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CHAPTER I

BUSINESS CYCLES

BY WESLEY C. MITCHELL

NATIONAL BUREAU OF ECONOMIC RESEARCH

The great mass of the unemployed in periods like that which led President Harding to call the Conference on Unemployment are workers who have been "laid off" because of business depression. The reason why millions of men lose their jobs at such times is that employers are losing money. Hence it is best to begin a study of methods of stabilizing employment by looking into the processes which every few years throw business into confusion.

I. THE NATURE OF BUSINESS CYCLES

Fifteen times within the past one hundred and ten years, American business has passed through a "crisis." The list of crisis years (1812, 1818, 1825, 1837, 1847, 1857, 1873, 1884, 1890, 1893, 1903, 1907, 1910, 1913, 1920) shows that the periods between successive crises have varied considerably in length. Further, no two crises have been precisely alike and the differences between some crises have been more conspicuous than the similarities. It is not surprising, therefore, that business men long thought of crises as "abnormal" events brought on by some foolish blunder made by the public or the government. On this view each crisis has a special cause which is often summed up by the newspapers in a picturesque phrase "the Jay Cooke panic" of 1873, "the railroad panic" of 1884, "the Cleveland panic" of 1893, "the rich man's panic" of 1903, " the Roosevelt panic" of 1907.

Longer experience, wider knowledge of business in other countries, and better statistical data have gradually discredited the view that crises are "abnormal" events, each due to a special cause. The modern view is that crises are but one feature of recurrent "business cycles." Instead of a "normal" state of business interrupted by occasional crises, men look for a continually changing state of business—continually changing in a fairly regular way. A crisis is expected to be followed by a depression, the depression by a revival, the revival by prosperity, and prosperity by a new crisis. Cycles of this sort can be traced for at least one century in America, perhaps for two centuries in the Netherlands, England, and France, and for shorter periods in Austria, Germany, Italy, Spain, and the Scandinavian countries. Within a generation or two similar cycles have begun to run their courses in Canada and Australia, South America, Russia, British India, and Japan.

At present it is less likely that the existence of business cycles will be denied than that their regularity will be exaggerated. In fact, successive cycles differ not only in length, but also in violence, and in the relative prominence of their various manifestations. Sometimes the crisis is a mild recession of business activity as in 1910 and 1913; sometimes it degenerates into a panic as in 1873, 1893, and 1907. Sometimes the depression is interrupted by an abortive revival as in 1895, sometimes it is intensified by financial pressure as in 1896 and 1914. Sometimes the depression is brief and severe as in 1908, sometimes it is brief and mild as in 1911, sometimes it is both long and severe as in 1874–1878. Revivals usually develop into full-fledged prosperity, but there are exceptions like that of 1895. Prosperity may reach a high pitch as in 1906–1907 and 1916–1917, or may remain moderate until overtaken by a mild crisis as in 1913, or by a severe panic as in 1893.

These differences among business cycles arise from the fact that the business situation at any given moment is the net resultant of a complex of forces among which the rhythm of business activity is only one. Harvest conditions, domestic politics, changes in monetary and banking systems, international relations, the making of war or of peace, the discovery of new industrial methods or resources, and a thousand other matters all affect the prospects of profits favorably or adversely and therefore tend to quicken or to slacken the pace of business. The fact that the rhythm of business activity can be traced in the net resultants produced by these many factors argues that it is one of the most constantly acting, and probably one of the most powerful, factors among them.

To give a sketch of the business cycle which will be applicable to future cases, it is necessary of course to put aside the complicating effects of the various special conditions which at any given time are influencing profits, and to concentrate attention upon the tendency of the modern business system to develop alternate periods of activity and sluggishness.

Even when the problem is simplified in this way, it remains exceedingly complex. To keep from getting lost in a maze of complications, it is necessary to follow constantly the chief clue to business transactions. Every business establishment is supposed to aim primarily at making money. When the prospects of profits improve, business becomes more active. When these prospects grow darker, business becomes dull. Everything from rainfall to politics which affects business exerts its influence by affecting this crucial factor—the prospects of profits. The profits clue will not only prevent one from going astray, but will also enable one to thread the business maze slowly, if he chooses, taking time to examine all details, or to traverse the maze rapidly with an eye only for the conspicuous features. Needless to say, in this chapter we shall have to move rapidly.[1]

II. PLAN OF DISCUSSION

Since business cycles run an unceasing round, each cycle growing out of its predecessor and merging into its successor, our analysis can start with any phase of the cycle we choose. With whatever phase of the cycle we start, we shall have to plunge into the middle of things, taking the business situation as it then stands for granted. But once this start has been made, the course of the subsequent discussion is fixed by the succession of phases through which the cycle passes. By following these phases around the full cycle we shall come back to the starting point and end the discussion by accounting for the situation of business which we took for granted at the beginning.

With full liberty of choice, it is well to start with the phase of the cycle through which American business is passing at present—the phase of revival after a depression. The first task will be to see how such a revival gathers momentum and produces prosperity. Then in order will come a discussion of how prosperity produces conditions which lead to crises, how crises run out into depressions, and finally how depressions after a time produce conditions which lead to new revivals.

This whole analysis will be a brief account of the cycle in general business. But it is important to note that different industries are affected by business cycles in different ways. Some industries, for example, are hit early and hit hard by a decline in business activity, while other industries are affected but slightly. This aspect of the subject has received scant attention from investigators so far, and it cannot be adequately treated until the various industries have collected far more systematic records of their changing fortunes than are now available outside a narrow field. But with the cooperation of trade associations and certain business men we have collected some data that show how important and how promising is further work along similar lines. This material concerning the effect of business cycles upon particular industries will be presented in the next chapter after the cycle in general business has been traced.

[1] The literature of business cycles is large and rather controversial. The differences among recent writers, however, are mainly differences in the distribution of emphasis. Among the best of the recent books upon the subject are the following: AFTALION, A., "Les Crises Périodiques de Surproduction," 2 vols., Paris, 1913; HANSEN, A. H., "Cycles of Prosperity and Depression," Madison, Wisconsin, 1921; HAWTREY, R. G., "Good and Bad Trade," London, 1913; HULL, G. H., "Industrial Depressions," New York, 1911; MITCHELL, W. C., "Business Cycles," Berkeley, California, 1913; MOORE, H. L., "Economic Cycles," New York, 1914; ROBERTSON, D. H., "A Study of Industrial Fluctuation," London, 1915.

III. REVIVALS AND THE CUMULATION OF PROSPERITY[1]

A period of depression produces after a time certain conditions which favor an increase of business activity. Among these conditions are a level of prices low in comparison with the prices of prosperous times, drastic reductions in the cost of doing business, narrow margins of profit, ample bank reserves, and a conservative policy in capitalizing business enterprises and in granting credits.

These conditions are accompanied sooner or later by an increase in the physical volume of purchases. When a depression begins, business enterprises of most sorts have in stock or on order liberal supplies of merchandise. During the earlier months of dullness they fill such orders as they can get mainly from these supplies already on hand, and in turn they buy or manufacture new supplies but sparingly. Similarly, families and business concerns at the end of a period of prosperity usually have a liberal stock of clothing, household furnishings, and equipment. For a while they buy little except the perishable goods which must be continuously consumed, like food and transportation. But after depression has lasted for months, the semi-durable goods wear out and must be replaced or repaired. As that time comes there is a gradual increase of buying, and as the seller's stocks are gradually reduced, there is also a slow increase of manufacturing.

Experience indicates that, once begun, a recovery of this sort tends to grow cumulatively. An increase in the amount of business that a merchant gets will make him a little readier to renew his shabby equipment and order merchandise in advance of immediate needs. An increase in the number of men employed by factories will lead to larger family purchases and so to more manufacturing. The improving state of trade will produce a more cheerful state of mind among business men, and the more cheerful state of mind will give fresh impetus to the improvement in trade. It is only a question of time when such an increase in the volume of business will turn dullness into activity. Sometimes the change is accelerated by some propitious event arising from other than business sources, for example, good harvests, or is retarded by some influence, such as political uncertainties. Left to itself, the transformation proceeds slowly but surely.

While the price level is often sagging slowly when a revival begins, the cumulative expansion in the physical volume of trade presently stops the fall and starts a rise. For, when enterprises have in sight as much business as they can handle with their existing facilities of standard efficiency, they stand out for higher prices on additional orders. This policy prevails even in the most keenly competitive trades, because addi-

[1] In this and the three following sections free use has been made of material from the writer's book, "Business Cycles," published in 1913.

tional orders can be executed only by breaking in new hands, starting old machinery, buying new equipment, or making some other change which involves increased expense. The expectation of its coming hastens the advance. Buyers are anxious to secure or to contract for large supplies while the low level of quotations continues, and the first definite signs of an upward trend of quotations brings out a sudden rush of orders.

Like the increase in the physical volume of business, the rise of prices spreads rapidly; for every advance of quotations puts pressure upon someone to recoup himself by making a compensatory advance in the prices of what he has to sell. The resulting changes in prices are far from even, not only as between different commodities, but also as between different parts of the system of prices. In most but not all cases, retail prices lag behind wholesale, the prices of staple consumers' behind the prices of staple producers' goods, and the prices of finished products behind the prices of raw materials. Among raw materials, the prices of mineral products reflect the changed business conditions more regularly than do the prices of raw animal, farm, or forest products. Wages rise sometimes more promptly, but nearly always in less degree than wholesale prices; discount rates rise sometimes more slowly than commodities and sometimes more rapidly; interest rates on long loans move sluggishly in the early stages of revival, while the prices of stocks—particularly of common stocks—generally precede and exceed commodity prices on the rise. The causes of these differences in the promptness and the energy with which various classes of prices respond to the stimulus of business activity are found partly in differences of organization among the markets for commodities, labor, loans, and securities; partly in the technical circumstances affecting the relative demand for and supply of these several classes of goods; and partly in the adjusting of selling prices to changes in the aggregate of buying prices which a business enterprise pays, rather than to changes in the prices of the particular goods bought for resale.

In the great majority of enterprises, larger profits result from these divergent price fluctuations coupled with the greater physical volume of sales. For, while the prices of raw materials and of wares bought for resale usually, and the prices of bank loans often, rise faster than selling prices, the prices of labor lag far behind, and the prices which make up overhead costs are mainly stereotyped for a time by old agreements regarding salaries, leases, and bonds.

This increase of profits, combined with the prevalence of business optimism, leads to a marked expansion of investments. Of course the heavy orders for machinery, the large contracts for new construction, etc., which result, swell still further the physical volume of business and render yet stronger the forces which are driving prices upward.

Indeed, the salient characteristic of this phase of the business cycle is the cumulative working of the various processes which are converting a revival of trade into intense prosperity. Not only does every increase in the physical volume of trade cause other increases, every convert to optimism make new converts, and every advance of prices furnish an incentive for fresh advances, but the growth of trade helps to spread optimism and to raise prices, while optimism and rising prices both support each other and stimulate the growth of trade. Finally, as has just been said, the changes going forward in these three factors swell profits and encourage investments, while high profits and heavy investments react by augmenting trade justifying optimism, and raising prices.

IV. HOW PROSPERITY BREEDS A CRISIS

While the processes just sketched work cumulatively for a time to enhance prosperity, they also cause a slow accumulation of stresses within the balanced system of business—stresses which ultimately undermine the conditions upon which prosperity rests.

Among these stresses is the gradual increase in the costs of doing business. The decline in overhead costs per unit of output ceases when enterprises have once secured all the business they can handle with their standard equipment, and a slow increase of these costs begins when the expiration of old contracts makes necessary renewals at the high rates of interest, rent, and salaries which prevail in prosperity. Meanwhile the operating costs rise at a relatively rapid rate. Equipment which is antiquated and plants which are ill located or otherwise work at some disadvantage are brought again into operation. The price of labor rises, not only because the standard rates of wages go up, but also because of the prevalence of higher pay for overtime. More serious still is the fact that the efficiency of labor declines, because overtime brings weariness, because of the employment of "undesirables," and because crews cannot be driven at top speed when jobs are more numerous than men to fill them.[1] The prices of raw materials continue to rise faster on

[1] Compare the discussion of fluctuations of production and of numbers employed in Section V of Chap. IV, below. Mr. Berridge there shows that physical output rises more in booms and declines more in depressions than do numbers of employees. But he agrees with the view here expressed regarding changes in efficiency of labor, thinking that these changes are more than offset by other factors—notably the prevalence of overtime in booms and of part time in depressions. Nevertheless, as George Soule of The Labor Bureau, Inc. who has kindly read this manuscript points out, the changes in efficiency of labor here referred to have never been statistically proved on a large scale. There are factors which tend to decrease efficiency in dull times, such as the desire to spread out slack work as long as possible, and inability to keep men on the processes for which they are best fitted. Mr. Soule knows personally some cases in which these causes have caused a decline of production in depression. He adds that if production does show a decline during booms per hours worked, "management or some other factor may be partly or even wholly responsible."

For evidence supporting the text, see the writer's "Business Cycles," pp. 476–80.

the average than the selling prices of products. Finally, the numerous small wastes, incident to the conduct of business enterprises, creep up when managers are hurried by a press of orders demanding prompt delivery.

A second stress is the accumulating tension of the investment and money markets. The supply of funds available at the old rates of interest for the purchase of bonds, for lending on mortgages, and the like, fails to keep pace with the rapidly swelling demand. It becomes difficult to negotiate new issues of securities except on onerous terms, and men of affairs complain of the "scarcity of capital." Nor does the supply of bank loans grow fast enough to keep up with the demand. For the supply is limited by the reserves which bankers hold against their expanding liabilities. Full employment and active retail trade cause such a large amount of money to remain suspended in active circulation that the cash left in the banks increases rather slowly, even when the gold supply is rising most rapidly. On the other hand, the demand for bank loans grows not only with the physical volume of trade, but also with the rise of prices, and with the desire of men of affairs to use their own funds for controlling as many business ventures as possible. Moreover, this demand is relatively inelastic, since many borrowers think they can pay high rates of discount for a few months and still make profits on their turnover, and since the corporations which are unwilling to sell long-time bonds at the hard terms which have come to prevail try to raise part of the funds they require by discounting notes running only a few years.

Tension in the bond and money markets is unfavorable to the continuance of prosperity, not only because high rates of interest reduce the prospective margins of profit, but also because they check the expansion in the volume of trade out of which prosperity developed. Many projected ventures are relinquished or postponed, either because borrowers conclude that the interest would absorb too much of their profits, or because lenders refuse to extend their commitments farther.

The credit expansion, which is one of the most regular concomitants of an intense boom, gives an appearance of enhanced prosperity to business. But this appearance is delusive. For when the industrial army is already working its equipment at full capacity, further borrowings by men who wish to increase their own businesses cannot increase appreciably the total output of goods. The borrowers bid up still higher the prices of commodities and services, and so cause a further expansion in the pecuniary volume of trade. But they produce no corresponding increase in the physical volume of things men can consume. On the contrary, their borrowings augment that mass of debts, many protected by insufficient margins, which at the first breath of suspicion leads to the demands for liquidation presently to be discussed.

The difficulty of financing new projects intensifies the check which one important group of industries has already begun to suffer from an earlier-acting cause. The industries in question are those which produce industrial equipment—tools, machines, plant—and the materials of which this equipment is made, from lumber and cement to copper and steel.

The demand for industrial equipment is partly a replacement demand and partly a demand for betterments and extensions. The replacement demand for equipment doubtless varies with the physical quantity of demand for products; since, as a rule, the more rapidly machines and rolling stock are run, the more rapidly they wear out. The demand for betterments and extensions, on the other hand, varies not with the physical quantity of the products demanded, but with the fluctuations in this quantity.

To illustrate the peculiar changes in demand for industrial equipment which follow from this situation, suppose that the physical quantity of a certain product varied in five successive years as follows:

First year	100,000 tons
Second year	95,000 tons
Third year	100,000 tons
Fourth year	110,000 tons
Fifth year	115,000 tons

This product is turned out by machines each of which will produce one hundred tons per year. Thus the number of machines in operation each year was:

First year	1,000 machines
Second year	950 machines
Third year	1,000 machines
Fourth year	1,100 machines
Fifth year	1,150 machines

Each year one-tenth of the machines in operation wears out. The replacement demand for machines was therefore:

First year	100 machines
Second year	95 machines
Third year	100 machines
Fourth year	110 machines
Fifth year	115 machines

The demand for additional machines was far more variable. Neglecting the first year, for which our illustration does not supply data, it is plain that no additions to equipment were required the second year when fifty of the machines in existence stood idle, and also none the third year. But after all the existing machines had been utilized new machines had to be bought at the rate of one machine for each one hundred tons added to the product. Hence the demand for additions to equipment shown by the number of machines in operation was:

First year	no data
Second year	none
Third year	none
Fourth year	100 machines
Fifth year	50 machines

Adding the replacement demand and the demand for additions to equipment, we find the total demand for industrial equipment of this type to be:

First year	no data
Second year	95 machines
Third year	100 machines
Fourth year	210 machines
Fifth year	165 machines

Of course the figures in this example are fanciful. But they illustrate genuine characteristics of the demand for industrial equipment. During depression and early revival the equipment-building trades get little business except what is provided by the replacement demand. When the demand for products has reached the stage where it promises soon to exceed the capacity of existing facilities, however, the equipment trades experience a sudden and intense boom. But their business falls off again before prosperity has reached its maximum, provided the *increase* in the physical quantity of products slackens before it stops. Hence the seeming anomalies pointed out by J. Maurice Clark:

> The demand for equipment may decrease . . . even though the demand for the finished product is still growing. The total demand for [equipment] tends to vary more sharply than the demand for finished products. . . . The maximum and minimum points in the demand for [equipment] tend to precede the maximum and minimum points in the demand for the finished products, the effect being that the change may appear to precede its own cause.[1]

When we add to the check in the orders for new equipment arising from any slackening in the increase of demand for products, the further check which arises from stringency in the bond market and the high cost of construction, we have no difficulty in understanding why contracts for this kind of work become less numerous as the climax of prosperity approaches. Then the steel mills, foundries, machine factories, copper smelters, quarries, lumber mills, cement plants, construction companies,

[1] Business Acceleration and the Law of Demand, *Journal of Political Economy*, March, 1917. Also see George H. Hull, "Industrial Depressions," 1911. Some materials concerning the sharp fluctuations in the activity of the equipment trades are given in Chap. II.

general contractors, and the like find their orders for future delivery falling off. While for the present they may be working at high pressure to complete old contracts within the stipulated time, they face a serious restriction of trade in the near future.

The imposing fabric of prosperity is built with a liberal factor of safety; but the larger grows the structure, the more severe become these internal stresses. The only effective means of preventing disaster while continuing to build is to raise selling prices time after time high enough to offset the encroachments of costs upon profits, to cancel the advancing rates of interest, and to keep producers willing to contract for fresh industrial equipment.

But it is impossible to keep selling prices rising for an indefinite time. In default of other checks, the inadequacy of cash reserves would ultimately compel the banks to refuse a further expansion of loans upon any terms. But before this stage has been reached, the rise of prices may be stopped by the consequences of its own inevitable inequalities. These inequalities become more glaring the higher the general level is forced; after a time they threaten serious reduction of profits to certain business enterprises, and the troubles of these victims dissolve that confidence in the security of credits with which the whole towering structure of prosperity has been cemented.

What, then, are the lines of business in which selling prices cannot be raised sufficiently to prevent a reduction of profits? There are certain lines in which selling prices are stereotyped by law, by public commissions, by contracts of long term, by custom, or by business policy, and in which no advance, or but meager advances can be made. There are other lines in which prices are always subject to the incalculable chances of the harvests, and in which the market value of all accumulated stocks of materials and finished goods wavers with the crop reports. There are always some lines in which the recent construction of new equipment has increased the capacity for production faster than the demand for their wares has expanded under the repressing influence of the high prices which must be charged to prevent a reduction of profits. The unwillingness of producers to let fresh contracts threatens loss not only to contracting firms of all sorts, but also to all the enterprises from whom they buy materials and supplies. The high rates of interest not only check the current demand for wares of various kinds, but also clog the effort to maintain prices by keeping large stocks of goods off the market until they can be sold to better advantage. Finally, the very success of other enterprises in raising selling prices fast enough to defend their profits aggravates the difficulties of the men who are in trouble; for to the latter every further rise of prices for products which they buy means a further strain upon their already stretched resources.

As prosperity approaches its height, then, a sharp contrast develops between the business prospects of different enterprises. Many, probably the majority, are making more money than at any previous stage of the business cycle. But an important minority, at least, face the prospect of declining profits. The more intense prosperity becomes, the larger grows this threatened group. It is only a question of time when these conditions, bred by prosperity, will force some radical readjustment.

Now such a decline of profits threatens worse consequences than the failure to realize expected dividends, for it arouses doubt concerning the security of outstanding credits. Business credit is based primarily upon the capitalized value of present and prospective profits, and the volume of credits outstanding at the zenith of prosperity is adjusted to the great expectations which prevail when the volume of trade is enormous, when prices are high, and when men of affairs are optimistic. The rise of interest rates has already narrowed the margins of security behind credits by reducing the capitalized value of given profits. When profits themselves begin to waver, the case becomes worse. Cautious creditors fear lest the shrinkage in the market rating of the business enterprises which owe them money will leave no adequate security for repayment; hence they begin to refuse renewals of old loans to the enterprises which cannot stave off a decline of profits, and to press for a settlement of outstanding accounts.

Thus prosperity ultimately brings on conditions which start a liquidation of the huge credits which it has piled up. And in the course of this liquidation, prosperity merges into crisis.

V. CRISES

Once begun, the process of liquidation extends very rapidly, partly because most enterprises which are called upon to settle their maturing obligations in turn put similar pressure upon their own debtors, and partly because, despite all efforts to keep secret what is going forward, news presently leaks out and other creditors take alarm.

While this financial readjustment is under way, the problem of making profits on current transactions is subordinated to the more vital problem of maintaining solvency. Business managers concentrate their energies upon providing for their outstanding liabilities and upon nursing their financial resources, instead of upon pushing their sales. In consequence, the volume of new orders falls off rapidly; that is, the factors which were already dimming the prospects of profits in certain lines of business are reinforced and extended. Even when the overwhelming majority of enterprises meet the demand for payment with success, the tenor of business developments undergoes a change. Expansion gives place to contraction, though without a violent wrench. Discount rates rise higher than usual, securities and commodities fall in price, and as old orders are completed, working forces are reduced; but there is no epidemic of bankruptcies, no run upon banks, and no spasmodic interruption of the ordinary business processes.

At the opposite extreme from crises of this mild order stand the crises which degenerate into panics. When the process of liquidation reaches a weak link in the chain of interlocking credits and the bankruptcy of some conspicuous enterprise spreads unreasoning alarm among the business public, then the banks are suddenly forced to meet a double strain—a sharp increase in the demand for loans, and a sharp increase in the demand for repayment of deposits. If the banks prove able to honor both demands without flinching, the alarm quickly subsides. But if, as in 1873, 1893, and 1907, many solvent business men are refused accommodation at any price, and if depositors are refused payment in full, the alarm turns into panic. A restriction of payments by the banks gives rise to a premium upon currency, to the hoarding of cash, and to the use of various unlawful substitutes for money. A refusal by the banks to expand their loans, still more a policy of contraction, sends interest rates up to three or four times their usual figures, and causes forced suspensions and bankruptcies. Collections fall into arrears, domestic exchange rates are dislocated, workmen are discharged because employers cannot get money for pay-rolls or fear lest they cannot collect pay for goods when delivered, stocks fall to extremely low levels, even the best bonds decline somewhat in price, commodity markets are disorganized by sacrifice sales, and the volume of business is violently contracted.

VI. DEPRESSIONS

The period of severe financial pressure is often followed by the reopening of numerous enterprises which had been shut for a time. But this prompt revival of activity is partial and short-lived. It is based chiefly upon the finishing of orders received but not completely executed in the preceding period of prosperity, or upon the effort to work up and market large stocks of materials already on hand or contracted for. It comes to an end as this work is gradually finished, because new orders are not forthcoming in sufficient volume to keep the mills and factories busy.

There follows a period during which depression spreads over the whole field of business and grows more severe. Consumers' demand declines in consequence of wholesale discharges of wage-earners, the gradual exhaustion of past savings, and the reduction of other classes of family incomes. With consumers' demand falls the business demand for raw materials, current supplies, and equipment used in making consumers' goods. Still more severe is the shrinkage of producers' demand for construction work of all kinds, since few individuals or enterprises care to sink money in new business ventures so long as trade remains depressed and the price level is declining. The contraction in the physical volume of business which results from these several shrinkages in demand is cumulative, since every reduction of employment causes a reduction of consumers' demand, and every decline in consumers' demand depresses current business demand and discourages investment, thereby causing further discharges of employees and reducing consumers' demand once more.

With the contraction in the physical volume of trade goes a fall of prices; for, when current orders are insufficient to employ the existing industrial equipment, competition for what business is to be had becomes keener. This decline spreads through the regular commercial channels which connect one enterprise with another, and is cumulative, since every reduction in price facilitates, if it does not force, reductions in other prices, and the latter reductions react in their turn to cause fresh reductions at the starting point.

As the rise of prices which accompanies revival, so the fall which accompanies depression is characterized by marked differences in degree. Wholesale prices usually fall faster than retail, the prices of producers' goods faster than those of consumer's goods, and the prices of raw materials faster than those of manufactured products. The prices of raw mineral products follow a more regular course than those of raw forest, farm, or animal products. As compared with the general index numbers of commodity prices at wholesale, index numbers of wages and interest on long-time loans decline in less degree, while index numbers of discount rates and of stocks decline in greater degree. The only important group of prices to rise in the face of depression is that of high-grade bonds.

Of course, the contraction in the physical volume of trade and the fall of prices reduce the margin of present and prospective profits, spread discouragement among business men, and check enterprise. But they also set in motion certain processes of readjustment by which depression is gradually overcome.

The operating costs of doing business are reduced by the rapid fall in the prices of raw materials and of bank loans, by the increase in the efficiency of labor which comes when employment is scarce and men are anxious to hold their jobs, by closer economy on the part of managers, and by the adoption of improved methods. Overhead costs, also, are reduced by reorganizing enterprises which have actually become or which threaten to become insolvent, by the sale of other enterprises at low figures, by reduction of rentals and refunding of loans, by charging off bad debts and writing down depreciated properties, and by admitting that a recapitalization of business enterprises—corresponding to the lower prices of stocks—has been effected on the basis of lower profits.[1]

[1] George Soule comments: "I should like to see a specific warning against the theory —so often resorted to by banks and employers in efforts to 'deflate' wages—that business cannot revive unless all levels of wages and prices bear exactly the same relation to each other as before the depression—a sort of 'normal' or mathematically

While these reductions in costs are still being made, the demand for goods ceases to shrink and begins slowly to expand—a change which usually comes after one or two years of depression. Accumulated stocks left over from prosperity are gradually exhausted, and current consumption requires current production. Clothing, furniture, machinery, and other moderately durable articles which have been used as long as possible are finally discarded and replaced. Population continues to increase at a fairly uniform rate; the new mouths must be fed and new backs clothed. New tastes appear among consumers and new methods among producers, giving rise to demand for novel products. Most important of all, the investment demand for industrial equipment revives; for, though saving slackens it does not cease, with the cessation of foreclosure sales and corporate reorganizations the opportunities to buy into old enterprises at bargain prices become fewer, capitalists become less timid as the crisis recedes into the past, the low rates of interest on long-term bonds encourage borrowing, the accumulated technical improvements of several years may be utilized, and contracts can be let on most favorable conditions as to cost and prompt execution.

Once these various forces have set the physical volume of trade to expanding again, the increase proves cumulative, though for a time the pace of growth is kept slow by the continued sagging of prices. But while the latter maintains the pressure upon business men and prevents the increased volume of orders from producing a rapid rise of profits, still business prospects become gradually brighter. Old debts have been paid, accumulated stocks of commodities have been absorbed, weak enterprises have been reorganized, the banks are strong—all the clouds upon the financial horizon have disappeared. Everything is ready for a revival of activity, which will begin whenever some fortunate circumstance gives a sudden fillip to demand, or, in the absence of such an event, when the slow growth of the volume of business has filled order books and paved the way for a new rise of prices.

Such is the stage of the business cycle with which the analysis began, and, having accounted for its own beginning, the analysis ends.

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balanced relation. I do not believe the existence of such a normal relationship has ever been proved. Certainly, it has not been proved that there can be no permanent changes in price and wage relationships."