 1908. The company was very ably managed and its business was growing steadily.

The investor had an opportunity to buy this stock at 68 in 1908, and even the highest price for that year was only 97. Dividends were further increased and the stock sold at 161 in 1912.

A similar increase in earnings under generally unfavorable conditions was shown by People's Gas Light & Coke —6.9% in 1906, 7.6% in 1907, 8.4% in 1908. This company has a perpetual charter of a very broad character and growth of the city of Chicago is behind its earnings. On the other hand, municipal regulation of the price of gas is an obstacle to increased profits. Dividends have been paid regularly since 1897. In 1908 the stock sold between 80 and 106½, and in 1912 between 103

and 122½, the dividend in the meantime having been raised from 6% to 7%.

American Telephone & Telegraph earned 10.1% in 1908, as compared with 9.0% in 1907, and 8.2% in 1906. The great strength of this company is too well known to require comment, and its earnings in 1908 were a splendid testimony to its independence of industrial reactions. The price in 1908 swung between 101 and 132⅝, and in 1911 the stock sold at 153. The dividend has been 8% throughout.

Utah Copper earned 23.3% in 1908, against 5.9% in 1907, when it was just starting operations. The investor would not have cared to buy this stock unless he knew something about the value of the mines and prospect for earnings. At that time the average investor did not know much about these points.

We have since come to understand that a porphyry copper is a manufacturing proposition, and that ore supplies may be very definitely estimated, without the uncertainties that exist in other mining enterprises. It is unnecessary to say that if the investor had

sufficient information in 1908, so that he could feel confidence in Utah's future, he would have made splendid profits by purchasing its stock. It sold at 20 in 1908 and at 67 in 1912.

American Car & Foundry earned 23.8% in 1908, against 20.1% in 1907 and 4.5% in 1906. It is characteristic of equipment companies that their periods of big earnings are always six months to a year behind those of most other companies. This is noticeable likewise in American Locomotive's earnings. Moreover, the Car & Foundry fiscal year ends April 30. Hence these big 1908 earnings were really chargeable to 1907 business.

Earnings on Car & Foundry dropped off very sharply in 1909 and have not yet fully recovered. Nevertheless this stock sold at 25½ in 1908, rose to 76½ in 1909, and ranged from 49⅜ to 63¾ in 1912. In 1908 it was paying 3%, now 2%.

The investor would not have bought this stock unless he had acted without a full understanding of the conditions; but if he had bought it he could easily have secured a satisfactory profit within a year. The wide fluctuations in the

earnings of equipment companies are well understood by investors, so that the price of the stock was not affected as much as would be the case with a railroad, for example.

It is to be borne well in mind that it is *increasing earnings in a year of depression* that gives the warrant for buying the stocks of a company on this plan. In a year of increasing business, enlarged earnings would not have any such significance. That is the time when all stocks should be showing better results.

The investor for profit is looking for bargains. Hence he must buy at relatively low prices. When the big earnings appear in a period of booming business, it is much more likely to be time to sell out than time to buy.

The average investor will not wish to do much in mining stocks, because, from the very nature of the business, it is rarely possible to estimate with any accuracy future profits from the mines. Mining—aside from some of the porphyry copper enterprises—is not a business; it is a form of exploitation. A mining company simply takes metal out of the ground and distributes

in form of dividends to the owners of the mine. When the ore gives out, the dividends give out also.

Hence an investor in a mining stock must always be, in a sense, an investor for profits, as his company does not earn dividends in the same way that a railroad or an industrial corporation earns them.

The time to buy a mining stock is when it is an assured prospect, and the time to sell is when the dividends are at their height. An experienced mining man lays down the following rules for the buyer of mining stocks:

(1) A mine must be well located in an ore-bearing district.

(2) The investor must know that the management of the mine is both capable and honest.

(3) Buy when the company is in the prospect stage, before it begins the payment of dividends.

(4) When you can double your money, sell out, even though large dividends are then being paid. You may get only a fraction of the possible advance, but you will have a big profit and you will have your capital in hand and be ready for something new.

VIII—When to Buy and When to Sell, as Shown by the New York Bank Statement

IN investing for profit, the element of time is the most important—even more important than selecting the securities of a growing company. What is the right time to buy and the right time to sell? This is the main question which must always be present in the mind of the investor.

Within the last five years a great deal of attention has been devoted to "Fundamental Statistics," so-called, in the effort to arrive at the time to buy and the time to sell by an analysis of the statistical situation from week to week or month to month. We have now available from various sources a great variety of statistics covering the money market, banking conditions, crops, prices and production in numerous lines of industry, etc.

The students of these fundamentals

are undoubtedly doing a most valuable work, and are laying the foundation for a far more intelligent analysis of financial and industrial conditions in the future than has ever been possible in the past; but it cannot be said that they have as yet had any striking success in forecasting the trend of the stock market. Half a dozen or more of them are now making public the results of their studies, and it unfortunately happens that they are very rarely found to agree. As they are all pursuing similar methods, this tends to cast a doubt on the accuracy of their results.

A year or more ago I studied and charted for a period of ten or fifteen years all the so-called "fundamental" statistics.

Most of these studies were thrown into the waste basket because, however interesting and suggestive the statistics might be to the business man, they shed no light on the future of the stock market. Such figures as combined railroad earnings, iron production, merchandise imports and exports, etc., and even to some extent bank clearings, move in lines following

the stock market or contemporaneous with it. They do not, so far as I can discover, shed important light on the future of the market, except in a very indirect and inconclusive way.

This is not said in depreciation of the value of such statistics. They are most important in their bearing on the business situation and should be watched by every business man who aspires to be well informed. But they do not predict the stock market.

This should occasion no surprise. It is a generally accepted fact that the market discounts future events, that the prices of stocks anticipate all great changes in the activity of business, and afford a better index to coming developments than can be obtained in any other way. Yet the same student who admits all these things is very likely to be heard referring to declining railway earnings, for example, as a bearish influence on the stock market. Future railway earnings will, of course, seriously affect the market, and if you have any way of finding out what they will be, good for you—go ahead; but past railway earnings are like past prices—interesting, but no longer af-

fording opportunities for profit in the market.

I found, however, one great factor which precedes stock prices, and that is the accumulation or dissipation of idle capital. It is the machinery of the stock market, which, directly or indirectly, supplies great business enterprises with the money to buy locomotives or structural steel or lumber or what not, and with money to pay out as wages in the enlargement of their plants or the building of new ones. The money thus put into circulation is the life-blood of the body politic. It gradually spreads through every artery of traffic, stimulating activity and growth. Hence why should we seek in industry the key to the stock market? It is capital that gives the initial impulse.

But the first resting place of this money as it accumulates, before ever it reaches the stock market, is in the banks. And when such capital ceases to accumulate or even begins to shrivel away, it is the banks that pay it out. Hence we may expect in banking conditions some anticipatory reflection of the movements of the stock market.

It is therefore very desirable for the investor to study banking conditions carefully and to keep his knowledge of the banking situation as closely up to date as possible. In order to bring out clearly the methods by which this may be done, it is well to review briefly the fundamental principles of banking.

A bank is a dealer in credits. It exists primarily for the purpose of accepting deposits. For these it sometimes pays a small rate of interest, or it may pay for them indirectly by the safety and convenience afforded the depositor. To insure the repayment of these deposits when called for, the bank is required to keep on hand a certain per cent. of its deposits in cash. It is then free to loan out these deposits on satisfactory security. There are, then, three elements in the situation: deposits, cash reserves, and loans.

The cash reserve must not be less than a certain fixed proportion to deposits, and this fact also places a rough limit on loans; for each loan increases the general supply of credit and this credit soon turns up somewhere else in the form of a deposit. Thus the growth of loans is ordinarily accom-

panied by a growth of deposits, and the growth of deposits is limited by cash reserves.

But this relation between deposits and loans is a very elastic one. The bank may loan not only its deposits but also, if it desires, a part of its capital, surplus, undivided profits, and its issue of currency. Hence in a time of great activity, loans will forge ahead of deposits, and when the contraction comes, loans will fall faster than deposits.

Phrases commonly met in the newspapers are "the over-extension of loans," "an over-extended banking position," etc. These phrases are misleading. The safety of a bank is indicated by the proportion of its cash reserve to its deposits. Can it pay on demand? That is the important question. Of course a loan on insufficient collateral or to a person whose credit was poor would endanger the bank just as any other mismanagement would. But the mere expansion of well-secured loans does not endanger the bank. On the contrary, it is good and profitable banking.

The danger from "over-extension of

loans" arises from the opposite side—that of the borrower. When loans increase much more than deposits, it shows that the business men of the country are increasing their current liabilities as compared with their quick assets. Such a condition is unhealthy and cannot proceed very far without resulting in embarrassments and failures.

We need, then, to study the relation between deposits on the one side, and cash reserves and loans on the other. By a systematic examination of these factors we discover not only the condition of the banks themselves, but also, to a very large extent, the condition of the depositors in these banks.

This point is worth bringing out still more clearly, as it does not seem to be generally appreciated. The relation of the banks to their customers may be called reciprocal. If the banks have relatively large deposits, that means that business men have turned over to the banks large sums of money for which they have at the moment no other use—their surplus, we might put it. On the other hand, if the loans of the banks are more extended than

usual, this means that business men need the money—that their current operations are requiring more money than they have at immediate command. These additional supplies of money (of course I am using the term money here in the ordinary commercial sense, meaning liquid capital) may be needed because of a rapid increase in the volume of business transacted, or because business is being done at less than customary profit, so that business men are getting "hard up."

The banks cannot increase their deposits or loans at will. Their function is receptive. Their deposits and loans reflect the prosperity or adversity of their customers. A study of the banking situation gives an index not only to the relative strength or weakness of the banks themselves, but also to the soundness or unsoundness of general business conditions.

Thus the feature of banking which interests us most is the expansion and contraction of credit. Since modern business is done so largely on credit, we find in credit something of a guide to business conditions, therefore to the probable profits or losses of the cor-

porations doing the business, and thence to the value of their stocks as recorded on the Stock Exchange.

To estimate the effect of the expansion and contraction of credit on stock prices, we must first arrive at some approximate measure of credit. Of course it is not possible to measure credit exactly, as it may be extended by all kinds of banks and trust companies, by private bankers, or by individuals.

The broadest indication we have of the condition of credit is found in the statements of all the national banks in the United States as reported to the Comptroller of Currency at Washington, whenever he calls for them, usually five times a year. State banks and trust companies operate under the same general conditions as the national banks, so that an extension of credits by one class of institutions all over the country is practically certain to be accompanied by a similar increase among the others. Likewise private bankers and private individuals, although not subject to the same restrictions in regard to cash reserves as the banks, find it impossible to enlarge their credits

to any important extent when the banks are contracting, and have no inducement to contract when the banks are expanding.

The condition of all national banks, therefore, now numbering about 7,400 and having aggregate resources of nearly $11,000,000,000, is a pretty reliable index of the state of credit.

A difficulty arises here, since these reports are compiled only five times a year, and at somewhat irregular intervals, and the complete statement is never available sooner than thirty days after the date for which reports are made up. In fact, a delay of six weeks sometimes occurs before this information reaches the public. Therefore, in keeping track of the Comptroller's reports for all national banks, we are always four to six weeks behind actual conditions, and at times we are likely to be three or four months behind.

As the stock market is generally credited with being somewhat ahead of current conditions, in the effort to discount the future, it is plain that bank returns several months old will not answer our purpose.

But the statement of the New York

banks and trust companies included in the clearinghouse is available every week, and the actual condition of Friday is given out at noon Saturday. The cash reserves of the New York Clearinghouse institutions in September, 1912, were over $564,000,000, while the cash held by all national banks in the United States was $895,000,000. For the same month the total bank clearings of New York City were $7,430,000,000, compared with $5,730,000,000 for all the rest of the United States.

Roughly speaking, we may say that nearly half the banking business of the country is done by the New York clearinghouse banks, and this certainly should be a large enough proportion to shed important light on the credit situation.

Moreover, the New York banks are far more intimately connected with the stock market than those of other cities. Practically all sales of stocks and bonds on the Exchange are primarily paid for by checks on New York banks, and nearly all loans on New York stocks as collateral are made by New York banks. This is, of course, the principal reason for the prominence of

the clearinghouse banks in the financial situation; and it also establishes a close connection between those banks and the stock market.

As every one knows, two bank statements are given out every Saturday—the "average" and the "actual." In the "average" statement each item is the sum of the daily totals of that item for the six business days, Saturday to Friday, divided by six; that is, the statement shows the average condition of the banks for the six days. The "actual" statement gives the exact figures at the close of business on Friday. This has been made public only since January, 1908.

Still more recently the principal trust companies have also been admitted to the clearinghouse, so that the bank statement now commonly published in the newspapers includes both banks and trust companies. These combined figures have not been given out long enough to permit of satisfactory comparisons with previous years; hence for that purpose we are obliged to confine ourselves to the New York clearinghouse banks, excluding the trust companies. The statement for the

banks alone is published every week in the Saturday edition of the New York *Evening Post,* the Sunday *Times* and other papers.

We have seen that the one great factor observable in current statistics which precedes the movements of the stock market, is the accumulation and the melting away of liquid capital which is lying temporarily idle in the banks. The accumulation of such capital is indicated by rising deposits and stationary or falling loans, and its dissipation is shown by rising loans or falling deposits.

For example, take the conditions following the panic of 1907. General business was suddenly checked by the great difficulty, and, indeed, for a time, the impossibility of getting credit. As much less business was being done, less capital was required to handle it, so that early in 1908 idle capital began to pile up in the banks, in the form of both cash and deposits. Loans, on the other hand, showed a tendency to decrease, as it was not necessary for business men to borrow much money to handle the small amount of business then doing.

The banks all over the country found idle money accumulating in their hands, and as soon as they became satisfied that panic conditions were over, they began forwarding this idle capital to their banking connections in New York City, where they could get a small interest on it and could recall it whenever needed at home. This forced the money rates at New York down to a low level, so that speculative investors could borrow money very cheaply with which to carry stocks.

Now it is to be borne in mind that the prices of stocks are made by those who wish to buy or sell. The thousands of investors who hold their stocks for income only and never enter the market, have absolutely no influence on prices —so long as they do not buy or sell. Hence this liquid capital which is continually flowing back and forth from general business into Wall Street and out again, has an influence on prices entirely disproportionate to its actual amount.

When this capital is available, it is pretty sure to be used before long in bulling the stock market. When this capital is withdrawn, high money

rates result and prices must soon come down. Big speculators may attempt to fight against high interest rates for a time, but if they persist they eventually come to grief; for general business can pay a higher *time* (not call) rate for money than the speculator can. In other words, prices are advanced on the Stock Exchange with the surplus capital which is left over from general business requirements, and general business will always take the money away from the stock market as soon as it is needed for other purposes.

Absolutely the first place where idle liquid capital makes its appearance is in the banks, and when this capital becomes busy again it disappears from the banks.

In the next chapter we will take up the practical application of the principles above explained.

IX—The New York Bank Statement (Concluded)

WE are now in a position to understand why the relation between deposits and loans of New York banks afford such a valuable index to the movements of the stock market.

The first step, in order to study the interdependence between the bank statement and the stock market, is to spread out the statistics for a series of years in such a way that they can be readily examined and analyzed. This is done by plotting a diagram showing the excess of deposits over loans (or deficit under loans, as the case may be) and the contemporaneous movements of the stock market.

How far back shall this diagram be carried? Very little would be gained by studying the bank statements during the disturbed epoch of the Civil War, the reconstruction period and the resumption of specie payments. The con-

ditions of that time were so different from the present that we could not expect to draw any useful deductions.

During the 80's and 90's banking conditions were, in general, similar to those of today, yet there are some important differences. For example, during the last ten years the per cent. of loans to deposits of all national banks in the United States has varied between 101 and 111; but between 1890 and 1896 this per cent. swung from 115 to 130. The lowest point of the 90's was higher than the highest point of the last ten years.

It is desirable to understand the reason for the great decrease in the proportion of loans to deposits shown by this comparison.

First, we must remember that the loanable funds of a bank include not only its deposits, but also its other available resources. Roughly speaking, the bank may loan out not only the money deposited with it by business men, but also its capital, surplus, undivided profits, and its issue of currency, or circulation, as it is commonly called.

Bearing this point in mind, we find that although the per cent. of loans to deposits was very much higher in the

80's and the 90's than it has been since 1900, the per cent. of loans to *all loanable funds* was pretty much the same.

This simply means that the banks are now doing a much larger proportion of their business on other people's money than was the case previous to 1897. In the six years of tremendous prosperity from 1897 to 1902, the people piled their money into the banks so fast that deposits leaped from $1,640,000,000 on December 17, 1896, to $3,112,000,000 on April 30, 1902. This tremendous inrush of new deposits took place without any corresponding increase in the rest of the bank's loanable funds.

The question may be raised whether this plan of banking on the other fellow's money does not leave the banks in a vulnerable position. A bank's deposits are subject to withdrawal on demand, while its capital and surplus are not. If three-quarters of the bank's loans are based on deposits, is the bank in as strong a position as when only half its loans are based on deposits?

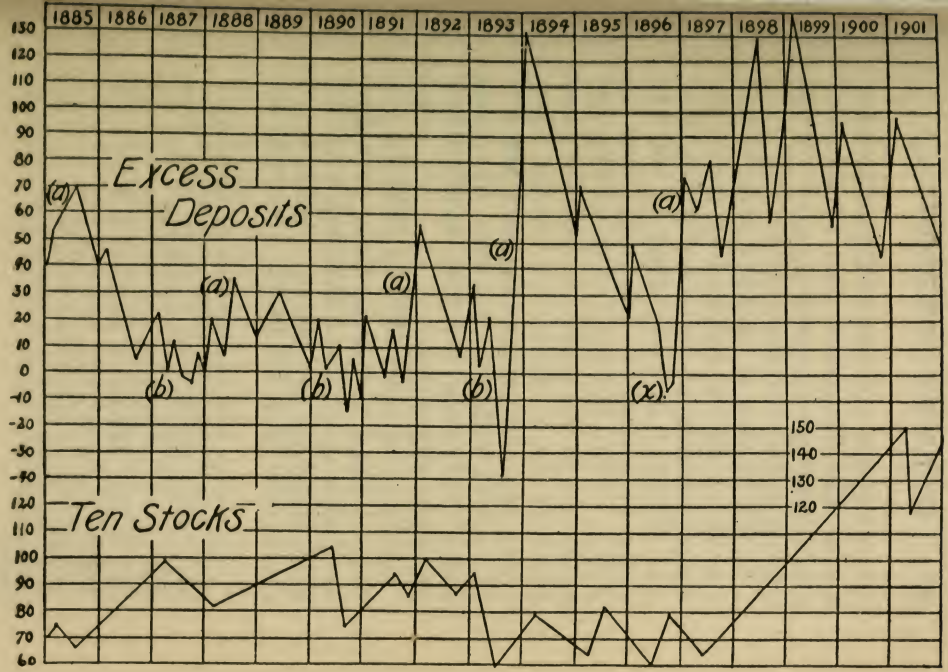
The answer to this question is: "Yes, provided the bank's loans are of such a character as to be called in within a reasonable time." The strength of the bank

does not hinge upon the amount of its loans or the extent to which those loans are based on other people's deposits, but upon the character of the loans and upon the cash reserves which are kept on hand to back up the deposits.

The per cent. of cash reserves is fixed by law and there has been no change in this respect during recent years, so far as national banks are concerned. The question of the character of a bank's loans depends on the management, but in view of the close supervision exercised by the United States Government over the national banks it is rare that any trouble arises from this source.

For the reasons explained above, I confine my study of these factors to the last quarter-century, and I place much less weight upon the statistics of the 80's and the 90's than upon those from 1900 to date.

The first diagram begins with the low prices of 1885, after the small business depression of 1884, and continues to 1901. The zero line represents equality of loans and deposits for the New York clearing house banks. The scale above the zero line represents excess of deposits over loans in millions of dollars, and


1885
1886
1887
1888
1889
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1891
1892
1893
1894
1895
1896
1897
1898
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1900
1901
130
120
110
100
90
80
70
60
50
40
30
20
10
0
-10
-20
-30
-40
120
110
100
90
80
70
60
Excess
Deposits
(a)
(b)
(a)
(b)
(a)
(b)
(a)
(b)
(x)
(a)
150
140
130
120
Ten Stocks

below the line a deficit of deposits under loans. On the lower part of the diagram is shown the average price of ten leading stocks for the same period.*

It will be seen at once that a rapid piling up of excess deposits, as shown at the points marked (a) on the diagram, was followed in every case by an advance of greater or less proportions in stocks. Also, the loss of excess deposits, shown at the points marked (b), was followed by a decline in stocks. We might say that excess deposits are the fuel which builds up the blaze of speculation, and when the fuel is exhausted the blaze dies down.

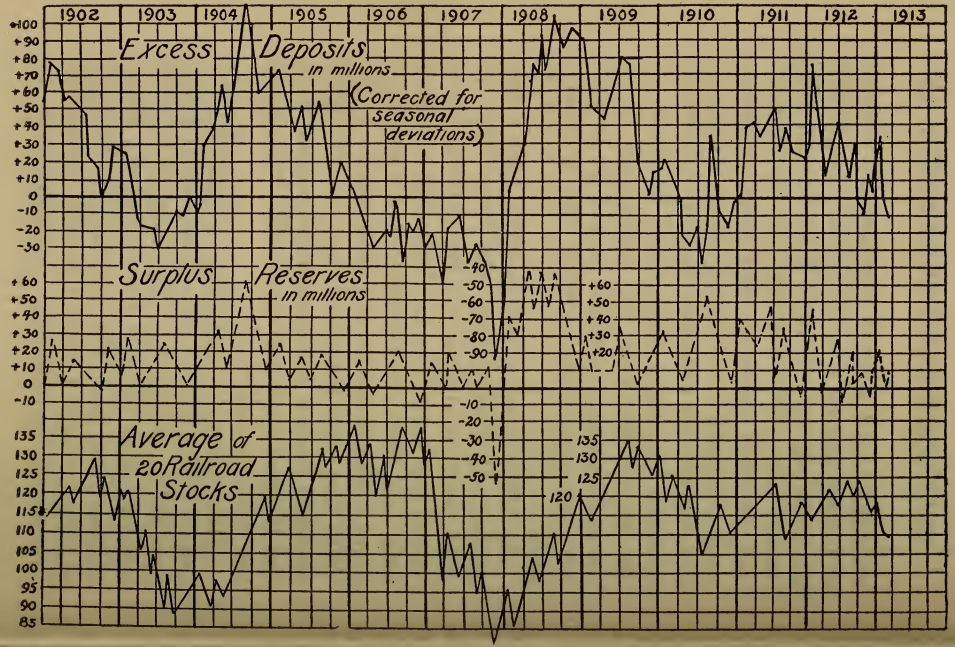
During the years 1893 to 1896 the action of this law was partially deranged by doubts as to the maintenance of the gold standard for money. Gold is, of course, the basis of credit. A rapid ac-

*The diagram was prepared from the figures given in Professor Norton's "Statistical Studies in the New York Money Market," and in Henry Hall's "How Money is Made in Security Investments." The diagram is not plotted from week to week, but fairly represents the general course of the figures. The term "surplus deposits" is sometimes used for excess deposits, by analogy from surplus cash reserves, but is misleading because there is no fixed or necessary relations between deposits and loans, hence there can be no true surplus. It also increases the danger of confusion between surplus reserves and surplus deposits.

cumulation of excess deposits as shown at the points (a) is always accompanied by a piling up of cash reserves in the banks. In 1894 we had an accumulation of cash reserves and bank deposits such as would ordinarily have resulted in a big rise in the market, but the actual advance in prices was small because of the possibility that the value of these big gold reserves might be cut in two if our currency was forced on a silver basis.

In 1896 these fears became still more acute and resulted in the hoarding of gold, so that deposits were pulled down below the zero line at the point marked (x), and the stock market lost the moderate advance which it had made in 1895. With the gold standard once established, deposits began to accumulate again and the biggest bull market in the history of the country followed.

The second diagram, covering the years 1902 to 1912, has been much more carefully compiled. The line of excess deposits was plotted from week to week throughout, and the average of twenty leading railroad stocks below shows all important fluctuations. Surplus cash re-


1902
1903
1904
1905
1906
1907
1908
1909
1910
1911
1912
1913
Excess Deposits
in millions
(Corrected for seasonal deviations)
Surplus Reserves
in millions
Average of 20 Railroad Stocks
+100
+90
+80
+70
+60
+50
+40
+30
+20
+10
0
-10
-20
-30
+60
+50
+40
+30
+20
+10
0
-10
135
130
125
120
115
110
105
100
95
90
85
-90
-50
-60
-70
-80
-90
-10
-20
-30
-40
-50
+60
+50
+40
+30
+20
135
130
125
120

serves are shown in addition to excess deposits.

The surplus reserves do not afford as good an index to the situation as the excess deposits, because they cannot remain for any length of time below the zero line. The banks are required by law to maintain the amount of surplus reserves represented by the zero line on the diagram. Reserves rise with excess deposits, and in a general way also fall with them until the zero line is reached, but from that point they cease to be a reliable guide.

The deposit-loan line on this diagram has been corrected to eliminate merely seasonal deviations. Every autumn the New York banks are called to furnish large sums of money for "crop-moving," as it is called; that is, to pay the farmer for his crops as they come to market. There is also a small outflow of money in March, in preparation for spring planting. During the rest of the year this money is gradually coming back to New York.

A change in excess deposits due merely to the season of the year is of no value as indicating the broad movements of the stock market; hence it is desirable,

though perhaps not absolutely necessary, to allow for these deviations.

The method of doing it was simple. First a monthly average for the entire period of 132 months was obtained, then the average for each one of the 12 months separately. A comparison of the two showed the per cent. to be added or subtracted in each month in order to get rid of the seasonal changes. I am aware that expert mathematicians would find fault with this method in certain minor particulars, but it is near enough for our purpose.

The following approximate changes were found to be necessary in order to get the non-seasonal line:

DEPOSITS.

January, add	3.9%
February, subtract	0.8%
March, add	0.2%
April	No change
May, subtract	1.0%
June, subtract	1.9%
July, subtract	2.6%
August, subtract	3.8%
September, subtract	1.7%
October, add	0.8%
November, add	2.5%
December, add	5.2%

LOANS.

January, add	3.8%
February, add	0.2%
March, add	0.4%
April, add	0.2%
May, subtract	0.1%
June, subtract	0.6%
July, subtract	1.5%
August, subtract	2.3%
September, subtract	1.7%
October, subtract	0.5%
November, add	0.4%
December, add	2.0%

This diagram will repay a careful examination. For four years preceding 1902 a liberal margin of excess deposits had been continuously maintained. The figure of $80,000,000 touched in January, 1902, was, however, somewhat lower than the high points of all the four preceding years. The highest had been nearly $140,000,000 in 1899. This showed some falling off in the quantity of idle money available for use in the stock market, but there was still enough for the purpose.

From January to September, 1902, excess deposits fell steadily, reaching the zero point in the latter month. During

this period the stock market gradually advanced. The high point was 129.36 for the average of 20 rails, which compared with a previous high point of 117.86 reached May 1, 1901. When the excess deposits finally shriveled to the zero point, in September, 1902, call money jumped to 25 per cent. and a sharp break in the stock market resulted.

This gave the bull market a shock from which it was not able to recover. A small excess of deposits was restored in January, 1903, but was soon lost again, and it was not until January, 1904, that a normal excess was restored. During this time the trend of the stock market continued downward to a low point of 90 at the end of August, and practically the same low figure was touched again in March, 1904.

Excess deposits were now piling up again rapidly and the market soon felt the effect. Prices advanced almost continuously for a year, and after some reactions again forged upward to 138.36 in January, 1906. By this time excess deposits were again down to zero and in the closing week of 1905 call loans touched 125 per cent.

A severe decline followed, which was

accentuated by the enormous destruction of capital in the San Francisco earthquake and fire. In the latter half of 1906 almost this entire decline was recovered. Some recovery from such an emphatic break was natural, but there is no doubt that prices were forced higher than otherwise would have been the case by the bullish efforts of a small group of multi-millionaires. This was the time chosen by Mr. Harriman for raising the Union Pacific dividend to 10 per cent., and every device was apparently exhausted to force prices to the highest possible notch.

All this fight was made against the money market, as would be expected when we see that there was a constant deficit of deposits under loans throughout the year. Call money touched 13 per cent. in August, 40 per cent. in September, 9 per cent. in October, 27 per cent. in November and 36 per cent. in December.

The effort of these gentlemen to prove their supremacy over economic law could not be called successful. How much they succeeded in lightening their load of securities will never be known, and indeed it is sometimes claimed that

they found themselves more heavily committed after their campaign was over than they had been before. At any rate they were large and continuous sellers in 1907, and at least one of them suffered reverses of fortune at this time from which he was never able to recover.

Prices declined all the more rapidly as the result of having been artificially sustained. Even the "Silent Panic" of March, 1907, was not enough to clear the atmosphere, and the disastrous crash of October was the final outcome.

With the restoration of surplus reserves and excess deposits early in 1908, another bull market began which lasted, with the usual reactions, throughout 1909. In November of that year excess deposits were once more used up, and promptly with the new year a prolonged bear market started.

In August, 1910, the excess of deposits was restored, as a result of heavy liquidation in the stock market and imports of gold from abroad. From that time, upward progress was slow and irregular and made in the face of many difficulties, both political and economic, at home and abroad, but in October, 1912, a new high point was established for stock prices

since 1910. At almost the same time the excess deposits, which had been wavering uncertainly for two years, finally disappeared and a drop in prices followed.

The question is likely to be asked, "Why not simply depend on call money rates as an index instead of going to all this trouble?" The answer is that the call money rate is itself, to a larger extent than excess deposits, a function of the stock market, which we are attempting to forecast. In 1901, for example, call money touched 10 per cent. or higher in five months out of the twelve, yet this resulted in nothing more than a big reaction in the market and the general bull movement continued to much higher prices in 1902.

The high call money rate was due to excited speculation and not to any real weakness in financial conditions.

In 1909, on the other hand, the highest rate for call money was 7 per cent., and during most of the year the money market was very easy. In fact the highest prices of that year were made in a 3 per cent. call money market. Speculation was only moderately extended; but fundamental financial conditions were

unsatisfactory and a bear market ensued.

The rate for commercial paper affords a better gauge of conditions and is well worth studying, but it is not as closely representative of the stock market situation as the excess deposits of the New York banks.

Of course it is understood that the relation of deposits and loans is far from being the only important factor influencing the market. Sometimes it may be comparatively unimportant, for the time being, as in the fall of 1906, or in 1894-5, both of which cases have been mentioned above; or in August, 1911, when a combination of a foreign war scare and anti-trust suits begun by the United States Government caused a big reaction in prices.

But the fund of excess deposits available for stock market purposes is the best index to the broad movements of the market. A weakness here renders the market easily vulnerable to other bearish considerations and unresponsive to bullish developments; while strength here enables prices to resist attack and to move upward easily when favorable news announcements are made.

I don't know of any one simple point

in connection with the stock and money markets that is so well worth careful watching as this. It will not satisfy day-to-day speculators. In fact it is doubtful if anything would ever satisfy that class of traders. But the investor for profit will find that this index to banking conditions gives him a sound, common-sense grasp of the fundamental facts in the financial situation.

In a word, then, the time to buy is when excess deposits begin to pile up rapidly, and the time to sell is when these excess deposits are exhausted. The purchaser may perhaps have to wait some time for an advance, as in 1893 to 1896, but if he has bought only sound dividend-paying securities he can stand the delay with considerable fortitude, as he will be receiving a satisfactory interest on his money all the time.

X How to Interpret the Action of the Market

HOW much attention, if any, should the investor for profit pay to the stock market from day to day or from week to week? Has he anything to gain from watching current fluctuations and volumes, or studying the general behavior of the market?

We may answer at once that he should pay relatively little attention to these things. Earnings and values, growth of population and of business, dividends and money rates, political conditions and the accumulation of capital in the banks, are of far more importance and significance to the investor than any indications he can draw from the temporary and often erratic fluctuations of prices.

Yet this question of the action of the market should not be entirely ignored. It is a well-known fact that some professional speculators are able, by carefully watching the technical indications derived from a study of volumes and

prices, to make more money during the year than they lose.

This is very far from being the ideal of the investor for profit. He wishes to keep himself always in a safe position and his first concern is a satisfactory interest return on his money. But the above fact does show that the action of the market is a subject worthy of some slight attention in connection with, but strictly subordinate to, other more important matters.

What are the elements with which the student has to work, in endeavoring to interpret the action of the market? This is a point on which even those who are constantly in touch with the technical situation are apt to have only a hazy and indefinite notion.

Reduced to its lowest terms, the action of the market includes only three basic factors:

(1) Price.
(2) Time.
(3) Volume; that is, the number of shares bought and sold at a certain price or during a certain time.

Each of these three factors may be recorded or used in different ways, and the

three, or any two of them, may be combined according to different plans.

Without going into the numerous ways in which these factors are recorded and studied by speculators, a few practical observations may be offered which will be of use to the investor.

First, no important conclusions can be obtained from any one of the three factors, taken alone. It is the varying relations between two or three of them that serve to give the market a sort of character of its own.

Second, the element of time must always be included. Thousands of students have wasted a great deal of more or less valuable brain-power in trying to draw conclusions from a combination of prices and volumes, without reckoning in the lapse of time. In my opinion, it can't be done.

Third, a study of time and volume without prices would be meaningless, as the investor cannot buy or sell except at some price.

These principles simplify matters somewhat. There are, in fact, only two combinations left: (1) Price and Time; and (2) Price, Time and Volume.

In many markets volumes are not re-

corded. They are not obtainable in any of the English markets, either for stocks or for commodities, so far as I am aware. They have never been recorded on the Chicago Board of Trade. They were formerly sent out on the cotton tickers, but the practice was discontinued some years ago, as the market got so big that it was very difficult to keep track of them.

Even in the New York Stock Market there is a good deal of inaccuracy about the recording of volumes, and the totals as figured up by the ticker companies and newspapers can be accepted as approximate only; but the errors (aside from occasional clerical or typographical mistakes) are not great enough to interfere seriously with any conclusions to be drawn.

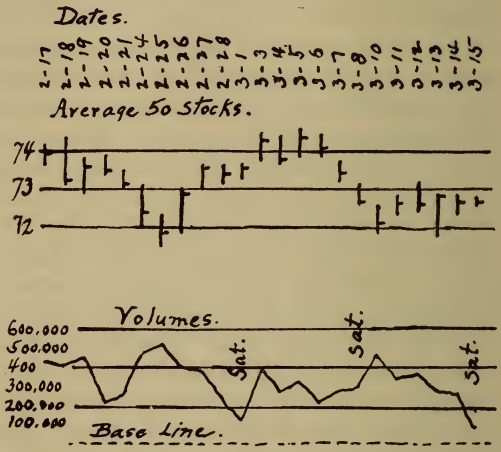
Almost all investors glance over the stock list in their morning papers to observe the general movement of the market, and notice the total of transactions for the day; but if they depend only on their memories for past prices and past volumes, and for the time that has elapsed since those prices and volumes were recorded, they fail to get any adequate idea of the action of the market.

It is desirable, and, in fact, almost necessary, to keep some brief record from day to day, or at least from week to week.

The most practical way to do this is to make a simple "graphic" of the average of the prices of a considerable number of prominent stocks, usually twenty or more. The investor records each day the average of the high prices of all the stocks selected, the average of the low prices, and the average of the closing prices. Several daily papers compute and publish such averages daily, to save work for their readers. One of the best is found in the New York *Times,* which averages twenty-five railway stocks, also twenty-five industrials, and then combines the two into an average of fifty stocks.

The best way to keep this record is to use paper ruled into small squares, placing the scale of prices at the left and the dates day by day at the top. Then a short line is drawn under each date, extending from the point on the scale representing the average high price to the point for the average low, with a tick on the right side of the line showing the average closing price.

The following small illustration will make the meaning clear:



Since only two factors can be recorded on a graphic by a single line, it is necessary to add another line along the bottom of the chart to represent the volumes. For this purpose it is best to use the total sales for all stocks, whether included in the averages or not, as what you want is a general picture of the whole market, as nearly as it can be obtained. A scale of one hundred thousand shares to the space, at the lower lefthand corner of

your chart, enables you to carry a continuous line across the paper showing the variations in the total transactions from day to day.

Individual stocks can, of course, be handled in the same way if desired, but the investor will not usually care to bother with these, as he will select his stocks on the basis of earning power, interest return, etc. What he wants to get from his graphic is a general view of the entire market.

When he has this graphic, what can he get from it?

He is chiefly interested in the highest prices and the lowest prices over a period of a year or two, as he has no intention of trying to catch intermediate speculative fluctuations. Are there any distinguishing features of the market at these grand turning points?

Common sense tells us that the lowest prices are likely to be made when the most people are trying to sell, and the highest prices when the greatest number are anxious to buy. We shall expect, then, that the volume of sales will be relatively large at the top and the bottom, and this conclusion is borne out by history.

A heavy trade in stocks is pretty sure to be accompanied by relatively wide fluctuations in prices—the whole market gets bigger, in every way. So we find that at these turning points the range of prices for the day, as shown by the length of our lines on the graphic connecting the average high with the average low, will be relatively wide.

After a period of heavy selling pressure, buyers are not likely to rush in the moment the selling ceases. They fear a renewal of the liquidation, and will only begin to buy gradually, as the market becomes quieter and more settled. Consequently a period of activity—that is, big volumes and wide daily ranges—at low prices, is usually followed by a time of dullness without any very great change in the general level.

The same principle, of course, applies after great activity at high prices; but the period of activity may be longer and the period of dullness shorter than at the bottom, because speculation is naturally broader at high prices and the public participation in the market more general.

The mistake must not be made of supposing that the action of the market alone

will indicate the top and the bottom. It will not. Conditions will determine those points, and the investor will often be misled if he tries to depend solely on the principles mentioned above.

To illustrate, the market may decline sharply to a low level, with big volumes and wide ranges, and then turn dull. But this does not tell us whether prices will not later fall to a still lower level, with still heavier volumes and still wider fluctuations. Something of this kind happened in 1907. After the "Silent Panic" of March, the observer might have imagined that bottom had been struck, but the conditions which caused the decline had not been cured. (We may note especially that there was still a large deficit of deposits under loans in the New York banks.) A still greater smash, in October, 1907, was necessary to lay the foundation of a new bull market.

These periods of extreme prices and big markets come only occasionally. In the mean time, can the investor draw any conclusions as to the "trend" of prices? He must be very cautious in endeavoring to do so. This is a difficult art, and few have the time or the special talent to master it.

Probably the best indication of the trend of the market that is easily available to everybody, is found in the comparison of the total volume of trade on days when the market moves sharply upward, with the volume on declines. In a bull market, buyers come in on the advances. In a bear market, they refuse to do so. In a bear market, holders are urgent to sell on declining prices. In a bull market, they hold on stubbornly.

The result is that, in a bull market, the volume of trade is likely to increase on the advances, while in a bear market it will probably become heavier on declines. But this principle can only be interpreted and applied to the market by long study and careful observation. The novice finds many stumbling blocks.

One of them is that he is almost sure to lay too great weight on small movements, caused only by professional operations. Professional traders make prices temporarily, but they have very little influence on the general trend of prices over a considerable period. They are merely trying to follow this trend, not to make it. The attitude of investors creates the trend, and no useful indications as to its direction can be gained from

fluctuations caused only by professional speculators.

Another point is this: Increased public buying, causing a larger volume at higher prices, is a characteristic of a bull market; but if this is followed by decreased volumes on a reaction, nothing is shown except the cessation of buying —there is no guaranty that it will be renewed, though perhaps there is usually some probability that it may be. And a similar principle applies, of course, to a bear market.

One other observed fact in regard to broad market movements may be mentioned, as possibly of some service under certain conditions. After a prolonged period of dullness the investor may often be in doubt as to the next probable move. The market may be in a state of balance, and merely waiting a new impulse, which may be in either direction.

In such cases, the first sharp move on increased transactions is likely to be continued for some distance. The reason of this is that speculators, tired of inaction, will follow the new lead until they see some signs of its becoming exhausted.

This little point is sometimes useful to the investor. For example, he might

consider prices relatively high and might be hesitating whether to take his profits or wait for a further advance. Under such circumstances, if a stationary market suddenly turned weak on larger volume of trade, he would perhaps accept this as a warning that the time had come to turn his stocks into money.

The investor will be positively injured by any study of the action of the market if he allows himself to be diverted from his original purpose and led astray into the byways of speculation. Active trading in stocks is a vocation, and a very exacting one; but investing for profit may safely be followed as an avocation, with only a moderate amount of attention.

Trying to mix active trading with investing is as bad as mixing drinks.

XI—What to Do With Idle Money

THERE will of course be times when the investor for profit cannot see any attractive opportunity for the use of his money in stocks or bonds. He may feel that the general financial situation is so doubtful that even the best of securities may be pulled down with the others; or he may be able to find plenty of good, growing companies, in which he would gladly invest at lower figures, but the market may be at such a high level that he is unwilling to pay current prices.

In such cases he will find his money temporarily idle and the question at once arises, What is to be done with it pending the development of a suitable opportunity for re-investment?

It is easy to exaggerate the importance of this question. Even supposing his money lay in a bank without any interest for a year, the loss of interest could hardly be figured at more than 5 per cent., and if as a result of this delay the

investor was able to buy some standard stock ten points lower than he could have bought it at the time his money was first released, his profit from the transaction might reasonably be considered as twice the amount of the interest lost.

We have, however, laid down the proposition that the investor for profit should consider safety and rate of interest first, and then should make whatever additional profit he can as opportunity arises. If he places profit first he becomes practically a speculator and much that has been included in these chapters would not accurately meet his requirements.

The first point that naturally occurs to us is that 2 or 3 per cent., and in some localities 4 per cent., can be obtained by placing idle money in a trust company, rather than in a national bank. In New York it is difficult to get more than 2 or 2½ per cent. on checking accounts from the strongest trust companies, but in many outside cities 3 per cent. is easily obtainable, and in the newer sections of the country 4 per cent. and in some cases even more.

Good private banking houses in New York City pay 3 per cent. on checking accounts, but the investor will not care

to place his funds with them unless he has a pretty good knowledge of the men in charge. Some private bankers are as sound as any trust company and may be even more conservative in the handling of their funds, but the difficulty for the ordinary investor comes in separating the sheep from the goats. For such a trifle as ½ or 1 per cent. yearly he cannot take any chances whatever.

No one can afford to place his money with the trust company or the private banker offering an exceptionally high rate of interest. The high rate would not be offered unless there were some reason for it, and that reason usually is that the concern has difficulty in getting money at the current rates paid by other houses similarly situated. In other words, they are not fully trusted by those having large capital at command; and if that is the case they certainly should not be trusted by those whose capital is smaller.

The instance comes to mind of a large New York trust company which advertised a few years ago for checking accounts, offering a slightly greater rate of interest than would usually be paid on such accounts. A year or two

later the company was in the hands of a receiver.

Still more recently a national building and loan company advertised rather widely offering about half of 1 per cent. more interest than paid by others. It had been doing this for five years or so; but the time came when the State banking department refused to permit it to continue longer in business owing to the insufficient security behind its borrowings. To any one understanding the business of a building and loan association, this additional one-half per cent., in the circumstances under which it was offered, was like a red flag.

If the investor has any considerable sum—say $10,000 or more—of idle money, about the only way he can get better than trust company interest on it is to put it into commercial paper, short term notes, or bonds that mature at an early date.

The objection to this is that he never knows just when a big decline in the market may come which would put prices on a plane where he would want to buy stocks or bonds. It might happen that just at the moment when he wanted his money to invest, it would be tied up in

short term notes, and when the notes matured the opportunity might have passed.

In any ordinary market, however, he could use his notes as collateral with his broker or trust company for the purchase of the stocks or bonds wanted. As he would buy outright, not on margin, he would simply be transferring his funds from the short term securities into others. At even 60 per cent. of their value, the notes would give him a credit of 60 per cent. on the stocks he wants to buy. This would, of course, be ample under any ordinary cricumstances.

Once or twice within the last twenty-five years there have been intervals of a few days when it would have been difficult to get brokers to accept any collateral whatever, no matter how gilt-edged, because it was practically impossible for them to borrow money on any terms. As a rule, however, the investor would prefer, in these exceptional cases, to wait until the extreme pinch of panic was over before buying, even if he had to pay a few dollars more per share for his stocks.

He can't expect to buy at the bottom. The attempt to do so would be likely to

result in his buying too soon and having to stand a further decline. And even if he were to make up his mind beforehand to jump in and buy at the very worst moment of the panic—or what he thought to be the worst moment—the chances would be 100 to 1 that when the time came he wouldn't have the courage to do it.

The fact is that when the investor appears at his broker's office with a perfectly good $10,000 short-term note in his hand and says, "I want you to take this and buy me $10,000 worth of sound investment stocks," the broker is going to leave no stone unturned to finance the deal. It may be questioned whether most brokers wouldn't have managed it somehow, even in the darkest days of 1907.

In the selection of short-term notes, commercial paper, or long-term bonds having an early maturity there is a wide range of choice, and consultation with your banker or brokerage house is desirable. The rate of interest obtainable will generally be from 4½ to 6 per cent., though there were times in 1906 and 1907 when 7 per cent. could be had.

Quite recently the holding company

idea has been applied to commercial paper. Companies have been formed to buy two-name paper of many different firms and to issue on this paper as a basis, their own collateral lien notes at perhaps one-half per cent. less interest, having practically any date of maturity desired by the purchaser. This distributes the risk in such a way as to make the notes exceptionally good—assuming, of course, that the central company is honestly and competently managed.

In this matter the small investor has an advantage over the larger one, because the amount of money he will wish to withdraw when he is ready to buy will be relatively unimportant to the institution which parts with it. He will therefore have less trouble in getting it promptly under conditions of financial stringency. He can also advantageously make use of two classes of institutions which have been created for the special benefit of the man whose capital is limited—the savings bank and the building and loan association.

Even the investor with $10,000 or more can use the savings banks and building and loan associations by dis-

tributing his money about in half a dozen or a dozen different institutions, so that the amount to be drawn from each one when needed would not be so large as to require notice before withdrawal. Such a distribution of funds has the advantage of greater safety, as the loss from the failure of some one institution would be relatively small. It is considerable trouble, however, when the investor wants all his money, to collect it together from so many different sources.

The investor with a few hundred or a few thousand dollars can easily get 4 per cent. interest by placing his funds in two or three savings banks. The thing that may prevent him from doing so is the "sixty-day clause," which permits the bank to require sixty days' notice of withdrawals whenever its officers consider that necessary. Under ordinary conditions notice is not required on small sums; but the investor remembers that stocks and bonds sell lowest under extraordinary conditions, so that the sixty-day rule might be enforced just when he wanted his money.

In fact, this was the case in 1907. The savings banks were enforcing this rule, at least nominally, for a month or

more after the worst of the panic was over.

It should be borne in mind, however, that the rule applies chiefly to actual cash. The small depositor who wants his money in the form of a check, for the purpose of buying stocks outright and paying for them in full, can get it in practically every case by using a little persistence. If the cashier has not been given the authority to make any exceptions from the rule, some higher officer of the bank will usually do so if consulted.

The savings banks apply the rule for the protection of their depositors, not to cause them inconvenience. The bank's officers would be likely to frown upon margin purchases, but the real investor, who explains frankly what he wishes to do and wants a check to do it with, nearly always gets it. The buyer of stocks in a panic is performing an important public service, and the intelligent bank official will look at it in that light.

Brokers, also, will do everything possible to help the small investor in such cases. If the bank depositor cannot get his money from the bank, the broker

will perhaps accept the bank book as a temporary deposit for the purchase of stocks or bonds in a panic. The broker, like the banker, would be likely to discriminate against the buyer on margin at such a time, but he welcomes the genuine investor who wishes to buy outright.

Those building and loan associations which are operated on the savings bank plan, as many of the larger ones now are, receiving deposits and permitting withdrawals as desired, are worthy of more attention in this connection than they generally receive. They pay from 4½ to 5 per cent. interest in the East and higher rates in other sections; and in 1907 no important association, so far as I can learn, was obliged to limit withdrawals.

This is because the depositors in these associations are not of a class to be easily frightened. Most of the deposits are made with a view to home-building, and depositors who would wish to withdraw, either from fear or for investment, in times of stringency, are so few in proportion to the whole number that their requirements are easily met.

Some discrimination must be exer-

cised in regard to such associations. The so-called "national" building and loan schemes—that is, those associations or companies which have charters permitting them to place loans anywhere in the United States—must be religiously avoided. It is impossible for the authorities of any State to oversee their operations, and the national government has never done so effectively. Even the officials of these national companies have often been inadequately informed about their own loans; and in some cases they have apparently tried to see how closely they could balance on the line of fraud without being prohibited the use of the mails.

Local building and loan associations, which can loan only within a restricted territory, have shown a good record for many years. In States where, as in New York, they are under the supervision of State officials, they are as a rule just as safe as the savings banks. Naturally, there can hardly be any better security for loans than newly-built homes.

Of course there is nothing to prevent the small investor from buying commercial paper, short-term notes, or early-maturing bonds, just the same as if he

had more money. Consultation with the odd lot houses will usually put him in touch with something issued in small denominations that will meet his requirements. Some of the companies which issue their own collateral lien notes based on varied holdings of high grade commercial paper, as mentioned above, make these notes in any multiple of $100.

The best general plan for the disposition of money temporarily idle is doubtless to distribute it in a number of the different ways mentioned above. One-third of your funds might be kept in a trust company or with a private banker at 2 or 3 per cent.; another third in savings banks or building and loan associations, and the last third in short-term notes or commercial paper.

Such a distribution would contribute to safety and conditions could hardly arise which would prevent you from getting hold of enough money and acceptable collateral to make your purchases at the right time.

It may be added that there is no logical reason why you should not invest on the short side of the market at times when you do not wish to buy. But this

carries us a little out of the field we have marked out—namely, getting a profit in addition to regular interest. There is no good ground for the popular prejudice against short selling, but the principles to be applied to it are somewhat different from those here discussed.

XII—The Three Sources of Profit in Buying Securities

IN the twelve chapters of which this is the concluding number, I have endeavored to develop the subject in as simple and straightforward a way as possible, avoiding unnecessary technicalities, and yet covering in a fairly systematic manner the most important principles of the science.

The reader has not failed to observe that my chief effort has been to bring this problem of investing for profit down from the clouds, in which it has been enveloped by statisticians, auditors, accountants and many financial writers, and to present it in such a way that the practical business man or investor may apply his natural common sense to the matter of buying and selling securities in much the same manner as he would apply it in the management of his own personal affairs.

In summing up the principles of the science of investing for profit, we see

that every opportunity for making a profit in this way must come under one of three different heads:

(1) A transition in the money market from a high money rate to a low one.

A continued high money rate naturally and necessarily means low prices for interest-bearing securities. When the conditions that have caused this abnormally high money rate pass away and money becomes plentiful, it again seeks employment in interest-bearing securities, until the increased demand for these securities gradually lifts their prices to a higher level. The investor can participate in this upward movement by buying bonds or high-grade dividend-paying stocks as soon as the money situation takes a turn for the better, after a period of high rates.

Three methods have been suggested by which such a purchase may be made intelligently:

(a) When a perfectly sound security is selling at a price which gives a much larger interest return on the money invested in it than has been usual in the past history of that security, and larger than is usual for other similar securities, owing to a general high rate for money,

the investor may buy it with confidence that it will sell at higher prices at some later date, when money conditions become easier.

Likewise, when such a security reaches a price so high that the interest return on that price is abnormally low, the investor will sell, assuming that he will later have an opportunity to repurchase at a lower price.

(b) By consulting a graphic showing the excess of New York bank deposits over loans, or deficit under loans as the case may be, the investor can easily observe when there is such a liberal accumulation of capital in the banks as to forecast an overflow of that capital into securities, thus producing an upward movement of prices. In the same way he may note the disappearance of excess deposits which precedes a period of scarcity of capital and falling prices, and take an early opportunity to dispose of his security holdings.

(c) By keeping a graphic showing the average high, low and closing prices of a well-selected list of stocks, together with the total volume of sales in the New York stock market, he will find the action of the market of some help in form-

ing his opinion as to the best time to invest or to close out his investments. As for example, the period of quiet succeeding a disastrous panic, or dullness after a big speculative boom. The conclusions drawn from this source, however, must be kept strictly supplementary to other considerations and not used as a main reliance.

(2) The second class of opportunities for investing for profit arise from the change from dull business to active business. This follows the transition from high money to low money, but after a considerable interval. The length of this interval cannot be determined in advance. With good crops and quiescent politics the interval may be short, and bad crops or disturbing political conditions may lengthen it out to several years.

All the three methods mentioned above will aid the investor in buying his securities during a period of dull business, which will work out into renewed activity. The low price is, of course, an essential element; and both the money market and the stock market give important help by preceding or "discounting" improved general business. I have also called attention to three other princi-

ples which will aid the investor in making up his mind:

(d) Per cent. of railroad operating expenses to gross earnings (Chapter V).

(e) Advance orders of industrial companies on the books (Chapter VI).

(f) Maintenance of relatively high earnings during dull times (Chapter VII).

(3) The third class of opportunities is found in the selection of the securities of a company which must grow, because of the favorable conditions by which it is surrounded. In this case all of the six methods mentioned above will be applied as tests, either to the general situation or to the particular security under consideration.

In additional, two other methods have been discussed:

(g) Examination of the general conditions surrounding the company.

(h) Study of the statistics covering the past history of the company and its securities.

Both these subjects were taken up in Chapters VI, VII and VIII.

The desire of the investor will be to combine all of the above methods, so far as possible, in deciding what and when

to buy or sell. He will naturally begin by keeping in mind methods (g) and (h); that is, noticing the general development and progress of leading companies and of different sections of the country, and keeping a brief statistical memorandum of results shown by annual reports, as previously explained.

In doing this, points (d), (e) and (f) will put in their appearance and be duly considered as a matter of course.

The investor will soon have in mind a number of securities that seem to him to be especially in line for growth, and will plan to buy them—*when the right time comes.*

In deciding on the right time, he will consider methods (a), (b) and (c). Method (a) requires no special preparation. As for methods (b) and (c), I have fully explained the exact process of constructing the necessary graphics and keeping them up to date, together with the principles on which they are based; but the actual work of compilation is being done by others, in case the investor prefers to take their figures instead of keeping his own.

A number of mistakes may be briefly mentioned, which should be avoided.

One of the most common is becoming wedded to some particular theory or idea, so that it assumes in your mind a much greater importance than it does in the minds of others. It is necessary to consider *all* the facts impartially and to maintain a well-balanced point of view.

Another similar error consists in being influenced by some personal prejudice, political or otherwise.

It is a mistake to push a mathematical or statistical deduction to its extreme conclusion. It is, in fact, quite noticeable that the man of mathematical taste and training is not, as a rule, as good a judge of investments as the one of a more practical business temperament. Mathematics lead us to an absolute conclusion provided our premises are assured; but in business or investment studies, the selection of the right premises is the most important consideration.

In general, any extreme conclusion is to be distrusted, for even if it is correct it will not be credited by the majority of investors and hence will not have its full effect on market prices.

The worst mistake of all, probably, for the simon-pure investor for profit, is to be gradually led into an effort to catch

relatively small fluctuations in the market. If you elect to be an investor stick to your chosen field, no matter what fine opportunities you may imagine yourself to be losing. If you want to speculate, learn how first, and keep your speculations strictly separate from your investments.

It may be asked, what profits can be expected from the application of the principles here explained? Results will differ widely with various persons, and at different times with the same person, but an average return of 20 to 25 per cent. a year, including both interest and profits, is not an unreasonable ambition.