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Chapter 6
UNDERLYING FORCES
SHAPING THE BUSINESS CREDIT MARKET,
1900-1940

THE BUSINESS CREDIT MARKET after 1900 was influenced by numerous forces which may properly be described as underlying in nature and pervasive in effect. Some of these forces have been dealt with above, primarily in Chapter 3: long-term changes in the relative importance of enterprises of different size and industrial character; long-term shifts in the relative importance of different types of assets held by nonfinancial business concerns; and certain discernible shifts in the policies and practices of concerns with respect to the way in which their assets are financed. These long-term changes were considered in Chapter 3 because of their immediate relation to changes in the business credit market, which it was the purpose of that chapter to describe. The present chapter will discuss certain salient trends in the American economy which, while somewhat less directly related to the business credit market, had profound and lasting effects on that market.

The basic underlying forces selected for discussion include:

- (1) The growth factor in the American economy, somewhat retarded during the early twenties and definitely interrupted in the thirties
- (2) The marked increase in the ratio of capital to labor in many important sectors of the economy
- (3) The fairly persistent increase in the relative importance of the output of consumer durable goods
- (4) The persistent and, to a certain extent, growing instability of business activity
- (5) The expansion of government as an agency of capital formation
- (6) The decline of interest rates, particularly after 1930.

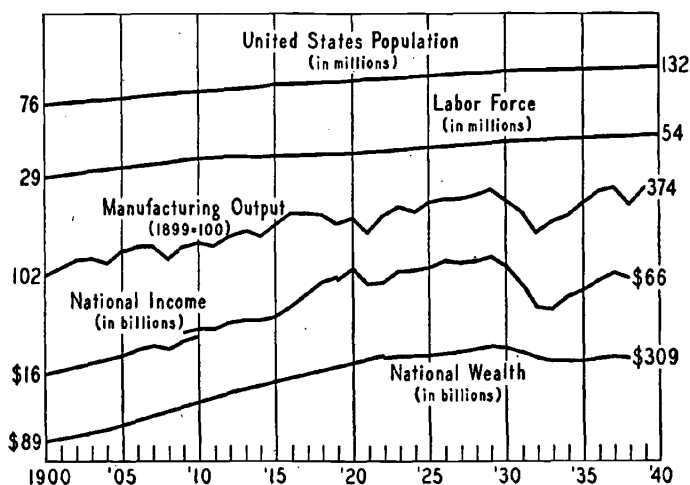
In some cases these factors were, to a great extent, independent of the banking and credit system proper; in others, changes in the business credit market and in these underlying factors were mutually dependent. Thus, credit conditions affected, as well as were affected by, fluctuations in business activity; and the declining trend of interest rates may be viewed as a change in the business credit market itself. This distinction between factors mainly independent of the banking and credit system and other, interdependent, factors is a useful one to bear in mind. Another useful distinction is that between long-term trends, such as those in population and production, and short-term fluctuations, such as changes in prices and profits, which exerted profound influences on the business credit market.

ECONOMIC GROWTH

Growth in the American economy after 1900 was at different rates in different periods, but the over-all result was one of tremendous expansion, as is clearly shown by the several measures of economic change presented in Chart 25. First of all, population nearly doubled between 1900 and 1940, with the rise more rapid in the first half than in the second half of the period. Beyond this, important internal shifts in population distribution, which are closely related to economic growth, took place. The urban population increased from about 30 million people in 1900 to nearly 75 million in 1940, while the rural population remained comparatively stable, rising from 46 to 57 million. Thus the population distribution as between town and country was wholly reversed in forty years.

Paralleling the growth in population was the growth in the labor force. Various estimates of the numbers in the labor force show marked discrepancies, since they were derived in different ways, but the same general pattern is apparent in all. The estimates of the National Industrial Conference Board (Chart 25) reveal a rate of growth almost exactly the same as that of the total population. Any over-all series on the labor force, however, veils important shifts in the distribution of employment by industries. For example, between 1900 and 1929 the proportion of the working population engaged in agriculture dropped from 35 percent to roughly 22 percent. Workers in industry, on the other hand, increased from 37

Chart 25 — MEASURES OF GROWTH IN THE AMERICAN ECONOMY, 1900-1940
(logarithmic vertical scale)



The dominant factor in the American economy from 1900 to 1930 was persistent growth. During the early thirties, the growth factor was absent; by most measures, the recovery of the late thirties did no more than approach the high levels of the twenties.

percent to around 40 percent; in trade and finance, from 12 percent to 17 percent; and in service industries, from 14 percent to 19 percent. When these data are carried forward to 1940, the only significant change beyond the pattern established by 1929 is a further increase — to slightly over 22 percent — in the proportion employed in the service industries.

The participation of increasing numbers of people in the process of production was accompanied by an even greater growth in the output of manufacturing industries, although this was interrupted in the thirties. After a sharp decline from 1929 through 1932 output increased again, but in 1939 it was only slightly above its 1929 peak.

Estimates of national income and wealth also record substantial

growth during the first three decades of the century, and then a decline. Although increases again occurred after the early thirties, the levels reached were not so high as those attained in the twenties. The rates of growth of national income and wealth were considerably above that of population, meaning that per capita income and wealth increased. This fact is important in the present study, because the continuing improvement in the economic welfare of the average American consumer, which it reveals and which was reflected in his consumption habits, is of peculiar significance to credit developments.

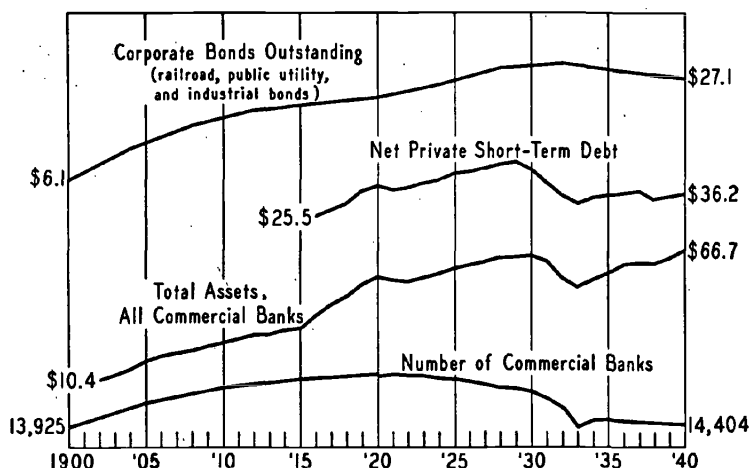
The business credit market, like other segments of the economy, experienced a considerable expansion from 1900 to 1930 and an interruption of that expansion in the thirties (Chart 26).¹ Rough approximations of the magnitude of the long-term credit market (measured by changes in corporate bonds outstanding)² and of the short-term credit market (measured by changes in private short-term debt and, prior to 1916, by the trend of total bank assets)³ indicate that each element increased fivefold during the first three decades of the century. In the thirties, however, when the long-term credit market held close to the level attained by the late twenties, the short-term market contracted more sharply than any other

¹ Not all the measures that are needed to trace changes in the magnitude of the business credit market are at hand, and some that are available cover more than the business element in the credit market; but information is fairly complete from 1916, and inferences can be made from other materials for the earlier years. Such broad measures as can be obtained are grouped in Chart 26.

² Quadrennial estimates have been made by the Corporate Bond Project, National Bureau of Economic Research, Financial Research Program. These data indicate that corporate bonds outstanding increased from \$6.1 billion in 1900 to \$33.4 billion in 1932; after a very moderate decline during the thirties, the total stood at \$27.1 billion in 1940. Other estimates of long-term business debt are available and, while they differ from the above in amount, they reveal almost exactly the same rates of growth and retardation over comparable periods. These estimates are the National Industrial Conference Board series on the outstanding corporate debt of steam railroads, public utilities, and industrial corporations, 1900-1942 (*The Economic Almanac for 1943-44*, p. 383), and the series on net private long-term corporate debt, 1916-42, compiled by the Department of Commerce (*Survey of Current Business*, July 1944, p. 16).

³ The nearest approach to an estimate of the short-term business credit market is a Department of Commerce series on *private* short-term debt for 1916-40. On the assumption that this can be taken as a fair indication of the direction and extent of change in *business* short-term debt for these years, the short-term business credit market can be said to have doubled from 1916 to 1929. Changes from 1900 to 1916 can be judged only from the trend during those years in total bank assets. Under the assumption that the relation between the two series which prevailed in 1916-29 also characterized the period 1900-1916, private short-term debt in 1900 may be estimated at something under \$10 billion.

Chart 26 — MEASURES OF GROWTH IN THE BUSINESS CREDIT
MARKET, 1900-1940
(dollar figures in billions; logarithmic vertical scale)



The business credit market, like the economy as a whole, was constantly expanding in the first three decades of the century. Long-term business debt stabilized in the fourth decade, while short-term debt decreased.

sector of the economy. Contrary to the behavior of most other series, net private short-term debt failed by 1940 to regain its 1929 level.

Accompanying this spectacular over-all expansion in the dimensions of the business credit market was an expansion in the facilities and resources of the commercial banking system. In 1900 there were 8,738 commercial banks incorporated under national and state banking laws, and 5,187 unincorporated private banks, a total of 13,925. By 1920 this total had more than doubled, but then a rapid decline began and in 1933 the number was about the same as in 1900. This decline reflected in part bank consolidations after 1920 and in part the closure of banks, particularly in rural areas. The 1933 number was maintained with only negligible change through 1940. A more adequate series for revealing the growth of

the commercial banking system is total bank assets. By this measure, bank resources expanded over sixfold from 1900 to 1940; only in the thirties did a significant interruption occur, and this was temporary. Over the whole period there was a remarkable increase in the assets held by the average bank.

How did the underlying force of economic growth affect the business credit market, aside from the effects obvious in the above measures of the market's expansion and decline? The most important effect from the point of view of the present study was the change in the competitive conditions of the market, caused by the shift from fairly regular expansion during the first three decades to the contraction and partial recovery of the fourth. During the early period, when the total demand for business credit was growing more or less persistently, there was little basis for inter-agency competition. This condition was wholly altered, however, when the underlying growth factor was lost; each agency was faced with increasing problems of competition, as its assets grew and the demand for private business credit declined. It is not surprising, therefore, that some of the most striking institutional changes in the business credit market appeared in the fourth decade of the century.

Specifically, the contraction of the business credit market during the thirties, and the consequent necessity for business financing agencies to use new methods of financing or to reach out into new credit fields, if they were to hold their own, forced the initiation and spread of new lending techniques. As indicated in earlier chapters, these occurred in three main areas — consumer instalment credit, intermediate-term credit to large and medium-sized business enterprises, and newer types of secured credits to small businesses — all of which, while they constituted new areas of lending for commercial banks, were areas in which other agencies were already functioning. The result was heightened inter-agency competition.

Economic growth also affected the conditions under which the business credit process was conducted. During the first decade of the century business was conducted in the main through enterprises of relatively small unit size; some of these were national organizations, but in most instances operations were relatively limited in geographical scope. Further, the market situation in which they operated was far less complicated than it became in later years. Economic growth meant not only an increase in the average size of the

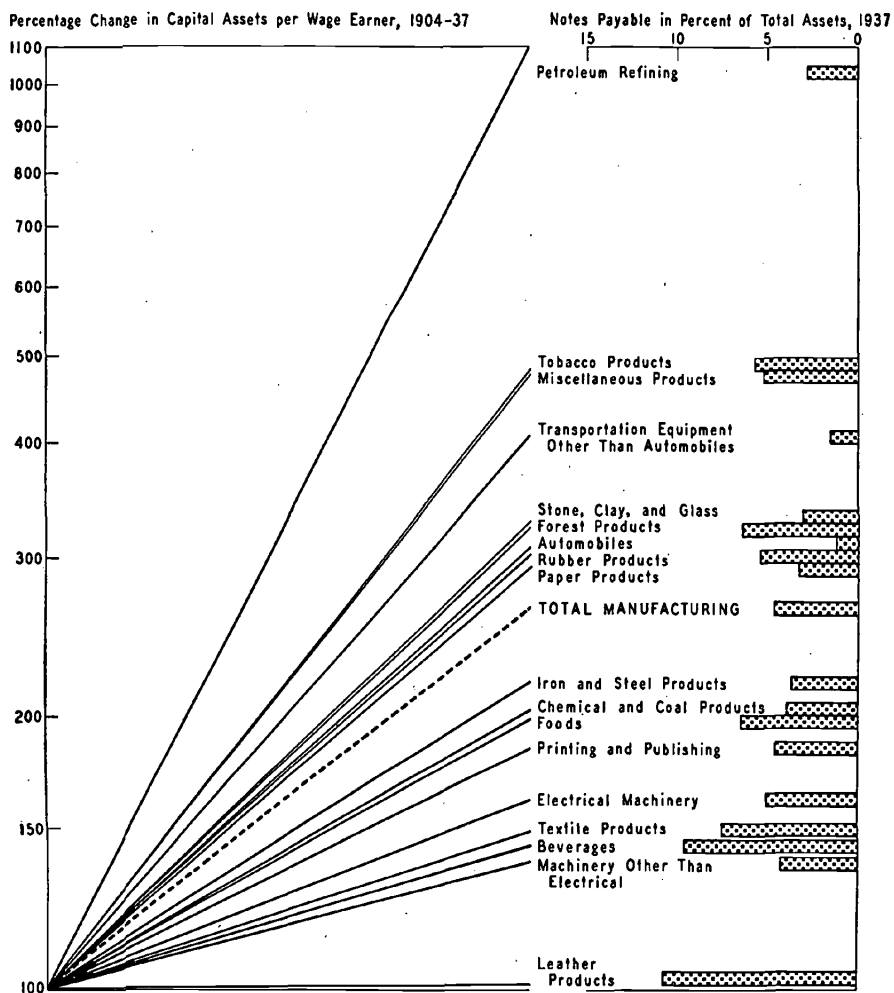
business unit and of the commercial bank, but also an increasingly complex set of market conditions; the whole process of business management became institutionalized and depersonalized through the agency of the large corporation. In consequence, the task of credit appraisal grew more complicated and less amenable to practice on the basis of personal relationships.

INCREASING RATIO OF CAPITAL TO LABOR IN PRODUCTION

Technological progress resulted in a marked increase in the ratio of capital equipment to direct labor in the productive process. This development can be measured in a number of ways, but for present purposes its extent may be indicated by reference to two measures: the ratio of "capital assets" (net of land) to the number of wage earners employed in manufacturing industries, and the proportion of fixed assets to total assets for the samples of corporations analyzed in Chapter 3. The first measure, shown in Chart 27, reveals that capital assets (net of land) per wage earner in manufacturing as a whole increased by 264 percent between 1904 and 1937. Of course, there were considerable differences in the extent of change among industrial subdivisions; increases were especially marked in petroleum refining, where capital assets per wage earner in 1937 were eleven times as great as in 1904, whereas the ratio for leather products remained constant over the period. Output per worker, which is a rough and indirect reflection of the use of capital equipment, expanded between 1902 and 1939 by 180 percent in mining, including oil and gas, and by 94 percent in manufacturing. In agriculture an increase of 64 percent occurred between 1900 and 1937.

The effects on business credit demands of more intensive use of capital in production may be summarized briefly. First, by increasing the optimum size of individual concerns as measured by total assets, the development meant that a higher proportion of business was done by larger concerns. As indicated above, the larger enterprises tended to depend less than small concerns on the banks for funds. Second, the greater importance of fixed assets relative to current operating assets, as shown in Chapter 3, had the effect of placing increasing emphasis on long-term as contrasted with short-term funds. Thus the industries that showed a greater than average

Chart 27 — CHANGES IN CAPITAL ASSETS PER WAGE EARNER IN MANUFACTURING INDUSTRIES, 1904-37, COMPARED WITH DEPENDENCE ON BANK CREDIT, 1937



Those manufacturing industries that experienced the greatest relative increases between 1904 and 1937 in the amount of capital assets utilized per wage earner were in general the least dependent on bank credit as a means of financing in 1937.

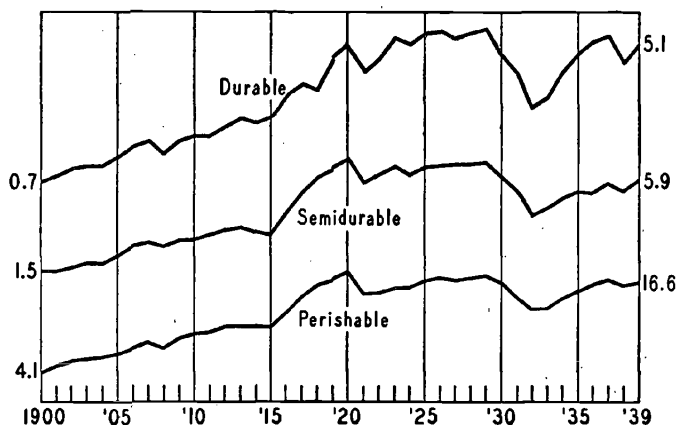
increase in capital assets per wage earner were, in 1937, generally less dependent on bank credit than those industries with a less than average increase. Third, the use of specialized capital equipment changed the character of credit demands. Increasingly, credit demands grew out of the acquisition of specific items of equipment, especially among manufacturing, trade, and service concerns of small and medium size. These demands meant not only an expanding market for medium-term credit but also the assumption of relatively high risks where the debtor was of only moderately good credit standing and where a lien was held on equipment susceptible to a high rate of depreciation. Finally, by increasing the potential (and actual) variation in annual business investment expenditures, the rising ratio of capital to labor contributed to the instability of the economy with consequences that will be discussed in a subsequent section.

ENLARGEMENT OF USE OF CONSUMER DURABLE GOODS

Another reflection of the technological progress and higher standards of living achieved during the twentieth century was the increase in the relative importance of consumer durable goods, compared with those of a semi-durable and perishable nature. While the value (in current prices) of the output of these last two groups of commodities increased about four times between 1900 and 1939, the value of the output of finished consumer durable goods expanded more than seven times. The most marked difference in growth, as shown in Chart 28, occurred in the twenties when the rate of output of durable goods increased rapidly while production in the two other categories increased only moderately or not at all. It is significant that the change in consumer durable goods was due mainly to greater output of new commodities and not to increased production of older types of goods.

The growth in the importance of consumer durables had two important effects upon business credit demand. First, the altered structure of consumer expenditures which it implies, with greater emphasis on expenditures on durable commodities, increased both the potential and actual degree of variation in annual consumer outlay. Chart 28 shows that instability was greatest in the output of durable, and least in the output of perishable, goods. By contrib-

*Chart 28 — OUTPUT OF FINISHED CONSUMER GOODS,
1900-1939
(in billions of dollars at current prices; logarithmic vertical scale)*



The value of output of consumer durable goods increased more than sevenfold from 1900 to 1939, contrasted with the fourfold increase of other types. Wider use of these high-unit value goods laid the basis for the development of consumer instalment financing.

uting to instability in the economy, the shifting composition of the flow of consumer goods produced consequences similar to those traceable to a rising ratio of capital assets to labor. Second, the increase in the relative importance of the durable goods component of total consumer goods output during the twenties was due mainly to increased output of automobiles, household appliances, and radios, each of which is a commodity of high unit value and commonly purchased on an instalment basis. The greater demand for such goods laid the basis for the rapid development after 1920 of the sales financing industry and the later participation of commercial banks in consumer instalment financing.

The implication of this second effect for the institutional structure of the credit market has already been noted: whereas commercial banks were extending virtually no credit to finance companies in 1920, such loans had increased by 1939 to the point where they

nearly equaled total bank loans to manufacturing concerns. It was estimated that loans to finance companies in 1939 amounted to \$1.3 billion, and those to manufacturing concerns to \$1.6 billion, out of an estimated total of \$5.1 billion of short-term loans to commercial and industrial enterprises. To this sizable quantity may be added direct consumer instalment financing by banks, which was estimated as \$1.0 billion at the end of 1939 — or about 6 percent of total loans and discounts and 17.5 percent of commercial and industrial loans held by all banks. If the two types of financing — loans to finance companies and direct loans to consumers — are combined, the total equals nearly 14 percent of total loans and discounts of commercial banks at the end of 1939.

INSTABILITY IN BUSINESS ACTIVITY

Both the increasing ratio of capital to labor and the greater relative importance of the durable goods component of total consumer goods output tended to make the economy potentially and actually more unstable, and thus influenced the business credit market. The increasing instability in business activity after 1900 is shown by data on the physical output of manufacturing industries. As indicated in Chart 25, production after World War I was disturbed by three major setbacks; two of these (in 1920-21 and 1937-38) involved a loss of about 20 percent each, and the third (1929-32) a loss of nearly 50 percent. By contrast, during the decade and a half preceding World War I the four years in which the index of manufacturing output was lower than in the preceding year, namely 1904, 1908, 1911, and 1914, the percentage declines in the index were 6, 17, 4, and 6 percent, respectively. A similar record of increasing instability is provided by data for bank clearings outside New York between 1882 and 1936.

Data on the sales and profits of business concerns do not extend sufficiently far back to support generalizations concerning changes in the degree of instability in economic activity. Measures that are available, however — such as sales of samples of manufacturing and trade corporations from 1915 to 1940 and ratios of net income to net worth, also based on sample data — reflect the highly unstable market background against which credit extending agencies have functioned since 1915.

The primary effect on the business credit market of economic fluctuations was to increase the risk inherent in the credit-granting process. Consequently, the serious fluctuations in the 1920's and 1930's tended to encourage both borrowers and lenders to take an increasingly cautious view of the financing process. On the part of the borrower, cyclical fluctuations stimulated the desire for as large a measure of independence from external sources of funds as possible, placed a greater premium on ownership than on debt funds where external financing was required, and suggested the use of relatively longer-term loans so as to minimize the contingency of having to repay loans at a time when the concern's general financial position was worsened by successive years of losses or of relatively low earnings.

From the viewpoint of the financing agency, the occurrence of business depressions, and especially the continuance for some years of low levels of activity and profitability, had a serious effect on risk conditions. Successive annual deficits among the small and medium-sized concerns that comprised the majority of business loan borrowers caused a reduction of their capital and general weakening of their financial condition and credit standing. To operate satisfactorily under such circumstances lending agencies had to have recourse to various types of risk-limiting devices. This underlying factor was responsible in large part for the development and wider use during the thirties of such devices as those described in Chapter 5, namely, the assignment of accounts receivable, warehouse and trust receipts, and liens on equipment.

The second major effect of economic fluctuations on the business credit market is found in the enlargement of public controls over credit extending activities. The framework of law and regulation within which commercial banks operated as business lending agencies was dictated in large part by the necessity, as the legislatures saw it, of preventing banks from exposing themselves to certain risks associated with economic instability. Thus, the limitations found in the national banking laws with respect to loans made on real estate and the security of stock exchange collateral, and to investment in equity securities, are examples of social controls the purpose of which is to restrain banks from excessive participation in types of lending and investing peculiarly susceptible to loss during periods of business recession.

Finally, after 1929 prolonged underemployment of resources became the basic factor underlying the rise of government agencies prepared to lend directly in the business credit market, or to assume some of the risks involved in credits extended by private agencies. The industrial lending activities of the Federal Reserve banks and the Reconstruction Finance Corporation and their risk-sharing programs developed out of depression conditions. Also, the insurance of home mortgages and of home modernization loans under the Federal Housing Administration was intended primarily to stem the tide of business recession and to encourage private lending agencies to expand their activity in the field of home financing.

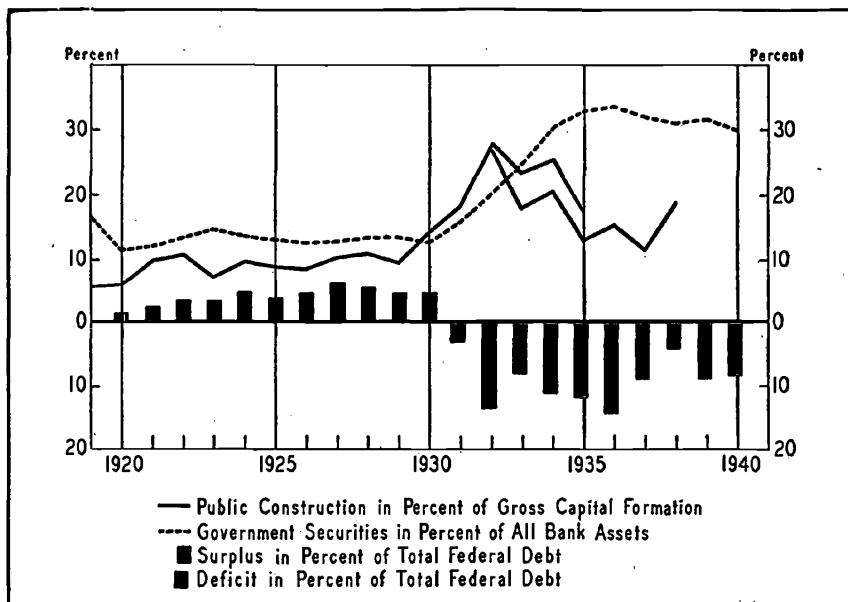
EXPANDING ROLE OF GOVERNMENT IN CAPITAL FORMATION

A development of fundamental importance to the business credit market in the period under review was the steady increase in the role of government in capital formation. By supplying an ever-widening range of services and developing natural resources, government enlarged the part it played in the productive activity of the community, and correspondingly in the financial system.

A rough index of this development is provided by data for public construction as a percentage of gross capital formation (Chart 29). This index reveals a steady increase in the importance of public capital formation during the twenties and a very sharp rise in the early thirties, attributable mainly to the fact that private capital formation declined more than public construction. While data on capital formation in later years were compiled on a somewhat different basis, and therefore are not strictly comparable with those for the earlier period, they show quite clearly that toward the end of the thirties the ratio of public construction to gross capital formation was nearly four times as great as at the end of World War I.

Associated with this underlying trend was a complete reconstitution of the asset structure of the banking system. At the close of World War I, government securities of national banks comprised about 16 percent of total assets; at the outbreak of World War II, the proportion was about 30 percent (Chart 29). The change, however, cannot be explained by reference exclusively to the rising proportion of public construction to gross capital formation. Two addi-

Chart 29 — PUBLIC CONSTRUCTION, BANK HOLDINGS OF GOVERNMENT DEBT, AND SURPLUS OR DEFICIT OF FEDERAL RECEIPTS OVER FEDERAL EXPENDITURES, 1919-40



Increased bank holdings of government debt in the thirties were associated with a higher proportion of public construction to total capital formation and with federal deficits.

tional conditions were important. First, the federal government operated with a net surplus of receipts over expenditures from 1920 to 1930, inclusive, and there was a substantial decline in the federal debt, offset for the most part by an increase in state and local government debt. In those years the proportion of government obligations to total bank assets remained roughly constant. Beginning in 1931, however, the federal budget showed a deficit every year; current expenses as well as expenditures on public construction gave rise to an increasing federal debt; a substantial part of which found its way into the commercial banking system. In sharp contrast, the rate of expansion of the assets of business enterprises was greatly

curtailed during the thirties, as was revealed in Chart 20, Chapter 3. Because of its low rate the asset expansion of private business which did occur was, to a higher degree than formerly, financed out of funds acquired internally and without extensive recourse to the financial markets. It was mainly the combination of these conditions in the thirties — the expansion of public, and the contraction of private, external financing needs — which produced the altered asset structure of American commercial banks. As will be seen in Chapter 7, this change in bank asset structure, clearly evident by 1940, was furthered by the economic and financial conditions of World War II.

DECLINING INTEREST RATES

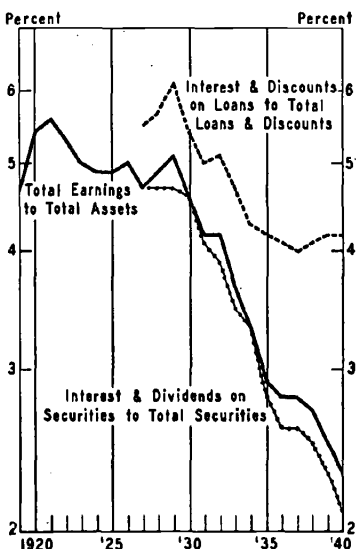
The declining trend of interest rates, particularly after 1930 — a circumstance of the credit market itself — was also a factor affecting business financing conditions. As shown in Chart 30, the ratio of total interest and dividends on securities to total security holdings declined from 4.1 percent in 1931 to 2.1 percent in 1940, while a comparable ratio for loan assets fell only from 5.0 to 4.2 percent. The combined result was to lower the earnings ratio for member banks from 4.2 to 2.3 percent, in sharp contrast to the preceding decade, when bank earnings remained roughly constant.

The primary effect on the business credit market was to intensify inter-agency competition and to induce changes in bank lending policies and techniques. The extension of bank activity into areas formerly served almost exclusively by specialized nonbank agencies has been described in earlier chapters. The fact that these institutional adjustments took place in the thirties and not in the twenties may be explained in large part by the different levels of bank earnings in the two periods and by the growing discrepancy between earnings on loans and earnings on investments.

Closer inter-agency competition and the necessity of following new lending policies and credit techniques were particularly marked in two separate but related developments: direct participation in the consumer instalment credit market and more extensive exploitation of the business credit market. The competitive conditions caused by the former development are well known. The latter took two forms, with quite different competitive results. First, commercial

banks attempted to raise earnings by extending their activities in the intermediate-term credit market where, as a rule, interest rates on long-term loans to a given quality of borrower were higher than rates on short-term loans. This was not true of all borrowers, but it may be observed that after 1930 the basic short-term yields on debt obligations fell increasingly below the long-term basic yields, whereas from 1900 to 1930 the former had, in all but two years, been either equal to or greater than the latter.⁴ This policy of making longer-term advances of credit intensified competitive conditions between banks and insurance companies and, through the device of private placement, affected relations with investment banking firms. Second, loans carrying somewhat higher risks and correspondingly higher rates of return were accepted, which meant, in almost all cases, a more extensive exploitation of the financing needs of small and medium-sized businesses. This development was possible only where appropriate safeguards could be established against borrower default, thus calling for the use of specialized lending techniques. In the institutional structure of the business credit market it brought about closer competitive relations mainly between banks and commercial finance companies.

Chart 30 — EARNINGS RATIOS OF MEMBER BANKS, 1919-40
(logarithmic vertical scale)



Associated with the sharp decline in member bank earnings was a growing discrepancy in the thirties between earnings on loans and earnings on investments.

⁴ David Durand, *Basic Yields of Corporate Bonds, 1900-1942* (National Bureau of Economic Research, Technical Paper 3, June 1942) Chart 3, p. 16.

