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*Part II*

**BUSINESS CREDIT MARKET CHANGES  
FROM 1900 TO 1940**



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### *Chapter 3*

## CHANGES IN COMMERCIAL BANK RELATIONS WITH BUSINESS: 1900-1940

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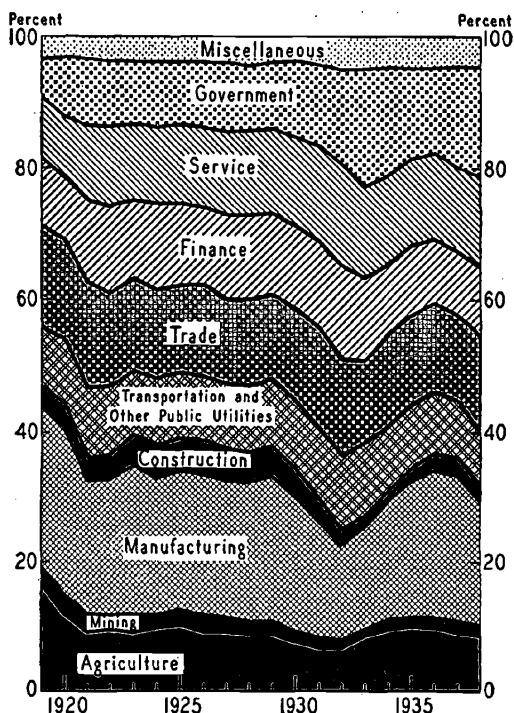
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CHANGES SINCE 1900 IN the relations between commercial banks and nonfinancial business enterprises have resulted from numerous economic tendencies. One of the most important is the shift in the structure or composition of the economy, reflecting the fact that all segments of the economy have not grown at the same rate. An increased relative importance of industries showing a less than average dependence on bank credit tends to weaken business demand for such credit while, conversely, the growth of industries with higher than average dependence on bank credit strengthens the demand. From the point of view of this study, the significant structural changes are those relating to the industrial and size composition of the business population; as indicated in Chapter 1, these changes directly affect the demand by business enterprises for credit.

### CHANGING RELATIVE IMPORTANCE OF INDUSTRIES AND BUSINESS CREDIT DEMANDS

Changes in the industrial composition of the American economy appear to have been such as to prevent bank credit to nonfinancial business from sharing fully in the growth of the whole economy. This is certainly true of developments after World War I. A breakdown of national income by major industrial divisions for the period 1919-38 reveals marked declines in the relative importance in the economy as a whole of agriculture and manufacturing as sources of income; somewhat less significant declines in mining and construction; and definite increases in the service industries and government (Chart 12). Data covering the distribution of gross national product by industrial origin also reveal that the relative importance of manufacturing and agriculture decreased after

Chart 12 — NATIONAL INCOME DERIVED FROM  
MAJOR INDUSTRIAL DIVISIONS, 1919-38



After 1919, agriculture, manufacturing, mining, and construction declined as contributors to national income; service industries and government grew in importance; other industries changed but little.

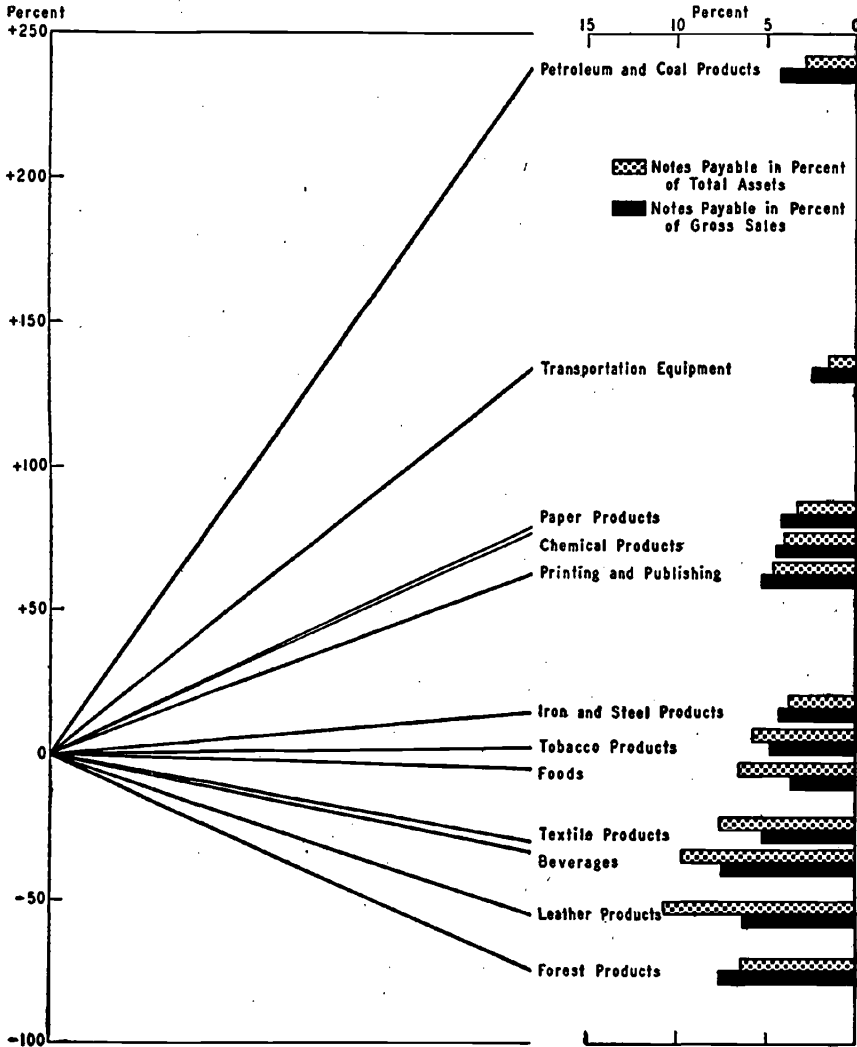
1919; lesser degrees of decline occurred in mining, construction, and trade; transportation and other public utilities shared a slight increase; and the service and government divisions rose very markedly in relative importance.

The significance of these broad tendencies to the over-all demand for business credit is clear. The sectors — manufacturing and agriculture — that suffered the greatest relative decline accounted for substantial parts of the total demand for credit; those that enjoyed the greatest relative increase were government, which does not produce any direct demand for business financing services of financial agencies, and the service trades,

which despite their growth are a minor element in the business credit market. Industrial divisions like transportation and other public utilities, which held their own over the period, were significant borrowers only in the open market and were interested primarily in long-term rather than short-term funds.

Since most of the data bearing on changes in industrial composition go back only to 1919, it is difficult to be certain whether the shifts were movements that set in after World War I or were con-

Chart 13 — CHANGES IN THE RELATIVE CONTRIBUTION OF SELECTED MANUFACTURING INDUSTRIES TO TOTAL MANUFACTURING OUTPUT, 1899-1937, COMPARED WITH DEPENDENCE ON BANK CREDIT, 1937



In general, the manufacturing industries that made the greatest strides between 1899 and 1937 in their relative contribution to total manufacturing output were those that in 1937 were the least dependent on bank credit for the financing of assets.

tinuations of changes that were operating before the war. There is some evidence, however, which leads to the following conclusions: first, that the shifts in the relative importance of agriculture, government and, in all probability, service industries began prior to World War I, and, second, that the declining importance of manufacturing was mainly a postwar phenomenon reflecting the readjustment of production from the high level of output elicited during the war by the needs of the military services. In any event, the fact that the changes cited occurred in the period after 1919 is sufficient for this study, since it was only after 1919 that the growth in direct bank loans to business was interrupted.

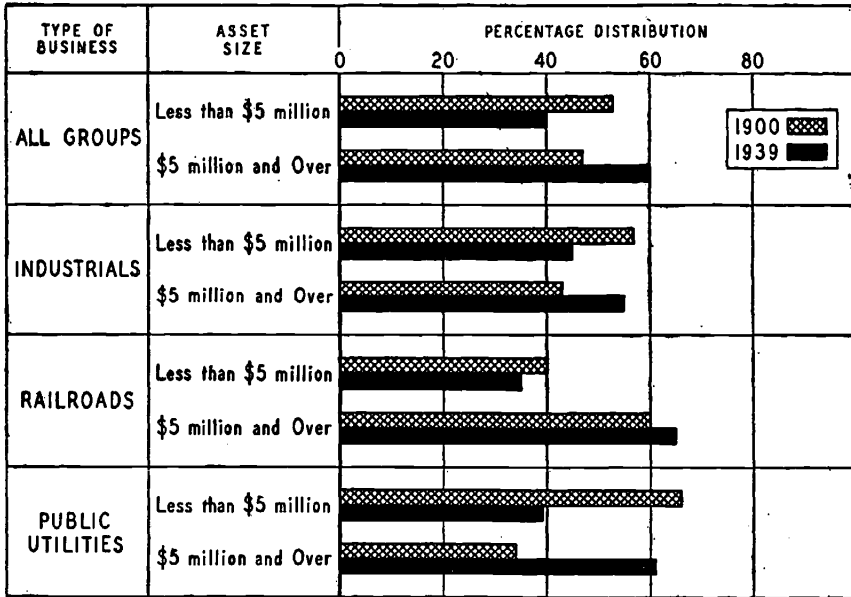
Paralleling changes in the relative importance of the main industrial divisions of the economy were changes in the relative contribution of selected manufacturing industries to total manufacturing output (Chart 13). The significant fact about these data is that, in general, the manufacturing subdivisions which showed the greatest percentage increase in output-contribution after 1899 were among those industries that relied least on notes payable for the financing of their assets. On the other hand, the manufacturing subdivisions that tended to depend most heavily on banks for their financing showed only a moderate rate of expansion, or even some decline.

#### EFFECTS OF CHANGING SIZE OF BUSINESS ON CREDIT DEMANDS

As pointed out in Chapter 1, the small and medium-sized concern provided the major market for bank loan credit around 1940. Doubtless the demand from this size group of enterprises was even greater in 1900, and, therefore, it is of interest to ask what happened to the average size of business concern between 1900 and 1940. Over these years a decreasing proportion of the number of business concerns was accounting for an increasing proportion of the total volume of production and trade. For part of this period, 1923-27, this is indicated by the fact that sales of a sample of large manufacturing and trade corporations increased 67 percent while the value of product of all business enterprises increased only 6 percent.<sup>1</sup>

<sup>1</sup> Albert R. Koch, *The Financing of Large Corporations, 1920-1939* (National Bureau of Economic Research, Financial Research Program, 1943) p. 15.

Chart 14 — PERCENTAGE DISTRIBUTION, BY TYPE OF BUSINESS AND ASSET SIZE, OF NUMBER OF NONFINANCIAL BUSINESSES HAVING CORPORATE BONDS OUTSTANDING, 1900 AND 1939



For each major type of business, corporations with assets of \$5 million and over comprised a larger percentage of all corporations with bonds outstanding in 1939 than they did in 1900.

Other evidence regarding changes in the size composition of business during this period is more indirect. Of the relevant and available information, the most comprehensive and useful is that relating to the sizes of concerns having corporate bonds outstanding in 1900 and 1939. These data reveal a shift toward larger average size in each of the major industrial divisions (Chart 14). The real changes that occurred may have been greater than indicated, however, since the data are probably more representative of the small and medium-sized concern in 1940 than in 1900.

A shift toward larger size in business enterprises is indicated also by data based on a sample of business listings drawn from the



*Reference Book of Dun & Bradstreet, Inc.*, for 1900, 1920, and 1940, showing what percentage of the total number of concerns had net worth in excess of \$200,000, and by data prepared for the Temporary National Economic Committee, giving percentage distributions of establishments in 1914 and 1937 according to the number of wage earners employed. The Dun & Bradstreet data (Table 10) reveal a shift toward larger average size between 1900 and 1940 in every industrial division except wholesale trade, with the shift particularly marked for manufacturing and mining concerns, two categories which are of major importance in the total demand by business for credit. The tendency for the average size of wholesaling concerns to decline is especially important, since this is the one type of concern for which dependence on bank credit increases in relative importance as asset size increases.

The TNEC data reveal that establishments employing fewer than twenty-one employees constituted 73.6 percent of all establishments in 1914 and 69.2 percent in 1937. In the field of retail trade notable changes were brought about by the growth of mail-order, chain, and department stores. These types of merchandising were of negligible importance at the turn of the century; by 1935, however, chain stores, for example, were making nearly one-fourth of all retail sales, selling over a third of the groceries, half of the shoes, and over nine-tenths of the variety goods.

*Table 10*—PERCENTAGE OF NUMBER OF CONCERNS WITH NET WORTH IN EXCESS OF \$200,000, BY MAJOR INDUSTRIAL DIVISIONS, 1900, 1920, AND 1940<sup>a</sup>

<i>Industrial Division</i>	1900	1920	1940
Manufacturing	4.0%	7.6%	9.3%
Wholesale <sup>b</sup>	11.3	15.9	9.7
Retail	.2	.3	.3
Service	.3	.6	.8
Construction	.3	.4	.8
Mining	1.6	4.6	13.4
Miscellaneous	1.0	1.5	1.1
TOTAL SAMPLE	1.1%	1.7%	1.8%

<sup>a</sup> Estimates of the National Bureau of Economic Research, Financial Research Program, based on a sample drawn from *Reference Book of Dun & Bradstreet, Inc.*, 1900, 1920, and 1940.

<sup>b</sup> Includes concerns dealing in both wholesale and retail trade.

From this scattered evidence, and from the relationships observed in Chapter 1 — namely, that larger concerns are in general less dependent on banks for credit than are smaller concerns — it may be concluded that business demand for credit in general, and for bank credit in particular, was weakened in the period 1900–1940 by shifts in the distribution of nonfinancial businesses by asset size classes.

### CHANGES IN BUSINESS ASSETS AND THEIR EFFECTS ON THE CREDIT MARKET

Changes after 1900 in the asset structure of nonfinancial business are of significance, since (as pointed out in Chapter 1) the types of assets held by a business enterprise strongly influence the amount and kind of funds which the management uses for financing. Unfortunately, data on assets for business as a whole do not exist back to 1900, but several samples of corporation financial statements have been assembled extending back to 1900, 1914, or 1916. These samples cover (1) large manufacturing and large trade enterprises, (2) small and medium-sized manufacturing and trade concerns, and (3) a combination of large manufacturing and trade concerns termed an “industrial” group;<sup>2</sup> other tabulations are for public utilities and railroads. Findings based on a study of these samples will be stated here in a general manner, indicating the broad character of the changes that occurred in assets and the relation of these changes to credit demand.

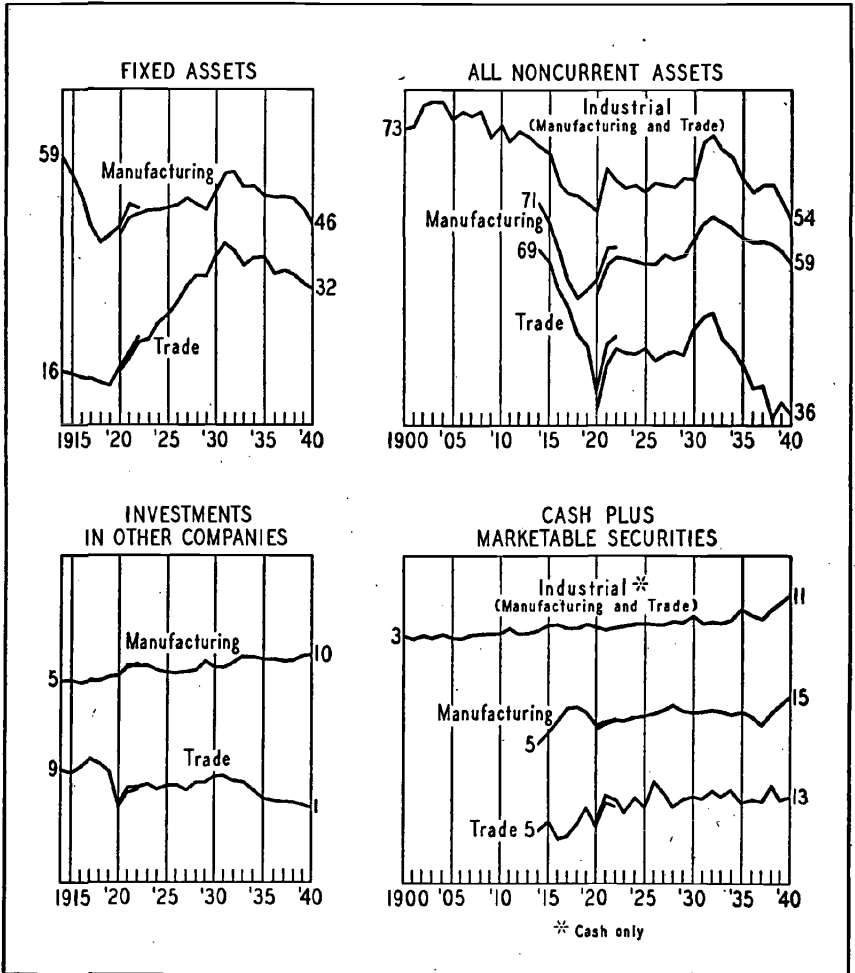
#### *Fixed Assets*<sup>3</sup>

In general, a tendency for fixed assets to grow in relation to total assets would be expected to produce a shift in favor of long-term

<sup>2</sup> The sample data for large manufacturing and trade corporations are described in Albert R. Koch, *op. cit.*, pp. 10–15, and Charles H. Schmidt and Ralph A. Young, *The Effect of War on Business Financing: Manufacturing and Trade, World War I* (National Bureau of Economic Research, Financial Research Program, Our Economy in War, Occasional Paper 10, November 1943) Appendix A. For information covering the large “industrial” group and small and medium-sized concerns, see footnotes 5 and 6, below.

<sup>3</sup> There is, of course, no escape from the fact that on the asset side of the balance sheet the valuation of fixed assets may reflect more closely accounting conventions than financial conditions; nor equally the fact that the element of arbitrariness which this involves is reflected among business liabilities in the net worth item. While it surely is wise to view data on fixed assets and net worth with reserve, it is nonetheless possible to utilize these data to increase our understanding of the financial process and particularly of the changing role in business financing of funds acquired on a debt basis.

Chart 15 — RATIOS OF SELECTED ASSET ITEMS TO TOTAL ASSETS FOR SAMPLES OF LARGE MANUFACTURING AND TRADE CORPORATIONS, 1900-1940



For large corporations, the marked rise in noncurrent assets, consisting primarily of fixed assets and investments in other companies, from World War I to the thirties served to place increasing emphasis on long-term financing. The greater liquidity of corporations as measured by the proportion of assets held in the form of cash and marketable securities also affected the demand for funds.

as against short-term financing. What is the evidence with respect to this matter?

Fixed assets of both large manufacturing and large trade concerns during the twenties showed a marked tendency to grow in relation to total assets, and subsequently declined from the level then attained (Chart 15). An analysis of large manufacturing concerns by industrial groups reveals that in most cases the trend was much like that for all groups combined; only in a few industries — particularly food manufacturing — did fixed assets tend to become less important during the twenties. It is especially notable that the petroleum industry, which was one of the most rapidly growing segments of the manufacturing economy, showed marked increases in its proportion of fixed to total assets.

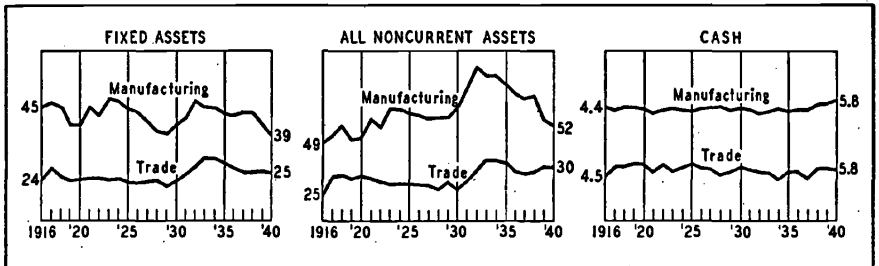
At least during the years from the end of World War I to the early thirties, the effect of an increase of considerable magnitude in the relative importance of fixed assets was probably to shift the focus of interest from short-term to long-term financing.<sup>4</sup> However, there is no basis for concluding that it also strengthened the demand for long-term debt relative to the demand for equity funds.

As for small and medium-sized corporations, the ratios of fixed to total assets for the samples available fluctuated within a narrow range during the entire period studied (Chart 16).<sup>5</sup>

<sup>4</sup> See Arthur Stone Dewing, *The Financial Policy of Corporations* (New York, Third Revised Edition, 1934) pp. 471-76. Dewing summarizes a 1929 study showing that the demand for short-term bank credit was reduced by a rising ratio of fixed capital to current capital for a group of 169 manufacturing and trade corporations: 2.05 in 1919, 4.35 in 1931.

<sup>5</sup> Samples of Wisconsin manufacturing and trade concerns with total assets of \$5 million and less, a sample of medium-sized Massachusetts corporations going back to 1903, and samples of corporations in five small manufacturing industries covering the period 1926-36 yield evidences of increase and decrease in the fixed capital component of total assets for certain years and for certain industrial groups, but in general the data indicate stability in this ratio. For descriptions of the samples see Charles L. Merwin, *Financing Small Corporations in Five Manufacturing Industries, 1926-36* (National Bureau of Economic Research, Financial Research Program, 1942) Chapter 2, and Sidney S. Alexander, *Changes in the Financial Structure of American Business Enterprise, 1900-1940* (National Bureau of Economic Research, Financial Research Program, ms. 1943) Appendix A. A comparison of the Wisconsin sample ratios with ratios computed from *Statistics of Income* data for all corporations in the \$50,000 to \$250,000 and \$250,000 to \$5,000,000 size groups shows that the direction of movement of the Wisconsin sample ratios is generally consistent with the behavior of ratios for all small and medium-sized concerns but that the level is sometimes different. This difference in level is not important in the present study, however, since the analysis depends primarily on the direction of change in asset structure.

Chart 16 — RATIOS OF SELECTED ASSET ITEMS TO TOTAL ASSETS FOR SAMPLES OF SMALL AND MEDIUM-SIZED MANUFACTURING AND TRADE CORPORATIONS, 1916-40



Greater bank indebtedness of small and medium-sized corporations, compared with large corporations, after World War I may be explained in part by the marked differences between the two groups in changes in asset structure.

The fixed asset component of public utilities showed virtually no change over the period, and that of railroads increased only moderately. In view of these facts it is likely that the changes in the demand for credit by public utilities and railroads, compared with demands from other businesses, were due primarily to the relative growth of public utilities and railroads within the economy as a whole. An implication of this relative growth is that the average ratio of fixed assets to total assets for the whole economy was raised, thus tending to promote a shift toward the use of long-term funds.

#### *Investments in Other Companies*

Investments in other companies (as distinct from marketable securities) are asset items that a company would be expected to finance with long-term funds. It is significant, therefore, that among large manufacturing corporations investments in other concerns grew rather steadily throughout the entire period studied, increasing from around 5 percent of total assets in 1914 to about 10 percent in 1940 (Chart 15). This is also true of various manufacturing subgroups, and, from 1920 to 1930, of large trade companies. For a sample of small and medium-sized Wisconsin manu-

facturing concerns, investments (which in this case include marketable securities) rose fairly steadily in relative importance from 1916 to 1935, but those for the small and medium-sized trade concerns remained about constant. Thus the tendency for business concerns to hold investments in other companies, reflecting the growth of the business concern as a financing agency as well as the consolidation movement of the period, increased after 1914, and was especially marked during the twenties. As in the case of fixed assets, this tendency served to place increasing emphasis on long-term financing.

### *Total Noncurrent Assets*

In order to obtain a measure of what may be termed total "non-current" assets, fixed assets may be combined with investments in other companies and with the relatively small item "other noncurrent assets." Ratios of noncurrent to total assets for samples of large manufacturing and trade concerns are available for the period from 1914 to 1940, and for a sample of large industrial corporations beginning in 1900.<sup>6</sup> These data suggest an important conclusion, namely, that for most of the period from 1900 to 1932 total bank loans to business moved inversely with the ratios of noncurrent to total assets; during the twenties both bank loans to business and the ratios of noncurrent to total assets were nearly constant. This relationship between the asset structure of business and outstanding bank loans to business reflects the broad causal connection between the character of business assets and the types of funds which have been used in their financing.

### *Cash and Marketable Securities*

Since the demand for financing facilities is affected by the holding of cash and its equivalent (i.e., marketable securities), considerable significance attaches to the changes between 1900 and 1940 in this measure of business liquidity. The analysis is complex, however, and can best be presented as changes that took place in three aspects

<sup>6</sup> The sample for large industrial corporations is a changing sample based on large manufacturing and a few large trade corporations taken from Moody's *Manuals*. Because of the changing composition of the sample, the median of individual company ratios is used for the analysis of the sample of large industrial concerns, rather than a ratio of aggregated balance sheet items which is used in the analysis of other samples of large manufacturing and trade corporations.

of the cash position of corporations: the ratio of cash to total assets; the relation between cash holdings and the volume of transactions calling for the use of cash (which determines whether a business has "free" cash); and the role of the cash account in supplying and absorbing funds for corporate enterprises during periods of expansion and contraction.

Over the period 1900 to 1940 the ratio of cash to total assets for the sample of large industrial corporations tended generally upward, with the rise particularly marked after 1937 (Chart 15). For samples of industrial subgroups of large manufacturing concerns, which extend from 1914 to 1940, it is found that in certain cases — e.g., tobacco, textiles, and meat packing — the ratios of cash and its equivalent changed very little; in other cases — e.g., automobiles, chemicals, food, and machinery — the ratios rose fairly steadily. Among large trade corporations the trend was generally upward after 1916. On the other hand, small and medium-sized Wisconsin manufacturing and trade concerns showed no strong tendency to hold an increasing proportion of their assets in the form of cash (Chart 16).

A tendency for concerns to hold "excess" amounts of cash, if it did prevail, clearly would suggest a weakening demand for external funds. Examination of the relation between cash holdings of corporations and the volume of transactions calling for the use of cash reveals that "(1) in the twenties transaction needs appear to have determined the level of cash balances of large manufacturing corporations, if year-to-year fluctuations are neglected . . . (2) in the thirties a large part of the cash balances of large manufacturing corporations was 'free' cash — an increasing part in recession and a decreasing part in expansion, (3) for medium-sized and small manufacturing corporations, 'free' cash increased after 1929, but in relation to transaction cash it was not so great as in the case of large manufacturing corporations."

Finally, it is found that the process of accumulation and depletion of cash by business concerns is significantly related to their use of outside funds. The data indicate that during periods of business contraction in the thirties, when ratios of short-term debt to total

<sup>7</sup> Friedrich A. Lutz, *Corporate Cash Balances, 1914-43: Manufacturing and Trade* (National Bureau of Economic Research, Financial Research Program, 1945) p. 50. For description of method of estimating "free" cash, see Lutz, pp. 40-41.

assets were low, large companies could hardly avoid accumulating large cash balances, since even a modest rise of the cash ratio was sufficient to provide the means for extinguishing debt. For these companies the only alternatives to cash accumulation during periods of contraction were retirement of long-term debt and the disbursement of unearned dividends.

As a result of cash accumulation, a subsequent increase of sales could be handled by a transformation of cash into inventory and other assets. Only when activity had risen to a level at which an expansion of assets was required, and even then only when asset expansion was prolonged and at a high rate, was substantial recourse to outside sources of funds essential. Thus, if the depression were severe and the contraction of operating assets led to very large accumulations of cash, the effect on the demand for short-term credit would be prolonged as well as immediate. In some such fashion the depression of the early thirties served not only to reduce the demand for bank credit during the contraction years but limited the demand for credit during the subsequent expansion below what it would otherwise have been.

The cash holdings policy of small and medium-sized concerns, at least as illustrated by the sample based upon Wisconsin corporations, was quite different. Since corporations of this size group had ratios of notes payable to total assets that were higher than those of large concerns, a greater transformation of noncash into cash assets was required before any ultimate increase in the ratio of cash to total assets could take place. As cash was released from operating assets during a period of business contraction it was used to retire debt and, therefore, the concerns were more needful of outside financing facilities when an expansion of assets was called for. The general result was that small concerns were, relatively speaking, both more heavily and more persistently indebted to banks than were the large concerns.

Trade credit used by manufacturing and trade enterprises was far less affected by varying cash conditions than was bank credit. The use of trade credit seems to have been determined almost automatically by purchases. This relative immunity to cash conditions partly accounted for the fact that trade credit was a more persistent element than bank credit in the short-term debt structure of manufacturing and trade companies.



### *Receivables*

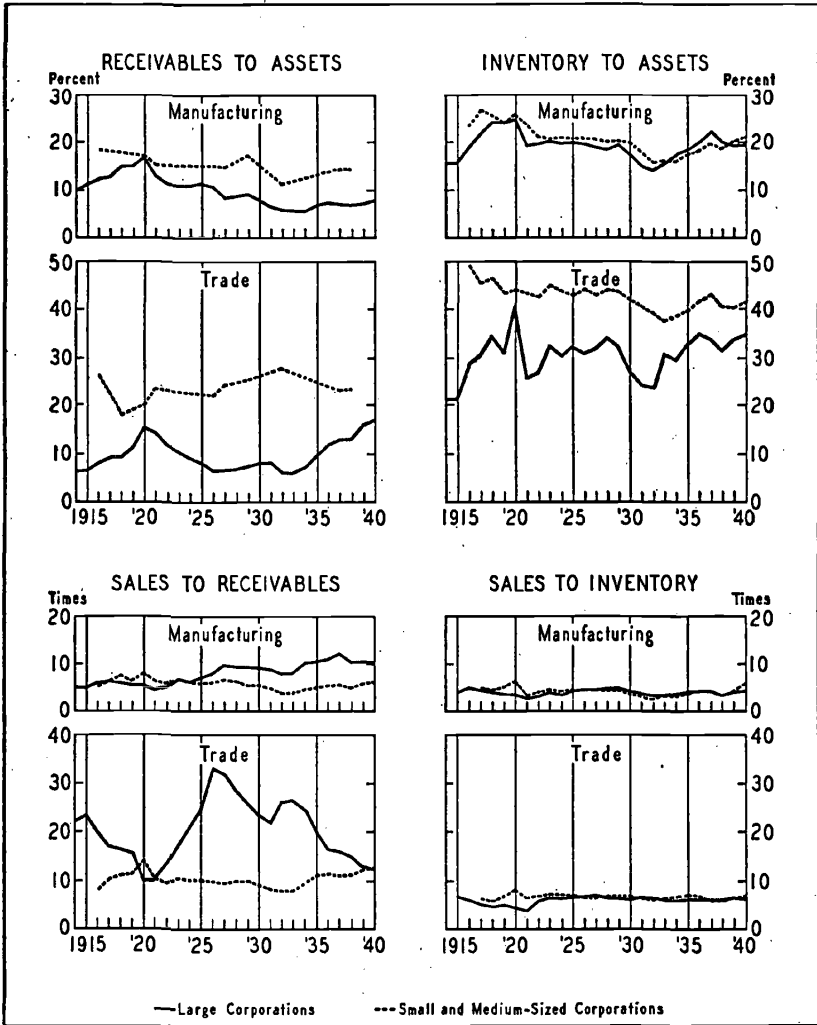
On the whole between 1914 and 1940, the structural and procedural changes in American business affecting receivables were such as to weaken the demand for short-term bank credit to business. From 1914 to 1920 an expanding volume of business and sharply rising prices caused receivables of large corporations to increase relative to total assets, and encouraged the greater short-term bank financing which marked this period. The deflation of the receivables item in 1921-22 coincided with declining business borrowings from the banks. And, finally, the failure of receivables to grow commensurately with other business assets during the twenties was doubtless a significant factor in preventing bank loans to business from rising appreciably during that period of general economic and financial growth. As indicated in Chart 17, the only receivables to total assets ratio showing a tendency to advance during the twenties is that for small and medium-sized trade concerns. A further point of interest is that throughout the entire period studied the relative importance of receivables among assets was greater for small and medium-sized concerns than for large companies.

The ratio of sales to receivables reflects the same general structural change in business assets as does the ratio of receivables to total assets; the sales ratio, however, has the advantage of being a direct measure of the increasing tendency for sales to be made on a cash basis. For large manufacturing concerns the period 1920-37 was one during which cash selling (or sales on increasingly shorter credit terms) became more extensive, especially in the early part of the period when readjustments were being made following World War I. For large trade companies the ratio rose sharply during the early and middle twenties and then declined between 1927 and 1940, reflecting greater extensions of consumer credit. Furthermore, within this size group those industries whose financial growth was most marked either evidenced an especially strong tendency toward a higher ratio of sales to receivables or held persistently to a ratio considerably higher than that characteristic of industries growing less rapidly.

### *Inventory*

The credit market in the first three or four decades of the century was also influenced by changes in the inventory-holding policies of

Chart 17 — SELECTED ASSET AND SALES RATIOS FOR SAMPLES OF MANUFACTURING AND TRADE CORPORATIONS, 1914-40



For large manufacturing corporations especially, receivables tended to become less important relative to total assets during the twenties, and sales volume tended to generate fewer receivables. Inventory as a proportion of total assets for this group showed little over-all change, while for trade corporations the relative importance of inventory increased somewhat. For the period as a whole no change in the turnover of inventory is apparent, but during the twenties inventory was used with increasing efficiency by both groups.

nonfinancial business. For large manufacturing corporations, inventory as a proportion of total assets showed little over-all change between 1914 and 1940, although some decline did occur in the twenties and early thirties (Chart 17). The situation was different, however, for large trade concerns; in this case the relative importance of inventory grew somewhat during the whole period, and markedly in the twenties and again in the middle thirties. As for small and medium-sized concerns in both manufacturing and trade, the ratios were distinctly lower at the end of the period than at the beginning.

The quantitative degree to which this structural change in assets influenced the business credit market cannot, of course, be assessed definitely. But it is clear that a reduction in the relative importance of the current asset most closely linked to the use of short-term credit would tend to produce a decline in the requirements for short-term financing. Stated differently, the decrease in the relative importance of inventory, together with changes in other asset items, doubtless prevented short-term bank credit from sharing fully in the business expansion of the twenties.

Confirming these findings are ratios of sales to inventory, which reflect the efficiency of inventory use (Chart 17). In nearly all branches of manufacturing the efficiency with which inventory was used increased somewhat during the twenties, but when ratios for the beginning and the end of the period 1915-40 are compared there is no indication of long-term improvement. Among large integrated trade concerns there was no tendency toward increased efficiency in the use of inventory during the twenties, with the exception of large department stores.

### *Summary*

During both World War I and the period of continued price increase ending in 1920, changes in the asset structure of business — such as a declining proportion of fixed to total assets and increasing ratios of receivables and inventory to total assets and to sales — clearly strengthened the demand for short-term credit which occurred at that time. Asset changes from 1920 to 1922, also responsive to reductions in the price level, contributed to the short-term debt liquidation of those years.

The fact that bank loans to business did not increase in the expansionary period following the price decline after World War I may also be explained in part by certain structural changes in business assets. Fixed assets grew in relative importance, while the assets normally associated with the use of short-term funds, namely, inventory and receivables, became relatively less important elements in the business asset structure. That these changes were especially marked in the industries which were growing most rapidly, thus affecting the average asset structure of the economy as a whole, further enhanced their effect on the demand for short-term financing.

Finally, while the decline in short-term credit which began in 1929, and the increase that followed during the recovery of the middle thirties, were dominated by cyclical changes in economic activity, changes in asset structure also contributed to changes in the demand for credit by business during those years. This fact is indicated by the increase during the early thirties in the amount of "free" cash holdings, and by the continued decline in the ratio of inventory and of receivables to total assets. Likewise the recovery of bank loans to business after 1935 seems to have been affected by asset-structure changes calculated to promote the increased use of short-term funds.

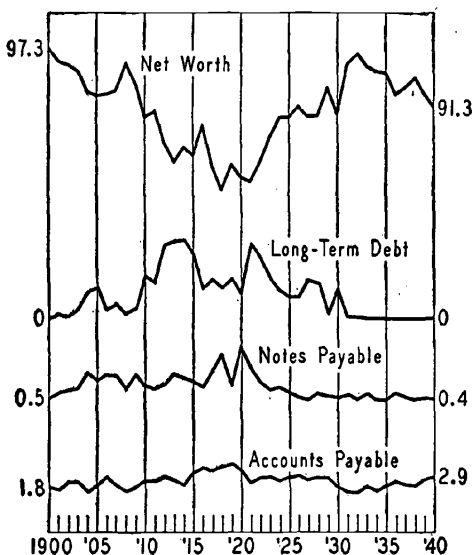
#### CHANGES IN BUSINESS LIABILITIES AND THEIR EFFECTS ON THE CREDIT MARKET

The liability structure of nonfinancial business — that is, the division of business liabilities into net worth and debt, and of the latter into various classes of debt — reflects all forces influencing the financing policies of business. Among these forces are changes in asset structure, discussed above, and also changing preferences on the part of business management as to financing methods, which may be quite independent of changes in the character of the assets to be financed.

##### *Net Worth*

The outstanding feature of corporate financial structure in the entire period 1900 to 1940 is the preponderance of ownership funds

Chart 18 — SELECTED LIABILITY ITEMS IN PERCENT OF TOTAL LIABILITIES FOR A COMBINED SAMPLE OF LARGE MANUFACTURING AND TRADE CORPORATIONS, 1900-1940



From 1900 to 1920, debt items grew as net worth fell; until 1932 the opposite was true. After 1932 debt items either stabilized or began to rise, while net worth declined.

Certain significant changes in the relative importance of equity funds during the period 1900-1940 are revealed by data covering a sample of large manufacturing and trade corporations, combined (Chart 18). These data show that the ratio of net worth to total liabilities declined between 1900 and 1921 — especially after 1914 as debt financing was utilized for war production and postwar inventory expansion; that from 1922 until 1932 the relative importance of ownership funds increased fairly steadily; and that this

as a means of financing business.<sup>8</sup> This has to be borne in mind in the following discussion of changes in liability structure. It means that other types of funds represent very small percentages of the total funds in use; as a result, changes in the relative position of any of these other items (notes payable, for example, which is generally small in terms of total assets) are highly significant in terms of total demand for the type of funds in question. Thus, if total assets remain the same, a rise from 2 to 4 percent in the ratio of notes payable to total assets, while of negligible effect on the ratio of equity to total funds, means a doubling of the absolute amount of the short-term funds borrowed.

<sup>8</sup> See footnote 3, above.

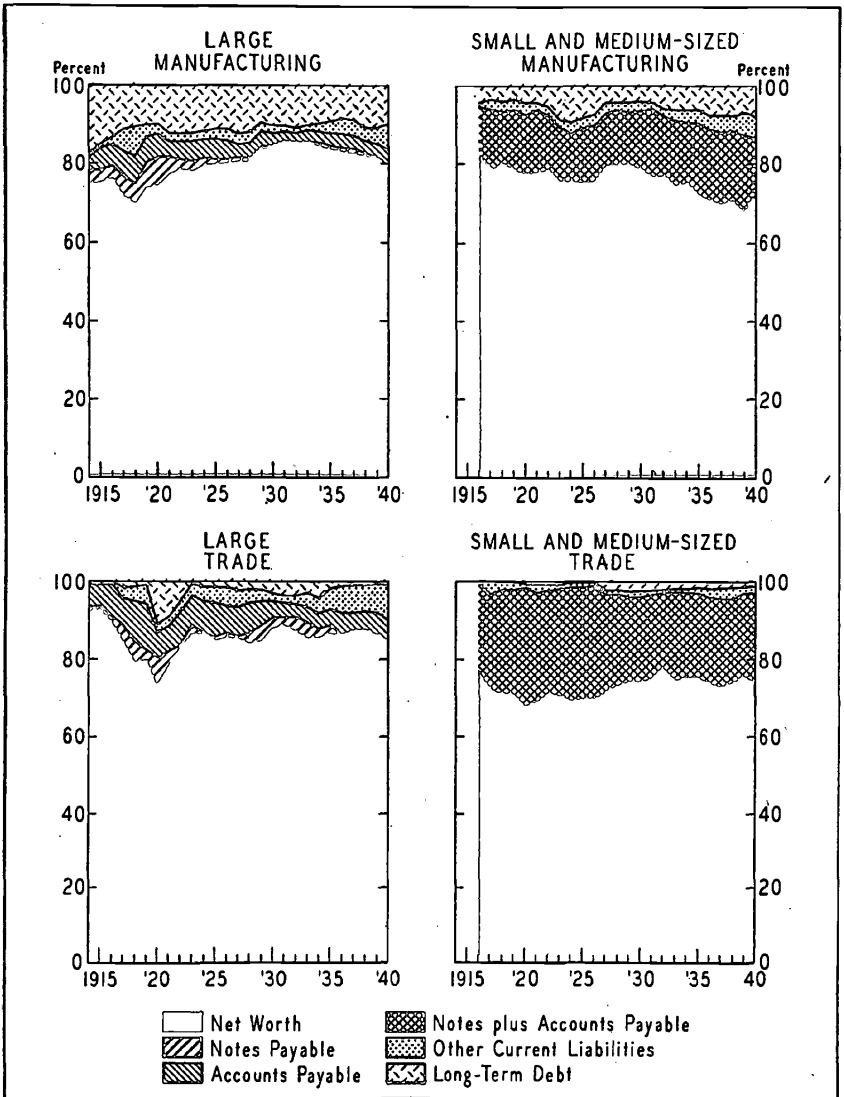
increase was followed by a decline through 1940. These findings, in general, are confirmed by other samples of financial statements (Chart 19),<sup>9</sup> and by the industrial subdivisions of these samples. To be sure, the tendency for equity funds to increase in relative importance during the twenties was sharper in some industries than in others. The rise was especially evident for concerns in meat packing and tobacco and to a mild extent for machinery manufacturers, but an increase did not occur among companies in the building materials, rubber, and petroleum industries. For these industries the failure of equity to show any noticeable growth in importance may be attributed, to a great extent, to the fact that it had already reached a higher than average level. For large trade companies the decline during World War I was much more marked than for large manufacturing companies and it continued until 1920; but after the sharp deflation of current liabilities in 1921-22 there was a growth in the importance of equity funds, although it was somewhat less for large trade than for large manufacturing concerns.

Data on the liability structure of small and medium-sized Wisconsin concerns, taken as a whole, indicate an upward drift in the percentage of equity funds to total assets among trade concerns and a downward drift among manufacturing companies. This attrition of net worth shown by manufacturing concerns is confirmed by data for a sample of Massachusetts corporations of small and medium size and by TNEC data for small and medium-sized concerns in five manufacturing industries over the years 1926-36. The importance of this development to credit extending institutions is heightened by the fact that the level of the ratio of net worth to total liabilities for small and medium-sized concerns is persistently below the level characteristic of large concerns.

Among railroad and public utility companies, where equity funds have traditionally been less important than long-term debt funds in comparison with other industrial groups, the role of equity funds increased after the end of World War I. The change was not marked, however.

<sup>9</sup> The differences observable can be attributed in part to the fact that the data in Chart 19 are ratios of aggregated balance sheet items for manufacturing and trade concerns examined separately, while the data in Chart 18 are medians of individual ratios for a combination of large manufacturing and trade concerns.

Chart 19 — LIABILITY STRUCTURE OF SAMPLES OF MANUFACTURING AND TRADE CORPORATIONS, 1914-40



In all groups of concerns, equity funds exceeded all other types. World War I was a period of relatively increasing debt, especially the short-term type. During the twenties, debt fell relative to equity except for small and medium-sized concerns.

*Debt*

At least for large industrial corporations, the corporate financial history of the first half of the forty-year period under review was significantly different from that of the second half. In the first twenty years, broadly speaking, large manufacturing and trade concerns financed an increasing, though always modest, proportion of their total assets with borrowed funds (Chart 18). While this increase in debt was not continuous and was confined within relatively small limits, the direction is nonetheless clear. From 1920 until the early thirties the general drift of the ratio of debt to total liabilities was downward, reflecting the increase in the relative importance of equity funds commented on above. After 1932 the tendency for debt to increase was most noticeable for accounts payable and "other" current liabilities.

Among small and medium-sized trade concerns there was also a general tendency for the relative importance of debt to contract after 1920; but for small and medium-sized manufacturing corporations the importance of debt relative to equity showed a fairly persistent rise from 1916 to 1940, a fact which is in sharp contrast to the results for other sectors of the business economy.

The implications of these facts for the business credit market are clear. In the first twenty years of the century the demand for debt funds was promoted by two expansionary forces: first, the growth of the economic system as a whole, and second, the tendency for business management to rely increasingly on debt funds in financing assets. From 1920 to the early thirties, on the other hand, the opposite was true: not only did the rate of growth of the economic system moderate considerably, but debt became a less important element in corporate financing.

Within the general category of debt, what changes occurred in the relative importance of short-term and long-term debt and, within the limited category of short-term debt, between notes and accounts payable? For the sample of large industrial companies, which is heavily weighted by manufacturing concerns, the ratios of both long-term and short-term debt to total assets increased from 1900 to 1914, although the course of the former was the more erratic. During World War I the short-term debt element gained considerably while long-term debt was reduced, a development



that would be expected in view of the financial problems of war production; while in the twenties and early thirties the ratios of both elements to total assets declined.<sup>10</sup>

The ratios for the two categories of short-term debt — i.e., notes and accounts payable which may be taken to be broadly representative of bank credit and trade credit, respectively — increased between 1900 and 1920, with that for notes payable rising the more sharply, to a level above accounts payable. In the declines that occurred during the debt deflation of the second twenty years of the century, notes payable fell to, and remained at, a lower level than accounts payable.

At several points in the analysis of the 1940 business credit market, in Chapters 1 and 2, it was remarked that accounts payable represented a far more frequent and quantitatively important form of business financing than did notes payable. The data in the present chapter reveal that this has always been a feature of large manufacturing and trade corporations and probably also of small and medium-sized concerns. Our materials at present are so limited, however, that it is impossible to say what proportion of trade credit is substitutive for some other form of financing, and what part merely reflects the fact that it is convenient and conventional for business concerns to buy merchandise on open account, with the result that even though concerns take up these accounts promptly there is always a substantial "float" of trade debt in the business system. For a thorough understanding of the business credit market, more detailed data are essential on trade credit, and on its relation to other forms of asset financing at different times and for different types of concerns.

### *Self-Financing by Business*

Since the business credit market would be adversely affected by a tendency toward financial self-sufficiency among business concerns, any long-run changes that may have occurred in the comparative importance of what may be called "external" and "internal" funds are significant. The term "external" funds means those acquired

<sup>10</sup> Among large trade concerns long-term debt practically disappeared, which accounts in part for the difference between the sample of large industrial corporations (including several large trade concerns) in Chart 18 and the sample for large manufacturing companies shown in Chart 19.

from sources outside the business, and "internal" funds, those acquired through the retention of corporate earnings.<sup>11</sup>

The first observation suggested by the data in Chart 20 is that the tendency or "propensity" of corporations to retain earnings — which may be termed the rate of earnings retention — changed very little, when measured by the ratio of earnings retained over a given year to total assets at the beginning of the year;<sup>12</sup> in fact it might be described as showing a slight downward drift. Second, the rate of total asset expansion, measured by the ratio of asset expansion over a given year to total assets at the beginning of the year, was a more variable element in corporate finance than was the rate of earnings retention. Third, since the use of funds acquired externally is measured by the difference between these two rates, it follows that changes in the degree of dependence on external funds was more nearly determined by changes in the rate of total asset expansion than by changes in the propensity of business to retain earnings.

Manufacturing and trade concerns apparently did not become more independent of outside financing to meet their needs for asset expansion. On the contrary, it appears that whenever asset expansion proceeded at a rapid, and particularly at an accelerating, rate, a vigorous demand for external funds was generated; but this demand was not sustained by the mere maintenance of a given rate of expansion, even at a relatively high level. In the early stages of expansion business concerns may overestimate their needs for external financing; furthermore, in such a period it is almost certain that profits will be high and that retained earnings will increase more rapidly than dividend disbursements.

These generalizations regarding the relation between retained earnings and the need for external funds are broadly confirmed by the record from 1915 to 1940. Among large manufacturing corporations, retained earnings as a source of funds for business expan-

<sup>11</sup> Granted that in certain instances a concern may achieve a higher degree of productivity through the investment of depreciation accruals, no expansion of assets results. Since the present study is concerned with the financing of asset expansion, depreciation accruals are not viewed as a means of self-financing. It may be noted, however, that gross property expenditure, inclusive of depreciation outlays (replacements), shows a remarkably constant relationship to sales from 1924 to 1942 for our sample of large manufacturing concerns.

<sup>12</sup> This is the most significant measure for the present study because it relates retained earnings directly to business assets, which comprise the quantity to be financed.

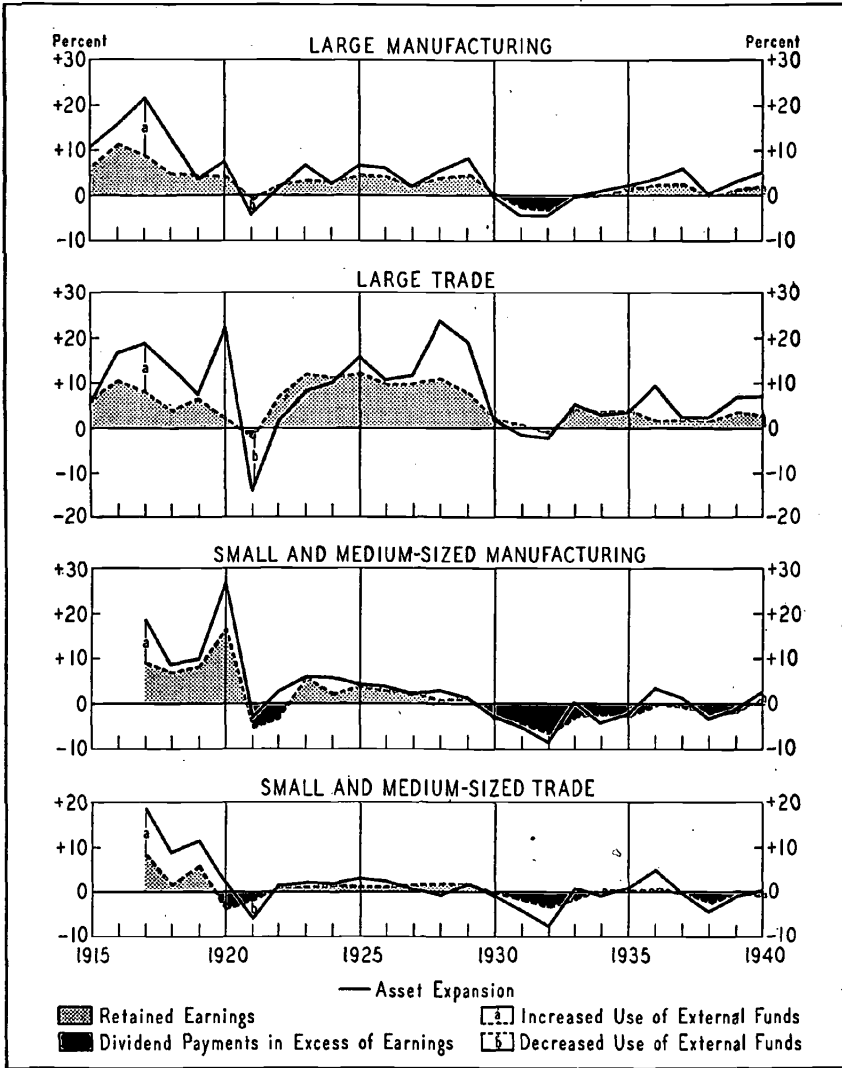
sion were most important in the twenties, since the financial problem for these concerns, as measured by total asset expansion, was far less in the twenties than in the war years. For large trade enterprises, the rate of asset expansion in the late twenties was as high as in 1915-20; consequently, in both periods these concerns showed about the same degree of dependence on outside funds. In the thirties, however, both asset expansion and earnings retention were at low levels, and except in 1936, 1939, and 1940 large trade corporations made virtually no use of funds other than those accumulated through earnings retention.

The retention of earnings ceased to be an important source of funds for small and medium-sized companies at the outset of the depression in 1930. During earlier years internal funds had persistently supplied the major part of the funds needed for asset expansion. In the thirties, however, these smaller companies were using up rather than accumulating funds; outside funds acquired were largely in the form of short-term bank borrowings.

All types of external funds shared the broad demand created by the high rate of asset expansion during World War I. This fact is reflected especially in the rising importance of notes payable among the liabilities of large corporations. During the twenties and early thirties, when the balance shifted definitely toward equity financing, the debt funds acquired were increasingly of the long-term variety. The experience of large and small concerns differed somewhat. Over the whole period, 1916-40, short-term external funds, as a means of financing asset expansion, were more important for small and medium-sized trade concerns than they were for large corporations. This was also true for small and medium-sized manufacturing corporations, although for this group long-term funds showed a tendency to increase in importance during the twenties.

Summarizing, the business credit market during the twenties was affected by two principal developments: first, business assets expanded at a slower rate from 1923 to 1928 than during the preceding war period, which meant that there was less scope for external financing; and, second, a shift toward equity financing occurred, especially among large concerns, which was an important reason for the failure of bank loans to business to increase. In the years 1929 to 1935 the dominant forces affecting the business credit

Chart 20 — ASSET EXPANSION, RETAINED EARNINGS, AND EXTERNAL FUNDS ACQUIRED, IN PERCENT OF BEGINNING-OF-YEAR TOTAL ASSETS, FOR SAMPLES OF MANUFACTURING AND TRADE CORPORATIONS, 1915-40



Asset expansion varied considerably more than retained earnings. As a result, access to external funds was needed mainly in years in which asset expansion was high.

market were the contraction of total business assets and the tendency for contractive forces to have a greater effect on notes payable than on other business liabilities. Following 1935 there was a reversal of this situation; and it is interesting to note that large manufacturing corporations in 1937, when the rate of total asset expansion was nearly as high as in 1929, depended as much on external sources of funds as during any year of the twenties.

## CHANGING CHARACTER OF THE SHORT-TERM CREDIT MARKET

### *Relation of Bank Credit to Trade Credit*

After the early twenties total short-term credit to business came to consist increasingly of trade credit and decreasingly of credit extended directly by banks. Among large manufacturing companies in the twenties accounts payable, which may be taken as a measure of trade credit, fell less in proportion to total assets than did notes payable. This tendency for trade credit to grow relative to bank credit continued during the recovery years of the thirties when, as would be expected, indebtedness on accounts payable rose more promptly and more substantially than did the notes payable of manufacturing concerns. The same general experience seems to have been shared by large trade concerns, including department stores, but not so markedly as among large manufacturing companies.

The small and medium-sized manufacturing corporations followed fairly well the same pattern as the large manufacturing concerns; that is, trade credit grew relative to bank credit. But for small and medium-sized trade concerns the ratio of accounts to notes payable fell during the twenties, indicating an increasing relative dependence on bank credit as contrasted with trade supplier credit.

As pointed out above, the importance of trade credit as an element in corporate financial structure and the fact that it exceeds bank credit in magnitude make it particularly unfortunate that so little is known about its character and composition. Because of this gap in our knowledge the remainder of this discussion must be limited to changes in that section of the short-term credit market represented by notes payable.

*Industry of Borrower*

The earliest date for which information is available on the industrial characteristics of commercial bank borrowers is 1920. In that year the Comptroller of the Currency requested all national banks to furnish, as of November 15 ". . . a statement showing the amount of loans and accommodations granted by them to certain classes of borrowers arranged according to the occupation." Reports received covered only 70 percent of the total loans and discounts of national banks, but unreported loans presumably were not of the types indicated in the Comptroller's classification, since banks were requested to report on all loans in "certain classes." For comparison with this early cross-section, commercial bank borrowers in 1940 can be classified by industry on the basis of estimates made by the Financial Research Program (Table 11). Margins of error doubtless are present in both distributions, but they probably are not large enough to destroy the value of the data for indicating broad changes since 1920.<sup>18</sup>

The first major change to be noted is the decline in the relative importance of manufacturing and trade borrowers. These two classes combined accounted for close to 50 percent of total loans and discounts in 1920 and only about 20 percent in 1940.

Secondly, finance companies which were borrowers of negligible importance in 1920, occupied a position of prominence in 1940, when they accounted for nearly 9 percent of all loans. This change is doubtless related to the declining importance of manufacturing and trade borrowings, since cash is substituted for the receivables of selling enterprises through finance company operations.

Thirdly, the growth of the public utility group nearly equaled that of the finance companies; public utilities accounted for slightly more than 7 percent of total loans and discounts in 1940, compared with less than 2 percent in 1920.

All these changes in the composition of the borrower clientele of commercial banks conform to the general findings reviewed above relating to the industrial composition of the economy:

<sup>18</sup> Both distributions include agricultural and real estate loans. Since these are not strictly "business loans" in the sense in which business loans have been taken for the purposes of this study, it might be advisable to exclude them from both distributions, but this procedure would not alter the main conclusions drawn from the distribution of total loans as given below.

*Table 11* — TOTAL NATIONAL BANK LOANS AND DISCOUNTS, BY INDUSTRY OF BORROWER AND TYPE OF LOAN, 1920 AND 1940  
(*dollar figures in millions*)

<i>Industry of Borrower and Type of Loan</i>	<i>November 15, 1920<sup>a</sup></i>		<i>June 30, 1940<sup>b</sup></i>	
	<i>Amount Outstanding</i>	<i>Percent of Total Loans</i>	<i>Amount Outstanding</i>	<i>Percent of Total Loans</i>
Manufacturing	\$ 2,863	20.8%	\$1,175	12.9%
Wholesale	3,581	26.1	296	3.2
Retail			440	4.8
Public utilities, including railroads	225	1.6	663	7.2
Agriculture	1,999	14.5	622	6.8
Construction	c	c	76	.8
Mining	c	c	76	.8
Service	c	c	76	.8
Commercial finance companies and factors	c	c	804	8.8
Professional men	375	2.7	c	...
Real estate	232 <sup>b</sup>	1.7	2,003	21.9
Brokers and dealers in se- curities	664	4.7	169	1.8
Banks	c	c	19	.2
Acceptances	171 <sup>b</sup>	1.2	83	.9
Commercial paper bought in the open market	c	c	215	2.3
Other loans against securities	2,489 <sup>b</sup>	18.2	1,573	17.2
Unclassified <sup>d</sup>	1,166	8.5	884	9.6
<b>TOTAL</b>	<b>\$13,765</b>	<b>100.0%</b>	<b>\$9,174</b>	<b>100.0%</b>

<sup>a</sup> Based on data from *Report of the Comptroller of the Currency*, 1920, Vol. I, p. 32.

<sup>b</sup> Estimates of the National Bureau of Economic Research, Financial Research Program.

<sup>c</sup> Contained in "Unclassified."

<sup>d</sup> Includes consumer loans; loans to personal loan companies, industrial banks, and credit unions; loans (other than real estate) to building and loan associations, insurance companies, Federal Land and Intermediate Credit Banks, Federal Home Loan Banks, clubs, churches, hospitals, schools, and charitable institutions.

### *Size of Borrowing Concerns*

While no direct evidence is available for measuring changes in the average size of borrowing concerns, certain generalizations can be made on the basis of indirect evidence. A sample of 84 large manufacturing corporations shows that they were relatively heavy bank

borrowers in 1920 and 1937, years of rapidly accelerating asset expansion (Table 12). However, their relative importance among all business borrowers declined during the twenties and again in the late thirties; by 1939 their borrowings were less important than in 1914. Apparently the growth of the large business concern in this sector of the economy was insufficient over the entire period to maintain the relative importance of large companies among bank borrowers, because large concerns, individually, were becoming less dependent on banks for short-term credit.

An indication that the average size of borrowing concern may have increased is found in the fact that the finance company and the transportation and other public utility industries rose in importance among bank borrowers; the major share of the business of all these groups was conducted by concerns of large and increasing average size. On the other hand, listings in the *Reference Book of Dun & Bradstreet, Inc.* reveal that between 1920 and 1940 wholesalers, traditionally frequent and heavy borrowers from banks, declined

Table 12—NOTES PAYABLE OF 84 LARGE MANUFACTURING CORPORATIONS COMPARED WITH BUSINESS LOANS OF NATIONAL BANKS, 1914-39  
(dollar figures in billions)

Year	Notes Payable of 84 Identical Large Manu- facturing Corporations <sup>a</sup> (1)	Business Loans of All National Banks <sup>b</sup> (2)	(1) in Per- cent of (2)
1914	\$.226	\$3.8	5.9%
1915	.221	3.8	5.8
1920	.857	8.1	10.6
1922	.273	6.4	4.3
1929	.162	6.7	2.4
1932	.035	4.4	.8
1933	.065	3.3	2.0
1937	.289	4.5	6.4
1938	.145	4.2	3.5
1939	.088	4.4	2.0

<sup>a</sup> Data as of December 31. Compilations of National Bureau of Economic Research, Financial Research Program.

<sup>b</sup> Data as of June 30. Estimates of National Bureau of Economic Research, Financial Research Program, based on *Report of the Comptroller of the Currency*, annually.



in average size, as measured by net worth, and that service concerns, which are typically small, increased markedly in their relative frequency in the business system. The significance of this latter development is lessened, of course, by the fact that in 1940 service concerns still accounted for a very small segment of the demand for credit from banks.

The relative importance of these conflicting developments cannot be weighed definitely, and therefore it is impossible to reach a final conclusion as to the average size of borrowing concerns in 1940 compared with 1920. Study of the American business credit market around 1940 (Chapter 1) has shown that small and medium-sized concerns were the predominant users of business credit at that time. Perhaps the most that can be said is that there is no positive evidence to suggest that this condition was different in 1920.

### *Security for Loans*

Since loan statistics for early years refer only to total loans and discounts, a study of trends in secured loans to business as distinguished from other loans cannot be made, but data on total loans and discounts of national banks indicate that collateral security tended to become more important. Among this group of banks the proportion of secured loans to total loans rose from 41.1 percent in 1900 to 55.2 percent in 1940. Most of this increase was attributable to the growth in the relative importance of real estate loans. But total loans and discounts exclusive of those secured by real estate mortgage collateral also reveal a trend toward greater use of security devices; the proportion of secured loans to total loans and discounts of national banks, exclusive of loans secured by real estate, rose from 40.8 percent in 1900 to 52.9 percent in 1930 and then fell back to 43.2 percent in 1940. The rise to the peak in 1930 no doubt reflected the growing importance during the twenties of loans secured by stock exchange collateral.

### *Maturity of Loans*

Of special significance is the fact that the average contractual maturity of bank loans tended to increase in the period under review. According to reports to the Comptroller of the Currency, about 57

percent of all bank loans in 1913 were made with original maturities of less than 90 days. In view of the relative unimportance during those early years of loans secured by stock exchange and real estate collateral, it seems reasonable to assign these over-all percentages to business loans, i. e., to say that in 1913 about 57 percent of bank loans to business were made with original maturities of 90 days or less. In 1940, on the other hand, about one-third of the commercial and industrial loans of all commercial banks consisted of term loans with original maturities exceeding one year. On the assumption that one-half of the 1940 loans with maturities of less than one year carried original maturities of more than 90 days, loans with maturities of 90 days or under can be estimated as comprising only slightly more than 30 percent of all business loans in 1940, contrasted with 57 percent in 1913.

## MEDIUM-TERM AND LONG-TERM CREDIT TO BUSINESS

### *Credit Outstanding*

Medium- and long-term business credit outstanding rose sharply and fairly continuously between 1900 and 1940. The set-back that occurred in the depression years of the 1930's was followed by an increase which by 1940 carried total outstandings, including bank term loans, to a figure five times greater than in 1900 (Table 13). Coincident with this long-run expansion were significant shifts in the sources from which medium- and long-term business credit was acquired. The principal changes were a considerable decline in the proportion of such funds acquired from the public, and an increase in the proportion acquired from financial institutions. Life insurance companies, whose assets increased nearly eleven-fold between 1906 and 1940, played an outstanding role in this increasing institutionalization of the investment process.

### *Character of Debt*

The changing character of medium-term and long-term business debt may be measured by changes in outstanding corporate bonds and bond offerings during the period 1900-1940. The tendency

Table 13—MEDIUM-TERM AND LONG-TERM DEBT OUTSTANDING OF NONFINANCIAL BUSINESS CORPORATIONS, BY CREDITOR GROUPS, 1900-1940<sup>a</sup>  
(dollar figures in billions)

Year	SECURITIES HELD BY						Total Amount		
	Commercial Banks		Insurance Companies		Other Financial Institutions			Public	
	Amount	Percent	Amount	Percent	Amount	Percent		Amount	Percent
1900	\$ .42	6.5%	\$ .65	10.0%	\$ .49	7.5%	\$ 4.94	76.0%	\$ 6.50
1910	1.39	9.9	1.56	11.1	.91	6.5	10.14	72.4	14.00
1920	1.60	8.4	2.08	10.9	.65	3.4	14.67	77.2	19.00
1930	2.85	9.5	5.16	17.2	1.26	4.2	20.73	69.1	30.00
1935 <sup>b</sup>	3.27	11.4	5.82	20.2	2.15	7.5	17.55	61.0	28.79
1940 <sup>b</sup>	4.28	13.1	10.10	30.9	1.97	6.0	16.36	50.0	32.71

<sup>a</sup> Estimates of National Bureau of Economic Research, Financial Research Program.

<sup>b</sup> Includes estimates of term loans held by commercial banks, insurance companies, and other financial institutions.

after 1900 was for the average size of outstanding corporate bond issues to increase. Medium-term issues, that is those with an original maturity of from 1 through 15 years, rose in median size from \$3.8 million in 1900 to \$17.0 million in 1939, while issues of long term, that is those with an original maturity of over 15 years, rose during the same period from \$15.0 million to \$32.1 million. These observations are confirmed by data on yearly offerings. Bonds of under \$1 million represented 13.6 percent of all amounts offered in 1900, 9.4 percent in 1910, 6.7 percent in 1920, 2.1 percent in 1930, and 0.9 percent in 1938. The average asset size of corporations issuing bonds also increased: the median size of concerns issuing medium-term bonds rose from \$68 million to \$163 million, while the median size of concerns issuing long-term bonds rose from \$83.5 million to \$191 million.

During the same period marked changes occurred in the industrial composition of the corporate bond market. Among issuers of medium-term bonds the order of relative importance in 1900 was railroads, first; other public utilities, second; and manufacturing concerns, third. By 1939 this order was wholly reversed, with manufacturing in first and railroads in third place, and with the distributive and service industries in a position of far greater importance than in 1900. Among issuers of long-term bonds, public utilities replaced railroads as the most important single industry; distributive and service industries grew substantially in importance; and within the manufacturing group the relative importance of such industries as chemicals, petroleum, rubber, and iron and steel increased.

The term to maturity of corporate bonds tended to become less dispersed and to concentrate at the intermediate level, both the very short and the very long maturities being less important components of the total at the end of the period than at the beginning. Finally, there was a marked tendency away from secured issues, which fell from 91 percent of total outstandings in 1900 to 42 percent in 1939, and a clear tendency, especially among medium-term bonds, for refinancing issues to increase in relative amount.

Since these data refer to all corporate debt securities outstanding or offered during the period, no direct inferences are possible concerning changes in the characteristics of corporate debt securities held by commercial banks. Not only would the exercise of manage-

rial judgment lead banks to hold something other than a random sample of outstanding securities, but banks have been subject to changing legal limitations over the years, which have affected their freedom in investment policy. The character of this legislation will be reviewed in Chapter 8; in general it served increasingly to limit banks to the holding of bonds of relatively high grade. A reasonable conclusion, therefore, is that data on the composition of their portfolios, if available, would reveal the same broad shifts shown by data on all outstanding bonds, namely, tendencies toward larger size of issue and of obligor and toward intermediate-term issues (from five to fifteen years) which would frequently be unsecured.

### *Direct Lending to Business*

In the thirties an outstanding development in the long-term segment of the business credit market, which apparently had no parallel in the short-term segment, was the growth in the relative importance of direct lending, in contrast to the acquisition of funds in the open market. Private placements of corporate securities accounted for 29.2 percent of the total gross proceeds of all corporate securities issued in 1934-35; the percentage rose to 42.4 percent in 1942-43, and then fell to 31.2 percent in 1943-44.

After 1934 certain shifts occurred in the general character of issues privately placed and in the agencies active in this market, but the data pertaining to the shifts are not wholly satisfactory and the period for which they are available is so short that it is hazardous to venture definite conclusions as to the direction of change. In general, the insurance company seems to have become a more important factor in the private placement market, accounting for an estimated 60 percent of private placements in 1934 and about 87 percent in 1939 and 1940. Somewhat erratic variation is found in the industrial composition of private placements; on the whole, industrial corporations became a smaller proportion of the total, and public utilities a larger proportion. Data are not available on the average size and term to maturity of private placements and on changes in these features of the issues over recent years.

In the medium-term field the term loan grew from negligible amounts in 1933 to a point where, in 1940, such loans held by commercial banks equaled one-half of all corporate securities held by the

banks. However, the period for which data on these credits are available is short and it is again hazardous to venture generalizations on changes in the nature of the market up to 1940. The evidence suggests, at least, that the tendency was for term loans to be made in smaller average amounts, increasingly to smaller companies, and, toward the end of the period, increasingly for new money as contrasted with refinancing purposes.

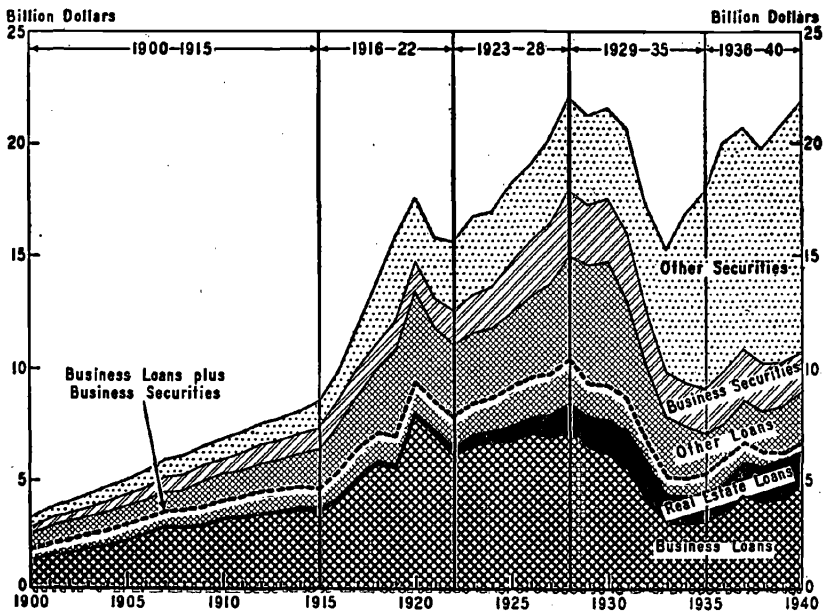
### POSITION OF THE COMMERCIAL BANK AS A BUSINESS FINANCING INSTITUTION

In order to study changes in the functional position of the commercial banking system since 1900, it is convenient to divide bank assets into the broad categories of "business" loans (including loans to financial enterprises other than banks), loans secured by real estate, other loans (including agricultural loans and loans secured by stock exchange collateral), "business" securities, and other securities. A further breakdown which would separate out loans on stock exchange collateral, consumer loans, term loans, and various types of investment securities would be useful, but the principal purposes of this study are satisfied by the broad categories indicated. The data presented in Charts 21 and 22 cover national banks only — an unavoidable limitation since this is the only group of banks for which satisfactory estimates of this distribution of assets for earlier years can be made. Nonetheless these data may be taken as fairly representative of the commercial banking system as a whole.

The history of structural change between 1900 and 1940 in the assets of commercial banks falls naturally into five fairly distinct periods: 1900–1915, 1916–22, 1923–28, 1929–35, and 1936–40. From 1900 to 1915 nearly all types of bank assets grew at about the same rate which, considering the length of the period, reflects a remarkable stability in the functional position of the banking system.<sup>14</sup>

<sup>14</sup> The increase in total assets of national banks during this period amounted to about \$450 million, annually, or an average rate of 6 percent per year. The average rate of increase for business loans also was about 6 percent, and the volume expanded on the average by about \$150 million, annually. When holdings of business securities are added to business loans, the average annual increase of this combined series is found to be \$190 million, or an average annual rate of about 7 percent. The average annual rate of growth for these series, as estimated here, is based on the assumption that the series increased at a constant rate each year.

Chart 21 — LOAN AND INVESTMENT ASSETS OF NATIONAL BANKS,  
1900—1940

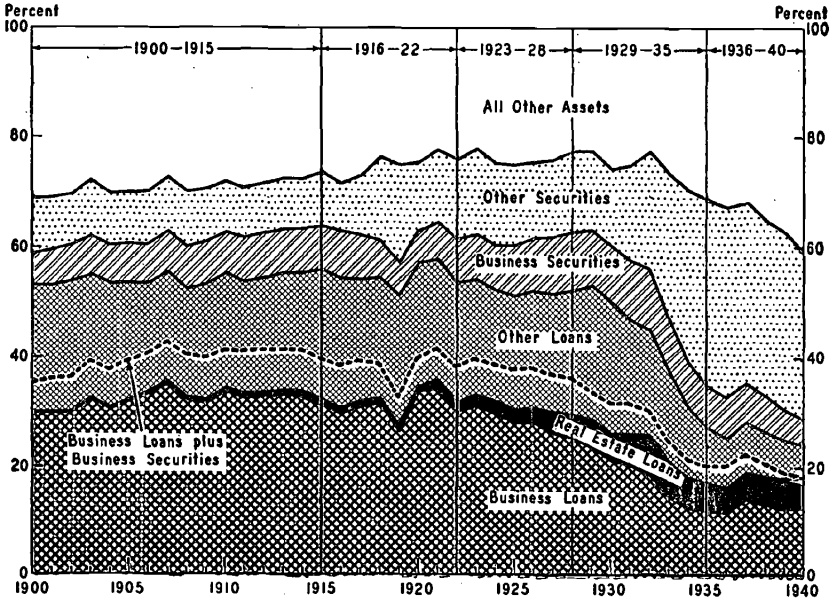


Changes after 1900 in the earning assets of national banks fall into five distinct periods. In the first three periods business loans plus bank investments in private corporate securities rose almost continuously; it was not until after 1929 that a sharp decline occurred.

In the period 1916-22, seven years of war and postwar readjustment, nearly all bank assets shared alike in expansion and contraction; during 1920, however, business loans made by banks expanded somewhat more than assets as a whole.<sup>15</sup> As revealed in the preceding analysis the changes in corporate financial structure which took place during the entire period — particularly those changes that represented the impact on credit demands of rising commodity

<sup>15</sup> Over the entire seven-year period the annual increase for total assets of national banks averaged \$1,270 million; that for loans to business, \$370 million; and that for loans to business plus holdings of business securities, \$460 million. In each case the average dollar increase represented an average annual rate of growth of about 8 percent.

Chart 22 — LOAN AND INVESTMENT ASSETS OF NATIONAL BANKS IN PERCENT OF TOTAL ASSETS, 1900-1940



During the twenties, bank holdings of business securities rose relative to other assets, but not enough to offset the relative decline of bank loans to business.

prices and inventory values — were such as to increase demands for short-term relative to long-term financing. But while the asset structure of banks underwent fairly substantial changes within this period, the structure at the end was very much like that which had prevailed at the outset.

Significant changes set in, however, during the period 1923-28. Despite the fact that the average annual rate of total asset growth of national banks was almost equal to the 1900-1915 rate (5 percent annually, compared with 6 percent in the earlier period), the rate of growth of loans to business (2 percent) was considerably less than in the earlier years. It is this structural change in bank assets which is frequently referred to as the "decline" of the commercial



loan. The decline, however, was merely a loss of relative position by the "business" loan, and was attributable entirely to the greater growth of certain other commercial bank lending functions, namely, loans secured by real estate and by stock exchange collateral, and heavier investment in corporate securities.

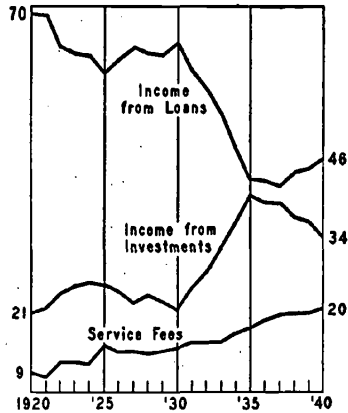
The tendency for bank holdings of business securities to increase during the years 1923-28 is especially noteworthy. When these assets are added to bank loans to business, the total is found to have increased at an average annual rate of 5 percent, which is not far below the average rate of increase during the period 1900-1915. Since the rate of growth for this combined series in the period 1923-28 was the same as that for total bank assets, its relative position among bank assets at the end of the period differed little from that at the beginning. This stability, however, veiled a significant change in the way in which banks met their continuing business financing function. During the period, the function was met increasingly through the purchase and holding of private corporate securities and the extension of credit on the security of stock exchange collateral and real estate mortgages and, relatively speaking, decreasingly through the extension of business loans of traditional form. Again, this behavior of bank assets reflects shifts during those years in corporate asset structure and financial policy. As reviewed above, all these changes seemed to conspire against the growth of short-term credit and to promote the more extensive use of medium- and long-term funds, in the form of debt or equity.

In the years 1929-35 business loans and private corporate securities declined more than total bank assets, and in 1936-40 they failed to recover at as fast a rate and as persistently as total bank assets. The result is that, while the relative importance among commercial bank assets of business loans and business securities, combined, did not differ markedly in 1928 from what it was in 1900 (37 percent of total assets in 1928 compared with 36 percent in 1900), in 1940 it had fallen to but 18 percent of total bank assets. It is useful, nevertheless, to distinguish between the periods 1929-35 and 1936-40, because in the latter period the absolute amount of bank loans to business was increasing, in sharp contrast to the years 1929-35 when liquidation by the business economy of its indebtedness to banks was almost uninterrupted.

Possibly a more effective measure of the changing stake of the

commercial banking system in the business credit market would be provided by data on the income derived by banks from various types of assets. Such an analysis is impossible, however, since in distinguishing between income from loans, investments, and fees a further distinction cannot be made between income earned on funds and services extended to business enterprises for business purposes and income earned from other sources, e.g., from consumer loans, government securities, and the like. In general, the outstanding facts about the data, as shown in Chart 23, are, first, that the relative importance of income from loans and that from investments remained practically stable until 1930; second, that between 1931 and 1935 the former lost ground to the latter in a spectacular fashion; and, third, that this shift in the relative importance of income sources was checked and even reversed slightly in the last of the periods which we have selected for our analysis of bank assets, namely, 1936-40.

Chart 23 — GROSS INCOME OF NATIONAL BANKS, BY SOURCES, 1920-40  
(in percent of total)



The years 1931-35 witnessed a rise in the importance of investments and a decline in the importance of loans as sources of bank income. Income from services tended persistently to rise after 1920.