The Art of Investment

THE ART OF INVESTMENT

By

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PREFACE

The solid fortunes have been amassed through investment and not made by speculation. They have been built up by men who have developed character and will-power, who have created depth and breadth of mind through concentration and experience, rather than by men of exceptional native brilliancy.

The serious practice of investment is a sturdy and businesslike pursuit. It is, in fact, at the root of every business. As an art, it depends on no mystery or occult secret. It consists of learning facts that are within the common reach and of applying principles capable of being assimilated.

The purpose of this book is to present an outline of principles; it is not a manual of facts. The discussion, moreover, is confined to the principles governing the investment of personal funds, excluding the canons of institutional and trustee investment, which is concerned with the funds of others. Yet even as thus limited, the subject is vast and the outline presented is not intended as an exhaustive treatment but merely as a foundation for orderly reasoning and inquiry.

Some men come to knowledge of the key to constructive or wealth-upbuilding investment in one way; some in another. There are men in every line of business who arrive at it early, and forge ahead of their fellows. The writer, in setting forth principles, professes no ready formula or open sesame save one—that work brings mastery. It is his aim to discuss the problem of the individual who invests in bonds and stocks, with such comment, description, and analysis as may help the investor in working to a solution.

Constructive investment is not speculation. Neither is it investing solely for income. Constructive investment is the middle course between these two extremes which is directed to the purposeful upbuilding of principal while maintaining the safeguards of income. In the faith that the individual may have results from his labor and intelligence, and in the conviction that the greatest safety comes from knowledge and application, the writer discusses this type of investment for those who are able and willing to invest work with their money.

MORRELL W. GAINES

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CHAPTER I

THE FOUNDATION OF INVESTMENT

Securities the Basis of Independence

One of the deeper aspirations, because it is the basis for carrying out almost all other aspirations, is to earn independence. To this purpose stocks and bonds provide the means.

Securities, taken straightforwardly, embody the essence of the struggle to be one's own master while living and, when dead, to leave one's family protected from want. At the present stage of material civilization they are, if not the last, at least the broadest door of opportunity open to the public, stirring virile minds to action, vivifying ambition, and breeding men. The saying of James J. Hill is true that a new force is borne into the world when a man has saved his first thousand dollars for investment.

Securities are too much neglected as a purposeful pursuit. They are regarded too lightly. Market activities are rather looked down on by the steady man of business, as tinged with a shade of the disrepute that attaches to the dissipation of energies in speculation. This is not altogether surprising, for there is much dabbling and inconsequential gambling in stocks, and little study and less of consecutive effort.

It is too well known that securities, and especially stocks, have been and still are abused by professional gamblers in a tainted struggle for dishonest wealth. There is, on the other hand, an insufficiently wide recognition of the fact that securities, taken soberly and seriously, are the head and center of self-created opportunity, to be followed as every other proper goal of ambition with all energy and resolution.

Investment an Art

Knowledge of how to invest in securities is not so easy to impart as knowledge of law, medicine, engineering, accountancy, or the principles of business management. Investment is an art that must be acquired individually, not a science whose principles have been formulated and standardized. To the general public, and even perhaps to most bankers and brokers, the art of investment is not so fully developed as other practical arts, where experience, precedent, and tradition have been classified, summarized, and brought within the range of practical learning. Success in investments depends upon the man—largely upon his development of two dissociated if not contrary traits of character, instant and forceful initiative, and deliberate and critical judgment. He must be hot in action, and cold in thought.

Investment is, besides, the most difficult art of business, because of the circumstances surrounding it. The field of operations is moving—in continuous change. The action is directed not to the known past but always to an unknown future. There are few of the ordinary and definite starting points and landmarks, such as pertain to professions and businesses of more limited scope. The investor must therefore grope; he cannot hope to know absolutely. He can hardly hope to escape a share of mistakes. It is his problem to resolve the course of coming events clearly enough to make useful decisions upon indistinct, uncertain, and shifting grounds. This is true even if he takes none but the most conservative investments; he must still be either looking forward or going blindly.

The difficulty is not diminished by the almost universal temptation, when some understanding of securities has been gained, to speculate and run great chances for great profits, instead of following the minimum risks and seeking the more conservative profits of investment.

Discipline and Training

There is no clear-charted course in the field of investments. Nevertheless there is a rational method of discipline and conduct to be followed that will serve. It is as with any other art. The mind must first be trained to think, reason, and react in terms of investment; then practice must bring, step by step, the mastery of detail and technique, until at length learning and reason are correlated into decisions that are made instinctively. The real difficulty after all lies not in the complexities of the subject but in the arduousness of the effort required to understand and master its language that speaks in terms of large affairs.

Other mental arts face similar problems. In one especially, that of war, the training of the mind to meet the exigencies of a vast, unknown, changeable, and hostile environment, seen darkly through inexact information, has been perfected to an extraordinary degree and on a grand scale. No two arts could be farther apart in object. But the methods and maxims of the one apply with great force to the other.

General Foch, in the "Principles of War," begins by answering incisively those who doubt that an art, especially one so difficult as that of war, can be taught or learned save from experience. To those who would still doubt and hesitate he says abruptly, "Of all mistakes, one only is disgraceful, inaction."

There follows, scattered through the description of battles and campaigns, an illuminating analysis both of problem and of method:

> The unknown is a constant factor in war. All armies have lived and marched in the unknown. The best commanded armies have lived and marched in the unknown, it was inevitable; but they have resisted that dangerous condition, they have come out victorious, by depending on protection which has enabled them to live without danger in an atmosphere full of peril.
>
> The elements of a war problem, to begin with, are only seldom certain, they are never definite. Everything is in a constant state of change.
>
> One standard alone, that of reason. We wish to reach the field with a trained power of judgment: it only needs to have us begin training it today. Let us for that purpose seek the reason of things; that will show us how to use them. Each one of us must build up his faiths, his beliefs, his knowledge, his muscles. Results will not spring from any sudden revelation of light, as by a stroke of lightning. We can only obtain them through a continual effort at understanding, at assimilation. Thus only do minds stretch in accordance with the study undertaken, principles are absorbed to the extent of becoming the basis of decisions taken. You will be asked to become the brains of an army: I say unto you today—Learn to think.

These same precepts apply to the investor; they might almost have been written of his field of action. His victories, too, lie within. Self-restrained before hidden dangers, always respecting that which cannot be known, he keeps guard and maintains defense. Enlarging his knowledge, watching the opportunity, he discovers, also, the points of vantage for the attack.

CHAPTER II

THE BUSINESS OF THE INDUSTRIALS

Sequence of Business Changes

It is within common experience that there are periods of activity and prosperity, and periods of inactivity and depression in business. It is general knowledge that the cost of living is higher in good and lower in bad times. Wages similarly expand and shrink. Incomes and, to some degree, salaries, follow the same universal trend.

These are basic elements of business, affecting the profits of industry even more sharply than the earnings of the individual.

The course of business is far from uniform. It passes through a sequence of changes which, while it cannot be forecast with precision, affords abundant room for study, observation, and understanding. The cycles of business, and the order and probable duration of the successive phases, have of late years been the subject of much research, concerned still with the learned and the abstract, but already making, in some quarters, a brilliant approach to the concrete and the practically helpful. The simpler acquisition of a practical knowledge of the state of industry and of its progress toward prosperity or depression, is not difficult to attain.

Values of Securities and Course of Business

In a broad way the prices and values of all securities are dependent upon the stage of the business cycle—upon the next stage even more than upon the one now actually present. The solid, slow-moving bonds swing with the current; the lighter, more volatile, and quick-acting stocks are in perpetual process of discounting in advance what is about to come. Values, no less than prices, surge up or down according to the prospects of change in business conditions. To understand, therefore, the basis of investing in securities it is essential to comprehend the fundamentals of the business that has created them, from whose earnings interest and dividends are paid, and by whose successive phases prices are profoundly affected.

Kinds of Business

The securities issued by corporations are classified, among other ways, by the kind of business they represent. It is a useful and elementary distinction. The principal kinds of corporations are those engaged in trade; in manufacture; in mines and oil wells; in specialties, such as banking, shipping, storage, moving pictures, ten-cent stores, and the like; and those operating railroads, tractions, electric light and power systems, gas plants, telephones and telegraphs, and other public utilities. To these may be added holding companies and companies of mixed activities.

Stocks and bonds take color and derive character as much from the kind of business pursued by the corporation that issues them as from the corporation itself. Each business is different. The risks of security-holders, their normal rate of return, and their hope of profit vary with the kind of business.

Classes of Corporations

Corporations may again be divided under two great classifications of business, those that sell commodities and those that sell services. The former are controlled by the laws of trade—directly and immediately by the law of supply and demand; the latter are quite generally restricted by statute and regulated by commissions, whose respect for the law of supply and demand has been remote. The price of the product, which may rise or fall freely, is the dominating factor in the prosperity and depression of companies selling commodities. The cost of the expenses is the more powerful factor with the service corporations, the railroads and public utilities, since the regulated rates for services are too inelastic and inadaptable. In this chapter the main types of commodity companies will be reviewed, with brief comment on the relation between their business and their securities. In the next two chapters the service companies will be considered.

The commodity enterprises are those engaged in trade, in manufacture, and in the extractive or mining industries. All these companies respond quickly to changes in general conditions. The securities they issue are the industrials, which rise tremendously in prosperity and sink in a disheartening manner on the approach of depression. As a group the best and strongest of them have much more continuity and solidity now than in earlier years. Within the group there are many differences, each subdivision having distinguishing characteristics of its own.

Trading or Commercial Companies

The trading, or commercial, companies probably give the most abrupt response to changes in business conditions. Their proportion of sales to capital is greatest, and therefore their turnover of capital is most rapid. Trading companies sell quickly what they buy, the rate earned on the capital depending not so much on large margins of profit as on the number of times a year the capital is turned. Their operating results reflect almost at once changes in general conditions that affect either the current volume of trade or the immediate margin of profit in prices.

These companies profit by rising prices. They are in the position of selling at a higher level than that at which they have bought. In so far as higher prices imply activity the companies also do a larger volume of trade. Thus the quantity of sales and the margin of profit per unit are both increased. The general prosperity strikes them with double effect.

Trading companies are adversely affected by declining prices. In spite of every care, prices received tend to be lower than prices paid. During depression sales decrease and the value of inventories shrinks. The turnover of capital is retarded both by small sales and by slower collections. There is more danger of loss then from inability of debtors to pay, and when there has been a severe price decline, from cancellations of orders for which purchases have already been made.

The business of merchandising is necessarily speculative in some degree, no matter how prudently it may be handled. It is perhaps of all lines of business the most dependent upon management, requiring not only skill in its own special technique, but also alertness in judging conditions and safe, conservative financing. It is true that trading companies, involved as they are in the shorter operations, may have the advantage of being able to turn and run before adverse conditions, and that shrewd, weather-wise management may minimize inventory risks and depression losses. But the broad fact remains that the condition of the business, and of the companies also, is subject to quick change.

Securities of Trading Companies

The foundation being changeable, the securities of trading corporations are almost necessarily somewhat speculative, partaking of the same changeable character. The exceptions are specially limited kinds of trading companies, such, for example, as chain stores and mail-order distributors, whose securities have a recognized and in some cases an assured place. But as a whole trade is best adapted to private capital, or semiprivate companies, under individual initiative. It is unsuited to the issue of bonds. It is difficult for the public investor to follow closely the immediate facts affecting the ordinary trading company, further than to make a guess from knowledge of general conditions.

The Claflin failure of 1914, which affected banks even more than individual stockholders, is perhaps the best illustration of the difficulty investors may find in maintaining contact with the values of the securities of trading concerns. In 1920 and 1921 many, if not most, trading companies incurred enormous losses; just previously they had been making immense profits. Sears-Roebuck, large and well regarded, fell into serious difficulties. In foreign trade Gaston, Williams and Wigmore fell, while American International, like many private concerns, took heavy losses in its trading departments. Trade as a whole had to be carried by the banks. Had traders been required to liquidate debts and pay off loans, a considerable proportion of them would have been found bankrupt.

The list of trading companies whose securities are in the hands of the public is relatively small when compared with the importance of trade. Those whose securities are outstanding comprise leading companies, such as Woolworth, S. S. Kresge, United Retail Stores, Montgomery Ward, and Sears-Roebuck. Some of these have clearly defined objects and publish prompt and full statements of earnings and condition, so that the investor may form a fairly intelligent idea of the progress of their business. But essentially commerce, as distinguished from industry and transportation, is in the hands of single proprietors, or partners, and not of stockholders, as indeed it should be from the nature of trade itself.

It is always to be remembered that whatever is permanent in trading companies lies in intangible assets—in trade-marks, organization, established trade, and good will. The capital is being turned over and over and is invested, not in fixed assets, but mainly in inventories and accounts receivable, both variable assets, which it is hardly possible to follow closely during periods of instability. An investment in trading company securities is to be made more with reference to improvement in trade conditions than as an expression of judgment on the permanent worth of the securities. As to the type of investment to be made in this case, the common stock has a chance at profits, while preferred, or any other security based on expectation of assured and steady future income, is insufficiently protected. To this general observation there are a number of exceptions, particularly among the large retail distributors, but with respect to trading companies as a class it is a rule of caution sufficiently well buttressed by the terrific, general, and sudden inventory and depression losses of the recent price declines.

Industrial or Manufacturing Companies

Manufacturing companies, which form the bulk of the industrials known to the securities markets, are also very responsive to changes in general conditions. Their capital is larger in proportion to sales than in the case of the ordinary trading companies, because it takes longer to make and sell goods than it does merely to sell them, and because also there is an investment in plant as well as in inventory and accounts. The turnover of capital is thus slower; on the other hand, the margin of profit per unit sold is normally higher.

The manufacturing companies are, it is true, engaged in trade as incidental to their business. They buy raw materials and labor, and sell finished product. Accordingly, they have a risk in inventory, which is somewhat accentuated by slower processes and the necessity of working up raw materials before these can be sold, and they may, therefore, experience all of the troubles of trade. On the whole, however, they are less speculative than purely trading companies, because they are paid for work done in making their product and also because they are steadied by the investment in plant. Their more besetting difficulties come from lack of management, or proper maintenance, or sufficient working capital, which factors pertain more to manufacturing than to trade. This class of risks, arising from standing conditions rather than from sudden changes, may be measurably guarded against by the investor who watches the published annual reports and statements of operations.

Business of Industrials

The industrials make large sales at high prices when times are good, and small sales at low margins above manufacturing costs when times are bad. Just as is true of trading companies, in a period of price decline the inventories may, of course, require to be worked off below cost; on the other hand, they may be sold at an enhanced profit on a constantly rising scale of prices. Special circumstances, such as tariff revisions and new competition, may affect manufactures, but as a very general rule profits follow the trend of business conditions. Steel is by no means the only industrial that is either "prince or pauper." While for most industrials the range of profits between prosperity and depression is thus very wide, there is nevertheless a fairly numerous class of industrials whose earnings are rather steadier.

Cost of manufacture is an important item with industrials. The rise in expenses during prosperity is usually compensated for, and more, by increase in selling price. But this is not universally true. It may sometimes happen that profits during the last year or two of a period of great activity are less than in previous years because of the rise in wages and other costs. The first marked slowing down of profits usually appears, in time of excessive prosperity, when railroad congestion and expensive strikes begin to impede the out-turn of product. At all times the difference in costs between competing companies, which make the same article, is a most important factor for consideration in estimating the safety and value of the securities.

When depression, with its sudden changes of prices, arrives, the extent of the immediate loss sustained by manufacturing companies depends on the size of their inventories and the conditions under which they must be worked off, and upon the outstanding contracts and accounts. Operations can be shut down within a short time and further losses can be minimized during the dull period that follows. Naturally this is usually a period of little or no profits. Possibly the most conspicuous instance of crippling loss suffered in 1920 was that of the Goodyear Tire, which was overstocked with rubber and cotton fiber contracts. The Steel Corporation, on the other hand, which was able to carry through to better times without sacrificing prices, realized comparatively little inventory loss. Depression is eventually followed by recovery, when, if the company is normal, part of the inventory loss is regained.

Securities of Industrial Companies

It is a little difficult to make easy generalizations concerning the industrial securities as a group. In respect to the distribution of their securities among the general public the manufacturing companies stand midway between the trading companies, still mainly owned by proprietors and those close to them, and the utilities and railroads, which are owned by shareholders from the public market place. Most of the large industrials are owned by the public, while most of the small industrials are owned by single individuals, by families, or by friendly interests. Very large industries have been built up by one man, or a group of men, such as Carnegie Steel, Standard Oil, and Ford Motor. But the time comes when the death of a leading proprietor, or the desire for cash, or the necessity for more capital, turns the securities of these companies into the market. The public is eventually let in, and it has now for twenty years owned the largest, best, and strongest manufacturing units, with only a few outstanding exceptions. The many smaller enterprises, which are very important in the aggregate, must naturally work with private or local capital.

As to the quality of the industrial securities, there are too many types and kinds of companies to permit of a sweeping characterization. The companies range from those always on the verge of trouble to those of splendid efficiency and solidity. The industrial combinations of the early years of this century were quite generally overcapitalized and inadequately financed. Many by wise management and withholding dividends have become strong.

A Few Industrial Companies by Way of Illustration

From the many varying types of industrial companies a few may be cited by way of illustration. United States Steel Corporation, now capitalized at $508,000,000 common, $360,000,000 preferred, and $572,000,000 bonds, has always been noted for the massive bulk of its physical properties. It has in recent years become notable also for the strength of its current assets. Three years after its organization in 1901 it was thought that this great aggregation of mills must fail for lack of adequate working capital. The early history of the Steel Corporation is in contrast to that of another large and well-managed industrial, the Standard Oil Company, whose initial progress was secured essentially by conspicuous strength in liquid assets. Among the lesser companies International Paper, organized more than twenty years ago with rather old plants, inadequate working capital, and large reserves of timber lands, worked its way along with considerable difficulty. Finally the war, creating a great demand for newsprint and limiting the supply, produced an abundance of cash. While part of this was lost in high-cost inventories of pulp wood, natural to the length of the processes of the business, the company, with its new bond issue, is in comparatively strong position, although not paying dividends.

American Woolen, also a company of long processes of manufacture, experienced a savage loss in the price decline of 1920, although apparently protected by contracts with buyers. Its business, however, returned to it quickly after the decline was over. It financed itself by stock, absorbed its losses, and is forging ahead with unimpaired power. American Sugar, long the synonym of steadiness among industrials, incurred large losses in the scramble for sugar just at the end of the high prices. It has put out bonds, and has passed its common dividends. The leather and fertilizer companies, and in general those industries requiring long processes or the seasonal accumulation of material in advance of manufacture, were among the hardest hit by the price slump of 1920 and 1921 and the ensuing paralysis of trade. The list of industrials is too long to pass all of them in review. At this moment they fall into three main categories: (1) industries stimulated by the war that kept their profits; (2) industries stimulated by the war that lost their profits; and (3) sober industries whose activities are increasing in the postwar epoch, such as equipment companies.

Higher Return on Industrials

As a rule the normal percentage of profit on the real capital of industrials is greater than with any other type of company. But this profit is also variable, according as times are good or bad. Because of this variability industrials must pay more for money than railroads and utilities. The yield, or income, from their securities is therefore higher. This general condition is somewhat accentuated by the fact that the newer industrial securities are not well seasoned, the methods of financing of the companies not always settled and conservative, and the memory of water, or inflation of nominal capital beyond the real capital, has not yet died out. Industrial securities have gained in public confidence but are not yet, and probably never will be, the equal of railroad securities for stability.

Securities issued by industrials derive their quality from the high return and the variability of the earnings upon which they are based. The largest profits are made in these securities when times are propitious, and the greatest losses when times are unfavorable. From the nature of the case the companies are, like the trading companies, well suited to the issue of common stock, with hope of profits offsetting risk of loss. The stronger among them have sufficient stability to issue sound preferred stocks, while the weaker, and especially those with the more intermittent earning power, put out unsatisfactory and disappointing preferred stocks. With the exception of the strongest and most stable companies, fortified by valuable plants, the business of manufacturing is not well suited to financing by bonds.

Common Stock

Investment is to be made as an expression of judgment on the permanent worth of the securities, but also, as a very general rule, with reference to probable improvement in trade conditions. This is particularly true of common stock, whose fortunes follow the development of the company, besides being subject to the general ups and downs of industry. Dividends and quotations rise in time of prosperity, fall off when business recedes, and follow also the growth of the business. The returns are great, under the right conditions, with almost any of the solvent and well-managed companies. The risk is also great, especially during good times, when this class of stocks sells far above its value.

Preferred Stock

Investment in industrial preferred stocks is to be made more strictly upon the permanent strength of the company. There is less chance of market appreciation with the preferred than with the common. Sometimes there is more danger, because the situation is less keenly watched, on the assumption that preferred dividends will continue to be paid. This assumption is not justified. Nothing is to be taken for granted without knowing the affairs of the company and understanding its position. Payment of preferred dividends is not compulsory, even when they are cumulative. The desideratum for investment is a preferred stock so strong that dividends will not be passed and income interrupted in time of severe depression. Some of the well-known industrial preferred stocks fail to meet the test in every period of strain. The best among them have withstood the crises of twenty years, and a few are considered to have almost as sound security as investment bonds.

Bonds

The investment in industrial bonds is also to be made upon the strength of the security. At certain stages of the business cycle there may be some expectation of appreciation of principal, but as a general rule the object of the investment is permanent income and safety. An earning power subject to fluctuations is not the best foundation upon which to lay fixed charges. Industrial bonds, except where secured by abundant fixed assets, rarely rank as prime bonds. There has been at times a tendency to overdo bond issues and make the creditor bear part of what is properly the owner's burden, especially in the case of consolidations. Bonds are a form of financing of which industrials should partake sparingly, both because of the nature of their business and because they should have no prior liens to interfere with such borrowing at the bank as may be necessary to carry the expanded activities of prosperity. Nevertheless, with the great increase in strength experienced by leading industrials in recent years, there are a very considerable number of sound and strong industrial bonds whose security is sufficient regardless of temporary variations in earnings. Under the federal reserve banking system, which moderates the acute strain of crises and makes cash available in emergencies, the number and safety of these sound issues should increase. They are, however, to be bought with discrimination. Their average yield is higher than that of railroad bonds, and considerably higher than that of municipal or government bonds.

Notes

Industrial notes must in each case be judged upon their merits. They may be protected by ample security, or their payment may depend upon the progress of the business. After a period of inflation they often represent the funding of heavy bank borrowing, and are to be repaid by liquidation of inventories and accounts, or more arduously, by application of future earnings. At other times they may represent borrowing to complete construction, or to carry out some other program of expansion. A note is a short-term investment that should be considered from the standpoint of safety and not of profit.

Industrial Crisis and Recovery

Industrials have just recently been through a period of great strain. The most important point to make sure of during a crisis is the cash position. If sufficiently strong in the cash box to ride through adversity, and absorb inventory losses and dead-season expenses, the company can be counted on to reach another period of prosperity intact and in position to do business with unimpaired power. If the company is strong to endure, its securities can be relied upon to rise from the basis of urgent liquidation and of disappointing earnings to that of confidence and bright prospects.

The acute strain upon industrials is a matter of current assets that have ceased to be current and of current liabilities that have become pressing. The process of relief by moving assets goes on gradually even in the worst of times. Indebtedness is reduced or funded. The final recovery comes when sales return, so that assets become fully current at advancing prices that recoup some part of the previous losses. Many industrials were scathed, some were weakened, but few were broken, in the world-wide trade and commodity crisis of 1920 and 1921.

Extractive Industries

The extractive industries are a type of industrials quite apart from the manufacturing enterprises. They produce, from the ground, raw materials which the manufacturing industries handle. Sometimes they are owned as adjuncts to manufactures. Their securities are of various degrees of merit. But of all securities this class appeals most to those investors who prefer imagination to knowledge. An easy surmise as to what may be hidden in the ground is, to many minds, a welcome escape from learning hard facts about manufacturing companies. Yet it is after all a mind small both in imagination and in intelligence that turns away from known facts to imagined facts for profits. Even in mines there can be, and is, intelligent investment.

The business of extractive industries is dependent in extreme degree upon general conditions, both for prices received and for the amount of product sold. Oil, coal, copper, lead, zinc, and silver follow the general trend. Only gold, which has a fixed price in terms of money, is adversely affected by prosperity, through the increase in cost of mining. It is characteristic of these industries that the supply of product, capable of indefinite expansion if given time and the stimulus of profitable prices, is nevertheless fixed at any moment by the effective capacity of the operating mines and wells. It can keep pace with demand, whether in expansion or in shrinkage, only within limits, after reaching which there is a scarcity or a glut of product. These companies feel prosperity and depression almost immediately, and at times they feel it most acutely.

Anthracite coal securities have been more dependable than bituminous, the trade served being steadier and better organized. The large, well-equipped bituminous mine, with good railroad facilities, is preferable to the smaller, more remote mine on an inferior seam. Low-cost copper mines that can make a profit at almost any price for the metal usually present better securities for investment than the high-cost mines. The latter are more speculative, rushing up violently in prosperity, when the metal is high, and descending precipitously when there is an oversupply of copper and the price is low.

All extractive company securities are dependent first of all upon the value and quantity of the coal, ores, or oil, as they may be ascertained, and upon the volume of the issues based upon that value. The dividends arise from the extraction of these assets, and cease when they have finally become exhausted.

A sharp line is to be drawn between the legitimate mining enterprises, represented by many corporations thoroughly known and understood, and the numerous exploitations of the imaginative and gullible, whose mines are pocketbooks worked by stock salesmen. Far too often the price of a new oil or mining stock depends upon ex parte statements, fraudulent or semifraudulent marketing methods, and the public fashion or momentary enthusiasm for this type of investment. Even among the more legitimate issues there are recurrent manias for mines, as in 1906, and recurrent oil furors, as the two since the war.

During such periods all manner of frauds are swept along with the general current and foisted upon the public.

Value of Securities and Earning Power

With all industrial, as with other corporate securities, values depend upon earning power and upon the volume of the issues resting thereon. The earning power depends on the volume of business for which the organization has capacity, the cost of doing the business, and the margin of profit in the price received. It is the probable future earnings that really constitute earning power and determine value. This has been strikingly illustrated during the past year by the rise in Pacific Oil on the strength of prospective new connections and development of acreage held in reserve. Almost all industrials compete. It is a fair test to compare the volume of business with the volume of securities, as between competing companies, and the profits per unit, and the aggregate profits. From such comparisons, the effect of the next great activity, or great depression, may be forejudged.

CHAPTER III

THE BUSINESS OF THE RAILROADS

Public Service Corporations

The service companies, while affected by the same prosperity and depression, stand on different ground from the commodity companies. They are the companies of great fixed assets, and of small inventories and current or working assets. They give no credit, or practically none, their business being done for cash. They are natural monopolies, by force of location; and because they serve the public, which must pay their rates, the rates are regulated by public authority. There is a vast public investment in railroads and utilities that rests in the final analysis upon public necessity.

Elements Affecting Railroad Finances

Beginning with 1907 there was a long and gradual rise in expenses that placed these companies, and particularly the railroads, in a condition of chronic debility. During the participation of the United States in the war, and after the war, the enormous rise in railroad expenses produced a crisis. This was met first by governmental operation and subvention, and later by radical increases in rates. The period of artificial support is not, at this writing, entirely ended. For that reason a long-distance view must be taken of railroad affairs—a view that goes beyond their present environment. At the same time it is necessary to look rather closely at their immediate position. Railroads are clearly in a stage of transition. It is not possible to speak conclusively of the outcome, but enough progress has been made to permit of definite comment.

Railroads have an immense investment in plant in proportion to business done. Using the Interstate Commerce Commission's figures for 1918, the funded debt and stock were $20,784,832,841, the operating revenues $4,880,202,255, and the interest and dividends paid $765,585,161. The gross earnings were less than one-quarter of the outstanding securities. The balance applied as return on those securities, after taking care of expenses and taxes, was less than 4 per cent of the aggregate volume of the securities. The turnover was slow and the margin of profit small. While 1918 is an illustration rather than a yardstick, the 5½ to 6 per cent upon the value of the property, expressed in the railroad law of 1920 as a measure of net earnings, represents the normal rate of return in good years, and on properties better than the average. It is a rate not reached from operations in the trying years from 1917 to 1922, and the return fell short of this rate more often than not in previous years.

A low rate of return is a consequence of railroad history and of the vitally important part played by railroad transportation in the development of the national resources. The truth of the matter is that investment in railroads has tended to tread close upon the heels of earning power, because of their prime credit and the favorable attitude of the public towards their securities. If money could earn the going rate in railroads, it went into them. The result is that the average railroad could earn in normal years no better than the going rate on the money that had been put into it; in many cases less—almost universally less in the recent years of over-regulation of rates and swollen expenses.

The Permanency and Prime Credit of Railroads

Yet railroad credit and securities have remained on the whole in prime standing. The reasons are that the business itself is permanent and steady, that the security issues rest upon permanent property, the fixed plant being large and the current assets small, and, perhaps most important, that railroad property is a permanent public necessity that must continue in use.

Railroad troubles may be severe, but they are essentially temporary. No substantial railroad has ever abandoned its tracks and given up its business. When financial difficulties have brought on receiverships, security-holders have had opportunity to recover part or all of their losses out of the ensuing reorganization and reconstruction. Provided it was a real railroad, with present traffic and future possibilities, and without too unreasonable a capitalization, they have usually fared well in the end. Railroads have accordingly offered the best corporate foundation for the issue of both bonds and stock.

Effect of Prosperity and Depression

The effect of prosperity and depression upon railroads is that the volume of traffic increases moderately when business is active, and decreases quite sharply for a few months, but on the whole moderately, when business slackens. The forepart of a period of prosperity increases the net earnings. During the later portion the net begins to be cut into by rising expenses. Upon depression setting in there are unavoidable delays in reducing expenses, and lean earnings result for some months until expenses can be fully got in hand. Net earnings continue to be on a somewhat reduced basis during the period of business and traffic depression.

Except for the fact that transportation is always a business of narrow margins of profit, the railroads are not so responsive to changes in general conditions as are the industrials. A 25 per cent fall in traffic during the first few months of depression is considered a severe decline. But this moderate falling off in volume of business produces a much greater inroad on net earnings. Because of their narrow margins of profit the railroads are also particularly sensitive to a rise in costs of operation, such as was but recently experienced. Conversely, the net earnings are fattened by a period of declining costs, or of increasing traffic.

There is always a delay in adjusting railroad expenses to meet changed conditions, arising mainly from the fact that more than half of the expenses are for upkeep and less than half for running trains. In the event of depression it naturally takes several months to rearrange tie, ballast, and rail programs entered upon for the entire season. It takes time also to cut down forces of operation, agree on new wage scales, reduce train schedules to fit altered traffic conditions, use up the high-cost coal of prosperity, and substitute the low-price contracts of adversity. For much the same reason the first traffic increases of returning prosperity invariably produce a marked improvement in net earnings. The railroads enter upon the increases with economies in force—on short rations as to operating, and often as to maintenance. Later, when traffic is assured, they may spend more liberally. There is much in the tendencies of railroad earnings that is determined by the delayed adjustment of expenses.

Effect of Regulation by Commissions

If the railroads were fully under private control this delay in adjusting expenses would probably mean little in the long run. One season would balance another. But under public control of rates it had, during the long rise in expenses, a most detrimental and even dangerous effect. The rate decisions of the Interstate Commerce Commissions and the state commissions were always much too late to cope with current emergencies, and never in fact caught up with railroad needs. These are deliberative and quasi-judicial bodies. They must hold hearings and accumulate great quantities of evidence regarding conditions already past. The decisions are reached still later. While expenses were going up during the upward trend from 1907 to 1918, the railroads suffered from tardy justice. At this moment (1922), with expenses down from the peak and traffic increasing, they are benefited by the immobility of the rate-making machinery. It is perhaps rather likely that downward changes in rates, such as the reduction of July, 1922, will be made with greater speed than the upward changes. Nevertheless there is a general condition of immobility in the regulation exercised by commissions that will continue to affect railroad prospects according to the direction of the expenses.

In 1906, almost contemporaneously with the progressive rise in expenses, the full vigor of rate control began. Prior to the war the railroads were being forced to narrower margins of income, and were plainly becoming impoverished by degrees. The war, with its sudden and overwhelming rise in expenses, would have ruined the railroads had it not been for the aid and subventions given by the federal government during the two years and eight months beginning January 1, 1918. After the termination of federal control, with traffic depressed and expenses inflated, the railroads reached, in 1921, their darkest and most critical hour.

Governmental Aid and the Wage Increases

The lavish aid extended by the government during and just after the war period was magnificent in its courage and breadth. For operating expenses alone the subvention amounted to some $1,800,000,000, or nearly 10 per cent of the cost of the railroad system since its inception ninety years ago. Some $800,000,000 in addition was advanced for betterments and capital expenditures, and later still further advances to keep weakened companies from insolvency. But at the same time the government also lent a ready ear to the war-time demands of labor. Between 1917 and 1920 it increased the annual wage bill more than $2,000,000,000, from $1,600,000,000 at the beginning to $3,800,000,000 at the end of the period. The National Railroad Labor Board remains as a legacy from the period of federal control, to maintain under private operation the governmental jurisdiction over the two most important factors of operation, wages and working conditions. Private management has been reduced to a fraction of its former power, the government controlling rates, or income, and wages, which constitute the bulk of expenses.

At the end of federal control in 1920 the government extended a six months' guaranty of earnings equal to the compensation provided under the control. Just prior to the expiration of this guaranty, in the month of August, 1920, increases of 25 to 40 per cent in freight rates and 20 per cent in passenger rates were made effective. These increases followed those made while the government was operating the railroads and placed the rate level from 50 to 75 per cent higher than it was before the war. In November, 1920, the sudden depression in traffic, due to the paralysis of trade, nullified the benefit of the rate increase. During the next nine months the railroads had alarmingly small net earnings. For the three months, January to March, 1921, the operating expenses and taxes were not covered. This was the most searching test of railroad endurance. Trade began slowly to revive in the fall, and this, with the crop movement, brought the turn of the tide in September and October. With the advent of 1922 more active business restored the earnings of the larger roads to something like normal—but not yet on a normal rate level. The roads had experienced distress, and many of them had borrowed in an unprecedented manner in order to preserve solvency.

Wages under Control of the Labor Board

The situation is at this writing still artificial, first as to wages, and, second, in consequence, as to rates. The Labor Board in June, 1921, announced a reduction of only $400,000,000 in the annual wages, preferring to force the public to continue to bear the burden of the bulk of the war-time increases. Later it adjusted working conditions, modifying the union rules that had been applied to railroads so that an additional reduction in expenses might be made. There is no doubt that railroad men had come to be underpaid, with the exception of the most skilled and strongly organized groups, in the years of railroad economizing that preceded the war. But the action of the board showed that it did not recognize the existence of a serious crisis, and that its line of resistance would be to meet situations with palliatives. Its lack of decisiveness in the shopmen's strikes and in the disputes over "seniority," after the minor wage reductions of July, 1922, shows again a leaning towards expediency in dealing with railroad employees rather than towards principle in dealing with the railroad problem as a whole. This is an influence that may and probably will change, but is for the time being to be reckoned with as a factor in railroad progress.

The Attitude of the Public Towards the Railroads

The railroads, for their part, met the wage and rate crisis of 1921 in a frank and manly fashion. The press and publicity agents who proclaimed that the $1,200,000,000 increase in rates of 1920 simmered down to a question of a few cents only in transporting a suit of clothes from New York to Los Angeles, were relegated to the rear. The ablest of the railroad leaders took the stand, told the truth, and were believed. Public sentiment had already turned in favor of the corporations, after long years of alienation. This had been shown in the passage of the railroad law of 1920, which proposes to base rates on a fair return upon the values of railroad properties, instead of, as previously, upon the complaints of shippers that the rates paid by them were unreasonable. The public recognizes more clearly that its own great interests are involved in the railroad problem, fears either political or labor control, and desires in consequence the efficiency and enterprise of private management. This is a factor of immense importance, to be taken into account in surveying the future.

The Passing of the Crisis

Since 1921 the railroads have made rapid progress to a position of greater strength. The tide of traffic, which brings net earnings up, has set in with remarkable power. Bonds and equipment trusts have been issued, with the revival of the securities market; much of the current indebtedness has been funded, and a beginning has been made toward bringing up the arrears of car replacements and rail renewals. While traffic is thus flowing, the aspect of the stronger railroads is changed, quite suddenly, to that of health and vigor. But there still remain certain legacies both from the federal control and from the great crisis. In the first place the railroads will not be on the most solid ground until high rates, and wages that make rates high, have been in due course of time reduced to normal. As yet the nettle of wages has not been grasped firmly and the deflation of rates has hardly more than commenced. In the second place the great pool of railroad equipment created by the Railroad Administration, that took cars away from their "home" line and from their owners' shops, resulted in enormous destruction and damage to equipment. It will cost the railroads many hundreds of millions of dollars to replace and repair these cars. While large orders for equipment have now been placed, there is a definite prospect of car shortage, impeding the full recovery of traffic. In the third place, a crisis involving so much strain as that of 1921, when railroads borrowed heavily at the bank, let their fuel and supply bills run, economized on maintenance, reduced forces, cut off trains, and withheld orders for equipment, ties, and rails, must needs leave some of the companies in a permanently weakened condition. Receiverships that were long averted by the most heroic expedients have materialized in some cases, notably the Alton and the Denver. They will undoubtedly fall upon others of the weaker and less favorably situated railroads before the atmosphere is cleared.

Railroad Securities

Eventually the great war unsettlement, like all other railroad disturbances, will be completely of the past. Railroad securities, which have already returned to favor as investments, should finally be established on a better and more solid basis than for many years past, because of the change in public sentiment. The political hostility to railroads has had its day and is dead. These are times of more constructive temper, during which the commissions and their regulation may be expected, more and more, to guard the foundations of business by protecting the means of transportation. The 5¾ per cent that has now been set by the Interstate Commerce Commission as the fair measure of return on the value of railroad properties is not a promise of net earnings to any railroad nor to all railroads, but it is a promise of just and moderate dealings.

Railroad securities stand high because of the carriers' perpetual and steady business. A stream of traffic once established is like a river that cannot be diverted and will not dry up. Railroad securities also stand high because the important facts concerning both maintenance and finance can always be known. The annual reports, published under the accounting rules of the Interstate Commerce Commission, give the fullest of information. There are, therefore, few sudden and unexpected changes in condition to be feared which cannot be known beforehand by investigation.

The Railroad Valuation

The valuation of the railroads, uncompleted after these many years and probably destined never to be conclusively finished, has nevertheless progressed far enough to answer the main question which is involved. The value to be found should support the existing capitalization of the average railroad, including both bonds and stocks. For many roads the value will be far in excess of the volume of securities outstanding; the exceptions may be the newer lines or those roads well known for the water included in their non-dividend-paying stocks. In the rate advance proceedings of 1920 the Interstate Commerce Commission based its findings on a tentative value of nearly $19,000,000,000 for the railroads of the entire country, a figure approximating the actual capitalization of something over $20,000,000,000. The valuation was originally intended as an engine of decimation of railroad securities, to eliminate water and abolish dividends on fictitious capital. For a time the confiscatory tendency had a threatening aspect, being dangerous because of the public temper. In the end the valuation, in so far as it may have any active influence at all, will serve as a barrier against uninformed and demagogic attacks on the existing securities.

Great Railroad Systems—New York Central, Pennsylvania, and Erie

The list of great railroads may be passed briefly in review. Each is an artery of trade for states and cities; and each has before it a future limited only by the development and prosperity of vast territories whose future is in turn dependent on the railroads' efficiency and ability to carry traffic. New York Central and Pennsylvania are the largest in tonnage and earnings. Of these two trunk lines the former has three-quarters of a billion dollars of debt and a quarter of a billion in stock; the latter has half a billion in debt and half a billion in stock. New York Central came through the war period without much impairment of earnings and, as always, recuperated quickly from the ensuing traffic depression. It has maintained its 5 per cent dividend.[1] Pennsylvania was injured by the war-time dislocation of coal traffic and the partial diversion of through freight. Being largely dependent

[1] Since increased to 7%.

upon coal, steel, and iron for freight, it was slower to recuperate from traffic depression. Its dividend was cut for the time being from 6 to 4 per cent. Earnings have, however, now returned and the 6 per cent dividend has been restored. In the long run this is a company of magnificent strength.

Erie has a half-billion securities outstanding, of which something over three hundred millions is debt. This is heavy in proportion to traffic, the gross revenues being one-third those of the Central and less than one-fourth those of Pennsylvania, and very heavy in proportion to net earnings. That is the reason Erie common has never paid dividends. By careful improvements, reduction of grades, and skilled use of equipment and power, the management has made Erie a strong railroad, but it has not yet made it a strong corporation. Baltimore and Ohio, with over half a billion of debt and two hundred millions of stock, was seriously disturbed by the reduction in traffic during the war. After the war was over, its first task was to set about recovering its business. In 1925, $125,000,000 of its bonds, all bearing 3½ per cent interest, come due. The property was put through an extensive improvement and reconstruction program in the ten years before the war. It is a powerful system in point of traffic, but as a corporation it is still in the making. Beginning with 1919 it has passed its common dividends.[2]

Atchison, Union Pacific, and Southern Pacific

Of the transcontinentals, Atchison and Union Pacific have wonderful records. Atchison, as built up by Ripley, is a striking example of the results of strong conservative management. He required his superintendents to count every tie in the track and examine every piece of timber twice a year, and to keep their budgets of needed

[2] Dividends recommended in December, 1923.

expenditures made up in detail for five years ahead. He held the dividend rate down to 6 per cent, and ploughed surplus earnings into the property. Thus the company was built up from the wreck of the nineties, when it passed through receivership, into the superb property of today. In finance also the management has been exceptionally sound, using convertible bonds, which holders have later exchanged for stock. The present capitalization consists of less than $300,000,000 of bonds, and $350,000,000 of stock.

Union Pacific is a striking example of brilliant and powerful management. Under the leadership of Harriman money was poured into the rebuilding of the property, after the reorganization of 1897. The Sherman Pass in Wyoming and the Lucin Cut-Off across Great Salt Lake (belonging to the Central Pacific) are great names in the annals of engineering. As a result of the reconstruction, Union Pacific has not only the shortest route but the lowest gradients across the Great Divide. Harriman also added to the power of the system by investments made on a gigantic scale in the securities of other railroads. The company has outstanding a little less than $400,000,000 of bonds and slightly over $300,000,000 of stock. With the exception of three years, when slightly lower rates were disbursed, it has paid 10 per cent on its common stock since 1906. This high rate has been due primarily to the fact that the road is naturally the best transcontinental route, being the shortest, most direct, and least costly to operate, and secondarily to the fact that it has been made an extremely efficient machine for transportation.

Southern Pacific, with about $464,000,000 bonds and $344,000,000 stock, is not only a transcontinental railroad, but one of extensive mileage on the Pacific slope.

It was built up by the energy of the Harriman régime, not without stirring episodes, such as the closing of the break in the Colorado River and the aid given the stricken city of San Francisco in 1906. The company, after distributing part of its oil property holdings, is still strong in possessions outside of the railroad proper. Its local tonnage has grown beyond expectation. It has paid 6 per cent dividends since 1907.

Great Northern, Northern Pacific, and St. Paul

The northerly tier of transcontinentals, Great Northern, Northern Pacific, and St. Paul, have on the whole not been doing so well in recent years. St. Paul put through its extension to Puget Sound in 1909, and the earning power to carry the capital outlay has not yet been fully built up. The other two roads have suffered, among other things, from the added competition of this line and from that of the Panama Canal. St. Paul passed both its common and preferred dividends beginning with 1917. During the current year 1922, Northern Pacific has cut its former traditional rate of 7 to 5 per cent, and Great Northern, after postponing its dividend action, has finally decided to keep up the 7 per cent rate.[3] These two companies have been drawing rather heavily upon Burlington, an extremely wealthy company, but not inexhaustible, which they own. The capitalization of St. Paul is something over $400,000,000 in bonds and $233,000,000 in stock; that of Northern Pacific is about $325,000,000 bonds and $248,000,000 stock. Great Northern has $300,000,000 of the bonds and $250,000,000 of the stock. Of the funded debt of each of these two railroads, $115,000,000 represents the control of Chicago, Burlington and Quincy, a company of low capitalization. Northern Pacific and Great Northern have a

[3] Later in 1922 reduced to 5%.

better and safer proportion of stock to net funded debt than St. Paul.

Other Systems

There are many other important railroad systems which are most conveniently studied by groups. The southwestern group, including Missouri, Kansas and Texas, St. Louis-San Francisco, Kansas City Southern, St. Louis and Southwestern, and Missouri Pacific, serve a growing territory. The north-and-south lines, such as Illinois Central, and Louisville and Nashville, and the lines of the Southern Railway west of the Alleghanies, are of importance. The traffic to the Gulf is participated in also by Atchison, Kansas City Southern, Missouri, Kansas and Texas, and the Iron Mountain lines of Missouri Pacific. The southern railways proper are the Atlantic Coast Line, the Seaboard, and the Southern. The soft coalers begin with the Clinchfield, the Virginian, the Norfolk and Western, and the Chesapeake and Ohio. Coming north they include also the Western Maryland, the Baltimore and Ohio, and the Pennsylvania. The Wheeling and Lake Erie, Wabash, and Chicago and Eastern Illinois are other examples of this very numerous type of railroad. In fact, most roads carry soft coal as a principal item of tonnage. The hard coalers are the Reading, Jersey Central, Lackawanna, Delaware and Hudson, Lehigh Valley, and to a less conspicuous degree, New York, Ontario and Western, Erie, and Pennsylvania. The New England group comprises the New York, New Haven and Hartford, the Boston and Maine, the Maine Central, and other smaller lines. This group was the one which was hardest hit by the postwar conditions, and the southern group was the next hardest.

There are also the greater groups, such as the transcontinentals, the trunk lines, and the grangers. Essentially the trunk line connects New York and Chicago, and the granger connects Chicago with the wheat and corn belts. But both titles spread over railroads that may be included under other groupings. The New York Central might be mentioned as typifying the trunk line and the Chicago and Northwestern, the Rock Island, and the Burlington as typifying the grangers. The Canadian Pacific is both a granger and a transcontinental. It is one of the most important railroads on the continent, doing a large business in the United States as well as in Canada.

Besides the important railroads and groups there are very numerous local or short lines, each serving some particular district or traffic. In competitive territory, such as that between the Ohio and the Lakes, such lines have usually fared poorly in recent years. Elsewhere an occasional line has done sufficiently well, being able to cover its expenses out of high rates.

The Basis of Railroad Investment

Railroad investment is usually made on the basis of permanent value. In the bonds men seek safety; in the stocks, except of companies whose position has become precarious and speculative, they seek the orderly working out of the railroad's problem, to develop itself and its section of the country. The great attraction of railroad investment is that it expresses so much of continuity and purpose, and so little of blind chance. There are of course chances. A railroad must be maintained or it will collapse. A railroad must have terminals or it cannot expand. A railroad must be well and closely operated, or it will lose money. But these are chances that may be watched and understood as part of the law of growth inherent in the investment.

It is not generally known that railroad traffic doubles every twelve years on the average. The cost of the railroads as represented by stocks and bonds used to double about once every fifteen years, until retarded by too zealous commissions. Railroad growth to transport a growing commerce is always a national necessity. To grow, funds must be raised. To raise funds, securities must be salable. This necessity is the great protection of railroad securities. The public itself is bound in the end to guard their value, guiding regulation and control toward fair moderation and away from confiscation.

CHAPTER IV

THE BUSINESS OF TRACTIONS AND OTHER UTILITIES

Financial Factors of Tractions

In many respects the traction companies face the same problems as railroads. They have large fixed investments and a slow turnover of capital, second only to the railroads. There are nearly 48,000 miles of track and an investment of about $6,000,000,000. Traffic on city lines is steady to an unusual degree, being hardly affected by the course of general business. Rates of fare within city limits have usually been fixed by franchise. Traction companies having been placed in an impossible position by increase of expenses, these rates were raised during and just after the war in over 600 cities and towns. The relief, however, was far from being proportionate to the great rise in expenses and many traction companies were accordingly brought into serious difficulties.

Tractions are of two general types, urban and interurban. As a rule the former afford the better basis for securities. City traffic is denser and operating conditions on the whole more favorable in spite of the crowded streets. The best property of all tractions is the through line in a large city, placed in a tunnel or on an elevated structure, or at least occupying a private right of way. But no class of traction has, during the period of high expenses, been wholly out from underneath the general cloud.

Franchises and Other Troubles

The chief difficulties with city tractions have been, first, the overcapitalizations that accompanied the original consolidations into urban systems, second, the undermaintenance characteristic of the earlier years of electric operation, and, finally, the political quarrels with local authorities over expiring franchises and over rates of fare. The industry is still new, and has had much to learn. Among other things, bitter experience has taught that a twenty-year franchise cannot be made a sound basis for securities. The final years of a term franchise are usually filled with demoralization and trouble. Franchise troubles of an acute character had been experienced in nearly all of the large cities, except New York, in the years prior to the war. In New York franchises were unlimited, or perpetual. But during the postwar inflation of expenses the 5-cent fare provided in those franchises became totally inadequate, and the city authorities, making the matter a political issue, were able to punish the companies as severely as though the franchises had expired.

The hereditary antipathy between municipalities and tractions is due largely to the corruption and promoter's profits of the original era of electrification and consolidation. The practice of paying high prices in watered stock for properties to be consolidated was almost universal, and that of buying franchises from aldermen was by no means unknown. As a rule the cities of moderate size have been more reasonable in their treatment of traction companies than those of large size. But localities differ. In many of the cities the quarrels have been settled and the franchise troubles are a thing of the past.

Interurbans have also had troubles. Fifteen to twenty years ago an exaggerated idea was held of the efficiency and economy of electric transportation, largely because the properties were undermaintained while they were new. Lines were built across country that would not yield a paying traffic. The increasing use of automobiles for both freight and passengers added to the natural embarrassment from the unforeseen rise in expenses. Over 1,000 miles of interurban track have been abandoned in the last six years. Well-managed interurbans affording a convenient route between populous cities as termini and carrying express as well as passengers have been able to stand up and pay their way. Some of these are excellent properties.

Elements of the Business

The main point about tractions is that they are distinctively local enterprises. Each must be judged by itself, according to its franchises and its relations with the public, as well as by its property and its earnings. The public relations are perhaps the most important single factor in judging future prospects. All cities grow, and the question is whether the traction will be encouraged in the investment of capital to keep pace with that growth or will be crippled by municipal hostility and opposition. On the whole the industry is establishing more satisfactory public relations, either through franchise protection or by means of a service-at-cost scheme of regulation. Generally speaking, more common sense and less politics is now shown by cities than formerly. There may still be an earnest effort from time to time to dry out water in the stock or punish past stock jobbing, but there is more disposition to protect genuine investment on the part of the average city.

It is difficult to use generalizations regarding the business and still more difficult to characterize the securities.

The properties are not interconnected like steam railroads, nor are the companies competing like industrials. Tractions are separate enterprises. There are, however, two important and outstanding features of the business. One is the steady growth of passenger travel from year to year. The other is its freedom from fluctuation. In the larger cities the gross receipts may be relied on to increase and to maintain their volume through good times and bad. Tractions also have this in common, that their operating expenses are composed of similar elements, alike with local variations. High expenses, such as accompanied and followed the war, reduce the net earnings. Reduced wage scales and lower costs of fuel, steel, and materials increase the net. Although the properties are separate, the income of the entire industry rises or falls with the trend of the expenses.

Traction Securities

Tractions have, accordingly, been through the same strain as the railroads. They, however, had no governmental aid. Such local aid as was given by increase of fares was not usually adequate. In addition the companies were less strong to begin with. Many of the companies went into receivers' hands, and others barely averted receivership. Some were solvent, but few were prosperous. Traction securities as a class are still somewhat discredited and low in price, having begun to recover from the great depression of 1921 later than either industrial or railroad securities, and with less confidence. Expenses being still high, the margins of profit are not large and in some cases are entirely lacking. The substantial securities of solvent and well-managed companies, and underlying bonds of companies that have defaulted on junior issues, are therefore still at prices that offer possibilities of profit. It is a case for discrimination in investment rather than generalization.

Interborough and Brooklyn Rapid Transit

The largest and best-known traction systems are in New York City. The Interborough Rapid Transit Company was incorporated in 1902 to build and operate the subway. It was then estimated that the main stem as originally constructed would carry 400,000 passengers a day. By way of making liberal provision for the future a capacity of 800,000 passengers was provided. By the time the city made up its mind where to build additional subways and who was to run them, the actual passengers carried had increased to 1,200,000 a day. This produced a crowding of passengers, and also high earnings. In 1913 new contracts were signed with this company and with the Brooklyn Rapid Transit Company for additional lines, including two new trunk lines. While the outlying branches of the system now bring down the traffic density, the crowding of the trunk lines has again reached impossible limits, and additional new construction on a gigantic scale is once more proposed.

The capitalization of the Interborough is $35,000,000 stock and about $200,000,000 bonds and notes. In addition the city provided the cost of the subways themselves, the funds of the company going for equipment, power plant, elevated extensions, and improvements. The Manhattan Elevated under lease has another $105,000,000 of stock and bonds. Most of the Interborough Rapid Transit stock was pledged with a holding company, the Interboro Consolidated, to secure an issue of $68,000,000, 4½ per cent bonds. This holding company also owned nearly all of the stock of the New York Railways Company, a major system of surface lines. In order to keep the holding company going, dividends were paid at a high rate upon the Rapid Transit stock, as high as 20 per cent from 1914 to 1917, inclusive, 15 per cent in 1918, and then 2½ per cent in 1919, after which they ceased, whereupon the holding company, obligated to pay bond interest, went into the hands of receivers.

The dividends of the operating company, the Interborough Rapid Transit, were keyed too high and maintained too long in the face of rising expenses. It has been obliged to propose an adjustment of its lease of the Manhattan, a five years' interruption of the sinking fund on its bonds, an extension of its notes, and a subscription from its stockholders, in order to escape receivership of its own properties. In the crisis its previous dividend policy proved a fatal weakness in its attempts to negotiate with the city for an increased fare to meet swollen expenses. It had made itself a fit target for attack. After the adjustment, with expenses on a more normal basis, the company's bonds will be sufficiently well secured, resting as they do upon a public necessity whose credit no city or state administration can afford to destroy. The stock, although its dividends are to be limited under the plan of adjustment, is in line to benefit by increasing travel. But the effect of the proposed new subways, and the results of negotiations with the city over construction contracts, and of the control and valuation to be imposed by the state Rapid Transit Commission, must also be considered as they may materialize. The stock is speculative, dependent upon developments still to come.

Brooklyn Rapid Transit Company was formerly a system of surface and elevated lines in Brooklyn. It invaded the subway field and the island of Manhattan in 1913, and was caught by the high costs of both construction and operation. It went into the hands of receivers on December 31, 1918. It has been through a process of partial dismemberment as to its surface lines, and is now gradually approaching the stage of reorganization. It has nearly $75,000,000 stock, upon which dividends were paid from 1909 to January, 1918, the rate being 6 per cent for the last five years of this period. The direct debt is about $130,000,000, not including the debt of former subsidiaries.

New York City Surface Lines

Of the surface lines in New York City proper, the Third Avenue has weathered the storm and is beginning to show a restoration of earning power. Its lines in the Bronx and to the north, the Union Railway, have considerable promise. The New York Railways, a larger system than Third Avenue, went under. The havoc of high expenses was complete. It defaulted down to its underlying bonds. Of the three principal issues of these underlying bonds that passed through the Metropolitan receivership unscathed, the Lexington Avenue and Pavonia Ferry, and the Columbus and Ninth Avenue, have failed to pay interest, while the Broadway and Seventh Avenue bonds dropped to low receivership prices but continued to pay interest. The New York Railways is at this writing not yet far enough through its difficulties to be in condition to reorganize.

Holding Companies

Traction holding companies are only partly typified by the Interboro Consolidated. There are well-managed holding companies whose capitalization is not excessive and whose purpose is to provide skilled operation to smaller, scattered properties. But most holding companies are too heavily capitalized, subject to the danger of excessive dividends and undermaintenance on the part of the operating companies whose stock is held. The reported earnings of the holding company are not a safe guide. It is no stronger than its subsidiaries, whose maintenance, earning power, and borrowings are not always easy to ascertain. Some holding companies, like American Light and Traction, were launched early, when properties were cheap. This company, mainly light and not traction, paid a high rate of dividends from 1909 to 1920; since then the rate has been more moderate. Other holding companies, which began late, paid too much for properties that were not first-class. Some of these have been speculative, others chronically weak, with a high rate of mortality at times when funds could not be obtained by borrowing or by selling additional securities.

Electric Light and Power Companies

Electric light properties have been in more favorable position than the tractions. The business being newer and the services rendered mainly under contract with private consumers, the public regulation has been less stringent with them than with either railroads or street railways. The treatment has been more liberal both as to rates and as to conditions of service. The machinery and appliances having been improved rather swiftly and consistently, the companies have been permitted to retain a considerable part of the profits resulting from the economies. In effect they have forged out in front of the regulation. There was a margin of profit even during the war era when prices for coal were at their peak. This crisis did not interrupt the record of good earnings.

The electric light business is steady, with only moderate changes due to general conditions. On the expense side fuel is a leading item, the pay-roll of wages being relatively less than with tractions or railroads. The capital investment, while large, is not so large in proportion to revenues as in the case of the transportation enterprises. The net earnings upon the real capital invested have been, as a rule, very good. It is possible to mismanage an electric light property, or to put an installation where there are too few consumers, or to neglect franchise protection for pole lines. But the record of the business as a whole is excellent. The securities are in favor in the market to almost the same extent as the traction securities are in disfavor.

In the evolution of the business, lighting companies became frequently yoked with tractions. By use of a common power house the traction received cheaper current and the lighting company a steadier "load," or demand for current, and therefore cheaper costs of production. Of recent years this union has had unexpected financial consequences, the lighting company carrying, or attempting to carry, the traction. Occasionally the evolution took a different course, as in New York City, where the New York Edison Company has been a mainstay of Consolidated Gas, and the traction companies have been kept out of the lighting field.

The lighting companies have also, where permitted to do so by local laws, undertaken to furnish power to industries. This is usually an advantageous arrangement, furnishing a low-rate, large-volume market for current at hours when the machinery would otherwise be idle. The invested capital is made to work longer hours, with a result similar to that sought in supplying current to tractions. The power load for industries, and consequently the earnings from this end of the operations, fluctuate somewhat according to general business conditions. But where the industries served are diversified, with no preponderant block of power going to one consumer, the fluctuation is not great.

An outstanding characteristic of the electric light industry is that it is still growing. The principal effect of depression is a retardation, and of prosperity an acceleration, of growth. The uses of electricity are increasing both in the home and in the factory. The field for its employment is by no means saturated.

Gas Companies

Gas is of course older than electric light. The incandescent mantle and the new uses of gas for fuel and heating have rejuvenated an industry that seemed to be threatened by the electric competition. The consumption per capita is much larger than in the old days, when gas had a monopoly of lighting, and the industry is on a solid and enduring basis. Nevertheless gas is the poor man's light, and as such its rates and its quality have long been, and still are, a favorite political battle ground. In Chicago the People's Gas bases its rates upon a fixed return, recently 7½ and now 7 per cent, on the value of its property as ascertained by a local commission. In New York the rates of the Consolidated Gas and Brooklyn Union Gas, with other lesser companies, have been in the courts from time to time on the issue of confiscation. The courts have protected the companies in the right to earn a fair return on the legal value of their properties. In many cities the companies have won the right to make gas of a heating-power instead of a candle-power standard. The former is cheaper gas, suitable for cooking or for lighting with mantles. In New York City the right of the poor to burn a naked light, at higher first cost, was, until 1922, firmly protected by the candle-power requirement.

Gas companies came through the expense crisis in better shape than the tractions, but worse than the electric lighting companies. The expense crisis for these companies was very sharp, coal for coal gas and the enriching oil for water gas mounting swiftly to unheard-of prices. But the crisis was also comparatively short. The rise in costs began in 1916 and 1917, but the worst of the peak lasted only from a year to a year and a half, according to the state of the existing contracts for coal and oil. Rate increases, more or less adequate, were granted in many cities and towns, or secured through the courts. In the end the companies came through with few insolvencies or major embarrassments. The earnings are again swiftly improving with the breaking of the prices of coal and oil, which are the largest single items of expense.

The gas business is extremely steady, the chief effect of prosperity and depression being upon expenses. It is well adapted to the issue of both bonds and stock. In some districts the business has become more complex because of natural gas, or because of the use of by-product coke-oven gas. Natural gas as a competitor is ruinous; as a component part of the business, it is not a permanent asset. The use of by-product gas cheapens costs but places the business more under the sway of general conditions, as it is not always easy to market the coke.

Hydro-Electric Power Companies

Hydro-electric power companies are characterized by heavy capital outlay and small operating expenses. With a new enterprise the problem is to sell power enough to take care of the large initial investment. Even large, successful, and expanding companies, such as the Pacific Gas and Electric Company, had for years the problem of finding new capital to keep up with the additional sales of power. This company finally solved the problem of growth in the most satisfactory way—by selling stock to its own consumers.

Hydro-electric properties are large units owing their inception to the vision of the promoter and engineer. They do not grow from small beginnings. The financing of new properties has been almost necessarily upon a construction company basis, bonds being issued to cover the cost and stock as bonus or inducement to make the bonds palatable to the purchasers and to pay the entrepreneur and financier. The cost of construction varies greatly according to local conditions, such as length of dam, nature of river bottom, height of fall, and necessity for building an auxiliary steam plant against risk of drought or ice. The value of the securities depends, among other things, on the rate of capitalization per horse-power of capacity, and the quantity and average price of the current sold.

The securities of a seasoned hydro-electric, such as the Niagara Falls Power Company, are often well protected and regarded as safe. Both bonds and stock of a new or uncompleted project are speculative. There are companies that have been great successes, like Shawinigan Water and Power, and those that have met disaster at the start, such as the McCall Ferry Power Company and the Hudson River Power.

A sharp distinction is to be drawn between hydro-electrics producing so-called primary power, good 365 days in the year, and those producing secondary power, subject to reduction or interruption in time of low water. The latter are of inferior and more doubtful earning power. Auxiliary steam plants may be used to bolster up the secondary power of a hydro-electric plant, and provide the continuity of service necessary in order to build up sales of current. In the case of the Consumers' Power Company of Michigan the two classes of power were worked in together very cleverly to create a highly efficient system. But ordinarily the hybrid companies are to be considered as steam power plants with a hydro-electric investment rather than as hydro-electric companies. They have, to a considerable degree, the costs of steam operation. While plants in the coal regions, using culm and waste from mines, of which the Pennsylvania Power and Light is an example, may do this cheaply, it is not common. Steam is an expense. The most essential requirement of the average sound hydro-electric is plenty of water, from a reliable water-shed.

The hydro-electrics have small operating expenses. Maintenance, wages, and fuel at the originating plant are practically negligible. If they retail power, or distribute it widely, they have the expenses of transmission lines, but these are still small. The income is steady, depending somewhat on the class of customer served. The light and traction consumption of current does not vary much with prosperity or depression. Where large blocks of power are taken by industries, as, for example, in chemical processes, the consumption may fall off in time of depression. A long-established company is usually sufficiently protected by diversification of industries, and may also be protected by the terms of its contracts. More than with any other class of enterprise the earning power is unaffected by the ups and downs of business. The current sold is the product of invested capital and not of labor and materials. The market for the current, after it has once been well established, is permanent.

The industry is well suited to bonds. Where the capitalization is moderate it offers also some excellent stocks. The main essential for investment is the established market for the current, with primary power and capitalization within the limits of the earnings. The construction enterprises, or those with markets to develop or expansions to make, are speculative.

Telephone and Telegraph Companies

Telephone and telegraph companies are a class of utilities apart from the others. The Postal and the Western Union still compete between the larger cities, and there are still some local telephone systems. But essentially each of these businesses is a natural monopoly because of the fact that it is better and cheaper to be provided with a single channel for talking to everybody than to have duplicate channels, or, worse, separate channels that reach different people.

The monopoly of the American Telephone and Telegraph Company has been tacitly assented to instead of being opposed, with local exceptions and with the exception of its temporary control of Western Union. Its public relations have been good. This has been a most important asset. Commissions have begun to turn their attention toward telephone rates, but up to the present time the rates have been sufficient to provide liberal margins for maintenance and for constantly recurring expansion-replacements of switchboards, lines, and appliances. The business will probably never be subjected to destructive regulation for two reasons: first, what customers are paying for is service and they would not tolerate impairment of service by inadequate rates; second, in order to keep going and supply new connections, the company or its subsidiaries have to sell securities every year, and it must keep the confidence of the money market and be able to pay the necessary return.

From its small beginnings, which were the source of large fortunes, the business has assumed great proportions. During the twenty years since 1901 the net additions to plant have been $1,333,000,000. Including $115,-000,000 new stock just subscribed, the stock outstanding is $700,000,000. The debt of the parent company, not counting subsidiaries, is about $275,000,000. In 1921, at the worst of the depression in securities, the company raised its dividend rate from 8 to 9 per cent, and sold $90,000,000 of stock to pay for necessary construction. With great courage it took the position that it must give service and, therefore, must pay the going rate for money.

Corporate Securities

Corporate securities outstanding in the hands of the public probably aggregate nearly or quite fifty billions of dollars, excluding those personal issues not quoted or dealt in in the markets. These securities, together with farms, city real estate, and the assets of individuals and firms and of semiprivate corporations, represent the bulk of the national wealth. Together with government and municipal issues, which are a debt against that wealth, and the loans of foreign countries, they constitute the fabric of investment. All securities, whether resting upon earnings or upon taxing power, are dependent upon the course of business for their value, and in a different way, as will be shown in succeeding chapters, for their price.

CHAPTER V

THE RELATION OF BANK CREDIT TO BUSINESS

Bank Credit a Fundamental Factor

Bank credit is the most general and fundamental factor controlling the course of business. All of the forces of trade, industry, and finance center upon the banks. Their position is the expression of a country-wide, or even world-wide, complex of activities and relationships. The situation of the banks with respect to their lending credit to business is in constant flux.

It is well known that credits expand when business is prosperous, and shrink when it is depressed. The prices of securities are affected by the resulting credit conditions. At times the prices are controlled more forcefully by credit than by business conditions. Finally, the business conditions themselves are influenced by the credit conditions which prosperity or depression has produced.

The cyclic changes in credit, business, and prices of securities will be touched upon later. To begin, there is needed direct discussion of the bank figures, the banking system, and the relation of banking conditions to securities.

Any change in credit conditions produces changes in the bank figures. Any great change alters the rates for the lending of money. The cause of the changes in the bank figures and in the rates for money is not always immediately clear. But the result is explicit, a definite point of departure for the investor, if rightly read and understood. The weekly bank statements, together with the analyses published in the *Federal Reserve Bulletins,* are a comprehensive and prompt index of the course of credit. They afford insight also into the prospects for expansion or contraction of business, as well as a measure of its present volume. They furnish grounds for judging the course of bank rates, the changes in which directly affect the prices of securities. They reveal what is actually going on in industry, trade, and finance. The best and most truly inside information an investor can have is knowledge of the credit situation drawn from these official sources.

The National Bank System

The old national bank system leaned upon cash reserves kept by the individual bank. Originally, as a Civil War outgrowth, the national banks were intended to issue bank note currency against the security of government bonds deposited with the federal treasury. They served the more limited needs of their day, but their function as banks of issue became gradually atrophied and their inability to cope with conditions of financial strain became, more and more clearly, an imminent menace. They were ill adapted to the larger and more active commercial and industrial life of later years for two fundamental reasons: (1) Their note issues, based on a cash outlay for government bonds, could not be adapted to the alternate shrinkage and swelling of commercial requirements; (2) their reserves, kept in the vaults of the bank, were also inelastic. The requirement that the reserves should be kept in vault prevented them from being used. While the country banks had a lower reserve requirement, and could keep a part of their reserves with selected correspondents in reserve cities, the keystone of the structure, which was its greatest source of immobility, was the requirement that the strong institutions in the central reserve cities should maintain a cash reserve of 25 per cent of deposits.

The records showed that the combined deposits of country and reserve city banks together might, under the most favorable conditions, reach a maximum of, say, seven times the aggregate reserve kept by both. But when anything happened anywhere, or any bank fell below its reserve requirement, credit had to be curtailed in order to draw in cash and replenish the deficient reserve. This drawing in of cash affected other banks and made them look to their own reserves. The center of pressure was naturally the central reserve cities. In time of tight money the reserves in these cities hovered close to the 25 per cent mark. The moment this limit was passed by some of the banks, all of the others were put under pressure. Every bank then sought cash.

Money Panics

Under these circumstances, call loans were called, as the quickest recourse, and the rates on call money rose to preposterous figures. Then, as the stringency continued, time loans were not renewed at maturity. The 25 per cent limit against deposits, with no way of getting cash except by taking it away from some other bank, and no way of reducing deposits except by demanding the payment of loans, brought an imperious and universal demand for payment. In times of crisis the banks generally found themselves in much the same predicament. They were forced into a competitive scramble for cash. Just when they should have extended credit, they were obliged to restrict it; they were compelled to cease functioning in time of financial difficulties simply because of the inelasticity of their reserves.

"Money" panics, which recoiled upon the banks themselves, were the most immediate and violent manifestations of crises. After the first burst of destruction the banks stayed further wreckage, in so far as they were able, by resorting to a credit expedient entirely outside of the national banking system, the issuance of clearing house certificates. But in the meantime great havoc had been wrought. Men in the full stride of prosperity had been brought to ruin. The country had been prostrated by the breaking down of its credit mechanism, and had to build again from the very ground.

The Federal Reserve System

The federal reserve system, which came into operation in 1914, was designed to obviate these disastrous panics by creating a stronger basis for credit and permitting a more discretionary use of it in time of strain. The banks were to be of service in time of crisis, instead of being crippled and made useless. Under this system the bank reserves are no longer held individually in separate vaults, but are pooled. The reserve requirement of the member banks is lower and the limit is not rigid but elastic. The reserve itself may be replenished otherwise than by drawing in cash from other banks.

Under the Federal Reserve Act the member banks are required to keep reserves of 13 per cent against demand deposits in the central reserve cities; 10 per cent in the reserve cities; and 7 per cent if located elsewhere. Against time deposits a 3 per cent reserve is required of all the banks. These reserves are not kept in the member banks' own vaults, but with the federal reserve banks. The gold and real money of the whole banking system is collected in a common reservoir in these regional banks, which are owned by the member banks and do no general banking business with the public, but function as banks of issue and of rediscount for the member banks.

These federal reserve banks, which are the governors and safety valves of the combined banking system, are required to keep gold reserves of 35 per cent against the deposits made with them by the member banks, and of 40 per cent against their own federal reserve note issues. The 40 per cent reserve against notes is not mandatory, but is an elastic limit. If a crisis requires the further issue of notes after this limit has been reached, they may still be issued subject to a graded tax that makes them expensive and insures their early retirement. In 1920 the better situated of the federal reserve banks helped out those whose reserves had fallen too low, by making advances against rediscounts and thus keeping all the regional reserves up to the required 40 per cent so far as possible. But the graded tax on note issues was imposed because of deficient reserves for a brief space in New York and for a longer time in southern and western federal reserve centers.

The Elasticity of Credit under Reserve System

The mechanism of the federal reserve system adapts itself with great flexibility to the expansion and contraction of the national credit requirements. To procure bank notes, or to replenish reserves that have fallen low, the member banks have but to take from their portfolios commercial paper or paper secured by government bonds, and rediscount it with the federal reserve bank. As it is the intention to support commercial in contradistinction to stock exchange credit, paper secured by bonds and stocks of corporations cannot be rediscounted. The avenue of relief for low reserves of member banks is, however, sufficient for all purposes, so long as the banking system as a whole is not too deeply overloaned. In 1919 and 1920 the member banks were borrowers on rediscounts from the federal reserve banks to such an extent that the problem became one of maintaining the reserve ratios of the latter institutions.

Two salient differences present themselves in comparing the present banking machinery with that of the national banking era. The note issues, based on volume of rediscounts, rise and fall with commercial requirements, instead of being rigid and limited. The replenishment of the reserves of member banks is not accomplished by taking away cash from the resources of borrowers, or of other banks, but by using the needs of commerce itself as a base for notes and credit through the process of rediscount.

Methods of Controlling the Increase of Credit

No banking system contemplates an unlimited increase of credit without the possibility of putting on the brakes. When political control turns state banks or state currency toward this inflation, as in bolshevist Russia, or bankrupt and speculative Germany, the end is a depreciation of the entire mechanism of credit, which is more deeply ruinous than the sudden rending asunder of bank credit which used to follow crises in this country when the banks stood alone.

There are three main remedies when the reserves of the federal reserve banks themselves fall low. The first is moral suasion upon the member banks, pressure and warnings, to reduce loans and decrease inflation. The second, more effective from a practical standpoint, is to increase the rates for rediscount, making inflation expensive. It was the necessity for keeping these rates down in 1918 and 1919, in order to permit the floating of war bonds at a low rate of interest, that allowed the inflation of that period to acquire such great impetus. The third remedy for low reserves is the tax on note issues and the auxiliary coercive powers granted by the law.

The Effect of the Raising of the Rediscount Rate

Of these three remedies the raising of the rediscount rate is the most natural and salutary. It is the time-honored method of the Bank of England and the Continental central banks. When the exchanges were normal and the free international movement of gold was permitted, the increase of the bank rate in London, or Berlin, or Paris would draw money instantaneously from neighboring countries, or even from the United States, to the support of the center that needed it. Dealers in exchange caught the signal in all countries, and put their funds where they would earn the highest interest.

The free international movement of gold from low-interest money markets to high-interest markets was interrupted by the war, and has not yet been restored. Raising of the rediscount rate in 1920 was not, therefore, so quickly effective as such action would have been before the war, especially in view of the high rates that obtained elsewhere. It did, however, prove gradually effective. While loans were not reduced in volume for many months and the federal reserve ratio remained for an uncomfortably long period close to the 40 per cent line, a definite and powerful discouragement had been interposed upon further expansion. Business stood still until it could accomplish a recession to lower price levels. In the end there was an orderly deflation of both the swollen note issues and the swollen loans and credits.

Some are inclined to criticize the federal reserve banks for maintaining high rates too long, in this first serious crisis in their experience. The fact is that the march downhill, with its sweeping price changes, was accomplished with a minimum of wreckage—in striking contrast to the national disturbances of 1893 and 1907. Banks carried their debtors and gave them help. The banking system stood the test. Even greater stability is to be hoped for in future inflations and overexpansions, upon which, under conditions of peace, a more timely restraint may be imposed by raising rediscount rates before conditions become acute.

The Expansion of Credit under the Federal Reserve System

The installation of the federal reserve system was practically contemporaneous with the outbreak of the war in Europe. For a time it seemed that credit would be in unlimited supply. For the first few years the new machinery of enlarged credit facilities was hardly used. In the end the war and postwar demands strained the capacity of this machinery. The discarded national banking system would have been totally inadequate for such enormous demands and would have broken down. The reserve banks carried the brunt of the Liberty and Victory Loan financing, met the governmental borrowing upon Treasury certificates, took care of the expanded commercial borrowings upon high-priced merchandise during the period of feverish activities, and, finally, supported the so-called "frozen credits" upon commodities that could not be moved because the market for them had vanished. Far more quickly than anyone had deemed possible, credit expansion reached the full capacity of the federal reserve system.

The financing of the war through the federal reserve banks was a great achievement. The carrying of the postwar inflation was a much greater and more difficult task. The inflation gathered force as it grew. In the four months from September, 1919, to January, 1920, loans to members and total investments of the federal reserve banks increased from $2,350,000,000 to $3,300,000,000, or over 40 per cent. Beginning shortly before the end of 1919 and continuing on into 1920, rediscount rates were raised by the reserve banks in successive stages, the Treasury advising the Federal Reserve Board on January 10, 1920, that war financing had been so far completed that the Board might feel free to exercise its statutory powers and regulate the discount rate without regard to governmental requirements. There was then inaugurated the long and difficult process of bringing the situation back within control. Loans continued to increase after the higher rates were imposed, although more slowly than in the last quarter of 1919. November, 1920, was a month of real money "pinch." In this month loans were practically at the maximum. The total deposits of the 9,567 member banks aggregated $21,148,375,000, nearly eleven times the $2,000,000,000 in round figures of gold holdings of the federal reserve banks and close to the theoretical maximum of the ratio of deposits to gold which has been estimated to be twelve to one.

The Figures of Inflation and Deflation

A detailed relation of the history of this notable epoch cannot be given within the space of this volume. The main features may be told as follows: Beginning with 1917 the reserve ratio was lowered from 86 per cent in March of that year to 40½ per cent in May, 1920. It underwent a slow recovery to 44½ per cent at the beginning of 1921, and a more rapid rise to 57 per cent by July of this year. Finally the beginning of 1922 saw it at 71 per cent, from which point there was a rise to 80 per cent.

The note circulation was practically negligible until toward the end of 1917, when it approached $1,125,000,000. It reached $3,400,000,000 in December, 1920. By February, 1922, it was down to a little over $2,000,000,000. During 1920, gold began to pour in from abroad and to accumulate from domestic circulation, and the situation was alleviated. By 1922, the gold holdings of the federal reserve banks were nearly $3,000,000,000, or four times the amount held by these institutions early in 1917.

The most significant changes of all, however, were in the loans. Loans and investments of reporting member banks increased $2,500,000,000 from midsummer, 1919, to October, 1920, and decreased the same amount by January, 1922. The maximum loans made to member banks by the federal reserve banks were $2,826,825,000 on November 5, 1920, having risen from about $600,000,000 at the beginning of 1918. They declined early in 1922 to the same low point, or lower. These loan figures and those for deposits show clearly the swelling and subsidence of the inflation. The approaching strain was fully indicated as it came on. The maximum strain and greatest extension of credit was after prices of securities and commodities had broken and the banks were engaged in carrying the situation through.

The Normal Bank Credit in the Reserve System

It is not yet fully possible to say how much of the vast powers of credit of the federal reserve system, which in its first hours coped with so great an emergency, will be required for the normal peace-time business of the country. It is at present obvious that, with the loans to member banks so nearly cleaned up and the federal reserve ratio approximating 80 per cent, credit will be in abundant supply for some time to come—fully equal to carrying at low interest rates the recovery of business that is now developing.

No one can guess or prophecy the exact reserve percentage at which increases of rediscount rates are likely when credit has again been drawn upon for future expansions of business. Circumstances will affect the decision. Exports of gold, a too rapid mounting of loans, or overindulgence in speculation would lead to quicker action than a gradual and healthful increase of business. It is altogether probable that the reserve banks would stiffen the rediscount rates under any circumstances long before the reserve ratio approached the legal limit of 40 per cent. It is certain, from recent experience, that the Reserve Board will give warning, in advance of action, when the point approaches where business exuberance must be curtailed.

In the meantime the bank statements are, more than ever, the primary barometer of the commercial and financial outlook. Rediscount rates, the interest rates of the open market, and the figures of reserve and member banks show the trend and mark the final goal. The post-war period that has been used as illustration was most unusual. For that very reason it brings out, better than long years of less strenuous experience, the bearing of the banking changes upon business, and their relation to securities and investment.

Securities and Business as Affected by Bank Credit

The relation of business and securities to bank credit is to be seen primarily through loans. There are three principal types of loans, of which two are directly, and the third indirectly but intimately, dependent on bank credit. Short-term loans are made by banks to corporations and firms for temporary requirements. Long-term loans are obtained by corporations from investors by the sale of bonds through investment bankers. Call or time loans are made by banks to individuals, or their brokers, for the purpose of carrying securities. There are other important forms of loans, such as real estate mortgages, and of credit, as, for example, bank and trade acceptances, but the three forms considered embody the main relationships between the banking systems, business, and securities.

The three types of loans have different functions. The first finances trade; the second finances construction; and the third finances the purchase of securities. That is not to say that the proceeds of a loan may not be turned to other purposes; but these are the usual purposes.

The Borrowings of Corporations

Corporations provide their permanent endowment of funds by issue and sale of stock, and sometimes by long-term borrowing on bonds. With strong companies this permanent provision includes a normal amount of working capital. With weaker companies part of the working capital may be short-term money borrowed over and over again from the bank. But all companies, no matter how fully financed, require additional money when business expands, especially when wages and costs are high and trade is at flood tide. To do the larger volume of work they must carry increased inventories, more accounts receivable, and larger pay-rolls, all demanding funds from some source until the companies are paid for their goods. For these and other temporary purposes, such as the carrying of costs of construction pending completion and permanent financing, short-term loans at the bank are resorted to.

Increased prosperity means, therefore, increased bank loans in all directions, in order to carry the larger business. Depression means a decrease of bank loans. Banks supply the money to carry the increased quantity of goods at the higher prices of prosperity. In depression, as inventories are sold down and accounts collected, they are asked to carry less and at lower prices. Business is always moving, either expanding or contracting—rarely standing still save in time of profoundest depression. Short-term bank loans supply the power to expand, the elastic cushion for contraction.

It follows, therefore, that when bank credit is stretched to the point of great strain by abundant prosperity, the power to enlarge business has disappeared and the next phase is certain to be a downward change. On the other hand, when in the course of depression bank credit has become plentiful and cheap, the power to enlarge business exists and will at length, in due sequence of time, be exercised. These are general principles, sometimes affected by war or other great disturbances, but lying deeper and constituting a more permanent force bearing on business than the external influences, such as foreign trade, the tariff, the crops, politics, strikes, the rulings of commissions, Sherman Law and Clayton Act decisions, or even taxation.

Bank Credit and Securities

Securities precede business in their dependence upon the position of bank credit. The call loan, secured by stock collateral, is the most sensitive of any type of loan. Its rate of interest varies almost from day to day, and is the first to rise when funds become fully loaned. It also rises the most sharply, the money lent on call being essentially the surplus, from all parts of the country, left after other banking requirements are filled. In addition, the price of stocks discounts prospective prosperity or depression of business, as indicated by the bank statements. Stock and bond prices discount also the value of money. Thus, in depressions, when bank credit is abundant and interest rates are low, there comes a time when securities begin to advance, even while the prospects are still black and business is lifeless. In days of prosperity, when bank credit becomes tight and interest rates rise, even though the prosperity seems unabated, securities are due after a while for a decline to lower prices.

The liquidation that marks the end of a period of prosperity is primarily that of selling for cash wherewith to pay loans. If not so exigent as under the national banking system, still the sales take place. Securities are sold like everything else. Having an instantaneous cash market, they are sold rather more quickly than commodities. Stocks, being themselves subject to call loans on margin, enter upon a period of forced sale. On the other hand, the buying that marks the end of acute depression begins with bonds and stocks. After bank money has again begun to be available at low rates, the first significant change is the purchase of long-term loans, or investment bonds. Then stocks, which have already crept up from the bottom, begin to be bought vigorously. Finally, the business recovery appears.

In summary, then, we may say, first, that the bank statements indicate, and second, that the securities markets anticipate, the great changes in business conditions, and third, that the course of bank credit dominates the course of both business and securities.

CHAPTER VI

BOOMS AND DEPRESSIONS

Psychology and Sequence

It is characteristic of both good and bad times that people always think them more permanent than they afterwards turn out to be. The reasons why business is booming or is depressed are in the foreground. Reasons why prosperity should vanish or depression melt away are not yet apparent.

This general state of mind has much to do with the overintensification of business activity into booms, and with the accentuation of depressions. The psychology of the matter is that many, thinking the prospects assured, take on new business in time of prosperity, just when new activities are in fact most speculative. In depression they refuse to enter into new activities because the outlook is so black, thus intensifying the existing dullness. No small part of the business community is affected by this contagious mob spirit. Nearly all construction, whether of railroads, mills, office buildings, or houses, is done in time of prosperity when wages are high and materials costly. Very little is done when business is dull and construction is cheap. Consolidations and new enterprises are launched when the tide is high—not when it is low. Liquidations of businesses are conducted when the tide is out, owners lacking cash to carry on, or throwing up their hands in despair. It is also true of securities that the general public have more confidence and buy more freely when prices are up than when prices are down.

Much has been written of the so-called "cycles of business," the sequence of whose phases Governor Harding of the Federal Reserve Board has described as follows: (1) business activity and increasing production; (2) excessive expansion and speculation, followed under the old national banking system by panic and forced liquidation; (3) a long period of slow liquidation, business depression, and stagnation; and (4) revival. The periodical recurrence of these cycles as affecting stocks and bonds will be discussed later. Here something will be said concerning the nature of booms and depressions, their mechanics and their causes, with a view to laying down the basic rules for identifying them while in progress, in the face of the mob spirit that asserts their permanency.

Recurrence of Booms and Depressions

This country, with its incessant development, its absorption of capital in new enterprise, and its long continuance of a rigid banking system, has been the home of both panics and booms. The transition from a wilderness to a populated, highly industrialized country, could hardly have been accomplished without these phenomena. Much capital had to be ventured. Sometimes it was ventured unwisely, and resources were strained, with little liquid capital to fall back upon. The heights and depths were both increased by the sharp ups and downs of bank credit under the national banking system. Nevertheless there are still periods of great activity and great depression under the federal reserve system, and will be under any banking system as long as the country continues to grow and business looks to the future. The philosophy of these ebbing and flowing tides lies deeper than the banks; it lies in human nature, the pursuit of livelihood and profit, and the spending of money for whatever is desired. Money panics may be a thing of the past, but to suppose that booms and depressions also are gone is to imagine that the national character and the national energies have reached a dead level and become quiescent.

Causes

Much has also been written in explanation of reasons for the alternation of prosperity and depression. It would be useless to advance a new theory, and presumptuous to hold that any existing theory was complete or universally accepted. There are many theories, most of which are partly true. Most are also too abstract to serve the investor's purpose. To attempt the practical and concrete, in such a case, is possibly dangerous. Nevertheless a brief picture of the reasons for alternating prosperity and depression must be attempted, in such terms as may bear upon investment problems. There are at least landmarks which the investor may use to mark his course. A chart may be sketched, without profundity or erudition, to trace some of the salient facts.

To leave out of consideration details and collateral questions such as are scattered through this and other books on financial subjects, the fundamental principle underlying this ebb and flow of business is so broad and self-evident as to seem to be of no direct significance. The ups and downs of business are due to the law of demand and supply. A simple method of analyzing the demand for the products of business, which ignores complications and refinements, is to regard it as composed of two elements—that of ordinary and daily consumption, and that of extraordinary or special consumption. Food and clothing, for example, are always needed. War, the construction of railroads, canals, public works, or numerous private buildings, abnormal exportations of merchandise, and the prevalence of speculative fever, with its luxuries and waste, create a special demand for temporary purposes. This is a rudimentary but useful classification.

The special demand is superimposed upon the basic demand for articles of constant consumption. In addition, it stimulates the basic demand by increasing the general buying power. The most active period of special demand within our history was that of the Great War, including the years immediately following. The demand for products was insatiate, extending through every corner of industry and trade. It began with munitions, ships, steel; passed through wheat, sugar, oil, and other necessities; and finished with silk shirts, automobiles, housing, and all manner of luxuries. The demand created rising prices that produced profits. Speculation became rampant and bred new and more artificial demands after the war itself was over.

Eras of Construction and Speculation

In peace time these periods of great special demand are usually eras of construction. The railroad building of the late eighties is perhaps the most conspicuous example. The period before 1907 was one of industrial enlargement and of speculation. The crises of the last century are each marked by the previous outpouring of capital into some new field of endeavor outside of the regular routine. Of the greater crises, that of 1837 was preceded by canal and railroad building, and the first great development of the West. It was precipitated by wildcat banking and the end of the United States Bank as a government institution. That of 1857 followed the stimulus of the California gold discoveries and the construction of railroads. That of 1873 was linked with the creation of industries by the Civil War and, once more, the construction of western railroads.

These earlier crises were connected with the westward expansion of the people. They were all consequent upon wild speculation, not only in stocks but in commodities, and, last and worst, in land. In the course of the commodity speculation the increase in consumption usually resulted in a great increase of imports, leading in the end to payment by shipment of gold abroad and the weakening of the banking situation. This position in foreign trade was an internal development. The country has been shaken more than once by foreign crises, through that long period when it borrowed capital and was a debtor nation; and it is true also that the contagion of speculation may affect the entire world and is not confined to any one country. Nevertheless the springs of this country's great crises have been within itself.

Each dollar of capital poured into construction marks an increase in the special demands of the construction eras. There is consumption of both labor and commodities that the new permanent enterprise may be produced. The limit of this additional demand is set by the amount of money that can be raised, by floating securities or by taxation, for construction purposes. It is an intermittent demand, diminishing when the enterprise has been produced and the labors of construction recede.

Then comes speculation, when additional dollars are poured, if not into new enterprises, then into old enterprises—into commodities, securities, and land at higher prices. The rising prices in these periods of unusual activity, and the great ease of launching or expanding enterprises, lead necessarily to speculative trading, broadening markets at still higher prices, and to extravagant consumption based on prospects. The speculation is always overdone. The dollars that circulate quickly in trading from high to higher prices are not the sound dollars of sober commerce. Finally, the construction and speculation demands collapse and yield place. Business finds itself in reduced circumstances, and with that there is a return to the minimum necessitous demands of consumption.

These overactive periods are times of fictitious income, when people are really living upon capital and not within their incomes. In the ensuing depression, when there is little spending, income is being accumulated to form new capital.

Besides the very active and very dull periods there are of course the various shades and degrees of moderate activity and moderate depression. There is always some construction; always some speculation. The intermittent demand, arising from the diversion of energies into fresh channels, such as construction or speculation, is never entirely absent; but it varies more than the basic demands of necessitous consumption, those making up the standards of living in ordinary times. The special demands are also prone to rather tremendous outbursts, being limited by nothing but the amount of money available at the time.

The Drawing of Conservative Business into a Speculative Position

Not all of the increased demands of these times is consciously speculative or based on construction. When prosperity approaches, it gathers strength as it goes on, gripping the entire population down to the wage-earners. The rising prices make money for traders and manufacturers, as well as create opportunities for speculators.

The spirit of enterprise and activity is in the air. To the very crest of the wave the appearance is that business will continue good indefinitely, with increasing activity and still higher prices. So it is that not only the incautious keep on with forward plans, but the solid manufacturer and merchant, faced with the alternative of closing down until prices moderate, find it most difficult to curtail. Just at the top, orders for goods are characteristically hard to place, are subject to delay, and require premiums for prompt delivery. But business must go on. Orders continue to be placed after the limits of safety have been passed, in the general expectation that the break will be postponed and that in the meantime still higher prices are pending.

But the special demands are nevertheless essentially speculative, or connected with new enterprise and construction. The moment the price level is doubted or begins to sag, the speculative demand disappears. The demand for construction stops almost as quickly, for these enterprises, too, are undertaken on the promise of future prospects. There is then a very sudden lopping off of the special demands. All branches of business are confronted with an oversupply, instead of the overdemand, which must be mopped up slowly and painfully by the residual basic demands.

Signs by which Booms May be Recognized

Those interested in the history and theory of the rise and fall of business will find Mitchell's "Business Cycles" an illuminating book of research. An older book, Sir Robert Giffen's "Stock Exchange Securities—An Essay on the General Causes of Fluctuations in their Price," published in 1877, also gives interesting observations which bear more directly than Mitchell on the problems of investment, particularly in his Chapter III, with regard to the waves of credit and non-credit and in his Chapter X, on "The Cycle of Prices in Securities." There are two reasons for setting forth here in a few lines an elementary and imperfect exposition of the sequence of changes in business, which is true only in limited sense. The first is that while other businesses may have their legitimate excuse for buying at the top in prosperity and selling at the bottom in depression, in the necessity for continuous operation, or in the fact that funds for construction could only be obtained when times were good, in the business of investment there is only one excuse—that the investor has made a mistake. The second reason for the discussion of the business cycle is that the recital of facts presents points that are entering wedges for the formation of views by the investor.

Construction eras are signalized, first of all, by bond issues—loans made for construction purposes. These loans begin in volume as soon as stagnation gives way to recovery. Later they become too numerous. Finally, they become difficult borrowing upon notes, or exaggerated borrowing upon thin security. Construction may also be followed from the building records, the statistical journals of the railroad and other industries, and other current reports. Speculation eras are marked by rise of prices and increase in volume of dealings. This is most conspicuous on the stock exchange, but may also be readily traced in the prices of commodities and land. It is not hard to determine the evidences of expansion. As to the stage reached by the expansion there are at times other grounds for judging whether it is going too fast or becoming extreme; but most often the bank statements, and especially the figures for borrowings, afford the best index.

The Borrowings of the Boom Periods

The special demands which have been referred to rest upon borrowing. The prosperity periods are times of increased borrowing in every form. First, there is the financing of construction by bonds; or in part by flotation of stock. Then the ordinary mercantile borrowing is increased. As money becomes less easy the long-term financing of corporate enterprise turns naturally to the temporary expedient of notes. Speculators borrow upon collateral of all types. Syndicates borrow upon bond and stock issues that have proved slow of distribution. The trend is toward an excess of borrowing from the banks. Finally, there are bank loans upon undigested securities, bank loans to finance the needs of corporations that cannot sell securities, bank loans on collateral bought and not yet paid for, call loans for speculation, and, by no means an unimportant factor, bank loans and credits to merchants and manufacturers to carry the enhanced cost of inventories and enlarged volume of accounts receivable.

In the end a strain is put upon the mechanism of credit. Bankers, cognizant of inflation, begin to take counsel of prudence and limit their accommodation. Under the federal reserve system the putting on of the brakes is an elastic process, which in 1920 resulted in an almost complete cessation of buying until prices had accomplished their full reduction. Formerly the attempt to reduce loans produced panics, with an immediate and general crash. In 1907 the bubble broke with the breath of suspicion, directed at the Knickerbocker Trust Company on account of its loans on slow construction-enterprise collateral, and at this and other institutions for their speculative loans to insiders. Loans and bank credit having been discussed in the preceding chapter, it need be said here only that booms end when doubt begins as to the adequacy of collateral.

Following the break in prosperity is a period of sales to raise cash, which comes after an era of purchases on credit. Formerly this took the form of scrapping débris and clearing the decks for rebuilding. Now structures are preserved, as far as possible, but there is a more gradual effort to pay loans previously contracted, to sell off goods acquired at high cost, and to complete half-finished construction. The banks furnish the cash to carry on, but nevertheless, in place of demand crowding supply, supply now towers high above demand until the process is completed.

Depression and Recovery

The stress of the liquidation is over after the current loans have been provided for, or defaulted on, as the case may be. Supply ceases then to be so insistently pressing. There follows a period of depressed business, of nursing lame ducks along, of winding up insolvent corporations, and of collecting accounts and slowly reducing high-cost inventories. It is a time of little or no profits, when enterprise is sick and buyers are slow and timid. Eventually the banks find themselves with a surplus of money and a quiet situation, in which they can lend without fear. Then the underconsumption disappears. The bare shelves of the merchant, the lean inventory of the manufacturer, the deferred maintenance of the railroad, the worn wardrobe of the householder, give an upward impulse toward recovery and activity. Finally, new security issues and new construction reappear. The consumption demands may be repressed for a space, but cannot long remain dormant. Their reawakening cleans up the situation, and arouses construction demands.

CHAPTER VII

BUSINESS BAROMETERS

Barometric Figures and Facts

Understanding of credit relations is fundamental, and knowledge of booms and depressions is elementary. It is necessary to have, in addition, such barometers as are available to forewarn of the great changes, and so far as possible of the lesser changes.

There is an infinite variety of barometric figures and facts, ranging in scope from the most general indications, discerned by the expert while still indistinct and far off, to the more definite foreshadowings that bear upon a particular security or group of securities. Safety, the "protection in an atmosphere full of peril," depends in part upon what is chosen as barometer and how it is used; the rest depends upon the strength of the security. The greatest and most common mistake is to be unduly influenced by what has already happened, especially in the securities markets, and to assume that it is an index of what will happen next.

The prepared statistical barometers are useful in the sense of placing before the reader a convenient summary of recent financial and industrial facts. But they are too narrow. Conclusions taken from compilers are weakening and sap the power of independent judgment. One difficulty is that the forecasters have to forecast; that is their trade. But there are times when no forecast should be made—when doubt should be frankly acknowledged, precautions taken, and the situation waited out.

It is also true that forecasting opinion, as commonly circulated, is never more dangerous, or more likely to be wrong, than when it is unanimous. There may be forecasters and prepared barometers free from the contagion of general opinion. Nevertheless the true investor learns to look through his own glasses; forward at what is coming more intently than back at what has just happened.

Sources of Information

Original sources of information are preferable where time suffices to follow them. These are, primarily, the bank statements, the daily quotations of prices of securities and commodities, the rates of interest, rediscount and exchange, the financial news of daily and weekly journals, the annual reports of corporations, and the statistics of the investment publications. As secondary sources there may be added the monthly *Bulletin* of the Federal Reserve Bank of New York, remarkable for the clarity and scope of its figures and analyses, the *Federal Reserve Bulletins* issued from Washington, the monthly reviews of member banks, the reports of the Secretary of the Treasury and Comptroller of the Currency, and the summaries of foreign financial news given in such periodicals as the two London publications, *The Statist* and *The Economist*. Probably the most informing of all sources, although not always available, are the official or semiofficial utterances of the Federal Reserve Board, put forth for the purpose of acquainting the entire country with the current situation, its progress, and its prospects, from a banking viewpoint.

From these main sources and from others there is drawn a great store of statistics commonly classed as barometric. Among these may be mentioned the banking details—the rediscounts, loans, deposits, gold holdings, note issues, clearings, and reserve ratios—the railroad earnings and car loadings, building permits, steel tonnage, crop reports, imports and exports, price indices, volume of securities issued and volume of trading and range of prices, the figures of savings bank deposits, employment, and wages. The Statistical Abstract of the United States summarizes these and similar figures year by year. Current figures are published covering every phase and form of commercial, industrial, and financial activities.

Of these statistics the financial figures are more truly barometric than those relating to trade and industry, most of which refer to the past instead of the future. By inference only, as exhibiting the most recent phase, may they be regarded as revealing the probable phase next to follow, in its due sequence. But they are quite apt to be confusing because of the overemphasis placed on their value as indices of existing conditions. It is difficult to read them with the necessary degree of imagination.

Steel and Pig Iron

Steel, for example, has been held up as the ideal barometer of business conditions. It does show the rise and fall of the tide. But steel orders are a result and not a cause of the financial conditions with which the investor is concerned. The Pittsburgh district is notoriously wrong in its estimate of the business prospects and the course of the securities markets, the local speculative enthusiasms reaching their height on steel operations rather than on the true outlook. Carnegie made most of his historic fortune by going counter to the view of those who dwelt too close to the blast furnaces, buying up properties cheap when the fires were dead, and selling out at a time when all of the stacks were in full blast. It is true that in a sense, and especially during the first revival after depression, the incoming of orders for steel, and the production of pig iron, may be barometric and indicative of a widening circle of activities elsewhere, until the steel is made, fabricated, and erected in new construction. But the interpretation requires perspective. The construction demands, for which much steel is used, are those that stop most abruptly, and often earliest, when financing begins to be impeded by scarcity of capital and high rates for lending. Under the most favorable circumstances the indications of the steel industry do not anticipate either the stock market or the banking figures.

Crops and the Crop Reports

The crop reports, in their proper place, are a more substantial and useful barometer. Crops are always at risk, the doubt diminishing as harvest time approaches. The stock market is influenced by the appraisal and reappraisal of the crop prospects, and more strongly as the season wears on. After midsummer there is a direct effect both on sentiment and on securities prices. Good harvests have a sustaining influence on business through the next six months, and have been known, when conditions were suitable, to turn the tide from depression to activity. The purchasing power of the farmer, the largest single element in the population, is an important factor in itself. The granger railroads, and indeed all railroads, expect increased earnings from a bumper crop tonnage. Unlike most of the non-financial figures the crop condition reports are truly barometric for the investor, because they relate wholly to the future and not to the past.

Systematic Inquiry

In addition to the general and published statistics much may also be learned by systematic inquiry. The credit departments and executives of banks have organized methods of keeping themselves informed, being naturally in touch with a large number of commercial and industrial companies. The heads of all large businesses use such facilities as are at their disposal for learning the developments affecting their trade. In every direction men are to be found with special knowledge of their own business and of experienced judgment on matters within their own observation. The investor can thus establish personal contact with the progress of matters in which he is interested. Trade conditions, politics, prospects for tariff and tax legislation, the trend in foreign countries, the drift of sentiment at home, the special local situations, the undercurrents that do not find their way into print, can be ascertained by word of mouth. The diligent and discriminating investor may supplement what he reads and thinks by what he hears, until the habit is fully formed of keeping *en rapport* with what is going on.

Use and Abuse of Statistics and Figures

There is a use and an abuse of barometric statistics and figures. Some minds absorb and remember more easily than others. But it is better for any mind to know what are the salient and important facts, to learn those few facts, and to reason correctly therefrom, than to weigh itself down with a mass of unilluminating details, especially the dead details of events already past. The detail and sharp outlines of the vital facts are necessary; the rest should be background, where details are not only useless but destructive of perspective. The mental processes should be selective and logical, directed at action, with memory aroused and quickened by interest and concentration on essentials. They should by no means be the processes of prodigious memorizing and scant reflection, with which statistics are much abused. Figures and what figures mean are two different things. There is a futility of information, consisting of spreading thin and seeking always some new thing to put in the mental storehouse; and there is great utility in knowing what one needs to know and thinking clearly about it.

The statistical records enumerated in this chapter are too numerous for memory—too voluminous for the average man to follow closely. They are given as sources of reference from which to draw useful information. With the general and most important statistics there should be sufficient familiarity to permit of comparison and inference—sufficient knowledge so that the meaning of changes is understood. There must stand out from these broad expositions of general conditions the critical, decisive factors in the changing progress of the current financial position. First comes selection, and then, as may be necessary, research into the related details.

The Process of Mental Selection

Living in the familiar atmosphere of the main and significant facts brings about, automatically, the process of selection. Any marked change, distorted relationship, or news out of the ordinary course arrests the eye. The mind concentrates upon the change as a center of movement. The why and wherefore are reasoned out, the effect estimated, the secondary circle of consequences guessed at and such details as are available seized upon. Then later, as events unfold, they are compared, almost without conscious effort, with those considered logical when the moving cause was first discerned. The investor finds himself, in the most natural way, watching the unrolling of the scroll of financial history—eager to see and learn. He can discover no better arena to "seek the reason of things"—no broader opportunity to "reach the field with a trained power of judgment."

Some are born with the gift of turning information into action; others must labor to acquire it. Acting upon insufficient information is a vice, but not more common or more aimless than the pursuit of information without action. Decisions are to be taken with regard to investments. The figures, the statistics, the barometers, are aids to making up one's mind to buy or to sell. They may be availed of in deciding, first, when to act, second, whether to sell or to buy, third, the general type of security to be bought, and, finally, the more specific choice of securities—even the actual bond or stock.

Primary Function of Barometers

The time when to buy or to sell is at or near the point of change, especially of the greater changes. To forewarn of these is the primary function of barometers, and by all odds their most difficult. This, their most important use, has already been touched upon in previous chapters, and will be discussed in more detail in later pages. The interpretation of current barometric figures is always a matter of judgment—of balancing known factors and adding into the scale a guess at the unknown. In the past financial men have almost always differed in their opinions, even on the verge of the great crises. Yet the reading of the figures of the past also shows that these greater changes were clearly indicated before they came; that the known factors in plain sight of everyone's eyes generally outweighed the unknown that were guessed at in forming opinion. The interpretation will never be a perfected science; but by paying attention to the major indications, particularly those of credit, and shutting out the confusing countercurrent of the lesser elements, concrete results should be had.

The type of securities to be bought depends upon the barometric indications in considerable degree. In times of expansion stocks will go up. In the high money periods to which expansion leads, bonds will go down. In the liquidation that follows, the soundest of short-term maturities are needed. In the depression long-term bonds may be depended on to rise. One may then also pick and choose among stocks, which as a whole, excepting the cripples, have their pronounced rise on the eve of the business recovery. While the investor cannot afford, like the speculator, to commit all that he has to his current hypothesis of the probable course of business, it is still of obvious advantage to him to know where the times are increasing his risks and in what direction they favor his profits. Even where he maintains, as he should, the protection of a solid substratum of bonds and prime securities, and insures against risks by diversification of his investment, nevertheless these limiting factors of safety will not annul freedom of action in accordance with the barometric outlook.

The Secondary Function

The narrowing down of the choice of securities to be invested in, and even the picking out of the actual bond or stock, is the secondary function of barometric figures, and on the whole much the easier function. It is not altogether a conclusion following the major premises of time and type, although dependent on them. But after the hypothesis of general business conditions has been formed, the hypothesis of conditions in any one particular business is something much sharper and more distinct. There are always plenty of special data applying to the one business, as soon as the trend of the general conditions has been arrived at.

Following the financial news creates a composite barometer of the condition and prospects of the several great divisions of enterprise. The railroads, public utilities, steels, coppers, textiles, equipments, and fertilizer, oil, automobile, coal, and other industries, fall into separate compartments, envisioned as facing separate problems. According to the state of business, the investor will think well of one group and poorly of another. To illustrate by the broadest grouping, the rise in commodity prices early in 1919 spelled prosperity for most industrials, except munitions factories, and depression for all utilities and railroads. The divisional barometer indicates where improvement is to be expected, and where retrogression.

Crops, for example, may augur well for the northwestern and central western railroads. Settlement of a coal strike, with increasing steel tonnage, may presage increased earnings for Pennsylvania and Baltimore and Ohio comparable to increases previously secured by New York Central and the transcontinentals from a revival of general business. Wage and rate decisions may affect the prospects of all railroads, but from the investor's standpoint two classes in particular, the stronger dividend-paying rails and weaker roads whose bond interest had not been too abundantly covered. Heavy stocks of refined copper, with slack consumption, may depress the issues of the companies producing and refining copper, and the gradual absorption of these stocks may bring recovery long in advance of the renewal of active production. A period of curtailment at declining prices may fall sharply upon automobile, textile, and companies producing luxuries, which stand to lose both on their business and on their inventories. A period of extravagant spending may bring prodigal wealth to the same companies. Great local speculations in Japan and in Cuba may send silk and sugar soaring, and be followed by collapses requiring a long time to mend because unsound conditions have been produced.

Effect of Change upon Industries and Choice of Securities

The ramifications and collateral consequences of any considerable change are great, often affecting not one industry alone but a chain of industries, and in the end more than one group of securities. The important developments are in the current news, coming before the reader in time to be used in buying or selling securities, provided the correct deductions are drawn. Some shrewd investors in stocks prefer to confine themselves to the specific indications affecting particular securities, as being more positive than the barometer of general conditions. They are often sufficiently well informed on a group of chosen industries to be able to pick stocks of the best promise. Their protection against general changes is not complete, but is better than it looks because a correct summing up of the prospects of any one stock or group of stocks will probably include major factors affecting other stocks.

In time of depression it is useful to be able to judge which group of industries will be quickest and surest to revive. It is true in a broad sense that all industries and all securities come up together in the ultimate revival of activity. Nevertheless there is precedence among them. Something is to be gained by avoiding industries and companies that have come into a bad and unsound position and choosing the securities of those that are sound at bottom but have slowed down. Thus in 1920 and 1921 the steel industry was slowed down to the point of demoralization, but the companies were sound and very strong in quick assets. The fertilizer and farm implement businesses, on the other hand, conducted on long credits to farmers, had so much money owed to them by poor debtors that their resuscitation depended on a deferred rise in the value of agricultural products. In general the raw material industries are worse hit by depression than those making finished products; the prices of raw materials begin to recover first but the securities of the finished product companies are a more likely choice for early buoyancy. Industries supplying ordinary consumption make an approach to normal sooner than those serving construction. The vigorous rise in stocks rests, however, with the awakening of the latter class of industries.

It is still more useful to pick out companies that are in position to resume active business with full power and are in an industrial group considered to be sound. The large companies publish complete annual reports, and the prominent bonds and stocks are well known. The principal issues may be compared one with another as to price, risk, and the possibilities of profit. From a general analysis of the business situation one may proceed, then, to groups of industry, and from groups to the particular bond or stock. In a similar manner, when prosperity has been experienced, the running barometer should guide the relinquishment of securities and the avoidance of risk.

In selecting securities, by whatever method, the first and foremost precaution is to make sure that the company itself, into which funds are put, is solvent and safe. The well-known and standard companies, which follow careful financial policies, afford the investor a wide scope for decisions and action. The lesser companies, with small means of tiding themselves over difficulties, either by bank borrowing or issue of securities, are much more apt to develop individual weaknesses, and when they do, holdings of their stocks or bonds are unmarketable except at great sacrifice. Questions of dividends or of ability to pay interest are wont to become suddenly imminent upon an unfavorable change in business conditions, and it is a sound rule to give these questions a wide berth.

Statistical Study of Phases of Business

The Harvard University Committee on Economic Research is making a genuine and serious attempt to apply statistical methods to the successive phases of business progress. By collecting data of business activities, and plotting and comparing curves, it has made a start toward analyzing the sequence of events. While still somewhat occupied with technicalities and preliminaries, such studies should ultimately give a clearer insight into the causes of change in business and securities.

Interesting tentative conclusions have been reached for the sequence of events in the crises of the period 1903-1914. Securities reached maximum prices "when the rate for capital was at a minimum"—bonds first and then stocks. Building permits and New York bank clearings reached their maxima four months later. Two months later pig iron, outside bank clearings, imports, and orders of the United States Steel Corporation reached the top, while business failures were at a minimum. Two months later railroad earnings and commodity prices were at the peak, bank reserves were at the low, interest rates were up, and security prices at bottom. Four months later loans and deposits touched bottom, and bank rates were at the highest point. The period under review included the panic of 1907, the liquidation of 1903, and the lesser reaction of 1910.

The data are incomplete, being for a short period only. The observations, and the curves that accompany them, are of interest but not intended to be accepted as giving the exact time and order of precedence. The two important facts are, first, that bonds and stocks precede, and, second, that the trend of the bank interest rates, its rise or fall, precedes the other phenomena with regularity, although its peak or lowest dip may follow them.

Legacy of the War

The war and its sequel have left a legacy of figures that are barometric in the deepest and widest sense. For long years they will result from time to time in great changes in values, both those of slow evolution and probably also those of sudden disturbance. They constitute fundamentals of a new era, in that great cycle extending from war to war that overshadows the norm of prosperities and depressions. To these basic facts the barometers of lesser change must be adjusted with due sense of proportion. While the first years of peace are replete with unusual opportunities, it is also a period demanding alertness, courage, and constructive conservatism.

The United States

As for the United States, the war has left, in 1922, a little more than $2,000,000,000 of federal reserve notes outstanding, approximately $23,000,000,000 of government debt, federal expenditures at the rate of $5,000,000,000 in 1921 and $4,000,000,000 in 1922, and a budget of $3,500,000,000 for 1923, with taxation of productive capital just moderating from the point of consuming industrial vitality. Other war burdens are being carried in the high cost of living, high railroad rates, and the forced inequalities of pay that come from distorted price levels. Still other burdens may be shouldered in the form of donations to soldiers, of government aid to shipping, farmers, and labor, and of tariff to manufacturers, and of the false adjustments that a disturbed economic structure passes through before it reaches a state of equilibrium.

On the other side of the picture the most sustaining element is that so vast a war implies a long period of peace. For the present the great nations are sated with wars. The ability of the United States to carry on peaceful enterprise and do business in volume has been increased by the very strain of the war. Since 1913 the resources of the banks have been doubled, being now over $50,000,000,000. As recently as 1895 the combined national and state banks had only $6,703,544,084 of resources. This greater banking power, employed under the new conditions of the federal reserve system, may well be set down as a constructive factor of the first magnitude, stimulating, enlarging, and leading to a new and more intensive development of our civilization. As to the machinery of production it has been increased, not destroyed, by the war. The population is intact. The country has escaped the utter exhaustion of those countries that were melted in the heat of the conflict and shattered by its forces.

Europe

In Europe the postwar picture is less favorable. It is not only that man-power and wealth have been destroyed, that currencies have been debased, that budgets have not been balanced, and that taxation is crushing; there are left unsettled questions of vital importance—the disputes over which may produce crises and the settlement of which may cause an uplift that will be felt everywhere. These issues, like the German reparations, the world loan to Germany, the collection or remission of debts from our associates in the war, and the arrangement of a *modus vivendi* with Russia or Turkey, loom up from afar, become acute, and finally exert a forceful impact upon the state of business here as well as abroad.

England has recovered her position in international trade and finance with amazing strength and skill. France, pending the reparations, has fallen into the error of spending and not balancing her budget, of taxing too lightly, and of giving too small energy to rebuilding trade. It is a people of strength and endurance, whose test is still to come. Holland and the Scandinavian countries, which have passed through rather deep waters in both industry and banking, have balanced their budgets and are in position to work ahead. Germany, with its billions of marks, and Russia, with its trillions of rubles, have passed from budget to printing press. International agreements for reconstruction may be reached with Germany, and possibly placed in the way of beginning with Russia; or they may be postponed. Of the struggling new nations in Central Europe and the Near East it is too early to speak. Some, like the Czecho-Slovaks, are working; others have hardly done with quarrels. More certainly even than the news, the current rates of exchange on these various countries will be barometric of changes present and to come.

The world figures of debt, taxation, governmental expenditures, expansion of bank credits, and inflation of currency, evidence the most noteworthy financial upheaval of history. The readjustments will affect our trade and industry. The loans that have been and will be in still larger measure called for, will affect our finance, draw down the excess of gold now in reserve here, and tie our prosperity in with the well-being of European, South American, and other countries. We shall not live entirely to ourselves. The barometer of affairs here must be read in terms of the greater civil and financial changes abroad, and must sense disturbance, as well as recuperation, from all quarters of the globe.

CHAPTER VIII

CORPORATION REPORTS

Known Companies and Securities

The real opportunities to choose and buy securities are non-spectacular, being among the familiar and well-tried companies. The surest profits lie with the upbuilding and growth of established industries, and the greatest gain from following the incoming and outgoing tides of business is in the old, worn channels. The occasional instances of great profit from venturing into new and untried enterprises are the exception. The lure of financial adventure is followed at the risk of loss.

The doctrine of *caveat emptor* has been distorted out of recognition, but covers the seed of a useful truth. The man who makes money out of his purchases, whether he buys horses, houses, merchandise, or securities, is one who knows all about what he is buying. The man who does not know ends by buying something he does not want and cannot get rid of. It is easy to know a few standard securities, while it takes time and work to know a large list of securities; and it is impossible to know the prospects and ventures that are just being hatched by advertising and flotation. The error that leads people to buy the unknown is that they have not taken the trouble to discover that profits lie, also, in the known.

Unknown Companies and Securities

Skepticism is not only justified but is imperative when unusual profits are promised in return for a cash payment.

That is the way the money is being raised. Cash need not be raised, however, in so costly a manner, with such lavish alienation of profits from the present owners of the properties, if these profits, or any profits, are assured and recognizable by the skilled buyers of the great market places. So it is that glittering offerings, in companies of more prospects than history, are made for the purpose of selling properties to the public at an artificially high price.

Most consolidations go in the same way, strategic advantages and economies yet to be demonstrated being pushed forward as the lever. In a measure, also, the stock issues of a distinctively flotation period partake of this same characteristic. The best illustrations in recent years are the great industrial promotion period of 1899 to 1901, the mining stock boom of 1906, and the preferred stock epidemic of 1919. Stocks that become the fashion because of temporary booms in earnings are also commonly purchased above their real worth. Even with bonds the recurrent waves of buying enthusiasm are certain to bring to the public a proportion of issues that are overpriced and undersecured.

Annual Reports a Basis for Investing in Values

The buying is better when the crowd is few and the seller is not advertising. The values are better when they can be studied and understood from the annual reports, and can be aligned with the current business outlook. The opportunities to purchase at an advantage, if not continuous, are nevertheless frequent and recurrent. The market, with its list of securities, is with us always, day in and day out. Its best purchases are among well-known conservative corporations, whose established financial policies are sound, honest, and provident, and which are devoting energy and prudence to building up their business. It is not necessary to jump into investments hastily. Excitement and artificial prices are to be shunned. The temporary movements up and down do not matter. What is needed is buying on values, at a price where one is sure he has his money's worth. The quick turn may be against or with the buyer; it cannot be foretold. But the long pull, if the security has the value, and the price it is selling at is moderate, will be in his favor.

In order to appraise the value of securities the investor must be able to analyze annual reports, understand the problems confronting corporations, grasp the progress made in meeting them, compare the issues of one company with those of others, and choose the greater value for the lesser price. The true reading of the statements of account published by companies is the foundation of corporate investment.

Three Main Features of a Corporation Report

A corporation report contains three main features with the accompanying explanatory matter—(1) a balance sheet, (2) an income account, and (3) a profit and loss statement.

The balance sheet is a schedule of assets and liabilities. The income account is a record of earnings of the fiscal year. Profit and loss is a summary of debits and credits of special character, pertaining to prior years or otherwise dissociated from actual operations. It includes occasionally current items, such as dividends, that are not stated in the income account.

The first two of these statements are the more important. The balance sheet shows the company's engagements and the resources it has to meet them. By comparison with previous balance sheets it reveals whether the company is becoming stronger or weaker, what the moneys earned are going into, and what other money than earnings has been received from borrowings, issue of stock, reduction of inventories and accounts, or sale of property. The balance sheet shows whether the company is strong or weak in quick assets, clean or clogged in current liabilities, heavily or lightly burdened with funded debt, and moderately capitalized with stock, or over-capitalized, in proportion to its business.

The income account, the most widely published of the statements, shows the results of operations—how much was earned and how much was paid in dividends on the stock. It furnishes a very important half of the story, but does not tell what the earnings have gone into, except as to interest, dividends, and appropriations. The earnings may be in disposable cash, or may have been applied to inventories, receivables, or debt, or may be locked up in new construction. To find what the company is doing with its money, balance sheets also must be consulted. The most useful application of the income account is in determining the amount earned that is applicable to interest and other fixed charges in proportion to the payments, and the amount earned that is applicable to dividends.

The profit and loss account is informing chiefly as a check on income accounts, setting forth the corrections and alterations made in incomes of previous years. A substantial surplus in the profit and loss account is sometimes indicative of stock dividends, or some other form of disbursement. But more usually the figuring of book values, or prospects, from the accrued surplus is of little or no value. Surplus represents bookkeeping history. What is divisible among stockholders stands in the current accounts and cash of the balance sheet; what may be given them without division, by means of the stock dividend, is to be deduced from the earning power shown in the income account more directly than from the accrued surplus.

The Analysis of Corporate Reports

The story of the analysis of corporation statements has been told and retold. Works on accounting and auditing discuss to a certain extent what figures mean. There are other books of analysis bearing more broadly and directly on finances and securities. Among these Woodlock's "Anatomy of a Railroad Report" and Greene's "Corporation Finance" may be mentioned as short and to the point. To be able to analyze the important facts of a corporation report quickly and surely, and to understand thoroughly the significance of figures, is basic to knowledge of the values of securities. No extended exposition of method can be given in these pages. In accordance with the general purpose of the book the discussion will be limited to an outline and summary of the simplest type of analysis.

The Balance Sheet

The balance sheet marshals assets on one side and liabilities on the other. Each of these two categories is divided into two principal classes, current and permanent, or fixed. While balance sheets differ in form there are certain conventional arrangements now generally used which can be easily followed and understood; railroads and public utilities use forms of balance sheets prescribed by the supervisory commissions. The order of the assets is usually—permanent, current, and deferred. The order of the liabilities is—stock, funded debt, current and deferred liabilities, reserves, and surplus. These are the elementary groupings, of which the larger definition and subdivision will be discussed in order. It may be observed in passing that two of the items on the liabilities side are not liabilities. The stock is ownership, not debt. The surplus also pertains to ownership, or equity, being a balancing figure for the excess of assets over debt, reserves, and stock.

Assets

Property Account.—First among permanent or fixed assets comes the property account; or with railroads and tractions the road and equipment accounts. This represents the plant from which earnings are derived by operation. Occasionally some unused portion, or piece of real estate, may be sold. Essentially, however, the plant is not disposable to pay the current debts of a continuing business. It is only salable in liquidation or under foreclosure to pay debts, after the stockholder has relinquished his control of the enterprise. Its value to the stockholder lies primarily in its earning power. Its salability is of value to the creditor and bondholder. But even here its earnings constitute most of its value. Dead properties sold for junk do not bring much.

Much confusion has always existed, and still exists, between cost and value. The confusion has been embodied into law and is being followed to strange conclusions by the Interstate Commerce Commission in its railroad valuation. It permeates the general mind and leads to false inferences regarding water in the property account. The property account represents history, often extending back for many years. It may or may not include an infusion of good will, or marking up of figures. The mark-up, if made, may or may not be representative of values as developed by the earnings. The property may be overvalued or it may be undervalued. Nowhere in bookkeeping is more latitude permitted than in the figure set up for the property account. It usually represents cost as measured in terms of the securities issued for the acquisition of the plant, together with the cost of subsequent additions, and does not represent an appraised or sale value. One needs to know the history of a company to understand what the book figures mean—the earnings to understand the going-concern value, and the amount of the physical properties, as compared with similar units of other plants, to determine whether there is inflation.

Requirements of the Property.—The property account is not cash in hand or liquid assets. Instead, it consumes money for additions and equipment, or, if run down, for extraordinary replacements and repairs. The earnings of the property reported as available for the stock must always be viewed in the light of the requirements of the property itself. Nominal profits and disposable cash are not the same.

Among the requirements of the property are the additions to property account. These may be shown separately on the balance sheet; or if not, they can be computed from previous balance sheets. They show the consumption of cash, from whatever source derived, in the increment of the plant. In England additions are capitalized. In the United States a considerable part of them is paid from earnings. Sound practice is exemplified in the motto of the Pennsylvania, "A dollar for improvements, a dollar for dividends." No other course has been safe in a country of rapid growth and severe depressions. Companies may be ranked, as to both safety and prospects, by their policy toward ploughing earnings into additions and expenses into maintenance.

Investments.—The next item of assets is usually investments. Some are salable, some not. Investments range from quick assets to extremely slow assets, and from the most liquid and positive values to worthless paper. They may be Liberty Loan bonds or Treasury notes, available for instant realization, bonds of the corporation itself held for a market, or permanent holdings of stocks and bonds of subsidiaries, representing the amount of cash that has gone into these outside properties. Losses of subsidiaries may be concealed in this account, as well as in the "advances to subsidiaries" account, as proved to be the case in the historic frauds of the Atchison bookkeeping thirty years ago. The value and nature of the investments should be looked at. The question should be answered whether they are a cash resource, a permanent asset held for the production of income, or a cash-consuming drain.

Receivables.—Accounts and bills receivable should, of course, represent collectible items, in volume proportioned to the amount and kind of business done. Excessive receivables, or unexplained increase, bring suspicion of inability to collect. Failure to write off for slow and bad debts hides losses and piles up a dead asset. The proportion between earnings, or sales, and receivables should indicate an active turnover of collections, according to the terms and nature of the business.

Inventories.—Inventories should be priced at cost or market, whichever is lower. No profit should be taken until it is earned. No loss should be unrecognized. Volume depends on the times and upon the kind of business done, usually bearing a rough, normal ratio to the annual sales. The inventory of product has all to be sold, and sometimes an idea can be formed of what is going to happen to the company by seeing how big it is. Railroads and utilities carry relatively small inventories—consumption inventories of materials, supplies, and fuel. Manufacturing and trading companies carry larger inventories, mostly production inventories of raw materials, semifinished, and finished goods.

Industrials with seasonal purchase of raw material, or sale of finished product, of which there are many, carry heavier inventories at one time of year than at another. The annual report may be so timed as to show the low point of inventories and of borrowings. Industrials of long manufacturing processes naturally keep larger inventories than those of short processes. Much the same distinction should be drawn as with the accounts receivable, where some industries sell for cash or on short date while others, as in the farm implement trade, customarily allow very long credits. What is normal to the business should be considered. If the management is to earn money it should keep its investment in inventories, as in everything else, fairly active and turning over reasonably well.

Where there have been great downward changes in the general price level, one should make sure that the inventory has been thoroughly written down. If there has been an upward change, it is equally important to know that the inventory has not been written up and paper profits credited to income—to make sure that the expectation of profits from bettered conditions is ahead and not behind. Industrials suffered inventory losses in amounts running into the millions of dollars in 1920; some recovered part of this loss in the subsequent sales, but with most the question reduced itself to selling inventories at prices less than cost. There is always a price risk in the producer's and trader's inventory. That is a leading reason why the condition of industrial and trading companies may change more quickly and radically than the utilities and railroads, and why their securities are less stable and more speculative.

The situation as to inventories can be checked up in a general way by comparison with other companies in the same line of business. It is sometimes useful also to estimate actual, or potential, profits or losses by applying the approximate price changes to the principal items, or, if quantities are unknown, by making a rough percentage adjustment. The most useful thing in studying a company is to know the fundamental fact that rise in prices of product is a harbinger of good earnings, while decline is likely to result in a poor or even a bad year.

Cash.—Cash on hand and in bank is one of the satisfactory items not subject to review. With companies doing an international business one should look to see how foreign currencies are reported—to make sure that all exchange losses are disclosed. As a rule cash is a trusted item, and not doubted. Only in cases of deliberate fraud have fictitious cash items been included, or the count of money been falsified.

Deferred Assets and Suspense.—Deferred items include such matters as prepaid insurance and interest, discount on bonds and notes to be amortized in the future, debits to suspense, as, for example, pending completion of construction jobs, and doubtful assets continued in hope of eventual recovery. This is ordinarily one of the minor categories.

Good Will.—The assets of every corporation have individuality and variety. Thus some companies carry "good will" as a frank statement of original water; others, less frank, have large patent accounts; still others have simply marked up their plant accounts and said nothing. Corporations intending to make a good showing carry patterns, hand tools, jigs, dies, and the like as permanent assets; more conservative companies charge these special appliances to the close of the first operations in which they are employed.

True Statements.—Increases and decreases in the several classes of assets are always informing. Analysis usually discloses the character of the management. The most important thing about the statement of assets, and in fact about the balance sheet in general, is to know that it tells the truth. The statements of the larger companies are certified to by independent auditors. The thing next in importance is that the statement should be clear and understandable. Items of doubtful meaning are also items of doubtful value. Items of concealment, such as occur in the complicated statements of a certain type of holding companies, are items of suspicion.

Liabilities

Stock, Bonds, and Notes.—On the liabilities side of the balance sheet the first item is stock, divided into its classes, and the second item is funded debt, or bonds. These, together with note issues, are the securities of investment. Being of the first importance, they require a separate chapter. In discussing them as balance sheet items it should again be observed that the stock is not a debt, has no due date, and does not require to be paid off unless the company is dissolved. The bonds are long-term debts with due dates, and until they mature nothing is due but the interest, and, if so nominated in the bond, a sinking fund.

Notes and bills payable are short-term liabilities with an early due date. The outstanding fact is that they must be paid. They may also be, and often are, renewed or refunded. Sometimes, as between affiliated companies, they are to be construed as standing and permanent loans. In the ordinary course of business, companies should clean up their loans from time to time; if the type of business is one that is customarily carried by the banks on secured loans, the companies should at least preserve an ample ratio of quick assets to quick liabilities.

Payables.—Pay-rolls and accounts payable represent the ordinary bills of the business. No company, however wealthy, is ever quite free of them. Pay-rolls accrue between pay-days, and accounts payable before vouchers can be audited and paid. Strong companies are prompt pay with their accounts. They take advantage of cash discounts. Companies running behind show it first in the slowness with which they pay bills. When the accounts payable have run up too high, there is a note or bond issue, or perhaps insolvency. The item is especially symptomatic of weakness, since an excessive amount of current bills is expensive because cash discounts are not taken, and therefore indicates poor credit at the bank. Nevertheless there is no universal gauge of the proper volume of the accounts payable. It varies with the business and with conditions.

Railroads and utilities may make seasonal purchases of ties or rails for the spring and summer replacements, or they may be buying material for a major improvement or extension; otherwise their accounts for fuel, lumber, and other supplies are fairly regular and cover the needs of a month or two at the most. Pay-rolls cannot be allowed to run, unless the company is in desperate straits, and the normal figure is approximately a two weeks' accrual of wages. Open accounts payable, if larger than usual, are usually reflected in the inventory on the opposite side of the balance sheet, unless the company has been running behind or has incurred capital expenditures not yet financed.

With the industrials and trading companies the accounts payable are on a different basis. Every trade has its own usage in extending time on purchases. Companies that extend credits to their customers and thus carry large accounts receivable may, in turn, lean on their own sources of supply for credit and have correspondingly large accounts payable. Thus, the cotton factors are often, in effect, financed by their mills. Certain other lines of business rely upon bank loans. But the strongest and best industries provide themselves with sufficient working capital to pay up the bulk of the normal requirements.

True and Certified Statements.—Liabilities are to be regarded from a different viewpoint from assets. With the assets the question is what are they worth. They are good only to the extent they are realizable and available. The liabilities, on the other hand, are good, as against the business, for 100 cents on the dollar. The question is not what they are worth, but whether any have been omitted, including contingent liabilities. Here again the auditor's certificate is helpful. The analysis of liabilities should reach far into financial condition, policies, and manner of payment, while that of assets should go into values.

Net Current Assets.—By "net current assets" is meant the excess of current assets over current liabilities. The figure is not so important with railroads and public utilities, possessed of great fixed assets and with nothing on the shelves to sell, although even this class of companies should have enough net current assets to do business with. But the industrials and trading companies carry in this figure a main essential of their business. It represents working capital, the margin of safety for bank borrowing, and the available resource for protection of interest and dividends. The course of the net current assets from year to year, and their ratio to loans and accounts payable, are significant milestones of progress.

Reserves.—The reserves and the surplus are the last items on the liabilities side of the balance sheet. The reserves for property purposes do not properly belong in the schedule of debts, but are important and illuminating figures. Such reserves are essentially appropriations from income, or accumulations piled up through the expense account. Other reserves, however, are merely estimates of true liabilities, as for claims and lawsuits, taxes and insurance, and dividends declared but not yet due, a true liability enforcible in the courts. Reserves for bad debts, contingencies, and losses are perhaps not to be classed as liabilities so much as deductions from assets.

The reserves for improvements and other property purposes are usually set up out of income or surplus, either for a specific object or as a deduction from, or offset to, the value of some asset owned. With railroads and utilities the depreciation reserve, a deduction from the value of property, is set up out of expenses. Under the present tax laws the industrials and mining companies are also charging depreciation, depletion, and amortization to expenses, where formerly they charged income or surplus. These property reserves are useful figures. In reading them one should take note whether they were set up at some time in the past as an offset to the gross total of the property account, or are a current reserve, with charges being made to them for replacements. The former may be an old, dead reserve; the latter is a live one, involving the expenditure of money on upkeep.

Surplus.—Surplus comes last. Companies cannot pay dividends out of an accrued deficit and it is therefore essential to dividends that there be a surplus. The bearing of a book surplus of magnificent size upon the dividend policy is a question of what it means; it may have arisen from mere bookkeeping in marking up the plant account, or it may have been built up out of current earnings. A watered surplus is of no especial value. An earned surplus means something. It at least shows the ploughing of earnings into the business. In the end it may mean a stock dividend to compensate stockholders for the ploughed-in earnings. The payment of stock dividends is, nevertheless, more a matter of current earning power than of accrued surplus, the declaration of such dividends being designed primarily to increase the annual cash disbursement to stockholders without increasing the rate, and at the same time to "cut a melon" without subjecting the beneficiaries to punitive taxes. The method has been followed, legitimately, by companies whose prosperity has proved excessive in proportion to their capitalization. It has been followed more questionably by companies interested in selling their temporary prosperity to the stock market. Most strong companies are content to keep a substantial surplus and to confine dividends to regular cash payments.

Income Account

The second of the corporate statements, the income account, shows sales or revenues, the operating expenses or costs of doing business, the taxes, and the balance of net earnings remaining after these deductions. It shows, then, the interest charges, dividends, appropriations, and surplus. Thus the income account gives first the results of the business, and second the use made of those results by the company. It is becoming increasingly customary to publish detailed periodical statements of income.

All income accounts were distorted during the war period. Volume was inflated during the four years 1916-1920, became subnormal in 1920-1921, and is recovering to normal in 1922. Price and cost levels were fantastically high until the collapse, and are still passing through long processes of readjustment. Many industrial concerns made money out of high prices on business extraneous to their regular field, created by the special demands of war and speculation; afterwards they lost money on lack of business, low prices, and inventories of high cost, and have now returned to the endeavor to make money on their normal business. Railroads lost money on expenses during the inflation and are now recovering lost ground because rates were not reduced violently when prices collapsed and because traffic has returned.

It is thus a time of more than usual difficulty in judging values from the recent record of earnings. There was an upheaval, with after-effects. In order to orient one's view, the pre-war earnings must be taken into account as evidence of the established basis of the business, and the net current assets as evidence of the present ability of the company to do its customary business. With any company the figures for a period of five to ten years should be taken and the record observed as a whole with respect to progress, continuity and fluctuations, the amount kept in the business, and the amounts paid to security-holders. It should be especially noted whether the war exigencies have forced a company to enlarge its capitalization, or to issue bonds or notes. New issues were often made for war expansions or to pay debts in order to keep afloat, and not for the purpose of producing new earnings. The carrying charges of the new securities are in these cases to be considered as a probable deduction from the old earnings.

Sales or Gross Revenues.—Turning to the details of the income account, the sales or gross revenues represent the money volume of the business done. A healthy business grows; a business lacking in vigor stands still, or shrinks. It is so difficult to cut down expenses to fit a reduced business that the usual result of a minor falling away in gross is a major falling away in net. Falling behind competitors ends in a struggle to keep alive. The records of the last few years are abnormal both as to quantities and prices. To determine whether a business is going ahead or falling back one should look at other companies and longer records.

Expenses.—Expenses include two main classes—those of doing the business and those of maintaining the plant. Good management is economical in the first and liberal in the second. Successful companies spend money for what they do carefully, methodically, and without waste. These are also the companies that keep tools sharp for work, replace old machinery and equipment with what is efficient, economical, and modern, and set maintenance before dividends. Companies on the road to failure yield to the temptation to make a showing by undermaintaining their plants. In the end the costs of doing business run up according as the plants have run down. When the situation is faced, there are arrears of maintenance to be made up, money to be provided for improvements and rehabilitation, and, if not outright disaster, there is at least an era of struggle and no profits. The culmination of neglect of plant is usually sudden—a shock to unobservant followers of dividends.

Units of comparison for operating expenses have been evolved for railroads, utilities, and some of the larger industrials. The statistics of operation published in the annual reports of the former are very full, showing work done and costs per unit of the different items of expense—coal, oil, water, wages, repairs of locomotives and cars, and maintenance of track. The understanding of these statistics is most useful, and may be arrived at most quickly by comparing the figures of two similarly situated railroads. For the industrials there are less detailed statistics. General facts, such as the lower costs and higher profit per ton of the Steel Corporation, may also be arrived at by comparing with reports of competitors. The operations of almost any company can be analyzed with a little effort.

Maintenance and Depreciation.—Comparison of maintenance expenditures is possibly more important than comparison of the expenses of direct operation. The latter show a state of facts that may be changed, but the former show the state of the plants, to change which if deteriorated costs money. The railroad maintenance statistics are complete. With industrials the statistics may be supplemented by general considerations—by comparing companies, observing the amount of property to be maintained, its nature and the use made of it, and noting whether replacements are charged to expenses and not to property account.

Maintenance and depreciation go hand in hand. The aggregate of the debits to both accounts determines the amount of upkeep. Rates of depreciation on property of different types have become more or less standardized under the tax laws. Typical rates are 6 to 10 per cent on machinery, 2 to 4 per cent on buildings, and nothing on land and real estate. Depreciation on railroad equipment runs from about 3 to 6 per cent under the Interstate Commerce Commission accounting. The maintenance expenses are cash put into the property. The depreciation is not cash put into the property when set up in reserve, but only later when the reserve is used. Thus there is considerable paper depreciation both with railroads and industrials in the shape of unexpended credits to reserve. It is the cash that counts in the physical condition.

Taxes.—Next after the expenses come the taxes. The present federal tax law has done away with the "invested capital" that was the *x* of the former tax equation. A fair guess can be made whether the provision for current taxes is sufficient. The government tax audit being four years behind, there are still occasional surprises from time to time on back taxes, as in the case of Crucible Steel and Kansas City Southern. It is impossible to determine from the annual reports whether managements actually set up, and paid, for the war period the full taxes that the government will require of them. But there is little danger with a reputable management and reliable auditors. What danger may exist lies with companies of boom earnings from 1918 to 1920, which earned a high percentage upon their stock. As a rule taxes are truly and carefully stated. Increases in local taxation are a menace to some railroads, and are an item to be watched. The federal taxation has been too heavy and is still a burden upon the vitality of business. Taxation has become one of the larger factors in estimating the future of both companies and securities.

Net Income.—The net income after the expenses and taxes are paid belongs to the company and is applicable to the securities and the interest payments, and to the building up of the business. The financial strength and the policies of management are revealed in the disposition made of this income. First, the interest payments on both funded and unfunded debt should be easily carried, with enough left over for protection in bad years.

Second, the dividend payments should be well within the company's means. Third, there should be a substantial margin above these two payments, applied to the growth of the business. The main point in running over income accounts, and a very essential matter with balance sheets, is to determine whether the company is getting stronger or weaker. Useful decisions as to the safety of interest and the probabilities with respect to dividends must be made long in advance, before the market has made its final appraisal.

Dividend payments are voluntary, while interest payments, once the debt has been incurred, are compulsory. Companies heavily laden with charges, or too rashly weakened by dividends, lack buoyancy against storms. The future, the chief consideration with all foresighted management, is then insufficiently provided for, and danger is courted. It is also a fact of importance to the investor that the stock of a company that defers dividends and devotes earnings to building up is fairly certain to appreciate in market price, while no stocks are more productive of losses and dangerous than those paying steady dividends on too narrow margins.

Resources and Their Disposition

A simple statement of "Resources and Their Disposition" may be prepared from the balance sheets of the beginning and end of a period to show where the money has come from and where it has gone. At the left of the statement, under "Resources," are listed the increases in liabilities and decreases in assets. At the right, under "Disposition of Resources," are tabulated the decreases in liabilities and increases in assets. This statement may be usefully amplified by making an inset of the aggregate income and profit and loss accounts for the years covered, to show how the increase or decrease in surplus and reserves was derived.

The table of "Resources and Their Disposition" is a searching analysis—elementary but of great power. One side of it presents the picture of the proceeds of operation, merchandising, and financing; the other exhibits the uses to which these proceeds have been put. The table will show companies of apparently ample earnings becoming reduced and in debt because conditions of growth, for example, have not been met with financial common sense and clear vision; or will show thrift, the clearing up of encumbrances, and preparation for better days by companies of reduced incomes in hard times. It demonstrates what problems have been met and how.

Story Told by Figures

The story told by figures is interesting, fascinating, when dug out in the concrete case to reveal the truth. It is infinitely broadening, not only because it tells more than gets into print, but because it is a first point of entry for "the continual effort at understanding, at assimilation" by which "minds stretch in accordance with the study undertaken, principles are absorbed to the extent of becoming the basis of decisions." Figures in the abstract, or without illumination, are heavy, dead, and stupefying. Enlivened by application, they become the best aid to developing brains and learning to think.

CHAPTER IX

THE LINES OF DEFENSE AND ATTACK IN INVESTMENT

The Dream of Speculation

Suppose the span of the working life to be forty years. Assuming that money will double each year, one cent invested at the beginning will amount to more than $10,000,000,000 at the end of that life. While people who speculate do it with more than one cent capital, the general proposition is the same. The idea, and it is an intoxicating one, is to roll up a number of consecutive 100 per cent profits, or larger than 100 per cent; and then retire to spend the money. The fallacy in the plan is that speculation is a game of doubles or quits. The consecutiveness breaks off, just as in matching pennies. The speculator's money quits him, and he has to start a new series of doubles from the beginning.

Plan and Purpose of Investment

The plan of investment is to be consecutive—to play neither for doubles nor quits, but to work always for an increase, either plain interest and regular dividends, or, on occasion, appreciation of principal, and then to keep that increase. Money rolls up quite fast enough on any ratio of increase, if the accumulation be not broken off and destroyed by losses. The spirit of investment is to work intelligently to heighten the increases without incurring added risk; and to work to minimize whatever risk there may be and keep down losses, to the end that processes may be consecutive and increment cumulative.

No investment is absolutely free from risk. There is always the unknown. It is only a short time since the Great War shook the foundations of the civilized world and government bonds themselves rested on victory for security. But there are degrees of risk that a prudent man considers, and there are ways of guarding against the risk that exists. "The best commanded armies have lived and marched in the unknown, it was inevitable; but they have resisted that dangerous condition, they have come out victorious, by depending on protection which has enabled them to live without danger in an atmosphere full of peril."

Values, and the Uses of the Market

In defense and in attack the art of investment implies the employment of elementary principles based on values rather than upon the technique of the market. The market cannot, to be sure, be ignored. It is there that prices are made, and securities are bought and sold. To know a great deal about the market is useful, especially if one knows the most important matter, and that is to regard it from far off and not become enmeshed in trying to solve its problems. To follow the market by active trading almost invariably results in small profits interspersed with losses, and in missing the large profits that come from holding on to securities for the ultimate value. "Beating the market" is hard, a task attractive to men of brilliant abilities because it is hard, but also a task that has sucked in and wasted many useful careers. The investor who buys on values for the long pull does not need to "beat" the market. Sooner or later the market will help him.

What the investor needs to know about the market is not what the speculator needs to know. The maxims of speculation, such as to let a profit run and cut a loss, are often revealing and informing, but do not generally fit into the investor's longer view. The lines of accumulation and distribution that serve as indices to many speculators may be casually interesting to the investor but are not his mainstay. The rate at which stocks are lending for short sales, the double tops, the gossip of who is selling and who buying, the rumors and tips that are dignified by the name of "inside information," are not his stock-in-trade.

In the abstract the investor needs to know only two things—the value of his security and the price at which it is selling. In the concrete he needs to know more, but still along simple lines. Value is after all an expression of judgment based upon past prices and upon the comparative prices of similar things. The investor should be thoroughly posted on quotations and market levels. He should understand the history of prices, know the meaning of the price presently put upon his securities by the market, and be able to judge for himself whether that price is high or is low. He should have respect for the market and not fight it. But he should also have respect for his own sense of values, acting on it when in his judgment the market prices have swung too high or too low. This is reasonably simple if he but refuses to concern himself with what the market is going to do next. It is the endeavor to call the turns and follow the short swings that nullifies investment processes and turns them into those of speculation.

Principles of Investment Based on Values

It is not easy to formulate the principles of investment that are based on values. The experienced investors have each their own creed or set of principles in which they believe. The most effective of these practically are often the most deficient theoretically, because based on the vivid impress of some personal experience, limited but nevertheless workable because clung to and worked out. But principles may be set down which are based on the belief that consecutiveness of increment is not to be secured solely by taking interest on prime mortgage bonds, but may also be obtained, and with more profit, by a discerning shifting of investment from time to time, and by studying the opportunities. There is an irregular rotation, or "cycle" of investment values, different from the business cycle although dependent on it, that may be employed to secure consecutiveness of increment, including at times an appreciation of principal that is as certain as the interest on a bond. The appreciation is not perhaps as certain for everyone. Anyone can read the plain English on a bond; but not everyone can read the plainest facts of business and of the market. These principles are based upon the rotation of values and upon investment for the long pull.

1. The first principle is that business will come back. It will neither remain depressed nor exalted.

2. The second principle is that security prices are finally governed by the course of business and the related changes in credits. The extremes of high and low in stocks are displays internal to the market, and are ironed out after a time by stronger external forces. It is only in a limited sense that the stock market forecasts business. The beginnings of stock market movements are much more often due to the real trend of future business than to any design or effort to lift prices. The ends of market movements, the height and depth of speculation, almost invariably over-run the real trend of business and go

counter to the true outlook, because speculative forces have been aroused into motion and have gained a momentum which carries them to extremes. When business changes become too imminent to be ignored, there is a sudden discounting of what should have been gradually discounted before, and a sudden wide change in prices follows. The bond market is more directly governed by credit conditions, the rate and supply of money, and begins to discount the downward course of business before stocks break. It begins the first recovery at about the same time as stocks, but during depression it makes its major movement of vigorous reawakening in advance of stocks. Both bonds and stocks swing into line with business in their own way. The course of their prices will be discussed in subsequent chapters.

3. The third principle of investment is that only the upbuilding companies, already strong against storm and depression, are worth investing in. Fair weather companies, weak in the cash box and poor in credit, may serve excellently as pawns of speculation, but are false media of investment. It is in the speculator's sphere to take chances of bankruptcy in return for chances of making quick profits. But the investor wants to take no chances of having to make a fresh start from the bottom.

It is, however, true that this rule of investment values should not be rigid. In time of prosperity, when increased risks can be looked for later, strong companies should be adhered to. In time of depression, after the storm is over and it can be clearly seen that business improvement will lighten risks, it is safe enough and quite profitable to take on second-grade companies, provided one knows they are not in danger of difficulties. Thus, beginning with 1920, there were men who made large profits out of the bonds of weak railroads, then purchasable very cheap, on the simple if daring theory that the railroads had the value of a necessity and that they would either come back to normal earnings of themselves, or else the government would have to take them over. During the formative period of the country a well-known practice of English investors, versed in American rails, was to buy ten or twelve different kinds of railroad stocks selling for a few dollars a share after a panic. A third or a half of the roads might go into the hands of receivers, but the profit on the rest would more than pay for those that dropped out. This illustration of insuring against risk by diversification is not intended as advice, because buying "cats and dogs" is always dangerous and speculative. But it serves to bring out the point in question. There are times of greater and times of less risks, and there are ways of analyzing and appraising risks and of protecting against them. For most people, and at most times, the simple principle of sticking to investment in solid, progressive companies and first-class securities is by far the best; and of avoiding the dangerous attempt to increase income by purchasing securities of extra high yield. It is quite common for investors to run a disproportionate risk as to principal, which is all that they have, for the sake of an inconsequential increase in income, from holding inferior bonds and stocks.

4. The fourth principle of investment is that that type of securities should be chosen which best suits the purpose of the investor. He should have a definite object in mind and choose a fit security of a fit company. The investor has to run his investments like any business undertaking. If he has all of his money in stocks, which are a proper investment in their place and time, he has subjected himself unreservedly to the major risks of the unexpected changes in markets and conditions. Like the speculator,

he will go on well enough as long as the market is rising; but when it becomes depressed he is, at the very best, reduced to quiescence and inactivity. The investor should have a cash reserve, so that if there is a slump in security prices he can go into action and buy cheap, instead of being put out of action by being loaded up with securities that have depreciated. He also should have a solid substratum of bonds or notes, long bonds if bonds are cheap, short bonds or notes if bonds are high. These securities should be diversified and strong, so that they may bring him assured income through any depression and be available for realizing cash at need, or to buy other securities at low prices.

Men vary in their investment requirements. The striking fact about the estates of the great investors of recent years is the high proportion of stocks they held. Under the surface is usually the equally important fact that these men had the skill and forethought to provide themselves with cash for buying these stocks in growing companies when stocks were down. For the ordinary investor the main point is that he should not tie up his cash so that he cannot seize opportunities. He should also not put his income at risk. If he goes into stocks, the investment should be within his means and should be made when the stocks are cheap and the risk is smaller. But if he is paying attention to the business of investment, he may at times properly put a certain proportion of his total capital into stocks, bearing in mind their higher risks and greater chances of profit.

5. The fifth principle of investment is that the value and the price of a security are to be weighed and the risk of loss set over against the chance of profit. At the price paid the risk should be less than the chance of profit. It is no uncommon mistake to take major risks for minor

profits both with bonds and with stocks. The real skill and discernment of investment exhibit themselves nowhere more than in appraising risks. If it can be discovered when and where risks have been exaggerated in the lowness of price, the major profit follows as a natural corollary.

To cite two illustrations, the bond markets of early 1908 and late 1921 afforded very safe opportunities for great profits to those who had cash or credit and understood the bond business. They could buy prime gilt-edged bonds at the lowest prices for years, bearing coupons that would more than pay bank interest on loans to cover the cost. Thus they had, in the first place, a prime gilt-edged investment that more than carried itself, an unusual desideratum, and, in the second place, if the precedents of similar occasions in the past were to be relied on, they had an investment that would shortly appreciate in price. Bonds were strong all through the year 1908, rising nearly 10 points on the average. The uprush of 15 to 18 points in standard bonds, beginning with the autumn of 1921, is too recent to need recalling to mind. Bonds were low on these two occasions for many reasons but perhaps most of all because risks were exaggerated in the mind of the general investing public. There is a depressing mental paralysis after the occurrence of calamity, high interest rates, lack of funds, and long months of liquidating sales, so that fears remain after their cause has been swept away.

As hopes revived in 1922 there came also the opportunities for profits in stocks, which had likewise been extremely depressed. The first-grade bonds recovered the bulk of their gain first, the second-grade bonds next, and the stocks took a longer time. For some time after the great bond rise it was evident that the best investment for probable appreciation was in the standard dividend-paying stocks of strong companies, the income yield of which was still high.

6. The sixth principle to be observed by the investor, partly covered in the preceding paragraphs, is that the phase of business cycles and security prices which determines both value and risks also determines the kind of security to be bought. Each stage of the business progress—prosperity, depression, and transition—has its most appropriate type of securities. Each phase of the security market cycle also presents its best types and opportunities.

Investment for the long pull by purchases through bankers is essentially different from the quick trading upon which stockbrokers thrive. In following it the genuine investor, whose capital is always theoretically liquid, has a great advantage over the speculator and over the business man—the merchant or manufacturer—in that he can make his capital actually as liquid as he pleases and still employ it in the investment business. He may increase his cash resources without much loss of income when risks begin to run high; and decrease cash resources by tying them up in long-term investments in securities when risks begin to run low. He can switch with moderation and within reasonable limits of safety from long-term bonds to investment stocks, and from stocks to short-term bonds or notes, and from these to long-term bonds again, according to the phases through which business and securities are passing. He is in position to watch the tides of the market, not too closely nor with too much absorption, and to change deliberately from what has become high to what has become cheap; or, if nothing is cheap, then to a Treasury note or some other short maturity that will not decline in price. He can take opportunities as he sees them, governing himself by the long-distance view.

His methods are simpler and surer than those of the speculator who holds on for the top of the rise, endeavors to buy at the bottom, follows stocks booked for immediate and quick action in the market, or tries to get in on the ground floor or lower stories of some exceptional enterprise. The business of investment does not depend on any of such money-making accidents, the search for which is rather to be avoided. Instead it follows rational and understandable lines of thought and action.

7. The seventh principle of investment, the most general and underlying all others, is that the investor must know all the elements of his investment—the company, the security, the stage of business and of market prices, and the outlook for credit and banking. He must understand. Where he knows, he can invest. Where he does not know, he is only speculating. It is not the function of this book to impart a detailed knowledge of securities. The main sources of information have been indicated. Really to know any security requires solid work; to have wide knowledge of securities requires a great deal of work—simple but abundant work. Such knowledge is the basis of sound investment.

The Trend of the Times

These are, and will be, unusual times. The first and most difficult deflation of bank credits and commodity prices from the recent dangerous, speculative inflation has been well accomplished almost everywhere around the world. It was a painful process. Commodity prices are now resting at the half-way mark—something over 50 per cent above the pre-war level, but incomes, except wages, have not on the average moved up to the same level. Some elements of inflation still remain—the waste and extravagance of governments, the tremendous borrowing that has been going on, the high wages in favored industries, the high retail prices, and the heavy taxes we are required to pay.

Besides these elements there is in many quarters, short-sighted but politically powerful, a desire to reinflate. Farmers want their burdens lifted by great liberality of the federal reserve banks—to carry their crops and put grain prices up—as well as by loans from the Farm Loan Board and aid from the War Finance Corporation. Labor, on railroads and in the coal mines, wants government backing in keeping its wages up. Manufacturers desire a tariff; railroads need supported rates. This is natural. Deflation means, in general, gradually reduced expenses; inflation means, for many, increased income. It is not altogether selfishness that aligns many groups on the side of fiat money, or fiat credit, or fiat wages. There is a real pinch of hard times and insufficient income during the maladjusted business that follows deflation, while costs of living are still high. There is ignorance of economic laws which has, for nearly fifty years, kept the fiat issue to the forefront in politics as a cure-all for poverty and lack of money. But more than all else, and this is the poison in the pot, there is the widespread feeling that those who have made money by war-time speculation, by the longer processes of investment, or by controlling banks or other large business enterprises, have not been honest or scrupulous.

This feeling is due largely to misunderstanding of the part played by brains and work in making money; but it exists. It is at no time devoid of political influence. It has, if not kept down by common sense, the power to start the country on a wrong course. Inflation theories have appeared, and have been followed to a conclusion in the countries suffering under the strain of defeat. For this one cannot blame men so much as the political pressure to alleviate misery and meet necessities by issue of paper. One or two of the hardest pressed among the victorious nations in Europe have yielded to a limited degree to the same pressure. In this country there will be attempts at special, or class, reinflations, the force of which will depend a great deal upon circumstances—the course of business and the degree of discontent.

Irregular Adjustments

Speaking generally, it is believed that we are in a period of irregularly declining prices and wages. From the precedents of former great wars this may endure for a period of years. But even if undisturbed by reinflation, the decline is and will be irregular. Prices of some commodities have already been down to pre-war figures. Others have not moved. Retail prices, rents, and cost of fuel have yielded only moderately. The general decline is now stayed by resumption of business activity, and will be resumed when business becomes poor again. During all such periods business may recover vigorously for a time, but its permanent solidity is conditioned upon a natural, and not artificial, level of prices having been finally reached.

There is thus, along with the general improvement already experienced, a period of many currents and cross-currents. There may be points of transition—sharp and difficult. The expenses of business and the prices received for product will change from time to time and make rather more difference than usual in the annual returns of corporations. There will be ups and downs in volume of business. The after-effects of the war still persist.

In the understanding, therefore, that the times are full of changes—pitfalls as well as great opportunities—investment may well be confined with strictness to securities that are intrinsically strong. These securities will afford sufficient action in the up and down play of prices.

Methods of Defense and Attack in Investment

Besides its plan, its principles, and its environment, investment must needs consider also its methods of defense and of attack. These vary with every investor. If a man finds out something, learns it so that he knows it, he can and will use it on the defense to save money, and on the attack to make money. Knowledge is the main basis of both defense and attack.

Lines of Defense

1. The first line of defense is to increase the proportion of liquid assets when security prices are high, when speculation is rampant, when bank credit is being used extensively, and when there are danger spots, or signs of imminent strain. Short maturities or cash should then be substituted for long-term bonds and stocks, and should be held through the period of doubt as a reserve for reinvestment. This means, of course, some waiting, usually decreased income, and often seeing prices go up higher after the sale of the long-term bonds and stocks.

Some clever people think they can cut the corners close and sell at the last minute. Others put stop-loss orders a few points under the current quotations and stay in their stocks until the market breaks. Others watch for irregularities and then sell. The one essential is to sell before it is too late and not afterward, and a very good rule is to sell at prices previously fixed in the mind as being high enough. It may be quite a wait before prices begin to come back. It requires patience. If steadfast, one will get better than interest for the period of waiting.

2. The second line of defense is to have seasoned and well-distributed securities, with a broad market and capable of instant sale. A mistake admits then of quick retreat. Sudden news, altering the outlook, can be met immediately.

The unlisted or specialty stocks, especially those in control of one dominant interest, and bonds quoted only by their sponsors, which are not standard issues over every bond counter, have no such market. These issues are tempting because of their higher yield, but they deprive investors of initiative, when conditions change, because of the difficulty of selling them. The holder finds himself locked into the situation of the companies that issued them. He cannot raise cash upon these securities in time of unsettlement, except at great sacrifice. Thus his resources are rendered immobile, whether for defense or attack. By preferring income to marketability he has made himself the prey of circumstance.

3. The third line of defense is to have, so far as possible, only such securities as are worth holding through a decline. Enough of these to assure a fair return through good times and bad should be income-bearing. It is not always possible to avoid being caught in a decline. The investor who has securities that will wear through, with income coming in, may feel discomfiture at low prices but does not need to worry.

Some investors indeed, who have bought cheap the securities of companies they believe in, prefer to hold on through declines and take no chances of being faced with a higher price when they come to buy the securities back. This is, within its sphere, a sound method of investment, productive of results over a period of years. It is an inactive method but, at that, preferable to too great activity.

4. The fourth line of defense is to buy outright, or if borrowing, to borrow so moderately upon strong collateral that the loan can under no circumstances wipe out the equity.

As in all lines of business more speed can be made with borrowing than without. But the risk is increased. Borrowing is safer at some times than at others. Those who borrow wisely lighten ship or lade it according to circumstances. One difficulty with borrowing is that the jettisoning of cargo to save the ship is painful, and quite apt to be postponed instead of being faced. A loan eats up the owner's equity in declining markets just as rapidly as it increases the equity when markets are rising. Another difficulty with loans is that it is not always possible to arrange with the lender to maintain the loan for more than a fixed period, say, of six months. In case money gets tight so that the loan is not renewed, that is precisely the most inconvenient time for the borrower to pay. A call loan is still more dangerous because the payment may be asked at any time, and is likely to be when a slump appears in the market.

No phase of investment activity demands more judgment and prudence than borrowing. A sound plan is not to borrow at all until assured experience has been gained, and then to borrow only at long intervals, when investment issues are to be had below values and bank money is relaxing.

Lines of Attack

1. The first line of attack in investments is accrual of income. Money doubles in fourteen years at 5 per

cent, in twelve years at 6 per cent, and in ten years at 7 per cent, assuming the income to be reinvested at the same rate. A thousand dollars a year for forty years invested at 6 per cent will amount to $165,000. Income is a primary force working in the investor's favor. In these days of high investment yields it is a very potent force.

If, as usually happens when bonds are cheap, and sometimes when they are high, the lending rate on money is less than the interest yield of the security, income may be increased by borrowing. Thus if one-half of the cost of a bond yielding 6 per cent be borrowed at 4 per cent, the rate of return on the other half, the actual investment, is increased to 8 per cent. One can be confident, also, that if the carrying rate stays low, and the bond is sound, the price of the bond will eventually rise, adding profit to income.

2. The second line of attack is appreciation of principal through knowledge of corporations and their securities. Thus a forty-year 5 per cent bond bought on a 6 per cent basis at 85 might be resold in five years on a 4½ per cent basis at 109, if its position had improved in the meantime by its becoming an underlying issue, or its strength had improved because of earnings. In this instance the appreciation would be practically equal to the interest. The wise investor is always looking for chances of appreciation in his solid bonds, but is usually content with a much smaller swing than that cited in the illustration. The best opportunities are with the new bonds of well-reorganized companies, with convertibles, and more broadly, with bonds of companies of increasing financial strength.

With stocks the buying for appreciation is perhaps more generally known. Stock of a sound company, with dividend prospects, may be bought cheap in the early stages, and resold, after a few years as a seasoned dividend-payer, at a very substantial advance. It is almost universal to look to the dividend prospects in buying a stock for investment. The most spectacular railroad advances this year have been in the issues of re-organized companies, such as those of St. Louis-San Francisco, Missouri, Kansas and Texas, Chicago and Eastern Illinois; also Pere Marquette, after a delay. But consolidations, too, have given advances, as that of the Nickle Plate, Clover Leaf, and Lake Erie and Western, and also the restoration of earning power, as in the case of Pennsylvania, Baltimore and Ohio, and many other railroads. Among the industrials the change in conditions has produced with great certainty an almost universal recovery, which is most substantial and lasting in the dividend-paying investment issues.

It is hard and speculative to find securities that will go up immediately. But it is not hard and is a sound investment principle to put money into securities that should be worth more at some future time, by basing one's judgment on the essentials of corporate progress. In general the difficulty diminishes with the distance.

But this last statement should be qualified by the observation that in time of great prosperity and high prices the seeking for appreciation should be changed to guarding against depreciation. It is sound practice always, but especially when prices are up and risks are increased, for the investor to emphasize the waiting and watching for bargains, with resources available to buy them, and to minimize the practice of following the market for minor advantages.

The best occasions for appreciation are in times of distress, after the passing of dividends and the devoting of earnings to recuperation, and after the long property-strengthening receiverships and drastic reorganizations. The only difficulty then lies in having the faith, vision, and patience required to hold securities through a period of drift and doubt until the brighter day of assured earnings and market recognition is at hand. These opportunities come from time to time. Many see them, and pass them by for the few that take advantage of them because they are already fully invested. The opportunity knocks for those who have cash, or can sell securities that have not depreciated.

3. The third line of attack is appreciation of principal through knowledge of general financial conditions. In part this blends with the appreciation through knowledge of corporations and their securities; in part it is distinct. In every cycle from depression to prosperity there is a sweeping change upwards in stock prices. There is an advance in bond prices that begins after the wave of prosperity has broken and carries through the phase of depression and cheap money. To carry over from the time when stocks and bonds are palpably high to the point where safe bonds are obviously cheap, there are Treasury notes and other secure short-term investments to put funds in, which produce income and avert the depreciation of principal, to which all other securities are subject.

This cycle of security values, conforming to the currents of the cycle of business, may be followed for the purpose of securing continuous income and a sufficiently consecutive appreciation of principal without incurring the greater risks. It is not, perhaps, so simple to follow the cycle as might appear. In the long space of the greater cycle of business securities, prices have movements not directly related to the business cycle. It is also a matter of judgment to gauge the business cycle itself. The shifting values of the different types of securities may be followed nevertheless, not closely, to be sure, but still positively and productively.

Even with one-class investment, stocks excepted because of their natural risks, much may be done by the shift from long-term to short-term bonds, and vice versa. The usual fate of investments in bonds is to drift inertly with the current. Over the space of the last twenty years this meant going down with the current. For a time, beginning with 1921, it meant going up with the stream; but as soon as the excessive borrowings and business revival bring firmer money rates there will again be a turn in bond prices. Bond swings are long. The turning points and the factors upon which judgment may be based will be discussed in a separate chapter. As always the trends of long swings are not hard to see, but the point of change is much harder. It is easier and surer to work from very simple considerations of high prices and low prices for bonds, and in fact for all securities, with observation of banking conditions and of the employment of money in new flotations, in stock market activities, and in business.

Appreciation of Principal

Appreciation of principal, to such extent as the investor may safely seek it, tends to double the compound interest that arises from reinvested income. Appreciation sharpens and strengthens the weapon of attack. If it were not difficult to follow without constant effort the strong tides of affairs, the piling up of large fortunes through investment would be a commonplace. Such accumulation of wealth is not infrequent. The building up of independence, through thrift and the knowledge of one or another form of investment, is to be found in every community. Some few know what things are worth, and consequently accumulate money.

Bargains

The war and the waste following consumed the surplus capital of the world and left an outlook full of dangers and uncertainties. Investments were eaten up by taxes, impaired by the maladjustments after so great an upheaval, and subjected to risks that were basic and grave. There were, therefore, exceptional bargains to be had; there have been most unusual opportunities, the extreme low price of solid investments having been an outstanding feature of the times. As in every era of distress and widespread losses, those who had cultivated the trading and investing instinct laid the foundation for their greatest profits, while those who had followed speculative proclivities during the preceding fictitious and artificial prosperity, were fortunate if they escaped the net of general ruin. Such conditions of distress and doubt are well recognized as the mother of great fortunes.

The first Rothschild bought British consols before the Battle of Waterloo, not knowing how the battle would go, but knowing that consols were cheap, and cheap because neither he nor anyone else knew the outcome of the battle. The same courage to set one's course against the prevailing despair has within the past two years resulted in substantial additions to investment, in some instances doubling, trebling, or multiplying the value. While the first forceful recovery of investment values is now past, there still remain opportunities. The upswing due to renewed ease of money is not, at this writing, yet complete. Later there will be pauses and recessions due to irregularities of business, and there will be new opportunities to buy.

Reorganizations

From another source also, in these times, investors have had and will have great opportunity. This is the receiverships and reorganizations which always follow periods of strain. There is a speculative method of following corporation difficulties, by guessing at the low point and taking a chance on the immediate course of prices; and there is an investment method, by watching to see how difficulties are overcome and buying on values.

When embarrassment begins with the finances of a corporation the trouble usually proves to be worse than at first appears. It is sound practice to step out, even at a loss, on seeing genuine signs of internal weakness. But many security-holders stay in. They are fatigued by the length of the ensuing receivership, and in the reorganization are often unable or unwilling to make sacrifices and furnish new cash. Upon reorganization there is a tendency to sell securities for what cash they will bring. At the same time it is a general and fair premise that the underwriting syndicate of the reorganization is cognizant of this and prices the new issues sufficiently low so that where old holders withdraw new ones will come in in expectation of a profit. To ensure distribution the syndicate will, as in the case of other new issues, endeavor to set the price a little under the prospective market level. The market level itself is certain to be low. But it is just at this point that the investor, having studied the company, the receivership, and the reorganization plan, can begin to be certain of the ultimate values.

It is sound practice to step in if the reorganization has been thoroughly done and drastic, if fixed charges have been cut down, capital stock kept moderate, cash replenished, property put into first-class condition, and means provided for future financing. One may buy in the faith that both the business of the company and the market for the securities will return to normal. With reorganizations brought out in time of improving business conditions, the recovery may be surprisingly prompt. If general conditions are poor, there may be a period of dragging at low levels, or even of decline below the reorganization prices, because the new securities are orphan issues, forced upon old holders who have neither money nor enthusiasm. But eventually, after the drift toward selling has exhausted itself, business has turned, and the reorganized company has demonstrated that it is clean and sound, the securities take their rightful place.

The fruitful experience of the railroad reorganization era of the close of the last century is in process of being repeated. It is not on the same scale because leading companies have not gone under; but where there is a real business to be reorganized, it follows the same course. There is the same buying of salvage after the wreck—the same purchasing of sound investments at prices below value. If anything, the opportunities go to the public more than in former days, because leading men of wealth have been forced by taxation to confine themselves largely to tax-exempt government, municipal, and state obligations. The corporation issues must seek a wider and more scattered market, their higher yields and greater possibilities going now to men of lesser wealth and lower surtaxes.

Risks and Losses

The lines of attack are not more important than those of defense. Much has been said of potential profits, and it should be repeated that there are potential risks and losses that must be guarded against. Not too much should be ventured on any single investment, or on any positive theory of the course of business and of prices. Risks may be reduced by dissemination, and by being moderate and not too active.

But mere diversification of investment, so often advocated, is not a panacea against risk. An English book written some years ago urging geographical diversification showed greater safety and larger profit from investment in government bonds around the world than in British home securities, over the period 1896 to 1908, but since then one-third of the foreign list is in default and largely worthless, another third is depreciated and doubtful, and the final third is not to be compared in quality with the solid British securities. Diversification should not go further than knowledge and understanding of the security itself. While one cannot perhaps go as far as Carnegie's dictum to "put all your eggs in one basket and then watch that basket," it is evident that there is no common sense in spreading investment over different things just because they are different. All true investment rests upon values and upon ability to foresee risks as well as profits. The writer's leaning, especially in these times, is toward nearby baskets that can be watched with unrelenting vigilance—such diversification as the investor can afford and considers wise to offset individual risks. The real and greater risks are those of unsound principles, of taking improper chances for a possible profit, rather than those of unforeseen contingencies suddenly altering the character of a standard investment.

CHAPTER X

THE COURSE OF THE STOCK MARKET

The Three Movements

The stock market is like the sea—always in motion, with waves, ground-swells, and tides. The bond market is like sheltered waters, with smaller waves and moderated tides.

Stocks have major, or primary, movements, lasting, say, from one to four years, secondary movements running for a few weeks, or possibly months, and day-to-day fluctuations. These movements proceed concurrently, and each is subject to change. In addition, prices of individual stocks are subject to movements of their own. As a consequence, the real direction of the market, positive and simple enough in retrospect, appears at any one time complex and confused.

The primary movement is the most important; the secondary is of much lesser importance; and the day-to-day fluctuations are incidental and of significance only to speculators. The largest of the primary movements are inter-related with the great cycle from depression to prosperity and from prosperity to depression.

Major Movement Dependent on the Business Cycle

In pre-war days the striking feature of the business cycle was the banking crisis that broke the tide of prosperity. Under a banking system of inelastic credit such crises recurred periodically, although at no exact intervals, but following the typical strain of prosperity as indicated by low reserves, high interest rates, and finally pressure for cash. A great crisis followed the feud between Jackson and Biddle, and the dissolution of the United States Bank in 1837. Other great crises occurred in 1853, 1873, 1893, and 1907. In recent decades there were intermediary crises in 1884 and 1903. It had come to be considered that a somewhat irregular ten-year cycle covered the movement of business, and was intensified every twenty years. The great depressions and exaltations of the stock market took their cue from movements of business.

The war compressed many years of activity and of change into a period of a few years. There were crises in 1914 and 1921, with partial depressions in 1917 and in the early months of 1919. These were not banking crises in the old sense; there was no banking collapse, panic, or issue of clearing house certificates. The federal reserve system has plainly moderated the character of the cyclic depressions. It may, under peace conditions, be able also to moderate the exaggerated outbursts of prosperity. But it can hardly do away with the major cycles. European experience under central banking systems is that they recur at irregular intervals, but on the average approximating the same ten-year span as in this country.

Major Swings of Stock Prices

Average prices of selected industrial and railroad stocks dealt in on the New York Stock Exchange have been kept by the *Wall Street Journal* since 1896. From these two lists the major swings of the market may be summarized as shown in the table on page 142.

This is a schedule of highest and lowest prices in the bull markets of prosperity and the bear markets of depression; and the price at date of writing. It omits the intermediate fluctuations. The successive rises and declines were not continuous between the points taken. The table shows the reaction of the stock market to the great sweep of the business cycle. It also shows that the swings of the market are shorter than the cycle. In fact, they

12 Industrials†	Price	20 Railroads	Price
Oct. 12, '96	34.74	Oct. 12, '96	47.51
Sept. 19, '02	67.77	Sept. 9, '02	129.36
Nov. 9, '03	42.15	Sept. 28, '03	88.80
Jan. 19, '06	103.00	Jan. 22, '06	138.36
Nov. 15, '07	53.00	Nov. 21, '07	81.41
Nov. 19, '09	100.53	Aug. 14, '09	134.46
July 30, '14	71.42*	July 30, '14	89.41*
Dec. 24, '14	53.17	Dec. 24, '14	87.40
Nov. 21, '16	110.15	Oct. 4, '16	112.28
Dec. 19, '17	65.95	Dec. 19, '17	70.75
Nov. 3, '19	119.62	Nov. 9, '18	92.91
Aug. 24, '21	63.90	June 20, '21	65.52
Sept. 11, '22	102.05*	Sept. 11, '22	93.99*

* These dates do not represent top or bottom of swings. The first is for the *closing* of the stock exchange on the outbreak of the war, and the other merely is given to bring the table substantially down to date.

†The Stock Exchange was closed from July to the middle of December, 30 1914. Upon resumption of trading the price record for industrial stocks was continued with twenty instead of twelve issues.

usually last much less than half the time of the cycle, the periods of decisive movement centering on the moments of overstimulation and the crises of depression, much of the time between being consumed in indecisive fluctuations.

Secondary Movements

The secondary movements are sometimes of considerable size, so that they confuse for a time the trend of the major movement. They are of very minor importance for the investor, who can ill afford to waste time or risk money in trying to guess the turn. They are not stages of the great primary movement, but independent swings within that movement, except that, of course, the usual rally after a drop in a bear market and the reaction after a towering rise in a bull market are corollaries of what has gone before. A typical secondary swing is usually short—a month to six weeks at the outside, and often less. It runs from 5 to 10 points, sometimes more. A rally in a bear market is often from one-third to one-half of the preceding sharp decline.

There is no fixed schedule of periodicity for the secondary movements. They come and go. But secondary rises have occurred twice a year, sufficiently often to be remarked in January or early spring, and again in late summer or early fall. The points of greatest ease in bank credits come after the turn of the year and in the dull season of midsummer. The greatest strain on banks is in the late fall and the first winter months, when the crops are being moved and interior cities withdraw funds left on call in New York. Funds available for investment from the dividends and coupons of January 1 and July 1 have a tendency to strengthen the market. The crop prospects become an important factor from August on. Thus from the yearly cycle of crops, money conditions, and funds for reinvestment, there is a condition tending to promote or favor a certain degree of periodicity for the secondary movements.

Nevertheless the movements are irregular and uncertain. They cannot be counted on. They occur every year in almost ceaseless succession. They come at other times than those mentioned above and for other reasons. The minor swings are often faint, and are sometimes obliterated when in progress by a stronger manifestation of an active major movement. They may sometimes be guessed at, from crops or other indications, but as a rule they should be observed only to be passed by.

Daily Fluctuations

The daily fluctuations, the little waves that are the third movement of the market, are of interest to traders scalping eighths on the floor. The alert mind that skims these small quick profits from the surface is not suited to the slower, more thoughtful processes of investment. Usually the traders do not know the value or the merits of the stocks they are in and out of; they do not need to know. They do not have to have their feet on the ground in order to swim in a sea of quotations. The daily fluctuations, which often move with considerable force, represent the eddies of speculation and the ephemeral effects of items of news. For all investment purposes they are to be disregarded. To pay attention to them is fatal. The investor who sells for trifling immediate profits will get nowhere.

Theory of Stock Prices

It is, of course, not the function of a book dealing with investments to set forth the theory of stock prices, a subject most efficiently handled by Charles H. Dow twenty years ago. Nevertheless it is necessary to describe briefly what takes place in the speculative markets. While investors must by no means let themselves be drawn into the trap of following the market instead of values, it is most essential for them to have a clear concept of the cold, dispassionate way in which the market, at its best, appraises values; and it is of interest and profit for them to know the surest of the major signs given by the market—those most widely accepted by the initiated.

The great movements of the market, and to some extent the lesser movements, conform to cycles of business and credit. But there is always visible, even in these broad movements, the play of internal forces set in action by speculation. One must understand the mechanics of the stock market. The market appraisal of values, cold and impersonal though it be, may yet at times be wrong. To read the appraisal correctly it is often necessary to read further than the actual quotations.

A majority of stock transactions are for purposes of speculation and not for purposes of investment. Speculative forces are the proximate, or immediate cause of market movements; investment forces come into play more as a gradual and limited brake on movements that have gone too far. Because they are speculative in origin the larger movements, the bull and bear markets, run typical courses, differing each from the other in detail but alike in principal.

Mechanics of the Market

What is bought on margin must be sold again in order to complete the transaction. What is sold short must be bought in. Otherwise there is no profit taken or loss stopped. Furthermore, while the time varies, the distance between purchase and sale is essentially short, the transaction as a whole being aimed at an oncoming and expected phase of the market.

To this first principle of the mechanism of speculation may be added a second, less mathematical and more psychological. When stocks are bought on margin and the margin increases because stocks have gone up, part of the increase will be used to buy more stocks. When stocks are sold on margin and the margin increases because stocks go down, part of the ammunition thus acquired will probably be used to sell more stocks short. While the bear party is prone to be more cautious and more intermittent in attacks than the bull, the general result is the same—the movement in either direction gathers momentum from its own inner forces, as well as from the fact that it attracts followers.

There is a third principle of speculation, very general in principle although usually given exaggerated importance. This is that professional speculators, in pools or singly as operators, will endeavor to sit in the driver's seat, from time to time, and direct the mechanism. It is a simple mechanism, capable of manipulation in detail, as in the case of the famous Amalgamated Copper episode, the notorious Stutz corner, and numberless pools; but too massive to be moved as a whole. Manipulation in the open market is limited in scope and extent. It cannot go against the main stream. It may anticipate and stimulate movements, but cannot cause them. Nevertheless it exists.

Bull and Bear Markets

The bull market begins slowly, creeps gradually up, and gathers headway after it has risen 5 or 10 points. It swings on into days of large trading and higher prices. Eventually it passes into a realm of fevered unreality, of excited dealings, and fictitious appraisals of value. It sinks then with great swiftness, rebounds part way from the first fall, and sinks again to still lower levels.

The bear market, the long swing downward that is thus ushered in, is often characterized by a series of slumps, with partial rallies, and intervening periods of comparative quiescence or of gently rising prices. The slumps are sudden and apparently without reason. At the end there are usually days of tremendous activity and of slaughtered prices. It is typical that sore spots that have produced the acute trouble should come to light at this juncture, in the shape of failures, or the taking over by bankers of the holdings of embarrassed plungers. After a sharp rebound from the bottom, the speculative force becomes exhausted and passive. There is then dull, quiet trading and general depression.

Thus both bull and bear markets go to extremes—to positions beyond the discounting of values. In the end, however, they produce their own correctives. It is impossible that speculation on margin should continue to carry prices in one direction without meeting after a time a more powerful counter speculation in the opposite direction. In spite of the momentum of stock movements there is a self-created weakness that becomes most imminent at the very point of the greatest display of strength.

The Limits

Bull markets are dependent on loans. These have their limit. When prices become unsafely high, or money tightens, lenders discriminate between collateral and ask for wider margins. More real money is required to keep the market going. Manipulation appears in order to encourage public buying and conceal private selling. Bear drives are attempted. To maintain prices requires more cash from bulls who can no longer borrow on increased margins. In this situation the wiser and stronger have already sold. The crowd that remains has become overextended—long of stocks and short of cash.

Bear raids break prices. The machinery of decline comes into operation with great power. Additional margins are called for to protect loans. Some speculators respond and some do not. Loans are therefore called and stock is sold; frightened bulls sell to prevent margins from crumbling and loans from being called. The selling induces new declines, a repetition of the demand for margin, and fresh sales. In place of having more and more cash to work with, the bulls have less and less. The position slides into collapse.

The bear market reaches its limit and finds itself powerless in a somewhat different way. There is the same machinery of margins but not the same curtailment of excessive bank loans. It is usually felt also that when stocks have dropped far below values, the investment absorption and the buying by bargain hunters, capitalists, and bankers have a more potent influence than the selling of investments at or near the top of the rise. After a time bear movements meet genuine buying on values. But the most important fact is that the bears themselves must buy in order to close their trades. Too much company on the short side means, therefore, that the position by being overdone has become exposed to and ripe for a bull attack. Bears are justly afraid of their fellows, knowing that there are certain to be purchases that will usurp the place of sales. When prices harden, the covering of shorts is wont to assume the form of a panicky rush, which rallies the whole market sharply and suddenly.

Bear operations succeed when they make other people sell. After this phase is past, they not only fail to depress prices but are a recognized protection against further decline. While "long" stock is being sold, prices swing downward, below true values. When this is over and it proves to be "short," or borrowed, stock that is being sold, it is the bears themselves who are due to be harried. The wary take cover. The stubborn, fewer in proportion than the bulls when the market is at the top, often back their pride of opinion by a futile and costly attempt to hammer prices that are already down.

General Characteristic of Markets One of Speculation

Any brief description of the successive bull and bear markets must be far too general to be useful, except as it may show something of the machinery of markets and of the principles of speculation that influence the prices of stocks. Actual markets are of course much more complex. Bulls turn bears and bears turn bulls. Profits are taken and losses realized. There are dips and "shake-outs" on the advance, rallies on the decline, tests of strength between the contending parties, and demonstrations calculated to deceive. The market turns and twists and progresses unevenly to an uncertain goal. Professionals endeavor to buy and sell ahead of the public, starting movements and riding prices both ways. More often than not the public, inexperienced and hasty for the quick profit from the immediate turn, sees the trend of prices tardily, comes into the rise after prices are up, overstays at the top, and lets go, in discouragement or because of exhausted margins, when prices are down.

It is always a most difficult and doubtful matter to estimate the length of time a bull or bear market will continue, or to guess the height or depth that will be reached. There are, it is true, all manner of charts; there are shrewd comparisons with previous manifestations; and better, there is experience. But with every aid the speculator, who makes this a business, expects to be wrong a large part of the time. If there were a formula for being right on the market consistently, anyone might have millions of dollars, without hard toil and harder experience, from such speculative media as Mexican Petroleum at present, or Reading in its active days, whose fluctuations rove through hundreds and even thousands of points in a single year. Even speculators see that the most speculative stocks are a buzz-saw, dangerous to trifle with. Money has been made out of these stocks, but those who have made and kept it have not endeavored to follow the fluctuations. Money has also been lost in these stocks. In a general way what is true of these extreme cases is also true of all speculation. It is a dangerous business. The skill of the expert speculator directs itself to making mistakes cost less than the profit of being right, if that is possible; it rests also to some extent on values and conditions. He has no foreknowledge.

Simple Observation and Deduction

For the investor the simplest observations and deductions regarding market movements are most effective. He should know when speculation has become intense and active, and when it has died away. He should know when prices are high and when they are low. To perceive the psychology of the market, to observe its trend, and to understand the reasons for its overappreciations and underdepreciations of value, will stand him in good stead. In so far as he uses the market he should take counsel of patience, wait out the declines, and not try for the very top of the rises. There will be occasional bargain days. But in general, to paraphrase an old saying, he should buy a little late and sell a little early. Values change. They have no determined level. That is what makes speculation and requires, equally, a watchful alertness in investment. When, for example, values have moved up on easy money after a depression, but are not yet resting on fully restored business activity, there is an obvious uncertainty. There have been instances of a false start after a depression crisis, when business sinks back into dullness and the permanent values of everything but fixed interest investments do not materialize for a year or two longer. But in general, the market prices follow values—move with and not against conditions. They swing too far, but swing back towards normal.

The beginnings of market movements are nearly always right in their trend, giving advance notice of prosperity or adversity before general business is affected. The culminations of market movements are always wrong, in the sense that they are, from the very nature of the speculative mechanism, too extreme.

The investor may learn much from the market. To be sober and clear about the market level is an invaluable asset. The appraisal of values under changing conditions must be cultivated. The habit must be formed of sitting as a court of independent review on prices, aloof from the enthusiasms and pessimisms of the market place itself.

CHAPTER XI

THE COURSE OF THE BOND MARKET

Price Movements

Bonds are affected by the great cycle of prosperity and depression, but less sharply than stocks and in a somewhat different manner. They are also affected moderately by the minor movements of business, especially when these represent change in credit conditions. Bonds have also their own slow fluctuations, and occasionally fairly brisk movements; but they are practically immune from the daily ups and downs of stocks, except, of course, bonds that happen for one reason or another to have assumed a speculative character.

There are many differences between bonds and stocks. In the market the great difference is that the former are owned outright, as permanent investments, while the latter are carried on margin as a speculation. There are important exceptions. An increasingly large amount of stocks is held for investment. There are bond issues that are speculated in. But the differentiation is essentially correct.

It follows that bond prices are not subject to the powerful influences of margin speculation that produce the extremes in stock prices. They are more directly subject to fundamentals of the business cycle, of credit, interest rates, of commodity price levels, and of the supply of investment money as compared with the volume of new issues offered for sale.

There is no schedule of bond prices quite comparable with the averages for stocks quoted in the preceding chapter. But a table showing the monthly yield of ten American railroad bonds, originally prepared by Professor W. C. Mitchell for the period 1890-1915, has been extended by the Harvard University Committee on Economic Research. The bonds in this list are few, of varying maturities, and not well chosen, three of them requiring to be changed in 1913 because of receiverships. Bonds of more uniformly high class would have shown more clearly the market rate for bond interest, as distinguished from the rate for risk.

Table of Prices

In the table below the monthly yield at selected dates has been translated into terms of market price for a 100-year 4 per cent bond, as affording a more graphic picture for the investor. A 15-year bond would show about one-half as much fluctuation in price as a 100-year bond on the same difference in yield; and a 5-year bond about one-quarter as much, or a little less.

There is also available from current periodicals a shorter and more diversified price record, for forty bonds, which capitalizes the yield at 4 per cent, part of which for the period beginning with 1915 is printed on page 155. A third table showing the range of price of selected standard bonds is given on page 156. From these three tables a general idea can be formed of the course of the bond market since 1890, and during and since the war.

10 Railroad 4 Per Cent 100-Year Bonds
(Based on Mitchell)

1890	Jan.	86.72		Dec.	85.43
	Dec.	80.80	1893	Feb.	87.09
1891	Feb.	83.31		Aug.	79.04
	June	81.29	1894	Apr.	88.06
1892	May	87.28		July	86.72

1894	Nov.	88.44	1913	June	88.44
1895	Feb.	86.34		Sept.	89.82
	Sept.	**92.08**		Dec.	88.44
1896	Jan.	88.44	1914	Apr.	91.66
	May	90.23		Nov.	86.91
	Aug.	**84.37**	1915	Apr.	88.84
1898	Jan.	95.31		Sept.	85.80
	Apr.	91.03	1916	Feb.	90.83
1899	June	102.77		Aug.	89.22
	Dec.	99.28	1917	Jan.	92.08
1900	Apr.	102.26	1918	Sept.	**72.72**
	June	100.75		Nov.	**80.47**
1901	Mar.	106.47	1919	Apr.	75.46
	Sept.	104.62		June	76.48
1902	Apr.	**107.28**		Sept.	72.33
1903	Aug.	**98.32**		Oct.	73.93
1905	Aug.	**105.14**	1920	June	63.78
1907	Nov.	**88.44**		Nov.	70.77
1909	Feb.	**100.75**		Dec.	67.89
1910	July	95.31	1921	Feb.	70.66
	Oct.	97.14		June	66.43
1911	Oct.	95.31	1922	July	81.62
1912	Feb.	96.23			

This table gives the main turning points in full-faced type; also, as bond prices are not so well known as stock prices, some of the minor changes and fluctuations in years of hesitation. The price changes, while not inconsiderable, are much less than in stocks.

The influence of the Baring failure is shown in 1890. Low prices continue until the slump of August, 1893, at the height of the panic of that year. There is an immediate recovery by April, 1894, to better than the pre-panic level. From this point bonds pass on through the semipanic conditions of 1896 with little recession, and from time to time through higher prices. Beginning with the latter part of that year, and all through 1897, they show consistent strength. Each year is upward, with minor fluctuations, until 1902, the point of maximum prices.

Beginning with April, 1902, six months in advance of any decisive turn in stocks, bonds begin a steady march down to the low point of August, 1903, where they turn upwards two months before stocks. The move to a new high in August, 1905, is unbroken. The downward march begins again the latter part of that year (before the highest prices are reached by stocks), and is uninterrupted all through 1906 and until November, 1907. Recovery begins with December, and there is an advance each month until February, 1909. After staying at the high levels for a few months, bonds sell off moderately in 1910, after which they display no marked tendencies until 1913, when lower levels are ushered in. These continued with moderate ups and downs, until the entrance of the United States into the war in 1917, when there was an immediate and severe decline.

The forty-bond table, running from 1915 to 1922, rests upon ten highest grade rails, ten second-grade rails, ten industrials, and ten public utilities. The movements of the combined average are as follows:

40 Bonds, Priced on 4 Per Cent Basis

1915	Jan.	76.51	1919	June	71.38
	Feb.	74.80		Dec.	63.38
1916	May	80.77	1920	Jan.	64.18
	Aug.	79.58		May	57.29
1917	Jan.	81.91		Oct.	62.07
	Dec.	68.30		Dec.	57.72
1918	Feb.	70.05	1921	Jan.	60.41
	Sept.	67.79		June	57.75
	Dec.	73.06	1922	July	75.44
1919	Apr.	70.05			

A concurrence with the preceding table would be most nearly shown in the prices of the ten highest grade railroad bonds alone, which start at 91.08 in April, 1915, are at 83.63 in December, 1918, drop to 66.82 in May, 1920, and again drop to 70.31 in June, 1921, and rise to 88.09 in July, 1922.

RANGE OF PRICES OF STANDARD BOND INVESTMENTS

Bond	Previous High Price	Low Price	Price July 25, 1922
1st Liberty Loan $3\frac{1}{2}$	Aug. 1918 102.50	June 1921 86.00	100.96
3rd Liberty Loan $4\frac{1}{4}$	Issued at par	Dec. 1920 85.60	100.64
4th Liberty Loan $4\frac{1}{4}$	Issued at par	May 1920 82.00	101.64
Victory Loan $4\frac{3}{4}$	Issued at par	May 1920 94.70	100.58
New York City 4's, 1959	Apr. 1909 102.50	June 1921 79.00	100.$\frac{1}{8}$
Atchison General 4's, 1995	Jan. 1906 104.50	May 1920 69.$\frac{7}{8}$	93.$\frac{1}{8}$
New York Central Ref. & Imp. $4\frac{1}{2}$'s, 2013	Jan. 1917 98.75	May 1920 69.50	87.50
Pennsylvania Consolidated 4's, 1948	Oct. 1908 105.50	July 1920 75.50	93.50
C. B. & Q. Nebraska Ext. 4's, 1927	Feb. 1906 107.00	May 1920 83.75	96.63
United States Steel Sinking Fund 5's, 1963	Aug. 1909 108.25	Dec. 1920 88.50	103.25

Like the previously cited tables of averages this table of specific prices shows the trend; but with exceptions. Only three of the bonds were outstanding as long ago as 1906, when highest prices were reached. Of these three the Steel "sinkers" reached their high price in 1909, due to the improving position of the corporation. For the same reason, and also because the sinking fund, for which they are drawn at 110, came into operation since 1907, these bonds were 10 points lower in the crisis of 1907 than during 1920-1921. But the story is the same as that of the averages. Bonds sank beginning with the entrance of the United States into the war, recovered briefly at the armistice, sank practically all through the inflation of 1919, and then still more profoundly when in 1920 the deflationary consequences commenced to materialize in the shape of higher federal reserve rediscount rates. The great recovery began before the reduction of the federal reserve rates, but started after the open-market rates for loans had gone down and after the rise of the reserve ratio from 40 per cent of notes and deposits to 60 per cent had made it plainly apparent that the rediscount rate would follow suit.

The striking features of the war period in these three tables are the extent of the decline from 1917 to the lows of 1920 and 1921 under the combined influence of high money, disturbed financial conditions, and the undigested war borrowing, and the vigor of the recovery that set in in July, 1921, with the rails and utilities, and in November, 1921, with the industrials. The recovery began while business activity was at its lowest ebb. It was the more remarkable in view of the great weight of government and other war financing which had greatly increased the volume of bonds in the hands of the investing public. As soon as the banking situation commenced to clear, an avidity for bonds sprang up that was truly amazing in its strength, scope, and persistence. It ranged from the Liberty and Victory Loans through the railroad and industrial list, and after a time extended to foreign issues, creating eventually a period of great flotations.

Meaning of Bond Prices

Bond prices have trends that are clearly defined whenever conditions are changing. These trends have meaning. The upward trend reaches its top and begins to yield to higher money rates before the culmination of the bull market in stocks, which it portends. The downward trend ends at about the same time as the crash in stocks, and is followed by a fairly prompt and strong recovery, not perhaps before stocks begin to get off the bottom but at least in advance of their vigorous revival.

Bond prices are more directly affected by interest rates and the supply of money for investment than by the nearby prospects of business. The high rates and full employment of money in periods of overstimulation, like 1902, 1905-1906, and to some extent that year of artificial federal reserve rates, 1919, produce sales of bonds and declining prices in advance of the ultimate fall in stocks. Stock prices when business is booming often keep up right into the teeth of high money, supporting for some time formidable rates on call loans. On the other hand, bond prices rise forcefully, without much regard for the business outlook, when interest rates are low, money is easy, and there is absence of borrowing for enterprise. Within the space of the two tables given above, such rise has occurred in the latter part of 1893 and early part of 1894, from August, 1896, through 1897, in the latter part of 1903, in 1908, and in the second half of 1921, running into 1922. It has been rightly said that as low commodity prices are a concomitant of depression and of the piling up of money in the banks, one could tell how low a nation's commodities had sunk by seeing how high its bonds had risen. This is a graphic way of expressing the apparent antithesis between bond prices and business conditions. The fact is, however, that bond prices are among the most reliable indices of business conditions. But the conditions they indicate are some distance ahead—a shorter distance on the fall and a longer distance on the rise.

What Makes the Price—Past History

Bonds are a class of security paying a uniform and determined rate of income regardless of business conditions. The ruling rate of interest on long-term money and the element of chance or risk attaching to the bond itself are the main factors determining its price.

Fifteen to twenty years ago the ruling rate of interest fell to 4 and even to 3½ per cent. Railroad bonds of savings bank class sold at par, or better, bearing these rates of interest. A few issues were even put out at 3 per cent. It was thought at that time that rates would go still lower, after the classic example of the British consols.

For a generation, practically since the historic sale made by Jay Cooke in the Civil War of United States government bonds bearing 7.30 per cent interest, the rate commanded by bond money had been gradually declining.

But the event proved that these extreme low rates were but the sequel of the long business depression of the nineties. As activity revived again, it produced a cumulative demand for capital. For this reason, mainly, the rate of interest on investment money began to rise and the price of bonds to decline. Other auxiliary reasons have been urged, such as the inflation of gold by the production of the Transvaal, the consumption of capital in the South African War, and the destruction of capital in the San Francisco earthquake. But the first reason given is the more weighty. A heavy shrinkage from the high prices of 1901-1905 followed in the subsequent period, with all investments paying a fixed or settled rate of return. While the decline was not rapid enough to offset the entire interest, there were nevertheless severely felt market losses in long-term bonds in the decade preceding the Great War. Such bondholders as had to realize their investments experienced a depreciation.

The Effect of the War on Bond Prices

The Great War produced in accentuated degree the investment conditions of other wars. The English experience in this respect is summarized in Hirst's "Political Economy of War." There were inflations, destructions of capital, and new flotations of loans, beyond all previous measure. While the peoples of the entire world were drawn into bond investment as never before, the supply of new bonds outstripped the absorbing power. The borrowings continued after the war, and, as is usual, the most profound effect upon investments and upon banking conditions came after the war activities were over. The activities sustain enterprise and common stocks that rest on enterprise. Afterwards, when other means have failed, investments must be used to raise desperately needed cash. Bonds, preferred stocks, and common stocks paying established rates of dividends, were plunged to lower and still lower levels of price. The war and its sequel exhibited in greatly intensified form the same phases of the progress through overactivity to depression as are shown in the peace-time cycle.

The ruling rate of interest on seasoned and well-secured corporate bonds rose during the postwar strain to 5, 6, and 7 per cent. Tax-free Liberty Loans yielded better than 4½ per cent and Liberty Loan bonds partly exempt from taxes from 5 to nearly 6 per cent. All new financing required a high rate, from 7 per cent for the most conservative up to 8 and even 9 per cent for the less conservative issues. The second-grade railroad bonds and some industrial issues returned yields of more than 10 per cent.

Bond yields in July, 1922, were, using very general terms, substantially 2 per cent lower than in July, 1921, and the prices of the longer maturities were, say, 15 to 18 per cent higher. While following the analogy of former recoveries, it may be that yields will become even lower and prices somewhat higher, it is also evident that the first great uprush has carried the standard bonds through the major part of the total rise from depression. It was a violent uprush, followed by great flotations, by excessive construction of dwellings and other buildings at home, and by harassing uncertainties abroad. At the moment of writing bonds of the first grade have receded moderately from the levels of the initial recovery.

The Fear of Risk

In addition to the other factors—the heavy and continued borrowing by governments, the taxation that lessened the supply of money to invest and induced shifting of investments, the inflation, and the tightness of money—the increase of risk was also a cause of the profound depression of fixed interest investments in 1920 and 1921. There is always an "if" in every situation, and especially in crises. The doubt as to security that rose from the wasting away of earning power through high expenses and the losses of deflation was a more influential factor on investments than ever before. There was a legitimate fear as to the solvency of the world's business after so gigantic a war—a question as to the ability of companies and countries to pay their debts. Until the strength of the federal reserve system had proved itself equal to carrying the load of distressed debtors, and the government itself had intervened to save the hardest hit of the railroads, the possibility of collapse was in men's minds, with defaults and still lower prices for all bonds. That is the main reason why the succeeding uprush in bonds was so sudden. Doubts ended just as soon as the banking situation eased.

Return of Confidence—Eased Money Conditions

The return of confidence, as well as the return of available cash resources, is characteristic of the present phase of the bond market. In all such decisive movements of securities there is a psychological as well as a physical cause. The succeeding phases will follow in due order. The secondary phase of large new bond financing, turning towards the putting out of second-rate issues of inferior security, has been experienced. The preferred stock era has begun. The equities, the common stocks, are claiming their day in the market, passing through the familiar cycle by which they become too high. Finally the questions of cash and of confidence will reappear.

Value of Bond Figures

Figures for bonds have been given quite freely, not with the idea of setting the framework of a chart or patent indicator, but because they are significant and much less generally known than they should be. The writer is not in favor of applying too much mathematics, or statistical method, to facts whose real analysis depends upon common sense. The artificially manufactured barometers referred to in a previous chapter are, to use a simile, playing chess with a poker deck. The uncertainties of business are due, first to one new factor, and then to another becoming imminent and dominating. The best forecasting is done by watching the changes and trends, selecting the one or two most important factors, and eliminating the rest. Among these factors the trend of bonds, the trend of bank reserves, the trend of rediscounts and rates on six months' paper, have been most frequently and continuously the essentials.

Bond Investment—The Institutions

The relative risks of seasoned bonds are always closely appraised in the market. The strongest and most conservative issues may be recognized from the price. The red flag of danger is visible in a price so low that the yield is excessively high.

Bonds are graded and classified by their quotations. Underlying, or prior mortgage, bonds sell higher than junior bonds of the same railroad bearing the same rate of interest. The bonds of a strong railroad are on a different basis from those of a weaker system. Industrial bonds sell on a separate scale of prices and foreign bonds on still another.

The heavy investors in bonds are the savings banks, the insurance companies, numberless estates, and individuals of wealth. The institutions, and the underwriters and bond houses that supply them, have a most discriminating judgment as to the relative risks. They make the price, determine the yield, and establish the character of the market for bonds suitable for institutional or trustee investment.

It is the business of the savings banks and insurance companies to buy bonds. They must invest funds safely to yield income. The stream of their investment continues, even in time of uncertainty or when the prices of all bonds are due to go down. The institutions may not, perhaps, buy as actively, but from their very size and immobility they cannot sell *en bloc* when confronted with a bad situation. Savings banks, for example, were permitted by law to carry depreciated railroad bonds at cost, and even to buy additional railroad bonds that had failed to keep within the original savings bank requirements because of lapsed dividends. It is outside of the canons of trust fund investment to buy for appreciation, and it is largely outside of institutional practice to sell in order to avert depreciation. The institutions pick and choose with great skill, and at times exchange one issue for another. But they must, to a large extent, stay in bond investments from force of circumstances.

Bond Investment for the Individual

There is also much that is heavy and inert in the bond investments of individuals. Like the traditional Boston and Maine, and New Haven stocks for the family funds of New England, an investment is often followed through force of habit by others than trustees. Bonds are not watched after being bought. The income is considered secure and no attempt is made to gain appreciation or to avert depreciation of principal. This is unsound investment because it is asleep—and often doubly unsound because it seeks high income. If investment for appreciation results in safeguarding income and watching all the chances affecting principal, it is safer than the lethargic investment for income only. It has the great advantage of being fully awake.

The active investor has the advantage of mobility—of buying or refraining from buying when or where he will. His field of action is of the broadest. He may establish his own standards of safety, and not only exercise the highest discrimination between bonds, but also an independent judgment as to fundamentals. The real safety of the investor in bonds lies in constantly knowing the facts, watching governments, corporations, and the possibilities of the bond market, and running away from risks as they appear. It is far from enough to buy "safe" bonds. They must be kept safe. Effort and intelligence must be exercised. If bonds are so bought and held, appreciation of principal should follow, in due course, as a natural consequence of the care and attention given them. The safety of the income should be increased rather than lessened by seeking, along proper and reasonable lines, safety and appreciation in market price.

Investment in bonds depends upon judgment of values as affected by the strongest and deepest currents of finance. No form of investment offers more scope for the "continual effort at understanding, at assimilation," or for the absorption of principles. If fully understood and fully labored with, no form of investment offers a surer profit.

CHAPTER XII

CLASSES AND TYPES OF SECURITIES

Qualities of Good Securities

It is not altogether easy to define the qualities of a good security. A catalogue of the attributes can be made up, beginning with marketability, income, safety of principal, immunity from being called for redemption, and chance of appreciation, and leading at will through other desiderata. But no such catalogue brings insight. A list of abstract attributes, many of which are not practically consistent with the other attributes, is too wooden and narrowing.

The *knowability* of an investment, or the lack of that quality, introduces one of the fundamental lines of cleavage in investments. On one side of that line are the Liberty Loan bonds, many municipal and most state issues, the standard railroad securities, and the solid industrials, all of whose values are or may be public knowledge. On the other are the investments whose values are matter of private or special knowledge. These include a very long list of securities whose attributes are commonly put into the catalogue, without discrimination, but which are not suitable for general investment—based on properties that must be seen first hand and examined with care and skill before their value can be ascertained.

These pages are concerned with the knowable securities. Those upon which public information can only be had from the vendors are dangerous. Those that require special knowledge or investigation can naturally not be covered.

The omitted list includes the issues of lumber and irrigation companies, of all small companies, of specialty and holding companies, of companies not publishing full annual reports, of construction enterprises, of patent promotions and other speculative undertakings, of all oil wells, gold mines, and exploration projects. Even real estate, whose investment principles have been most clearly presented in Richard M. Hurd's book, is excluded—because whoever buys or takes a mortgage must first look at the property in person or by agents. Real estate bonds as a class, except where guaranteed by a strong and conservative institution, rest too much on faith and are subject to the danger of overlending upon unknown security. Many foreign bonds are also considered to be beyond the line, as it is impossible for most investors to follow the circumstances, solvency, politics, or morals of the issuing governments. This line of cleavage follows that broad investment principle—the investor must know his security.

Distinction between Bonds and Stocks

Among the securities here treated of which rest on public knowledge and a public market, the most fundamental distinction lies between bonds, representing credit, and stock, representing capital. The bondholder is a lender, protected more or less fully against risks; the stockholder is the proprietor, subject to the risks and entitled to the profits of the business. No very extended catalogue of attributes can fit both classes of securities, or in fact cover very much of either class. The differences are as important as the similarities. Both types of investment, and the subordinate types as well, have their use, if the investor knows and understands the nature of the security.

In practice bonds may carry some risks, and the risks of stock are sometimes partially protected. There are many grades and qualities of securities. There are gilt-edged bonds, whose fixed interest is so fortified that they are free of concern in the profits and losses of the business. There are bonds that have a distinct risk in their dependence upon management or the continuation of prosperous conditions. There are also bonds that have been unfairly sold to the public, carrying unsuspected risks, or risks that should have belonged to the stockholder. As to stocks, there are some so sound and strong that their risk is less than that of many bonds. It is quite general practice also to modify the risk of stocks by classifying them into preferred, carrying less risk and a fixed rate of dividend, and common, carrying the full brunt of the risk and dividends according to earnings.

Classification of Securities to Meet Investment Needs

The object of subdividing securities into classes is genuine and useful. Each class appeals to a different type of investor and is suited to different investment purposes. Bonds could not be made safe for institutions if they were not followed by stock. Stock would not be attractive to the active and ambitious individual if it carried the entire weight of the business and bore a fixed, or approximately fixed, rate of return. Except the companies suited only to stock and not to bonds, more money may be raised, therefore, for the enterprise by classifying securities and appealing to several groups of investors, than by appealing to one only. In every business of settled earning power and large capital requirements it is necessary and customary to raise part of the money on bonds at stated rates of interest, and to concentrate the profits, as they may be earned, upon a correspondingly smaller issue, or issues, of stock.

There are many types of investment securities, and there are as many kinds of investment as of securities. The securities could not be sold if they did not seem to fill an investment requirement, to fit some particular niche in investment demands. Thus, for example, what the savings bank laws of Massachusetts and New York really imply when they require before bonds are legal for savings banks that railroads shall have paid dividends of not less than 4 per cent for ten years on an amount of stock not less than one-third of the outstanding bonds, is that individuals shall make a solid junior investment of definite type and proportions to protect the senior investment of the savings banks. In every legitimate enterprise the investment in stock or junior bond issues is, and always has been, a large part of the whole. All types, with their various qualities, constitute securities of investment, serving a purpose and capable of being purchased intelligently. They are to be characterized and defined separately to show their purpose and the degree of their risk.

Evolution of Corporate Finance

Corporate finance is the result of evolution. Before there were corporations, merchants and firms carried on business with personal capital, and borrowed at the bank on the strength of that capital as they do today. The effect in England of the South Sea Bubble of 1720 was that stock companies, designed to draw capital from a wider public, were required to be formed on the lines of partnerships, with an unlimited liability against each stockholder for the debts of the corporation, except in those special cases where Parliament granted charters conveying the privilege of limited liability. But the failure of the City of Glasgow Bank in 1878, bringing widespread ruin to weavers and other humble folk as well as to merchants, who were hapless stockholders, forced a change. The stockholder's liability is now definitely and almost universally limited to what he has subscribed to the business. In this country the stockholder's liability has become, customarily, limited to what he has put in, except with banks which carry a double liability. Stock is issued as full paid, and the holder owes no debts of the corporation.

Stock financing preceded bond financing. Our first large railroad, the Baltimore and Ohio, was financed with stock, part of which was taken by the state of Maryland. But it developed after comparatively few years that railroads could not raise enough money on stock, or by recourse to governmental aid. Public loans had to be resorted to by the railroad corporations. In England these have taken the form of debentures, many of which are a charge on the earnings, while in the United States they are, characteristically, mortgage loans secured on the property. In order to be sold the mortgages became split up into bonds of $1,000 pieces and other convenient denominations. In the early period of American railroad construction loans were often used as the main reliance for money, with stock merely as bonus to make the loans salable. But this proved costly and disastrous to investors, whose bonds carried all the risks of the enterprise. Most states now require that railroad stock cannot be issued for less than par, and public service commissions and the Interstate Commerce Commission compel the companies to furnish full details of the value received before authorizing the issue of either bonds or stock. It is the swing of the pendulum, the present regulation being too restrictive of stock for safe and sound financing, where the former absence of regulation was too loose. The methods of the English Companies Act, which permits corporations to issue stock for what it may be worth but requires sworn statements to be filed afterwards, allow of a more salutary freedom.

Not to go too much into history, the first simple stock and bond issues have been supplemented as occasion has required by all manner of devices and forms of raising money by promise to pay or by promise to divide profits. The industrials have of recent years been less restricted than the railroads, but the latter because of their age and experience have a more complex financial structure. In both cases it is a rational financial structure, devised to meet the requirements of investors. Through it the public has built and equipped and now owns the railroads and the other so-called private enterprises of great magnitude.

Types of Securities

The principal types of corporate securities, stated in the order of their protection against risk, are mortgage bonds, debentures or plain bonds, preferred stock, and common stock. Notes secured by mortgage collateral rank with mortgage bonds, and unsecured notes with debentures.

Railroad Bonds

Mortgage bonds, especially of railroads, have become subdivided. Purchase money, prior lien, and other underlying issues come "next to the rails." These are usually the old bonds, not often on the market. There are also the first mortgages, which may or may not be actually first, the Baltimore and Ohio, among other companies, having stretched the name more than is reasonable. Second mortgages were more frequent in former days. The idea of giving a bond a good name and at the same time of providing that it ultimately become a first mortgage upon the maturity of prior issues, so that the holders might look forward to increased security and appreciation of principal, has been in vogue in recent years. The general, refunding, consolidated, improvement, first consolidated, first and refunding, general first, refunding and improvement, general and refunding, and similar mortgages, are of this blanket type as a rule. The names are not indicative of quality. Rock Island put out a first and refunding mortgage that matures more than fifty years before the underlying general mortgage, which it might be supposed to refund, will mature. On the other hand the general mortgage of that company has now become a genuine first mortgage, a metamorphosis that is in gradual process everywhere.

Divisional and extension mortgages are more usually but not always the type that rests on part of the property and not on the property as a whole. Specific or local names are often given to such mortgages. The collateral trust mortgages are not secured upon real property but by pledge of collateral. Equipment being good security, chattel mortgages and leaseholds on cars and locomotives are used as a basis for a very important class of serial obligations known as "equipment trusts." These various types of debt, and others, are a result of the growth of properties and the necessary creation of new vehicles of borrowing.

Convertible bonds may be secured by mortgage, or they may be issued as plain promises to pay. Guaranteed mortgages are usually issued as a mortgage by the subsidiary and guaranteed with the force of a plain bond or debenture by the parent company. Joint mortgages are those in which two or more companies join by mortgage upon property of each. A typical terminal bond is secured by mortgage upon the terminal, supported by rentals from the lessee roads and by a joint and several guaranty of the tenant-proprietors.

General Protection of Mortgage Bonds

The last-ditch protection of the mortgage bond, after default has taken place, is, first, the value of the mortgaged property if sold under the hammer, and second, the earning power of that property if taken possession of by the bondholders. The rate per mile of the bonded debt is of significance only when compared with the probable value of the property, which varies greatly as between different railroads and between different sections of the country. What is important is that the property should be a unit, of sufficient extent to be capable of separate operation, and at the same time necessary to the system of which it is a part. Recent railroad reorganizations have treated branch-line issues harshly because the bondholders could neither operate their property nor sell it as a railroad, and hence were not in position to fight.

To avert default the general protection of all bonds lies in these three important factors of safety—the general earning power of the company, the weight of its bonded debt and charges as compared with that earning power, and the volume of stock and junior bonds that must see to it that senior issues are taken care of in time of trouble or lose their equities. Something depends also upon whether the issue is a closed mortgage or is the company's medium of future financing. In the latter case new sales of bonds are to be expected from time to time, and possibly with a resulting depression of price. If the provision for future issue is too liberal, there is also the possibility that the security may be diluted, the risks of construction and expansion incurred, and the character and value of the bond itself altered.

The continuity of earning power is an essential consideration. The question affecting the bondholder is: What will the company be able to pay during depression? He is not concerned with the profits of prosperity. As the steadiness of earnings under future contingencies is a matter of judgment and estimate, there are no exact criteria of weight of debt and ratio of charges to net earnings. Some companies, such as old-established railroads with diversified and solid traffic, can carry more debt than others which are younger and less developed. It is sufficiently obvious that a road like Alton, whose debt is over four times its normal gross earnings, had less strongly secured bonds than Pennsylvania, whose gross earnings exceed its debt. It is also plain that properties earning their charges twice over have better bonds than those earning their charges one and one-half times, and much better than those whose charges are barely covered. But comparison with similar properties and like bonds, with careful watch against undue increase in debt or decrease in earnings, is better than any arbitrary ratio. The salient points about a mortgage bond, ranking after property mortgaged, earning power, and size of the mortgage, are the bonds that lie under it, the securities junior to it, and the financing ahead of it. Its strength or weakness is more a matter of position than is commonly conceived.

Open-End Mortgages

When the original mortgages have been outgrown, and the old bonds are still outstanding, the problem of creating a suitable vehicle for future financing has had to be faced by almost all railroads. The former types of blanket mortgages, limited to a fixed amount and, except with the Pennsylvania Consolidated and a few other issues, to a fixed maturity date, did not completely solve this problem. It proved impossible to look far enough ahead and the same problem had to be faced again and again, resulting in inconvenient three- and four-story bond structures and costly piecemeal financing outside of the general structure. Accordingly a number of the stronger railroads have now created open-end mortgages, with no fixed limit upon the authorized amount of bonds outstanding except that they must not exceed three times the amount of the stock. These are intended to be a perpetual means of finance, the bonds being issued in series maturing at different dates and bearing such rates of interest and carrying such provisions as to conversion and sinking fund as may be necessary at the time of issue. In general they serve their purpose, although the unexpected conditions of the war resulted in departures and the issue of a stronger form of short-term bonds secured by mortgage collateral. The open-end mortgage is adapted only to the strongest companies, with legitimate expectations of remaining strong.

Provisions of Mortgage Indentures

Mortgage indentures recite the purposes for which bonds may be issued, the amounts, and the conditions. They set forth the right of the bondholder to possession, operation, foreclosure, and sale in case of default. Until default the bondholder has no control over the property or voice in its operation. The manner in which the privileges of the corporation and the remedies of the bondholders are established in the indenture bears on the solidity and value of the bond. The principal features are available in the standard descriptions of bonds, including those prepared by reliable investment bankers. As a general rule the more recent indentures are more carefully and precisely drawn than the earlier ones. The defect most to be watched is too great freedom of issue, especially for expansion or against collateral. But the earlier bonds have as a rule the better physical security and are more seasoned issues. In addition, underlying mortgages are usually, but not always, closed by the creation of the newer blanket mortgage.

Convertible and Collateral Trust Bonds

Many convertible bonds have turned out well, the conversion privilege being ultimately cashed in at a profit. Sometimes the conversion privilege has been of no benefit, lapsing and becoming ineffective because the stock did not rise to the conversion figure within the time allotted. Obviously the call on the stock is given as an inducement to buy, and the bond itself is not usually of the first order of strength. There are exceptions, good convertible bonds having been issued, for example, by Atchison, Norfolk and Western, Southern Pacific, Union Pacific, and although a distinctly junior security, preceded by a large volume of mortgage bonds, by the New York Central. Examples of weak convertibles are furnished by the old Missouri Pacific before reorganization, by Erie, and, under present circumstances, by Chicago, Milwaukee and St. Paul. Conversion is a top-dressing that does not work on poor soil.

Collateral trust bonds secured by stock alone sometimes carry the risks of a stock with the limited return of a bond. In eras of consolidations such bonds are a favorite device for securing control at a minimum cash expenditure. Of these the Rock Island Collateral Trust 4's of 2002, that were foreclosed, are an example. The Chicago and Eastern Illinois stock trust certificates of the old St. Louis and San Francisco were practically the same thing. The Interborough-Metropolitan 4½'s, although not strictly railroad bonds, are a case in point. On the other hand, there have been strong bonds secured only by stock, such as the Northern Pacific-Great Northern Burlington Joint 4's recently paid off, New York Central's Lake Shore Collateral 3½'s, now become a mortgage on the railroad itself, the Atlantic Coast Line's Louisville and Nashville Collateral Trust 4's, and Reading's Jersey Central Collateral 4's.

Collateral trust bonds secured by deposit of other bonds are essentially stronger than those secured by stock, the strength depending, however, upon what is pledged. In time of high money and poor credit it is quite common to issue notes or short-term bonds secured by pledge of mortgage collateral in an amount in excess of the par of the obligation issued. It is the customary method of administering oxygen to sick companies, and in such cases a danger sign. It is also the method followed by strong companies to shorten the term during which they must pay high interest rates on money borrowed during hard times, and to avoid selling their regular bonds at a heavy discount. Among the railroads availing themselves of this type of collateral trust bond during the last four years are the Pennsylvania, New York Central, Illinois Central, Union Pacific, Chicago and Northwestern, Atlantic Coast Line, and Baltimore and Ohio. Their bonds are not of equal strength, but the form of the bond is the strongest known. Many other companies filled the need for short-term money by borrowing of the government.

Collateral Included under Blanket Mortgages

There is a proportion of collateral included in the security of a large number of the blanket mortgages.

Often the corporate structure prevents the giving of a direct mortgage. Reading, for example, is a holding company, owning railroad, coal, and other companies, and its general mortgage rests largely upon collateral of companies it owns and controls. The Lehigh Valley Railroad is composed of a number of separate corporations, whose issues are pledged under the principal mortgage of that company. Texas requires its railroads to be incorporated within the state, so that large systems traversing that region customarily pledge their Texas collateral under their general mortgages. There are other reasons for separate subsidiary corporations, and as a rule if everything of the subsidiary is pledged and it does not run up debts of its own, the effect is the same as though a direct mortgage had been given. There may be some danger in scattered collateral; the Missouri Pacific Collateral 5's of 1920 and 1923 escaped severe sacrifice through piecemeal appraisal of such collateral only by determined effort on the part of the bondholders. Under ordinary circumstances, and with due regard to corporate peculiarities, the privilege of pledging collateral under blanket mortgages should be restricted to one-fourth or one-third of the total security, and carefully safeguarded.

Debentures

Debentures, or plain promissory bonds, are sometimes stiffened by providing that any future mortgage must secure them, as was done by the New York, New Haven and Hartford. The old 4 per cent debentures of the New York Central have in this manner actually become secured by mortgage; the 6 per cent debentures issued in 1915 were, instead, sweetened by a conversion privilege at 105. Debentures may also be strengthened by making them a first charge on earnings, as was done by an industrial, the old American Tobacco Company. This is a weak type of bond which can only be issued with propriety by a strong company.

Equipment Trusts

Equipment trusts have been among the safest of bonds. Equipment is necessary to operation, and a receiver usually finds he is short of it and not in position to dispense with any. The instalment payments outstrip the normal depreciation in the equipment, so that the security improves with age. But under present conditions of excess "bad-order" cars and extremely high prices just recently paid for both cars and locomotives, the newer trusts should be regarded as based partly on the strength of the issuing company, whatever that may be, and on the fact that equipment is universally in scant supply. In the event of a falling off in business and slack traffic the equipment would hardly bring what it was pledged for. Equipment trusts are a very strong form of obligation, and yet burdensome to the issuing company because of the instalment payments running off within a comparatively short term. New York Central has done a great deal with 15-year equipment trusts, having $85,000,000 outstanding, besides $12,000,000 borrowed through the Railroad Administration. But as a rule excessive resort to equipment trusts is indicative of a weak company, or one lacking suitable means of permanent financing.

Notes

Notes are of various types and of varying significance. They are a justifiable expedient to postpone high cost, long-term financing, provided they are secure and can be paid off. But if notes are to be paid only by issue and reissue of more notes, the company is already in trouble, At the same time there is, even in such case, a moderate presumption in favor of their being paid off, because they are usually in strong hands and because it is against the interest of other and longer term securities to let them default. The Missouri Pacific notes, which finally brought the company to receivership, were paid off in the reorganization, although hardly as well secured as bonds that were readjusted. There are many note issues, however, that have failed of payment, and it is a general rule that no obligation rises higher than its source—the security that backs it. There can be little appreciation in the price of notes, because of the short maturity. Their usefulness in investment is against uncertainties. It is, therefore, essential that no risks whatever should be taken in purchasing them. A strong note should be bought or none, money in bank being preferable to a weak note.

Income Bonds

Income bonds have more often been unsatisfactory than not. An occasional issue put out in reorganization, like the Atchison Adjustment 4's, has turned out well and become actually, or practically, a fixed interest obligation. Occasionally, as with the Central of Georgia, bondholders have enforced their rights. Generally speaking, the difficulty has been so to define income that directors would be obliged to pay interest if any was actually earned. If the interest is cumulative, bondholders have a fair chance, but if non-cumulative, they have insufficient hold. Progress has, however, been made in defining the terms in which income is to be measured, as, for instance, with the New York City Railways Adjustment 5's, now unhappily sunk beyond hope of payment. The income bond, both cumulative and non-cumulative, is being used extensively in such reorganizations as those of Missouri, Kansas and

Texas and St. Louis-San Francisco, and with apparently good results. As a class, income bonds have been really a stock in the form of a bond, with the risks of stock but without its voting power. The passing of the interest payments, as has happened with the Seaboard Air Line Cumulative Adjustment 5's, does not constitute an enforcible default on the bonds.

Proportion of Railroad Bonds to Stock

Of late years railroad financing has tended to grow topheavy with debt because of inability to sell stock. The proportion of bonds to stock has risen from an approximate equality twenty years ago to something over one and one-half times. The present ratio is recognized as unsafe in the sense of imposing too great a burden on weaker companies. The debt exceeds the hypothetical danger line of 60 per cent of total capitalization. While no exact ratio of safety for funded debt exists, all credit ratings being subject to almost more exceptions than rules, it is evident on looking over the field that although a majority of railroad bonds are sound, the railroad structure as a whole is not. It needs more stock financing. Preferred stock financing has recently been initiated by Illinois Central and Chesapeake and Ohio. Sufficiently good earnings, with prospects of fair rates and treatment, would result in an era of sales of both preferred and common stocks. For nearly fifteen years, since the Great Northern, Northern Pacific, and St. Paul brought out their large issues, railroad earnings and prospects have not been bright enough to permit floating stocks at par or better, with few exceptions. As the law and the commissions frown upon the sale of stock for less than par, the railroads have been involuntarily thrown back upon bonds and notes as the sole way of raising funds for capital expenditures.

Industrial Bonds

The industrials have entered the bond stage more recently than railroads. Large industrial issues hardly date back more than twenty years. The more important companies have been able to market bonds, but it is well understood that the proportion of debt to stock should be less with industrials than with railroads. The fluctuating earnings, the greater risks of the business, and the higher scale of profits render stock financing more appropriate for the bulk of the requirements. Preferred stock, where non-payment of dividends in time of distress entails no danger of receivership, has been largely employed. Nevertheless the marketing of bonds by second-rate industrials has been at times overdone. The Steel Corporation, first-class coal properties, and companies owning valuable real estate, are illustrations of those justified in using bonds. But with most industrials a large bond issue may be considered both as a risk in itself and as adding to the risk of the stock issues. There will still be hard times for industrials to pass through, when fixed charges hurt, in spite of the evening-up processes and great carrying power of the federal reserve system.

Public Utility Bonds

Public utilities, those still expanding and still dependent upon management, have in recent years endeavored to strengthen their bonds by paying especial attention to the form of the indenture, permitting, for example, the issue of bonds for only 80 per cent of the cost of improvements, additions, and acquisitions, and then only when previous earnings, after adequate maintenance charges, are equal to twice the interest, and with particular limitations also as to collateral. These and other like restrictive provisions prevent the weakening of the bond issue. Too many restrictions are, however, an unfailing sign of a second-rate property forced to borrow on difficult terms. The essential thing is the real value of the security. There are good bonds, especially among the older issues, and even, also, with the discredited tractions. The newer issues used as medium of financing by the utility holding company are more speculative. Recent years have been as severe a test of utilities as could be conceived, and any closed or properly restricted issue that came through unimpaired has a strong prima facie presumption of safety.

Municipals

Municipal bonds are a class apart. Being tax exempt under present laws they sell higher than corporation bonds of equal security. Municipals are essentially an inactive type of investment—suitable for rich men, trustees, and institutions. State issues and the First Liberty Loan 3½'s, together with some of the series of Treasury notes and certificates, are also tax exempt and appeal primarily to the same class. The other Liberty Loan issues have a limited and temporary exemption, ending in 1923 and 1926, and are more suitable for general investment. The presence of so large a body of securities, the income from which is non-taxable, has had an important influence on all investment. Holders with high surtaxes have shifted at their convenience into such issues, releasing to the general public corporate bonds and stock of higher yield.

All governmental issues are supported by the taxing power. With the municipals proper there are certain governing considerations. A debt limit is customarily prescribed by the state legislature beyond which bonds cannot be issued by cities. This limit does not include the self-sustaining bonds, such as those issued for rapid transit or docks. It is sometimes of interest to note whether or not this additional debt is actually self-sustaining. The limit is also breached, especially in the West and South, by the creation of drainage or school districts, practically coterminous with the city, to issue bonds as a separate unit. There are also special assessment, or improvement bonds, that are a levy against individual taxpayers and not against the city as a whole. The vice of municipalities is extravagance, and the tendency to swollen debts, now stimulated by the ease of selling tax-free bonds, or the conservatism in creating obligations, are the important factors. While states have been slower, for natural and constitutional reasons, to pile up debt, there have been instances of careless bonding for highways, which wear out quickly and which may be subject to graft in the construction, or of issues on the grand scale for other public works such as canals and for bonuses. The repudiations of former years are fortunately not now a factor with states or with any important city.

The laws governing investment by savings banks and trustees in municipal and state bonds contain provisions as to population, observance of past obligations, and percentage of debt to assessed valuation, by which the best of the city issues are to be identified. Beyond this the market makes its own differentiation. But the most important fact with respect to each new issue, whether it was put out in accordance with law by duly constituted authority, can only be known through painstaking legal examination of the steps taken by the municipality. If a board of directors makes a mistake in the formalities of a bond issue the bonds are nevertheless a debt of the corporation; but if a board of aldermen of a city makes a mistake in authorizing a bond issue the obligation may be totally illegal and invalid—a debt of no one—which cannot be assumed by the city. Hence the purchase of municipal bonds is usually done through bond houses equipped for that purpose and able to furnish the opinion of counsel as to their validity. The future of municipals is largely concerned with federal surtaxes and, possibly, tax legislation. This is a special, although important, type of investment, the details of which scarcely belong in this volume.

Foreign Government Bonds

The bonds of foreign governments have expressed, most prominently, the necessities of the borrower. They have borne most attractive rates of interest. These bonds, practically a new division of the bond market, are beginning to be sorted out as to values. The United Kingdom issues are up to a prime-security, low-yield basis. The Canadian, Swedish, and Swiss issues are ranking as fair securities, of moderate yield. But most other issues are on a high-yield level, speculative basis. Generally speaking, the external loans of European countries that have both commerce and a sense of honor are regarded as reasonably safe. The internal loans are more speculative, besides carrying a gamble in exchange. In the first rush of foreign investment the business of lending has been in some direction quite overdone. Nations at war have so multiplied their debts that a nation not at war which has merely doubled its debt appears conservative—an appearance, however, that in the case of South American countries improves neither the morals nor the financial ability of their governments. With the creation of new countries constituted out of discordant elements, such as Jugo-Slavia, bonds of extreme high yield have appeared that are a speculation in political stability and in a national character yet to be determined. There is a speculation also in the very promise to pay an inordinately high interest rate over a period of years when current rates may become low. The business of lending money abroad has not yet settled down. In the end we shall lend much of our surplus credit. In the meantime we have made many difficult and some poor loans.

Stock

Stockholders are owners. They rank after all debt in point of security. They rank ahead in possibility of profit. The stock is the margin above the debt, which may be wiped out or doubled, like any other margin. An investment in stock that does not rest upon an understanding of this relation is unsound. The first step toward safety is to see what the margin is, in terms of market value and earnings value, as against the debt, comparing the figures with those of like companies.

Contract between Stockholders

The articles of incorporation are a contract between stockholders and convey no rights against bondholders and creditors. The preferred is usually given a settled rate and priority of dividend, and precedence in liquidation, over the common. The most important distinction in preferred stocks is that between those bearing cumulative dividends, accruing whether earned or not, and non-cumulative, lapsing when not earned and declared. An occasional issue of preferred stock, like those of the Northwestern and St. Paul, is participating, and shares in any higher rate of dividends paid by the common. The common is usually given all the right to profits after payment of the fixed rate on the preferred.

The interpretation of this stockholders' contract occasionally gets into the courts, particularly as to the relative rights of non-cumulative preferred and common. In the Union Pacific case it was held that the preferred had no cause to stop the payment of a large extra dividend to common out of accrued surplus. In the case of the Chicago, St. Paul, Minneapolis and Omaha, now in litigation, the court of first instance held that although the dividend on the preferred was reduced to 2 per cent out of current earnings the company could still pay 2 per cent on the common out of the surplus of previous years. In general the non-cumulative preferred is interested only in the earnings of the current year, which may be good or poor, while the cumulative preferred is entitled to dividends out of any surplus that the company may have—past, present, or future.

All dividends are payable when and as declared by the board of directors, whose judgment as to whether or not the company needs the money for something else is final. They are not compulsory like bond interest. The remedy of the stockholders against unfair treatment lies in their control over the board at the annual elections. It is sometimes useful to note which class of stock has the voting control; it is vital, when a working control is held by another company or by some one dominant interest, to know the dividend policy of that control. Chesapeake and Ohio, for example, under the tutelage of Pennsylvania and New York Central, paid 1 per cent dividends for ten years, while the property was being strengthened. When Hawley bought in in 1909, he raised the rate to 4 and then to 5 per cent, cashing in the conservatism of his predecessors.

Covenants of Industrial Preferred Stocks

Many industrial preferred stock issues of recent years are supported by protective covenants, such as to maintain properties, to redeem a percentage of the stock annually, to keep net current assets equal to or greater than the amount of the preferred, and not to issue other preferred, a prior obligation, or mortgage, without the consent of three-fourths thereof. Sometimes also control is given to the preferred if dividends are passed, a majority or all of the directors being elected by this class of stock. These covenants do not, and cannot, create the strength of a bond. In so far as they may limit the dividends paid out on common they may strengthen the preferred. But in so far as they may limit, or reduce, the borrowing power in time of trouble, whether at the bank, by notes, or on mortgage, they may be weakening to both classes of stock, and inconveniently dangerous.

Preferred Stocks as Investments

There are sound and strong preferred stocks, mostly of the older type—plain and without the protective innovations that interfere with management. Standard Oil preferred is better than most bonds. United States Steel preferred is an investment security of great strength. The strongest industrials and many of the standard railroads have preferred stocks—some cumulative, others non-cumulative—ranking high in this class of security. Still preferred stock investment is not to be made without watching the business. If things go wrong, there is little equity, as debts must be paid first. If things go poorly, the lapse of dividends is apt to be longer than expected.

Preferred stocks rightly carry higher yields than bonds because the risks are greater. It is therefore a type of investment to be made circumspectly, and primarily with an eye to possibilities of profit. Improving conditions and the approach of dividends are usually reflected earlier in the price of the preferred than in that of the common.

Common Stock as an Investment

Common stock has the larger risks and the greater chances of profit. The investment is to be made with eyes open in both directions. Even when a regular dividend has been paid for years, it is but blind plunging, and quite too common, to assume that it will for that reason continue to be paid. In time of crisis dividend reductions may affect several hundred large corporations, including in the difficult years just passed such stable companies as Pennsylvania, Chicago and Northwestern, and American Sugar. It is necessary to know the facts of the corporation, the trend of the business and of the net current assets, and of earnings and debt, the maintenance, the financial requirements, the weight of the fixed charges, and the proportions and aggregate amount of the capitalization, including bonds. A safe and serviceable rule is to compare the company with its own past and with other companies in the same line of business, avoid all capitalizations that are heavy in proportion to earning power, and then invest on the basis of general conditions.

Dividend and Financial Policies

Industrial dividends are more changeable than those of railroads. Industrials are more likely to adapt themselves to conditions, paying in years of good earnings and passing or reducing in bad years. Railroads are slower to change and endeavor to follow a steadier course. While industrial stocks rise and fall with dividend prospects, the changes in railroad dividends, when these take place, are of more serious nature and may herald an alteration of the entire character of the investment. Not every railroad management has the courage of the Pennsylvania to reduce dividends on an investment stock in a temporary slump of earnings. Too often embarrassments and receivership of railroads are preceded by years of struggle to pay dividends that should have been dropped. And on the other hand when Union Pacific raised its rate to 10 per cent in August, 1906, a goal that Harriman said he had seen and known ten years previously, that surprise to the public meant an increased dividend continuing through the panic of 1907 and through the war down to the present time. It was, as railroad dividends should be, an expression of judgment of the directors as to the capacity of their property to pay.

The consistent building up of corporations that in the end brings wealth to stockholders is rooted in the maintenance accounts, the financial policies, and the growth of the business. If these three are soundly based, the result over a period of years should be such an increase in net revenues, greater than the increase of debt and capital, that there is finally a geometrical increase in the divisible profits per share.

Liberal maintenance is a harbinger of liberal dividends at a later time. As to financing, a company that borrows heavily for expansion during prosperity courts trouble in depression. If it finances by stock, instead, the holders are taking chances, it is true, on future profits, but have not the same chance of being wiped out. But if a company progresses gradually, without excessive issue of either bonds or stock, carrying forward its advance by assistance from its own earnings, the chances of an assured future are in favor of the stockholders.

Investment Uses of Stocks and Bonds

A good stock of a strongly solvent, upbuilding company is less risky and has a greater chance of profit than a poor bond. A poor stock of a company weak financially, and running down hill in its maintenance and business, has 100 per cent risk, with no chance of investment profit.

The war, with the subsequent inflation, was the heyday of the common stockholder, as is every period of intense activity. Few foresaw, nor did many participate in, the full extent of the rise in such stocks as Bethlehem Steel, Electric Boat and Submarine Boat, and International Mercantile Marine. War is too infrequent to be familiar, and its powerful forces are not a part of the knowledge and equipment of peace-time investment. The war, with its taste of extraordinary profits and unusual losses, was unsettling to investment habits. Nevertheless it was most instructive from the investment standpoint. It multiplied the reactions and impulses that may be observed in the milder transitions of peace.

During the feverish period during and after the war stocks went up and bonds went down. The course of safety itself was reversed, the worst securities becoming the best and the best securities giving rise to apprehensions and causing difficulties. But afterwards, for those who were not aware that stocks should be sold when earnings are at the peak and prospects most resplendent, profits were turned of a sudden into losses. The contraction of business brought out all at once all of the inherent risks of stocks, and brought also salvation to bondholders who had clung to their investments. It revealed the inherent safety of bonds.

Much is to be learned from the effects of the war. In lesser degree these same effects recur in the cycles of peace. The war has displayed with startling sharpness the uses of different types of investments to meet changing conditions.

CHAPTER XIII

CATCH PHRASES AND FORMULAE OF INVESTMENT

Forms and the Realities

These pages contain few rules and no catch phrases. The ready formula is absent. There is even a deficiency in those satisfying measurements of such matters as over-capitalization, bonded debt per mile of railroads, under-maintenance, proper ratios of fixed charges to net revenues, safe and desirable yields of income, and the due proportions of bonds, preferred and common stock. It is not that these matters are unimportant in the concrete case; but they are not subject to uniformity of measurement, so that generalization without particularization becomes dangerous. What must be aimed at in a brief survey of principles is, therefore, the substance and not the form. The advice that may be safely given by printed page is strictly limited. There can be no counsel to invest here or sell there. There should, then, be no formulæ by which superficial processes of investment without research and reflection, or the purchase and sale of this or that security according to purely formal indications, are directed. The purpose of the book is to initiate thought and work on realities.

Appreciation and the Catch Phrase

One of the well-worn catch phrases is that which settles on the convenient distinction between income and appreciation, and aligns investment on the one side and speculation on the other. The definition has this measure of sanction, first, that speculation is naturally for differences in price, and, second, that appreciation at any given moment is a most uncertain quantity, so that the recommendation of bankers must necessarily limit itself to the quality of the investment and the sureness of the income. The intimation from responsible quarters that this security or that should appreciate would necessarily give rise to speculation on margin, to abuse by overinvestment, and to the incurring of undue risk on the part of those who could not afford it. But this silence does not mean that investors themselves should be blind to the fact that securities are now cheap, and now dear. It is the privilege of the individual, who knows what he is about, to seek his own appreciation.

Advice to Investors—Its Object and Its Risk

There is in these pages no thought of persuading safely anchored investors, dependent on income and following customary safeguards, to drag their moorings, slip their cables, and seek uncharted seas. But there is set forth firmly, as strong meat for the strong, the counsel of seeking for appreciation through the methods of the long pull; just as there is recommendation, in their place, of the stocks and junior equities that pertain to the sphere of enterprise. The subject of the book is investment, serious, fully considered, and as far removed as possible from the play for stakes that constitutes speculation. All intelligent and experienced investors do aim at appreciation. It is generally true of bonds. It is almost universally true of stocks, where those who buy to keep look ahead as best they can, consider the risk of the dividend and of the market, and weigh the chance of better things. Those who buy merely on the dividend rate, for income only, are sadly speculative. The danger of counseling intelligent investment, and the development and use of the mind in aiming at appreciation, is that many cannot have the understanding and others can hardly arrive at a sense of proportion. There will be those who overestimate their own abilities and experience, and those who fall into the vice of taking chances for profits. The writer runs the risks of his public, some of whom drive motor cars too fast and may invest, with loss and damage, in the same heedless manner. But it is also a vice, and a much greater one, not to develop abilities and not to become self-reliant and active, in accordance with the capacity to grow to the stature of men. The discussion of investment rests upon ambition, upon effort, upon achievement, with faith in the average common sense, when trained and guided, and still greater faith in the salvation by work.

Wider matters than the customary and orthodox have been freely talked over, as pertaining to the investment of the individual. The seeking of appreciation and the using, upon occasion, of equities and stocks is directed to the soundest and strongest companies and guarded by urging labor and knowledge. Sometimes, as with the famous public warning of Jacob H. Schiff before the panic of 1907, or with the more recent utterances of the Federal Reserve Board, these matters may be subject of bankers' counsel, that makes bold to draw aside the veil of the future. But more often the investor must follow the inner light, guiding his own course. The discussion may, perhaps, keep him from that greatest of dangers, drifting without a course, and investing without consecutive thought. It has been direct, without rules of rote, catch phrases, formulae, maxims, and categorical generalizations; the argot and patter of common currency; the forms that are the anodyne of thought.

Tips

The channels of superficial investment, skimming the surface by generalization and *a priori* prescription, are many. Market services spring up with the revival of interest in advancing prices, and die away when the market declines. Tipsters' letters appear, sometimes from brokers, sometimes from those who make a living by selling them, sometimes for the brazen purpose of unloading worthless issues on the public, as, for example, a notorious series on copper stocks. Tips may be interested or disinterested. They are always floating in countless number and as a very general rule catch only the novice. Investment does not rest on secrets, and if it did, insiders could hardly be expected to whisper them to outsiders. There are many methods besides tips of arriving at hasty generalizations on the course of prices, quick and simple, positive and unsound. No formula or chart provides a rule without exception or one that is permanently true. Conditions and circumstances are ever in change, and must be seen as they really are. Superficial investment, based upon half-knowledge and resting upon what is told, is always dangerous.

Phrases

Phrases are in frequent use. Take for example "business man's investment." It appears to have a satisfying meaning, but is incapable of logical definition. The thought undoubtedly is that investments with a vaguely limited degree of risk are suited to the man who, being in business, understands the risks of all business and is watchful of general conditions. In short, it refers to a partly speculative investment, of some substance, that needs watching. "Business man's investment" is a self-contradictory term. If there be any typical investment for men in business other than a mere "investor's investment," it is that made to insure against the risks of the business, sound and not speculative. If there be any typical investment for the funds of the business itself, when times are dull and the capital seeks useful employment, it is such as will surely produce cash when the business comes to need the money. Both of these forms of sure investment are the opposite of that denoted by the phrase. And if it is "business man's speculation" that is meant, there is no use in defining it further than to say it is something different. The outside ventures of business men are too broad a subject. It does not matter so much that the term lacks definition, or is used to cover investments of all assorted degrees of risk below the high-grade standards. What would matter, under so broad a characterization, would be to know definitely the risk of the investment and to be able to determine whether or not it was worth incurring and under what conditions.

Maxims

As an illustration of generalization in investment take the five-year maxim, which is in substance that prices are to be considered high or low as they compare with the average price of the five years just past. It is, of course, most useful to look at the history of prices. This rule does good to a certain class of people by making them look back. But consider it as a rule of investment. Observe the difference in rates for money during the five years 1916 to 1921 and during the years immediately preceding or the year that has followed. Can fixed interest investments, then, with prices dependent on money rates, be judged by a five-year rule? And as to stocks a company will quite ordinarily change for the better or the worse within the span of five years. Its earning power may have altered and its prospects will certainly be different. The danger of this rule may be seen in the fact that it would operate, automatically, to put investors into the securities of companies that are becoming defunct, as being cheaper than the five-year average. It would tend to keep them out of companies that are growing stronger, because the prices of their securities are proportionately high as compared with the same average. The maxim presents a valid exhibit of the fallacy of quick generalizations.

Rules

To pass from the superficial to that which is deep and solid, look for a moment at the savings bank rules, thoughtfully worked out, embodying not only skill but long and responsible experience. They are of immense value as a bulwark of the integrity of savings. But they are of little value as rules of investment for the individual.

In the first place their prescribed investments always include questionable bonds. When the local New England railroads sink into a morass of difficulties, the Massachusetts list contains bad and dangerous investments. In New York a complaisant legislature places Chicago and Alton bonds on the list. Manhattan Elevated struggles through real and harassing difficulties while still complying with the requirements. St. Paul, strained by expansion and piling up debt, continues to have its bonds retained on the New York list even when a yield of from 9 to 12 per cent has shown, for the time being, a clear signal of risk. Rock Island and Missouri Pacific bonds are taken from the list only after the financial embarrassments have begun. During the war and federal control railroads in general are hard hit, and the requirement that they must pay dividends, in order to keep their bonds legal, is waived until two years after the end of the control. Always, when bonds become weakened, they are weeded out only after the deterioration has occurred.

In the second place, the investor should know that there are other bonds, as strong or stronger than savings bank bonds, and on the whole of higher yield. There are, for example, the equipment trusts, not legal for savings banks because they are not a mortgage on the road. There are the collateral trust bonds, secured by collateral that is legal for savings banks, but not themselves legal because they cover no physical property. There are the mortgage bonds of railroads paying dividends, whose dividend record is not yet long enough and which are due to appreciate when the date arrives on which they become legal. There are underlying bonds well protected by junior issues but not complying with the savings bank requirements, terminal bonds, strong industrial and utility issues. The investor should be guided by the value of the bond and not by the savings bank rules in seeking safety, income, and the best chances of appreciation.

Precepts

Of all precepts those most apt to prove useful are based on psychology. The pithy sayings of experience, such as the advice not to sell a strike short, are of this nature, the fact being that strikes frighten more than they hurt and have little real effect on fundamentals. It may almost be said beforehand that they will be settled in accordance with the fundamentals. The shrewd observations that one and another of the long-pull stock investors follow in their own investment are also of this character. The man who declares that he buys only when there is a unanimous consensus of opinion that the market is going down still further and sells when everyone without exception is agreed that it is going higher, that he does nothing when there is a division of opinion, and avoids any attempt to use intermediate fluctuations, has appraised much that is permanent in human nature.

Danger in Superficiality

Phrases and formulae, generalizations and rules, too readily applied, blunt and cloud the sight. Investment is a business of close and careful vision, and not of yardsticks measuring the surface. What lies beneath must be thoroughly understood. The values must be studied. The information must be genuine and deep.

There is great danger in the easy, half-informed methods of investment. In 1913 some 40,000 miles of railroads were in the hands of receivers. In the periodic depressions the weaker systems go under. In 1921 more than 250 large corporations passed or reduced dividends. There were many defaults, collapses, and receiverships. But perhaps the most dangerous time of all is that of prosperity, when security prices are too high. The seeds of corporate downfall are planted in the optimistic expansiveness of these periods. The investor must know, really and genuinely, the character of his investment, and be able to watch encroachment from changing conditions, from weak management, or from deceit. The risk confronting the half-informed is not academic. It is a condition of investment to be guarded against with every care.

CHAPTER XIV

TRUSTWORTHY AND UNTRUSTWORTHY DEALERS IN SECURITIES

Whom to Trust

There comes for every class of investor the need of skilled advice. The more he knows the more keenly he realizes that he falls short of what he should know. He may go far in searching out by his own study what to believe about securities; and it cannot be too much or too often emphasized that his progress in investment rests on his own knowledge of values and upon his own decisions, and that the profit to the purse, as well as the broadening and strengthening of the mind, cannot be surely attained except by personal effort. But in the end there arises also the question of whom to trust and believe about securities; where to repose confidence. It is of the utmost importance to choose a banker whose sense of honor is above reproach, of whom there are many. It is of great importance to choose a banker of sound business sense and of high professional skill in investments. No loss is more irretrievable than that which comes from following false or mistaken guides. No error is more utterly hopeless than that of believing a lie.

All of what may well be termed "quack banking" might be passed over in silence except for the surprising number of dupes among those who should know better. This class of security-selling is based either upon deliberate fraud or upon unfair profits, beyond what is legitimate. In some forms it is practiced by men who are, possibly, honest but self-deceived.

Bucket Shops

The bucket shops are the conspicuous instance of criminal pretense at dealings in securities. The New York Stock Exchange, long engaged in purging trading of unfair practices, has joined vigorous battle with these crooks outside of its walls to the extent of its ability, the real seat of trouble being with inactive prosecuting attorneys. These shops offer to customers inducements that legitimate brokers cannot—lower margins, less interest charges, and reduced commissions—for the reason that their transactions are not genuine; they themselves have no margin to maintain at the bank, no interest to pay on loans, and no commissions to other brokers or costs of handling securities. Their business consists of betting against the customer by book entries, instead of executing his orders as broker. A majority of the inexperienced, get-rich-quick type of speculators are bulls, so that in a long declining market the bucket shops win the bet, swallow customers' money as profits, and thrive and multiply like weeds. But when the market turns and goes up, the bucket shops lose the bet and, as has happened recently, close by scores. Whichever the outcome, the customers lose. The profit these criminals are after is not a commission but the cash of their clientele. The frauds committed in this manner have been colossal in extent and marvelous in recurrence. They rest upon credulity and affect, primarily, margin speculators and not investors.

Jail Birds

At times of ardent speculation the true jail-bird criminals, like the Burr Brothers and Ponzi, also come forward to make a regular business of fraud. Fraudulent securities are put out by organized bands, reappearing again and again under different names. The stakes played for are a year or two of extraordinarily high profits for the entire group against a jail sentence for the few scapegoats who may finally be caught when the federal government, moving too slowly under the difficult fraud laws, has secured evidence to prove the crime. After the descent of the officers of the law there is the familiar spectacle of handing back money to last-minute dupes, and driving back, unwilling, a crowd of would-be dupes. Conditions are improving, but the prompt detection and punishment of these public robberies is by no means the swift justice that it should be. Instead, preventive measures have been resorted to in many states, the Blue Sky laws having been enacted for the purpose of heading off this type of fraud. These laws are better than they were. Their fault, common to regulatory legislation, is that they hamper the honest more than they embarrass the dishonest, who at the worst have but to defraud the Blue Sky enforcement and work under its protection. So criminals ply their trade without the simple and savage punishment that is their due.

Fraudulent Securities

The profit in the sale of fraudulent securities is not a commission but the whole price paid by the buyer, less expenses. Any promise that can be held out to induce purchase is made, including representations as to value of property, strength of security, rate of prospective dividend, and immediate advance in price. A point is even made of the omission of commission charges. There may be liberal arrangements for partial payment. Whatever else the customer may get, he gets service. Few circulars of this type of offering fail to cite the highest profits made by legitimate enterprises in the same field. It is common practice to intersperse recommendations of substantial investments along with the newly incorporated, unknown, and valueless ventures, to give the latter the air of solidity and at the same time to create an impression of breadth and substance. Which kind of investment the unfortunate inquirer will be steered into is a foregone conclusion. The worst of such frauds is that they take money from the poor and ignorant. They ruin helpless people. The most despicable and wide-spread of these larcenies, in recent years, was the procuring of the exchange of Liberty Loan bonds, asserted to be depreciated and of small worth, for oil and mining stocks, mere bits of paper, glittering with promise of affluence. The vendors act as the true friends of the buyer, honestly aiding him to avoid and outwit the unscrupulous powers of Wall Street, with whom he cannot deal safely and who must, unhappily, look on in utter contempt.

Promoters

In promotions of new enterprises it is the money of the purchaser that is the object. Cash is being raised by direct action, without bankers or brokers as middlemen. The amount that the seller may take as compensation, legitimately and without fraud, may be matter of opinion. It is customary to construe the compensation liberally and the balance that goes to the enterprise narrowly. In fact this is necessary, as floating securities through non-banking channels is expensive. It results that the promoter class of vendors, ignorant of corporation finance and optimistic, sell stocks of more promise than substance, upon large commissions, with nothing to lose, not even reputation. It is essentially high-profit peddling, sweetened with a side profit of bonus stock that waters down the value of what is sold. More often than not the last thing looked to is the giving of value for cash received, the seeing to it that the enterprise is soundly conceived and organized, with enough real money paid in so that returns can be earned on the volume of stock issued. Worse, in conducting subscription campaigns of this nature it is impossible for the promoters to know whether the intended amount of money will be raised at all, or whether the enterprise will be left stranded, as often happens, before it is started. Whatever their intentions, therefore, they may be selling what has no possible substantive value. The difference between the optimistic promoter-salesman and the out-and-out crook is that the latter knows what he is really doing.

Gradations of Untrustworthiness

Criminals and promoters are engaged in pitiless robbery by selling securities for more than they are worth. The bucket shops are robbing by pretending to sell securities. There is no doubt of these facts. But in other more nearly legitimate cases, where the degree and shade of exaggeration of the quality of the wares is less, there may be doubt. Where brokers or bankers are weakened and becoming insolvent, there may also be doubt. There is less patent fraud. There is carelessness, though less flagrant. There is less obvious and less conscious shouldering of the risks of vendors and dealers upon the customer and his securities. The gradations of untrustworthiness extend into the outer borders of recognized brokerage and banking. Someone is always found to underwrite and sell securities of whatever quality or merit, provided they be of a sort the public wishes to buy. The distinction between speculative and assured securities may not be carefully marked. The banker's position of trust has not seldom been translated into the position of purveyor, as though he were merely a broker acting at the volition and on the responsibility of his client. And as for margin brokers, whose strength and solvency is of the essence of all transactions because they borrow at the bank on their clients' collateral, there have been failures, and some even among stock exchange houses, because of which evil the New York Stock Exchange, exerting itself against manifestations of unreliability, has recently initiated an audit and examination of accounts of its members. One should, in buying securities, learn to draw an absolute line between trustworthiness and untrustworthiness, and be, first of all, well advised where he shall deal. The business of dealing in investments should be looked into, and also the proper relation of the banker.

Investment Banker's Position of Trust

The investment banker's position with his client is, in the first place, that of trust. In the second place it is a position of profit, the commissions on securities and the underwritings carrying their share of the expenses of the banking house and contributing to its income. It is a high calling in the world of affairs, resting on service and consideration for others even more than on money reward.

The true banker holds to his trust first, regardless of profits. The "business-getter" who may have arrived at the banker's chair gives the greater attention to profits, emphasizing the selling of securities and the organization of salesmanship, and is, if not forgetful, inattentive and careless in the relation of trust. The criminal betrays his trust and sells to his own profit, dealing treacherously with his client.

Wherever there is trust it must be, on the whole, deserved, or it would not exist. Nevertheless, in all institutions trust is also accompanied by breaches of trust. It is a condition so common, so universal, that it should be plainly and easily understood as applying to the great financial centers. Yet surprisingly many think of Wall Street for its breaches of trust, its playing with securities as with marked cards. Surprisingly few, more soberly informed, respect its trustworthiness and know its keeping its faith, its word as good as its bond, its thought as clean and straight as the given word. The order of society rests upon the bestowal of trust; the Reds, the elements expounding class warfare, are merely people whose capacity to trust has failed them. It is, therefore, on the one hand, a dangerous and mischievous thing that the trust kept by bankers should be misunderstood and belittled. On the other, there can exist no meaner and more dastardly crime than the betrayals of trust for selfish gain perpetrated under the cover of banking pretense.

Banker's Legitimate Profits

The second element in the banker's position is even less clearly assimilated and understood. Profits are often thought of as a sordid grasping from others. The banker's profits particularly, which build strong institutions, are regarded with envy and dislike. The inspiring side of profits, that they are at once the motive force that has driven men up and the fuel for other finer and higher forces, is forgotten. Profit is the great solvent of economic questions, far outstripping in process and results the logic and power of the mind and creating the very character of peoples. Sunken China and India drudge because there is no enlivening margin of profit. Russia or Germany lapses into lethargy, or becomes galvanized into forward effort, as ways of working at a profit may be found. The resilient strength of America lies in the energy bred by profit, everywhere so near and tangible that the mind of the people is awake. Profit produces every useful thing. It makes useful things grow and multiply, to the common use, carrying on freely in infinite progression where the conscious co-operative advancements of charity or taxation stop and cease with their first objectives. Profit also furnishes the criterion of usefulness by extinction of the unprofitable. A world with a profit motive is at least a living world and a world of men. So it is with the profits in the banker's business. If there were none, we should have few and poor securities, nascent industries, and incipient railroads if any at all, and no investing class participating greatly in the public development. The profits of the investment bankers are the channel for the organization and use of savings and investment.

Temptations Avoided by Banker

From the investment banker's profit come the power to do good and the temptation to do evil. Out of it arise the relation of trust and the occasion for breaches of trust. A primary question, therefore, when securities are offered for sale, is as to the nature of the banker's profit; is it fair or unfair, honest or dishonest? Enough has been said of dishonesty. It remains to review in brief survey the temptations that may lead to unfairness, and to outline the code of ethics and of practice of the banker loyal to his trust.

The temptations that the sound banker avoids are connected with profits. They come in three main directions, overactivity in selling, a dual interest with reference to the sale, and weakness in taking participations or underwritings in unsound issues. These are not usually conscious temptations to unfairness. To resist them requires ability and character. The yielding is through inexperience or bad judgment much more frequently than because of low standards. But looking back over banking history for years past, it is written plainly that they are real temptations. Not a few names once prominent have fallen from their high place because of yielding to these mistakes.

Overactivity in Selling Securities

To resist the tendency to overactivity in selling is not always simple. The overhead expenses of a large organization for dealing in securities, the rent, the advertising, the salaries of the force, are a heavy outgo in times of dull business. If the temperament of the salesman is in control of policies, aggressiveness in selling may sweep from the saddle conservatism in buying. The temptation is to cover expenses, and not to be timid about inferior issues. The best of the large organizations have resisted this temptation in season and out, often at heavy cost. The maintenance of a high standard of quality can be judged by looking over the list of past offerings, to see whether they have proved to be good securities whose quotations have stood up, or have turned out to be speculative or unsound. Published manuals supply this test by giving the names of the underwriting bankers and the issue prices for the various securities.

Dual Interest in Sales

The second temptation that may bias the banker's judgment is a dual interest with reference to the securities sold. This commonly arises from his owning the issuing property, or a large stock interest therein, or from having made bank loans to it. Discussion of the financing of their own properties by banking houses, a necessary practice in former times and one that sapped the strength of strong and promising institutions, is out of place except as it bears on the marketing of securities. The fact is that men identified with a property and its management, engrossed heart and soul in making a success of the business, are not suited to be disinterested and critical judges of values. They will be influenced by the connection, and cannot appraise the risks of the securities as they would the property of another. It has not been unknown, also, that a banking house too deeply loaded with securities of properties requiring assistance, has endeavored to sell them to the public and keep things going, after receivership and reorganization should have been squarely faced. Independence of judgment is particularly difficult with specialty houses, interested in one kind of property, because when conditions are unfavorable it involves telling clients to leave that line of investment alone and trade elsewhere in something else. Among the businesses of this type, which work only one way, may be mentioned the irrigation bonds that were so advertised some years ago, certain real estate bonds of the present day, and the inferior section of the public utility holding companies.

An element of the same dual interest may, if not guarded against, attach to the handling of inactive issues of small companies, to the dealing in speculative bonds, to the following of syndicates during boom periods of flotations, and to all securities transactions where the profit is more tempting than the ordinary commission. The enthusiasm for the profit may assume undue importance. Restraint must be exercised if trust is to be kept. The avoidance of bias is essential. Some very conservative investors will for this reason pass by the new underwritings, which carry larger than brokerage commissions, unless they are of seasoned and active issues. It is an extreme position, but a logical illustration of the principle.

Rash Underwritings

The third temptation which may warp the banker's judgment lies in rash underwritings and participations in syndicates. To be wise and conservative in the quick decisions that go with underwriting is an art in itself. The temptation to excess is more insidious and harder to guard against than might be imagined. Underwritings go by waves. Dead periods with few issues are followed by moments when, with the market advancing and the public appetite constantly more keen, new securities go with a rush, so that books are closed almost before the telegraph can carry word of the offering. In these times of profit it requires sturdiness to weigh values and refuse. The line of least resistance is to take on and sell. The end of such periods is, normally, an equally sudden deadening of the absorption and a wholesome loss to careless distributors who have rushed too fast. But in the meantime all manner of bonds have been sold.

Over a period of years unwise underwriting has weakened almost as many institutions as the financing of their own properties. The test of skill and judgment and of conservatism in seeking profits is the length of time bankers have stood in the forefront of underwriting and the class of securities they have been identified with.

Overeager Pursuit of Profits

To sum up, the one thing that may draw minds away from a sense of trust and into a distorted view of relationships, is entanglement in one or another form of speculative banking, of the overeager pursuit of great profits. It is a failing to which generous abilities may yield, men conscious of power attempting to gain by brilliancy what they should seek by patience and industry. During boom or speculative eras aggressiveness is wont to be more highly regarded than conservatism, as with the Barings in the Argentine thirty years ago, and with names that might be cited here before 1907. This was also a very prevalent banking condition during the postwar exaltation. These periods are particularly a time for restraint and caution. But at all times the banker's eye must be farsighted and single to safety, moderation, and permanency.

Investment Bankers the Intermediaries Between Savings and Enterprise

Investment bankers are intermediaries through whom savings are put to work. In the earlier years enterprise was a dominant factor, with a new West, new railroads, new industries, and new consolidations as the field. In these maturer years the emphasis passes more to security, in the enlargement of railroads and industries already in production, the lending to cities already large and fully established, the financing of the war needs of a strong and wealthy nation. The new field of the present is the foreign loans. Still, even at home, the spirit of enterprise lives in investment and is sometimes ill judged and sometimes becomes impetuous and torrential. The investment banker worthy of the name regards the savings of his clients as the first of all considerations, weighing every risk and harnessing enterprise to conservatism. He can best succeed in preserving a careful, detached, and independent point of view if he finances other people's enterprises and enthusiasms, not his own, keeps his expenses and his underwritings within bounds, and has the financial strength to remain quiescent in bonds and securities from time to time, at will.

Banker's Reputation

Perhaps the best criterion of the investment banker's standing is his reputation among fellow bankers. The local banker who carries the deposit account knows what institutions are safe and strong for the investor to trust—which are active and in good repute. The most satisfactory source of investment advice and of investments is, naturally, a house steadily engaged in the distribution of standard securities, which is, because of a general and high-grade business, keenly alive to conditions, prices, and values. The great names of investment banking firms endure and are known. Only seldom, as with Vermilye and Company, do they disappear. It is not because of dollars, or because of massive offices of stone and mortar, but because these names stand for something more permanent—character, energy, square dealing, and a sense of honor.

As a whole, investment bankers are the most responsible class in the community. No other profession brings a more profound satisfaction than the knowledge that the material welfare of those who have come, in trust, has been safeguarded and upbuilded. No profession carries an equal opportunity of creating comfort and happiness. It tests both brain and conscience, and develops leaders of great strength. With keen minds, understanding motives and forces, habituated to the business of securities, they work beyond the hours of ordinary industry in watching and comprehending that in which they deal. Investment banking is an exacting profession, with high standards of trustworthiness and ability, growing higher as the years pass.

Rules of the Investment Banker's Business

There are three quite general, but not universal, rules applicable to the business of the investment banker. The first is that the bond house buys for its own account, after thorough investigation, securities of corporations in which it has no financial interest, or of municipalities, and offers them for resale to investors. In buying the house takes the risk of the value because it is not trading with itself or selling for a commission upon consignment. The presumption is that it has got value for its money, to the best of its judgment. The second rule is that the dealing in securities should not be mere merchandising, but conducted wisely and with conservatism, as befits a business of intermittent activity which to be truly successful must be carried forward through long years. Securities have long life. Prestige and reputation must be maintained even longer. The third rule is that the investment banker will not ask or allow others to risk their money on his opinion of the course of the market. He will advise as to values. He will maintain a service to apprise customers of developments. He may express his opinion as to conditions and the outlook. But his training in the sale of securities is to be meticulously careful to state facts and not make representations, and his responsibility for prices ends with the sale. The course of the market rests with the buyer.

It is not the beginner who may profit most by the banker's guidance. The deeper the study of securities and the greater the energy devoted to investment, the higher the value set upon trustworthy counsel. As in other matters the imparting of real knowledge by the professional depends in great measure upon the proficiency already attained by the amateur. The genuine business of investments is highly organized and highly skilled. A most necessary asset of the serious investor is dealing with a banker who has his implicit confidence. His highest privilege is to be advised, at need, by a banker whom he trusts.

CHAPTER XV

THE POSTWAR INFLATION AND DEFLATION

Typical Period

Even so brief and general a survey as the present work must needs carry into its texture the color of the immediate financial environment. The phenomena of a most significant period are touched upon here and there as passing events; its incidents are used freely. It was a sharply typical period, which will recur again in kind if not in degree of intensity. Allusion to problems and events of the hour has value in that it illustrates the processes of investment itself—of groping forward into the unknown and of foreseeing, dimly but still foreseeing, possible avenues of safety and increase. More than that, there has seldom been in this country a short period that has so well illustrated the principles governing the values of securities. From abroad more absolute demonstrations could no doubt be drawn, as, for example, from Germany, where bonds have become worthless and stocks have carried speculators to positions of unparalleled power, because of extreme inflation. But the lessons of the American experience are more useful, if less positive, because they are more nearly reconcilable with the elements of our own future.

The three years 1919, 1920, and 1921 sum up a swift, vivid, and complete financial cycle. Starting from the hesitant pause after the armistice, business reached its greatest heights, fell to its lowest depths, and after desperate losses and stagnation recovered poise sufficiently to proceed. The recovery of 1922 belongs to a new era that proceeds under different influences.

Securities in 1919

The stock market speculation that reached its height in the summer and fall of 1919 was centered upon the industrials. These were the companies making the fabulous profits out of high prices and extraordinarily active business. The railroad stocks rose but little. The properties were under federal control, with constantly growing pay-rolls and other expenses, and the companies were living upon the temporary bounty of the government. Bonds were under artificial conditions. The federal reserve system was supporting the war loans, of which more than $6,500,000,000 par were at one point carried by the banks. The rediscount rates were kept low throughout the year because of these loans and because of the current borrowings of the Treasury. But in general bonds sank through the year beginning almost with the armistice. Toward the end of the summer the higher rates for money in the open market and the pressure of undigested Liberties and Victories sold to meet the exigencies of overloaded owners undermined the support that the banking system had placed under the most important corner of the bond market. By autumn bonds had fallen heavily, renewing their general decline.

Industrial Stocks from 1919 to 1921

High prices for industrial stocks were reached, generally speaking, in July, 1919, with a renewed advance to even higher prices in October and early November. Some stocks, however, reached their high points in April, 1920. The first great slump took place in August, 1919, the second in November, the third, after a typical half-way recovery in December and early January, ran through the rest of January, February, and the first few days of March. After a sharp recovery of a few weeks the heavy decline began again in the middle of April, followed by other intermittent declines until at the end of 1920 the industrial average stood 50 points below that of November, 1919. The first four months of 1921 were deceptive, with gently rising prices. Then came the culmination of the bear market in May, June, July, and August, with days of tremendous selling and prices sinking to less than half of the 1919 prices and 10 points below the low of 1920. After the outburst of sales the market rallied somewhat, and a little later began, sluggishly and almost imperceptibly, to creep up from the depths. By October, 1921, recovery of prices, quite against the general disbelief that business could be on the mend, had definitely set in.

The movement of prices within the different industrial groups is instructive. The bear market of 1919-1921 was typical, being of unusual length and severity, and striking hardest at those stocks which had risen farthest in the previous speculation for the rise. It wiped out not only the advance of the earlier months of 1919 but also the residuum of the preceding advances made during the activities of the war.

Steel Stocks

To begin with the steel group, United States Steel common had reached its highest price of 136⅝ in 1917 before the government control of the steel market and while the stock was paying 16¾ per cent dividends. At the armistice it was about par, and from there dropped to 88¼ in February, 1919. Then the postwar bull market caught it and sent the price to 115½ by July. In the August slump it went to 98⅜, recovered to 112¼ in October, fell again to 92¼ in February, 1920, rose to 107½ in April, then slid down to the low of 70¼ in June, 1921, dipped again to almost the same level in August, and then, starting slowly, entered upon the rise that has carried it, now paying 5 per cent dividends, to 111½ in October, 1922.

There is a great contrast between this stock and those of the independent steels. The stock nearest in dividend record is Bethlehem Steel B. This stock went to 155½ in 1917, and in the early summer of 1919 stood at 110¼, reaching 112 in October. In that year it paid 8¼ per cent and has since paid 5 per cent. It fell to 81½ in February, 1920, rallied to 101¾ in April, dropped to 41½ in June, 1921, and by May, 1922, had risen to 82¼. Nearly or quite even with Steel common at the high points, its swings were greater, its slumps more severe, and its low point 40 per cent lower.

Lackawanna Steel, which passed its dividends in 1921, started from 103 in October, 1919, and reached 32 in June, 1921. A year later it passed 80 on the news of the proposed merger with Bethlehem. Crucible reached its high of 278½ in April, 1920, and after paying 100 per cent in stock dividends fell to 49 in August, 1921. Midvale sold in 1921 for barely one-third of its 1919 value, and Republic for less than one-third. Barring the special movements due to mergers, to stock dividends, and to speculative concentration, the steel stocks moved in harmony. But where depression took 40 per cent from the strongest investment stock, it took 60 to 70 per cent from the others. In days of less assured strength Steel common itself was subject to the wider fluctuations, dropping to 8⅜ in 1904.

Coppers

The coppers, whose heyday had also been in 1916 and 1917, rose to the first high point in June and July, 1919, but were more sluggish than the steel stocks in responding to the recoveries of October, 1919, and April, 1920. Starting from less exalted heights than the steels, Anaconda, Utah, and Kennecott each lost, roughly, 60 per cent of their 1919 high in their 1921 low. The influence of surplus copper metal and part-time operations is also seen in the laggard participation of these stocks in the general recovery of 1922. At this writing they have not yet reached their Armistice Day levels, and have by no means reinvaded the advanced ground of 1919.

Fertilizers

The fertilizer companies reached, generally speaking, their very highest recorded prices in 1919. The leaders, American Agricultural Chemical, and Virginia Carolina Chemical, lost more than 75 per cent of the 1919 price by 1921. Dividends having been passed, the recovery to date is slow and small.

Equipments

For the equipment companies the story is entirely different. American Car and Foundry starting at 84⅛ in February, 1919, rose to 121¼ by July, to 138¼ in October, and to 147⅜ in April, 1920. The low point was 111 in December, 1920. In June and August, 1921, when other kinds of stocks were so depressed, Car and Foundry dipped to 115¼ and 119½, prices practically up to the high point of the summer of 1919. By September, 1922, it had crossed 190. The swimming against the tide during the depression is not due so much to dividends, which were increased from 8 to 12 per cent in

1919, or to the strong earnings, as it is to the 300,000 "bad-order" cars on the railroads, the wastage of equipment during the period of railroad control, and the scanty replenishment and construction while the railroads were poor. Railroad necessities prophesy for the car-builder an unprecedented volume of business to come. The other equipment companies experienced declines in 1921, but not of severe proportions. The fall varied with the strength of the company. The manufacture of equipment, both cars and locomotives, was clearly in a position of increasing demand.

Railroad Stocks—1919 to 1921

Railroad stocks reached their high prices of 1919 at the same points as industrials. But their low prices came in 1920 even more than in 1921. The 1919 rise was small and the subsequent depression was much less sharp than in the case of the industrial stocks. Prices were indeed low enough, and the railroad distress was acute. But, there having been little speculation, the more violent phenomena of the bear market were absent. The lift given by the railroad law in 1920 moderated the later phases of extreme depression. The swing of leading railroad stocks through this period was:

	High, 1919	Low, 1920 and 1921
Atchison	103⅞	76
Union Pacific	136½	110
Great Northern	96½	60
Northern Pacific	97⅝	61¼
New York Central	83	64⅛
Pennsylvania ($50 par)	46¼	32¼
Illinois Central	103⅜	80⅞
Erie	20	9½
Southern	32	17⅜

The subsequent recovery of the dividend-paying railroad stocks has already carried them into new ground, above the high of 1919. They have been bought as investments, and have also come back into speculative favor. Stocks whose dividends have been reduced, or with regard to which doubt has been raised, are at this writing well up towards the 1919 best. Non-dividend-paying stocks are in various position, there having been sufficient receiverships to cast shadows over the position of the distinctly weak companies.

Except for the comparison with the industrials, 1919 is a poor year by which to measure the prices of railroad stocks. They were already depressed. The rise of that year was most moderate. Past levels had been much higher.

Bond Prices

The initial slumps in the stock market of August and November, 1919, were weighty indications of what was to follow. Yet the recoveries of October, 1919, and April, 1920, tended to conceal the fact that a great liquidation movement had set in. Stock prices did not definitely and clearly start downhill with irresistible power until the latter part of April, 1920. Bond prices gave, on the whole, an earlier and clearer indication. Disregarding the temporary fluctuations, the trend of bond prices was deeply significant, especially when taken in conjunction with the previous severe decline of 1917, from which there had been no substantial recovery.

A previous chapter has given the movement of bond averages from limited and imperfect tables. The real course of bonds is shown as truly and perhaps even more distinctly in the price range of almost any active and typical bond. Take, for example, Atchison General 4's. Starting at 97 in January, 1917, these bonds went to 79 in September, 1918, rose to 90 in November, with the defeat of Germany, but fell again to 81¾ by February, 1919, recovered only a point, to 82⅞ on June 3, when stocks were rising to their best heights, slipped down through July and August to 76, were pulled up by the October rise to 81½, and then went down by stages to 69 in May, 1920. The steady down grade is obvious. It is broken only faintly by the upward drives in the stock market, and still less distinctly as matters progressed, the striking stock market rally of March and the first ten days of April, 1920, producing a high of only 78½ on March 11, after which the slipping away process was resumed. From the low of 69 made May 21, 1920, there was a fair recovery to 80 in January, 1921, under the sustaining influence of the railroad law and the advanced rates. But the general pressure brought the 4's down again to 73⅛ in June. From this point the recovery of prices had proceeded by July, 1922, with steady and firm march practically back to the levels which prevailed in January, 1917.

The course of this strong bond is typical of the railroad issues. A strong industrial bond, such as the United States Steel Sinking Fund 5's, shows a slower and less marked decline. Here, as with the equipment stocks, the current strength of the corporation is a factor. An old and well-seasoned tax-free municipal, such as New York City 4½'s of 1957, is also of slower and lesser movement. The Liberty Loan issues, however, recently marketed and of the widest distribution, fully confirm the indications given by railroad issues. The down slope from 1918, broken but little by the up swings of the stock market, continued to a low price of 82 for the Fourth Liberties in May, 1920, and of 85.60 for the Thirds in December, 1920. From this point there was already a recovery of 5 to 6 points by June and August, 1921, when stocks were at their worst, and in the short space to the end of the year both issues had risen above 98.

Thus the bond market, with its strongest gilt-edged securities selling at distress prices, gave early indications of the presence of a great liquidation. It also gave early indications of a great and forceful recovery, extending to stocks and to general business.

Commodity Prices

During the periods of excitement and strain commodities presented characteristic reactions. Silk was \$3.50 a pound in January, 1913, was about \$6.80 at the armistice, started to rise in May, 1919, and reached \$16.85 in February, 1920. In March the market became panicky, and by June the price was down to \$6.50. Sugar (raw, duty paid, New York) rose during the war from 3½ cents a pound to 7.28 cents, at which price it was stabilized until January, 1920. The control was then taken off and the price soared to 22 cents in May. From July to November, 1920, it dropped to 6½ cents, from which point it slid gradually to 3.67 cents in December, 1921. Wool (Ohio fine delaine, Boston) was pegged at \$1.85 during the war, two and one-half to three times its 1913 price. In March, 1919, it went down to \$1.52, but then started to rise and ruled at about \$2.35 during the early months of 1920. The price began to break in June, was \$1.25 by the end of 1920, and 80 cents by August, 1921. The rise of hides lasted until July, 1919. By the end of 1920 they sold at less than half their former price. In April, 1921, they sold for one-sixth of the 1919 prices, and one-half of the peace-time prices of 1913. Coal reached its highest prices in July and August, 1920, slumping terrifically at the end of the year. Much the same story runs through other industries, the price changes varying and the time of recession coming late for some and earlier for others. In general the crest of commodity prices was reached in May, 1920, after liquidation had begun with both bonds and stocks.

Each industry went up to the brink of its own precipice and fell over. No general price index, mingling ups and downs, can tell the story of havoc and loss so well as the figures of any one single industry. The commercial paralysis was felt throughout the world; even the caravans of darkest Africa gave up their customary annual journeys from the interior to the sea. The real recovery of trade and industry began with the clearing up of the banking situation, with the creation of a broad bond market where new activities could be financed and old bank borrowings wiped off in security issues, and with the unlocking of the frozen resources of purchasers. So far as commodity prices are concerned perhaps the most influential changes were the rise in cotton in September, 1921, and in hogs and corn and wheat in February, 1922, which reopened our largest market, the domestic trade with the farmer.

Banking Situation

Figures showing the advent of strain upon the banking system and its subsequent passing away have been given in a preceding chapter. The salient points are the decline in the reserve ratio from 64 per cent January 1, 1918, to 51 per cent January 1, 1919, to 44 per cent January 1, 1920, then to barely above 40 per cent by midsummer, with a heavy drag back to 45 per cent by January, 1921, and the subsequent rise to 71 per cent January 1, 1922, and later in that year to 80 per cent. The most rapid inflation of loans took place during the last quarter of 1919, although they continued to expand, more gradually, until a year later. Rediscount rates were first raised by the federal reserve banks on November 3, 1919, and then raised repeatedly and more forcefully beginning with 1920. The open-market rates were high through the second half of 1919, and reached their maximum in 1920. The progress of the banking system during 1921 to a thoroughly liquid position was uninterrupted and was very plain from the figures of the banks.

The fluctuations of bond and stock prices, and the fantastic ups and downs of commodities, are linked with the banking situation. The course of events could almost be read in advance from the mere progress of the reserve ratio. While business does not always press so vehemently upon the banks that it encounters, with shattering force, the final limit of expansion, the bank figures are always a condition within which business lives and moves. The striking lessons of this period are not to be forgotten. When business moves easily, without pressure, within the metes and bounds of normal credit facilities, it may seem to be dominated by other influences. But sooner or later business itself raises the question of credit in one or another form.

CHAPTER XVI

ORGANIZING ONESELF

The Basis—The Familar Securities

Every man determines his future. He may drift; or he may set himself a goal. The setting of a goal is the beginning of manhood and the test of manhood is the reaching of goals and the making of unflagging progress beyond to further and higher goals.

In material matters wealth and progress lie, not always but usually, in what is most familiar and closest at hand. There is opportunity everywhere. Failure to grasp it is due, most of all, to inertness—to not being awake. The beginning of material success is the organizing of one's knowledge so that it can be used. The outlook for a man's forces, if he be determined in mind, is close by—in what he knows best, not in some strange, far-off venture.

Securities are a medium of almost universal appeal, because facts and information about them are so public—so widely disseminated. No one who reads can fail to have news of securities pressed upon his attention. About no other division of wealth is such a vast amount of statistics and price data available. The fringe of this knowledge touches the entire population; the familiar knowledge, which can be turned into power, is within the general reach.

Many reach out vaguely and blindly; few really grasp. The very multiplicity of detail in the data on securities confuses the mind and has a deterrent effect. Many lack simple methods of grasping useful knowledge and building it up into wider knowledge. To all except the professional the business of securities seems remote, intangible, and incapable of profitable comprehension. The wonderful array of information that is available passes idly before inert minds. It is thought of momentarily, perhaps, in terms of speculation, but is not reduced to order by the disentangling logic of investment principles.

Acquiring Knowledge of Securities

A book on the problem of thinking in terms of investment has limits. The subject is too vast. The ground covered cannot be dug deep, and much ground must be left untouched. Worse, that portion traversed can hardly ever, under shifting conditions, be precisely what the reader at any given moment wishes to cultivate. A book may give useful illustrations of the digging process at great length and in great variety, but they cannot be followed by the average investor except at a large expenditure of time. Yet on his specific problems he needs much more. His great requisite is a simple manner of gathering and co-ordinating knowledge that bears on what lies before him.

In corporate investment there is abundant information on prices, statistics, and general conditions. It comes from every side in great profusion. But it is almost always about the waves and not about the tide; the temporary fluctuations overshadow the permanent changes of values. Values and their trend are not on the surface; they need study and orderly assembling of facts. A basis for connected observation and thought must be provided.

Classification and Comparison of Prices

Prices of securities are published from day to day—the mass of figures is confusing. Changes from the day before are given for stocks, and sometimes the changes since the first of the month or year; but the longer changes and the collateral relationships are given much less frequently. To give meaning to a mass of figures requires classification and comparison. The beginning of understanding comes when the most simple comparison is made by setting like beside like. The first step with stocks is to group them into classes; as rails (subdivided into dividend-paying and non-dividend-paying, trunk lines, transcontinentals, coalers, and by geographical location), steels, equipments, coppers, automobile stocks, electric manufacturing, fertilizer companies, and the specialty groupings. Bonds may be classified into governments, municipals, savings bank rails, second-grade rails, low-grade rails, gas, traction, light and other utilities, industrials, and foreign issues. The primary comparison may be, and often is, carried to great lengths, until the similarities and unlikenesses are sorted out and the groundwork for careful discrimination in securities is laid.

Security prices are also to be compared with the past. This is the second comparison. For this a record is necessary, such as is given in the monthly booklets distributed by most banking houses, and in the "Quotation Record" of bond prices. No one has ever compassed the enormous task of absorbing and understanding all prices, although the dealer in securities derives much of his intuitive skill from his inbred familiarity with quotations. But it is a simple matter to compare present with past prices in whatever group the investor may be interested, if he will but equip himself with a record running over a period of years. Comparison, for example, of the price of Atchison stock and bonds with those of Southern Pacific, the prices of Northern Pacific with those of Great Northern or of St. Paul, Westinghouse with General Electric, Western Union with Mackay Companies, American Car and Foundry with Pressed Steel Car, or United States Steel with one or more of the independent steels, cannot fail to be illuminating if carried over a period of years. Already, from these two most elementary comparisons of price, like against like and time against time, the investor will begin to see the reason for the individual prices, to know whether prices are high or low, and to make an intelligent decision as to the possibilities of the stock or bond he is starting with.

Comparison and Analysis of Financial and Operating Statistics

Financial and operating statistics of companies, like prices, come with crowding detail and without standards of comparison. The monthly booklets give the important features of past records except the balance sheet; the manuals give more details, and the annual reports of the companies give a more complete story. There should be the same comparison in these statistics with the past and with other like companies as in prices. But in order to do this some simple method must be adopted. The statistics must be reduced to their most important elements. If a brief memorandum note be made of earnings, debt, capitalization, dividends, surplus above dividends, and working capital of a company, it will serve for purposes of comparing it with another company. The increases or decreases in these several items will show the trend of affairs within the company over a series of years, which can be compared with what is happening in competing or analogous companies. A striking comparison can be made by bringing in prices, especially where new stock has been issued, as in General Motors and Crucible Steel, or where there has been a reorganization, as in Missouri, Kansas and Texas, or where bonds have been put out to carry postwar necessities, as in Goodyear Tire and Rubber, and then setting the market value of the entire capitalization, at some previous date, including bonds taken for convenience at par, against the present market value of the entire new capitalization.

The analysis of statistics is a field for the exercise of individuality. It is a study that repays the most painstaking efforts. But from even the simplest comparisons insight begins. Orderly knowledge of permanent values can be built up out of the confusion of ephemeral data by study of selected securities. The monetary stake from actual investment always increases concentration of mind, and if thoughtfully and reflectively followed, redoubles the learning power.

Mortgage bonds are perhaps more difficult to learn than stocks. They have a multitude of dissimilarities in detail. The main facts about a bond are, however, quite as broad and simple as with a stock. The security is the property, the earnings, and the junior bonds and the stock, the margins of safety with respect to each of which can be measured and compared with other similar issues. The investor should by all means cultivate the power of sound judgment as to the values and prices of bonds, and know the type and grade of bond he wishes to invest in, getting advice from his bankers as to details of strength, comparative merits, and price.

Development of Information on General Conditions

As to the information on general conditions, which comes with overwhelming prodigality, there is little to add to what has been said in previous chapters. Most people attach too much importance to special knowledge, possessed by a few, and far too little importance to the orderly pursuit and development of the common knowledge of what are, after all, the most permanent and largest influences bearing on securities and their prices. In the first place, those who possess special knowledge and power began with the common information, sorted out its confusing multiplicity, built up what was of value and permanence, acquired ability of discrimination, and so passed almost imperceptibly into the possession of special knowledge. In the second place, since the "if" is in every situation, the tendency is to exaggerate the unknown, waiting until its effect becomes fully patent, when it is too late. The useful decisions are made by appraising correctly that which is known, and thinking ahead.

The best way to develop a sense of judgment is to make judgments and see how they come out. These, if the factors are noted, lend themselves to comparison with other people's judgments, with one's previous judgments, and with financial history generally. An investor who analyzes and classifies what he knows about general conditions cannot fail to develop powers of judgment on the progress of these conditions. He will at least know the status of affairs, and have an opinion as to the eventual trend—the most useful cornerstone of his investment. It may be, and it has not been unknown to happen, that he will so strengthen his powers of judgment as to be able to approximate independently the times of great change.

The Progress of Organization

Organization progresses from simple beginnings to far-reaching results. It is especially true if a man is organizing himself, developing and perfecting his own latent powers. To go back to the beginning, this is like any other art. The title and the object of these pages is investment. The subject is the man—how he may train himself and organize what is around him for material success. Investment offers no easy, lucky career for the indolent. It proffers work and discipline. It brings to reality over and again that proverb illumined with modern spirit: "Seest thou a man diligent in his business; he shall stand before kings."

Circumstances do not matter. A man can make himself if he be wise in investment, sturdy in saving. The struggle is with money, but the striving is of the spirit. This book bears the message of resoluteness and steadfastness, of keeping aflame the torch of ambition and courage, of driving forward to a self-reliant goal.