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Part I

BUSINESS CREDIT MARKET IN 1940

Chapter 1

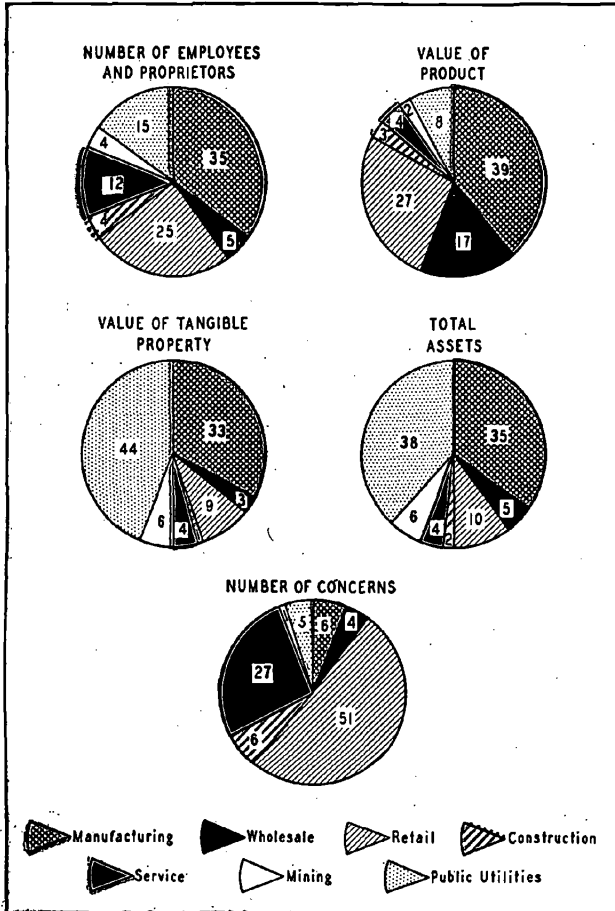
THE NONFINANCIAL BUSINESS COMMUNITY AND ITS CREDIT DEMANDS: 1940

CHANGES SINCE 1900 IN the credit market serving nonfinancial business, excluding agriculture, can be described most effectively when related to conditions in a specific recent year. Furthermore, a study of the relationships between business characteristics and the use of credit in a certain year yields suggestions as to the features of the business credit market which should be examined for evidence of change, and it also provides a basis for weighing the importance of any changes that may be found. A base year that is particularly appropriate for the present study is 1940. By that time the effects of the depression of the thirties on the business community and its credit demands could be appraised; in addition, economic conditions in the United States had not been distorted to any great extent by World War II. This chapter, therefore, outlines the composition of American business around 1940, and its asset and liability structure and financial policy as they affect the demands of business for credit. The succeeding chapter measures both the short-term and long-term elements in the supply of credit at that time, and indicates the role of the commercial bank in the credit supplying process.

COMPOSITION OF THE NONFINANCIAL BUSINESS COMMUNITY

At the outbreak of World War II there were about 3.4 million independent nonfinancial business enterprises in the United States, of which nearly 1 million were one-man owner-operated ventures. Their consolidated total assets, including net ownership or creditorship claims upon consumers, governments, agriculture, and financial institutions, as well as tangible assets, amounted to more than $166

Chart 1 — Composition of the Nonfinancial Business Community, 1939
(*in percent*)



Among the major industrial divisions, manufacturing had the largest fraction of personnel and value of product, public utilities the largest share of tangible property and total assets, and retailing the largest number of concerns.

billion. These enterprises provided a livelihood for more than half of the 46 million people who were gainfully employed, although they formed only about one-third of the total number of private undertakings in the nation; the six million farm enterprises accounted for the remaining two-thirds. Chart 1 describes the industrial composition of the nonfinancial business community at the beginning of the war period, in terms of number of personnel employed, value of output, value of tangible property, total assets, and number of concerns.[1]

Table 1—PERCENTAGE DISTRIBUTION OF ESTIMATED NUMBER OF NONFINANCIAL BUSINESS CONCERNS IN MAJOR INDUSTRIAL DIVISIONS, BY ASSET SIZE OF CONCERN, 1939[a]
(*dollar figures in thousands*)

Asset Size	*Manufacturing*	*Wholesale Trade*	*Retail Trade*	*Construction*	*Service*	*Total*
Under $250	88.5%	93.7%	99.5%	99.6%	99.6%	98.6%
250–5,000	10.7	6.1	.5	.4	.4	1.3
5,000 and over	0.8	0.2	b	b	b	.1
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

[a] Estimates of the National Bureau of Economic Research, Financial Research Program, based on data from U. S. Department of Commerce, Bureau of the Census, *Census of Business, 1939* and U. S. Treasury Department, *Statistics of Income for 1939*, Part 2.
[b] Less than one-tenth of one percent.

The nonfinancial business community was made up of a vast number of small concerns and relatively few large ones — whether size is measured by the total assets a business employs, by the number of its employees, or by the annual volume of its sales. For a study of the financing of businesses, it is convenient to group enterprises into size classes according to the amount of their total assets. Therefore in this study, unless otherwise indicated, "small" businesses will mean concerns with total assets under $250 thousand; "medium-sized" businesses, those with total assets of $250 thousand to $5 million; and "large" businesses, those with total assets of

[1] Sources of data for all charts included in this study are given in the Appendix, pp. 221–23. Sources of figures given in the text may be found on pp. 224–29.

$5 million and over. A fourth category of "very small" businesses with total assets under $50 thousand may be useful for some purposes. The predominance of the small concern among the total number of business enterprises is indicated by the estimates for 1939 presented in Table 1.

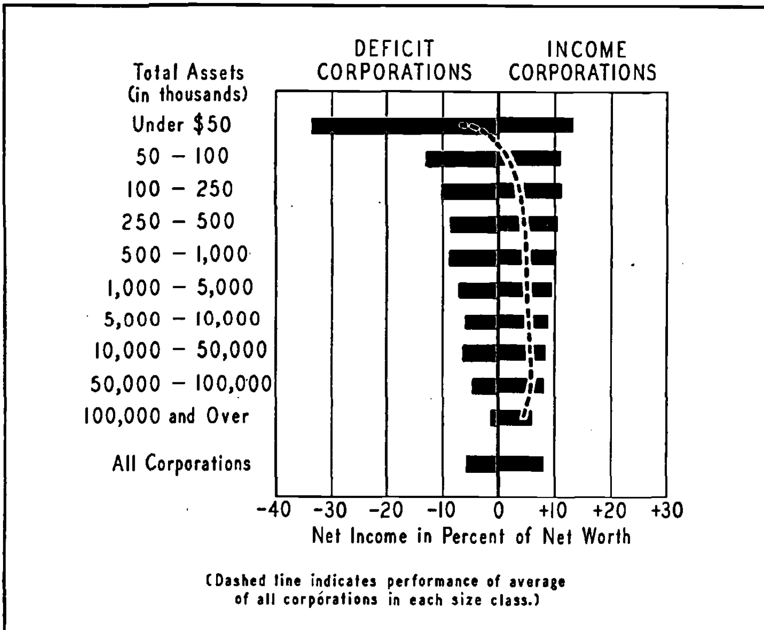
PROFITABILITY CHARACTERISTICS OF NONFINANCIAL BUSINESS AND THEIR EFFECTS ON THE BUSINESS CREDIT MARKET

Examination of concerns of varying asset size reveals that the profitability of business, measured by the average rate of return on the equity of owners, becomes progressively higher as asset size of business increases. After studying the relation between corporate size and earning power during the period 1931–36, Professor W. L. Crum concluded that "on the average, large enterprise — in all or nearly all broad lines of industry, and in different stages of the economic cycle — is more profitable than small enterprise, especially very small enterprise." When unprofitable enterprises were separated from profitable ventures, however, the range of profitability and unprofitability diminished with striking consistency as corporate size increased. In other words, both the highest profit rates and the highest deficit rates were found among small concerns.[2] In many cases big business is really an agglomeration of numerous small ventures whose successes and failures average out into a comparatively narrow range of profitability.

The relationship between size and profitability, shown in Chart 2, emphasizes two features of the business credit market. First, the erosion of funds as a result of operating losses, which gives rise to urgent and persistent financing demands, was relatively most important among small and medium-sized enterprises. Second, the enormous range in operating results among small concerns, due in part to their large number, and the greater temporal instability in the earning power of individual small concerns, made the risks of lending to small and medium-sized businesses many times greater than those of lending to large enterprise.

[2] See William Leonard Crum, *Corporate Size and Earning Power* (Cambridge, Mass., 1939) pp. 7 and 31.

Chart 2 — Relation of Size to Profitability, Nonfinancial Business Corporations, 1936



As asset size of business increased, the range of profitability and unprofitability diminished. Both the highest profit rates and the highest deficit rates were found among small concerns. For income and deficit corporations combined, the *average* rate of profitability improved as size increased.

SIGNIFICANCE TO THE CREDIT MARKET OF CHANGES IN THE BUSINESS POPULATION

Another factor of significance to the business credit market is the rapidity with which the business population changes through time. Estimates indicate that the number of completely new business concerns established each year during the period 1936 through 1940 averaged 160,000, although an additional 270,000 concerns annually acquired some element of newness through succession

or extension of operations.[3] In view of the negligible changes in the total number of business enterprises between 1925 and 1940, the over-all average "life expectancy" of a completely new American business at that time could be put at about fourteen years. But this average means little because of vast differences between the "life expectancies" of old and large enterprises, on the one hand, and new and small ones, on the other. Scattered studies indicate that approximately one-quarter to one-half of all new ventures in various retailing lines discontinue operations within a year after starting; they also reveal that average life increases steadily with size in all industries.[4] The high rate of turnover among small enterprises largely explains why special techniques of credit extension are applied in meeting their credit demands. It means that lenders frequently take liens on assets or apply other methods of assuring repayment of loans in the event of unexpected discontinuance.

RELATION OF BUSINESS ASSETS TO THE CREDIT MARKET

The types of assets held by nonfinancial business concerns strongly influence the amount and kind of their demands for credit. When all assets are divided, for convenience, into the three categories of fixed assets (including land, plant, and equipment), investments in other companies, and current assets (including cash and equivalent, receivables, and inventory), certain broad features of asset structure around 1940 may be noted.[5] No "normal" or typical pattern of assets for all business enterprises is apparent, but there were characteristic asset structures for businesses of particular industries, sizes, and degrees of profitability.

Of prime importance are the ratios of fixed and of current assets to total assets.[6] In 1939 the fixed assets of all nonfinancial concerns

[3] Alfred R. Oxenfeldt, *New Firms and Free Enterprise: Pre-War and Post-War Aspects* (Washington, 1943) p. 48.

[4] *Ibid.*, pp. 174, 176.

[5] For an extensive analysis of corporate financial structure, based on 1937 data, see Walter A. Chudson, *The Pattern of Corporate Financial Structure: A Cross-Section View of Manufacturing, Mining, Trade, and Construction, 1937* (National Bureau of Economic Research, Financial Research Program, 1945). This section relies heavily on Dr. Chudson's analysis.

[6] It must be recognized that the dollar values of fixed assets on the books of business corporations often do not measure the *present worth* of fixed assets vis-a-vis current assets, because of property write-ups and write-downs, changes in the price level, and other factors.

(on an unconsolidated basis and excluding agriculture) constituted 53 percent of their total assets, with the ratio of fixed to total assets varying considerably among the major industrial divisions. (See Chart 3.) For manufacturing concerns the ratio was 37 percent, for retail trade concerns 26 percent, and for wholesale trade 10 percent, while in certain other divisions of business, notably public utilities (including railroads), the importance of fixed assets was much greater. As size of business increased, fixed assets as a proportion of total assets became more important, and current assets less important.

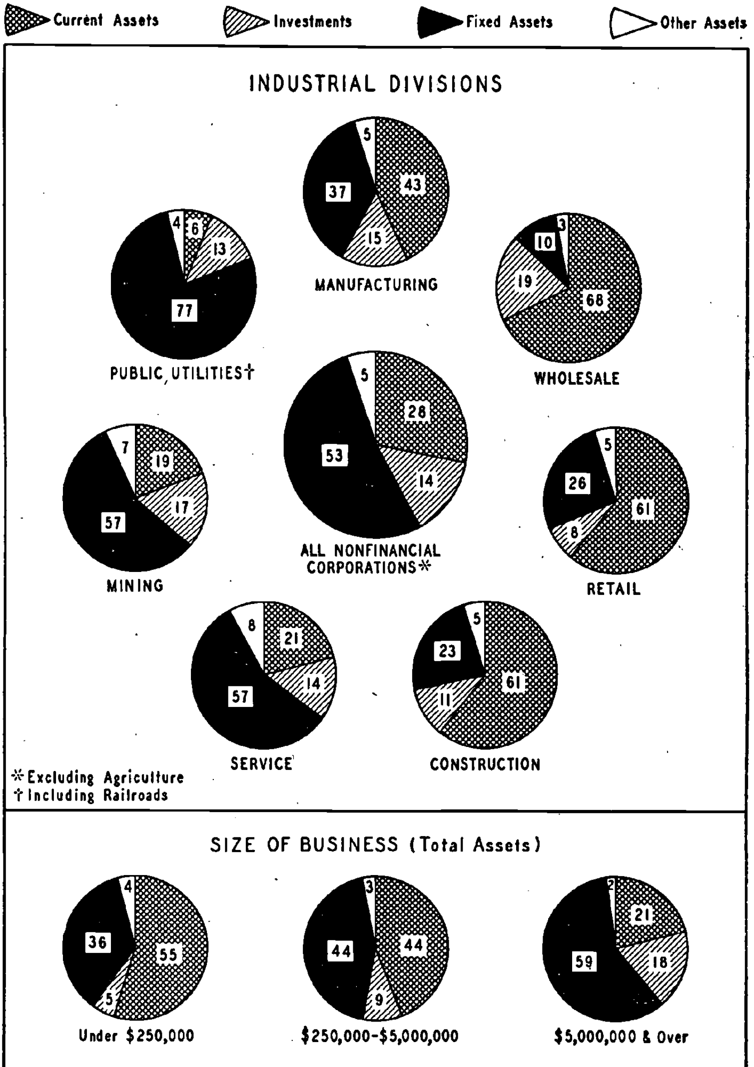
Investments in other companies, like fixed assets, increased in relative importance with size of business (Chart 3). The concentration of investments among business corporations of large size may indicate, among other things, that large businesses tend to finance the needs for long-term funds of other businesses, including small firms, just as they provide much short-term credit to small concerns through the medium of accounts receivable.

Cash and its equivalent (marketable securities) is universally a major item among business assets. Trading concerns understandably carry a larger proportion of their total resources in cash than do manufacturing or public utility concerns. The ratio of cash to total assets falls with size of business, measured in total assets, but when marketable securities are added to cash, the ratio for the combined total varies only slightly as corporate size increases. When corporate size is measured by annual sales, there is a distinct tendency for the larger concerns to hold greater fractions of their assets in the form of cash and its equivalent.

Accounts receivable are among the most liquid and therefore the most bankable of business assets. At the end of 1939 nonfinancial business corporations as a group had $15.0 billion of receivables and only $11.4 billion of payables outstanding, showing that they were extending $3.6 billion of net trade credit to unincorporated businesses and to consumers. While the receivables/sales ratios of the various industries differed widely, they were generally higher in the producers' goods industries than in the consumers' goods industries.

Inventory also is a highly bankable current asset. Ratios of inventory to either sales or total assets varied considerably among industries, but they were relatively high in manufacturing and in

Chart 3 — Asset Structure of Nonfinancial Business Corporations, 1939
(*in percent*)



Fixed assets in 1939 were a major fraction of total assets in the public utility, mining, and service divisions. Current assets comprised the greatest proportion of total assets in manufacturing, wholesaling, retailing, and construction. For business as a whole, the relative importance of fixed assets increased with size of business.

trade, industrial divisions that hold the preponderance of all inventory of the economy. The ratio of inventory to sales for most manufacturing industries exhibited a marked and consistent tendency to rise with corporate size, reflecting the tendency for big business, because it usually combines a number of production processes under one management, to turn over its inventory more slowly than small business.

In summary the available data indicate that the asset structure of the major industries varied considerably in the period preceding World War II. Further, when concerns of different size are compared, fixed assets and investments are found to have been of more importance and current assets of less importance as size increased. As a consequence, the credit demands of large concerns tended to be greater, relatively, for long-term than for short-term funds. A broad picture of these variations is afforded by the data presented in Table 2.

CREDIT VERSUS EQUITY IN BUSINESS

The funds employed in a business enterprise are either owned or borrowed. The debt of a business represents dollar claims of definite amount against the income and assets of the business, while the equities represent the remaining values in the enterprise belonging to the owners. The amount of risk borne by the two classes of claimants differs considerably, that carried by the owners being the greater. Some investment by owners is clearly essential to business birth and is generally an indispensable condition to the incurrence of debt. Lacking equity, a business could not provide to creditors that preferred position in the scale of risks which is the very essence of creditorship.[7]

At the outbreak of World War II, as in the entire period 1900-1940, ownership capital claimed the preponderance of business assets. No less than 62 percent of the total assets employed by all nonfinancial business corporations (excluding agriculture) was financed with ownership funds, and only 38 percent with debt funds at the end of 1939. Comparable information is not available for

[7] In unusual cases an established business may have no net worth, and still may operate profitably. But it is scarcely likely that a concern can contract a new loan without possessing some ownership values.

Table 2—COMPARISONS OF RATIOS OF SELECTED ASSET ITEMS TO TOTAL ASSETS AND TO SALES OF NONFINANCIAL BUSINESS CORPORATIONS, BY INDUSTRY, SIZE, AND PROFITABILITY, 1937[a]

Asset Item	*Industry Variation* Low	High	Median	*Movement of Ratio as Size of Corporation Increases*	*Ratio for Profitable Compared with Unprofitable Corporations*
In Percent of Total Assets					
Cash	1.4	13.0	6.2	Falls	Profitable — higher
Government securities	.1	4.9	1.8	Rises	Profitable — higher
Cash plus government securities	3.3	16.7	8.2	Irregular	Profitable — higher
Receivables	5.5	37.9	13.7	Falls	Little difference
Inventory	.5	47.5	22.7	Irregular	Little difference
Fixed property assets[b]	4.9	74.4	34.6	Rises	Profitable — lower
Other investments	5.3	25.6	12.6	Rises	Little difference
In Percent of Sales					
Cash plus government securities	1.7	19.6	7.7	Rises	Profitable — higher
Receivables	4.9	28.0	12.7	Mfg. — irregular Trade — rises	Little difference
Inventory	4.7	38.5	18.2	Mfg. — rises Trade — irregular	Little difference
Fixed property assets[b]	3.8	186.3	30.6	Mfg. — rises Trade — irregular	Profitable — lower
Current Ratio	.6/1	5.1/1	2.5/1	Mfg. — rises Trade — irregular	Profitable — higher

[a] From Walter A. Chudson, *The Pattern of Corporate Financial Structure: A Cross-Section View of Manufacturing, Mining, Trade, and Construction, 1937* (National Bureau of Economic Research, Financial Research Program, 1945) Chapter 1, Tables 1 and 2, pp. 8 and 10. Based on analysis of data from *Statistics of Income*. Variations studied are among 61 subdivisions of the following major industrial divisions: manufacturing, trade, construction, shipbuilding, and mining and quarrying.

[b] In *Statistics of Income* the term "fixed capital assets" is used in place of "fixed property assets."

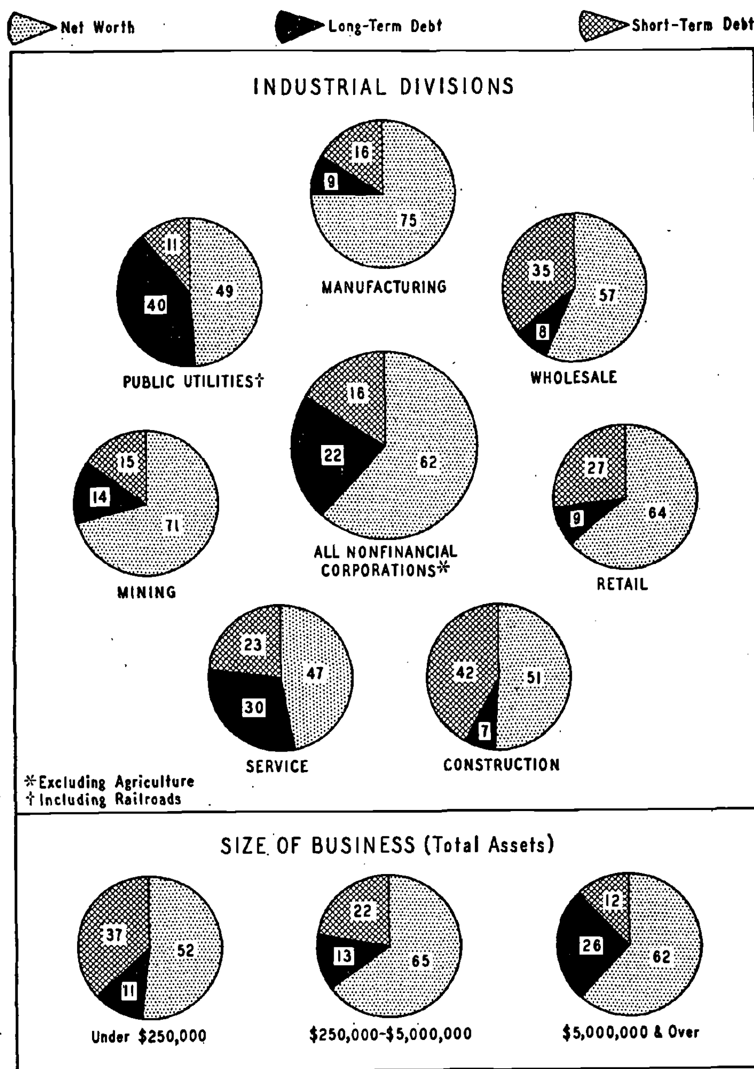
unincorporated businesses, but sample data show that the average proportion of equity for them was greater than for corporations, in part reflecting the fact that these businesses are principally small and very small concerns for which the ratio of equity to total assets is typically high.[8] Broadly speaking, for each dollar of credit it demanded, business management sought about two dollars of ownership capital. Ownership funds were more than equivalent to the total investments of businesses in fixed assets, and covered a substantial portion of their current assets.

Among major industrial divisions there were stable and clear-cut differences in the relative importance of debt. In manufacturing, debt comprised about 25 percent of total liabilities in 1939; in retail and wholesale trade, it formed about 35 and 45 percent, respectively; in construction, it amounted to about 50 percent; in public utilities (including railroads) and in the service industries it comprised more than half of all liabilities (Chart 4).

The size of a business also was a major determinant of its relative use of equity and debt financing. Among the asset-size classes shown in Chart 4, the highest indebtedness in proportion to total assets in 1939 is found in the class of concerns with total assets of less than $250 thousand. Broadly speaking, ownership was large and debt was small for very small enterprises (i.e., those with total assets of less than $50 thousand, not shown separately in Chart 4) and for large enterprises other than public utilities. Breadth of access to financial markets is an important factor in explaining this behavior. Very small concerns may have high fractions of equity simply because they are unable to borrow, are unwilling to borrow on the credit terms available to them, or have no desire to expand. Small and medium-sized concerns (with assets from $50 thousand to $5 million), having greater accessibility to credit than to equity funds, are more likely to finance their activities through loans. Large businesses can make public offerings of equity securities readily, and in addition they have a higher and more stable average profitability which enables them to build up equity and pay off debt by retaining earnings in the enterprise. Another reason for the greater importance of equity in businesses of large size may be the

[8] Carl Kaysen, *Industrial and Commercial Debt — A Balance Sheet Analysis, 1939* (National Bureau of Economic Research, Financial Research Program, ms. 1942) p. 14.

Chart 4 — LIABILITY STRUCTURE OF NONFINANCIAL BUSINESS CORPORATIONS, 1939
(*in percent*)

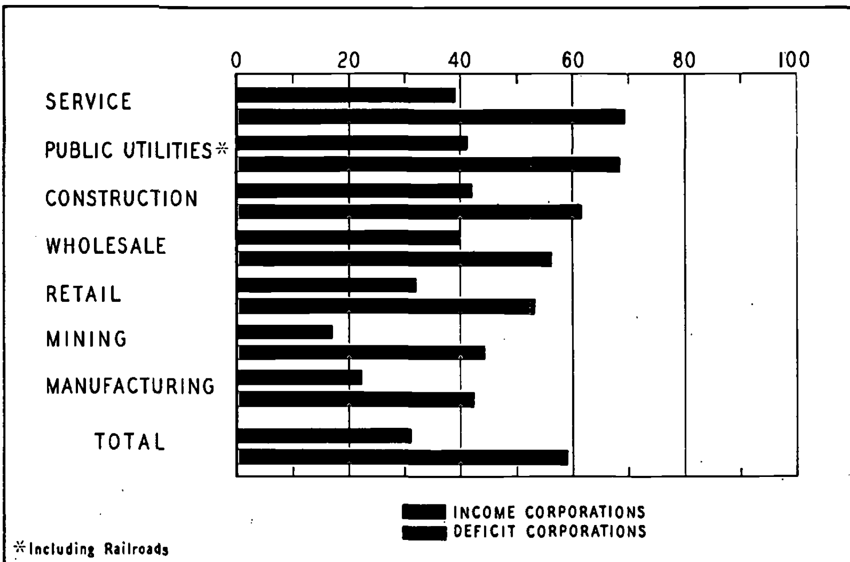


For corporate business as a whole, net worth at the outbreak of World War II was the preponderant source of funds. In the public utility and service industries, however, debt accounted for the major fraction of funds.

direct correlation between size and age of enterprises; large businesses, being older, may have relatively more equity funds simply because they have had more time to accumulate equity through retention of earnings than have smaller concerns.

Profitability of business has affected its use of credit to an important degree. Profitable concerns have had much lower ratios of debt to total assets than have unprofitable concerns. In 1939 the profitable concerns in every major industrial division were 15 to 30 percent less indebted than were unprofitable businesses of the same size (Chart 5). The current liabilities of unprofitable concerns as a whole were substantially greater in relation to both total assets and sales than were those of the profitable ones, both their borrowings and their accrued liabilities being heavier. Invested

Chart 5 — Debt in Percent of Total Assets, Nonfinancial Business Corporations, 1939



In every major division of industry in 1939, income corporations had less indebtedness in proportion to their total assets than did deficit corporations.

capital formed a definitely smaller proportion of total liabilities of the unprofitable concerns, a condition resulting almost wholly from the smaller proportion of surplus accumulated by them. These findings are in no wise peculiar to 1939 or 1940. It is a matter of common observation that when the profitability of a business concern declines, its trade payables are allowed to rise and its bank loans are renewed rather than paid off. When operating losses occur they reduce the owners' equities, thus enlarging, on a relative scale, the indebtedness of the business. In either case a higher ratio of debt to equity emerges as a more or less automatic or passive response to the situation. The fact that owned funds play a more important role in large and in profitable enterprises than in moderately small or in unprofitable ones also reflects in part the high degree of direct association between size and profitability — a relationship that was commented on above.

THE PRINCIPLE OF "TRADING ON THE EQUITY"

What determines the relationship between debt and equity funds in a business managed so that profits to owners will be maximized? Theoretically, the assets a business could profitably employ would be acquired with borrowed money up to the point where the interest rate on the last increment of debt equaled the rate of profit realized from employing these funds in the enterprise. In other words, credit would be used in a business so long as it could be obtained more cheaply than equity funds.

This familiar principle of "trading on the equity" does not provide a complete and realistic description of entrepreneurial behavior around 1940. Businessmen did, of course, make comparisons between the expected payments they would have to make on new equity funds and those they would have to make for loans, in determining how they should obtain new funds. But other factors generally appear to have weighed more heavily in their decisions. In nearly all businesses the fluctuations of earnings and the probabilities of loss were difficult to evaluate quantitatively, but losses could cause the fixed charges of debt to become embarrassing. As a result, management in many cases apparently had developed a predisposition against borrowing which often produced a structure of liabilities that could not be explained merely by reference to

cost differentials. Borrowing — particularly on short term — was regarded as a seasonal or emergency measure, and not as a normal and continuing source of funds. Furthermore, standards of prudence in lending required that a margin of equity funds be present in the financial structure of a potential borrowing concern.

Apart from this, the institutional structure and traditions of finance bore heavily upon the equity-debt relationship. Many concerns desired equity funds, but found the equity securities markets closed to them or accessible only on terms they could not profitably accept, and they utilized credit for lack of an alternative. Enterprises with large fixed properties, such as railroad and public utility concerns, even when they could obtain equity funds, pursued a tradition accepted by financial institutions of borrowing substantial percentages of the appraised value of these properties against mortgages. During the period between the two world wars, many railroads could not lawfully sell additional stock, because their outstanding equity securities sold for less than their par values. Consequently, they were compelled to borrow the funds they needed. The anticipations of entrepreneurs and investors regarding the future earnings of a concern also affected the nature of its financing. Federal taxation strongly influenced the choice between debt and equity funds, generally favoring the incurrence of debt because interest was a business expense deductible from taxable income, while dividends were not. Large concerns had a wide range of options in adjusting their financial structure to these conditions, a fact which is reflected by data showing that the complexity of corporate financial structure increases with business size.[9] In summary, no simple statement can encompass all the forces that determined the division of the liabilities of businesses of different types and sizes between creditors and owners in 1940.

[9] W. A. Chudson, *op. cit.*, p. 108.