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Chapter Title: Internal versus External Sources of Financing

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INTERNAL VERSUS EXTERNAL SOURCES OF FINANCING

IN recent years considerable interest has centered on the relative importance of internal and external funds in financing corporate investment. Have corporations tended to increase the proportion of their investment expenditures which they meet out of retained income? Has retained income provided funds for financing varying proportions of corporate investment in the different phases of the business cycle? Clearly, answers to these questions are of paramount importance to our understanding of how the business system operates and how corporate financial policies affect economic stability. Data are presented in this chapter which suggest answers to both questions, but before considering this evidence it will be useful to discuss certain problems of definition.

Two concepts of external financing are used, depending on whether the analysis is concerned with changes in total assets or with changes in physical assets only. In analyzing total asset changes, a measure is required of the additional amount of funds, debt or equity, obtained in the period in question from outside sources. Naturally, there is a certain netness in this amount, since a concern may, for example, use part of the proceeds of a stock issue to repay bank debt; however, interest centers only on the additional amount of outside funds obtained. The term *external financing* will be used to signify this amount. On the other hand, when physical asset expansion is considered, account must be taken of the fact that, in any given period, a concern may both increase the amount of outside funds which it is utilizing, and also make funds available to other concerns or individuals through the accumulation of certain types of financial assets, such as the securities of other concerns. Accordingly, it will be useful to have a concept that refers to the additional amount of outside financial resources used *less* any increase, in the same period, in the resources made available by the corporation to the rest of the economy. This quantity will

be referred to as the *net balance of external financing*.¹ It should be clear that when these two measures of the dependence of business concerns on outside financial resources are used, retained income plus external financing, in the sense of the additional amount of outside resources being employed, is equal to total asset expansion, whereas physical asset expansion is equal to retained income plus the net balance of external financing.

An additional note on definitions is essential. In many economic discussions measures of corporate investment and corporate savings, gross of depreciation, are required. To construct such gross measures it is necessary merely to add depreciation accruals to asset expansion, or to retained income, respectively. The amount of external financing, or the net balance of external financing, remains unaffected by this addition. Gross corporate investment and saving are mentioned in later sections of this chapter.

ALL MANUFACTURING AND MINING CORPORATIONS²

Net Asset Expansion, Retained Income, and External Financing, 1923-41

Changes in retained income, physical asset expansion, and total asset expansion (all taken net of depreciation) of all manufacturing and mining corporations follow a distinct cyclical pattern, conforming in gen-

¹ In terms of balance sheet items, external financing, in the broader definition, is the sum of changes in notes and accounts payable, other current liabilities, long-term debt, other liabilities, and capital stock. Adjustments must be made for revaluations and transfer entries, such as are involved with stock dividends. Net balance of external financing, on the other hand, consists of the above, corrected for changes in financial assets, which consist of cash, marketable securities, notes and accounts receivable, and miscellaneous investments and advances. Net balance of external financing is *less* than external financing by the amount of any net increase in these financial assets and *greater* than external financing by the amount of any decrease in such assets. When net balance of external financing is positive, it indicates a net absorption of outside resources; when it is negative, it represents a net release of resources to other sectors of the economy.

² The data on physical asset expansion are unpublished estimates made by George Terborgh, who combines manufacturing and mining companies. Since the latter are only about 10 percent of the total, as measured by asset size, the total gives a fair approximation of the behavior of manufacturing corporations alone.

The data on total asset expansion, available for 1927 and subsequent years, are unadjusted year-to-year changes in total assets, as reported in the U. S. Treasury Department *Statistics of Income* (except for an adjustment to a 1934 basis of the consolidated reports of prior years). Though rough, this series indicates the order of magnitude of the growth of total assets as compared with physical assets.

eral with the reference cycle turning points established by the National Bureau of Economic Research, but none of these amounts exhibits a clear upward or downward trend over the entire period 1923-41 (Panel A, Chart 16). In other words, the relative importance of the internal and external components of new financing³ changed considerably from year to year, but neither of the components gained or lost in relative importance as a means of financing asset expansion over the entire period.

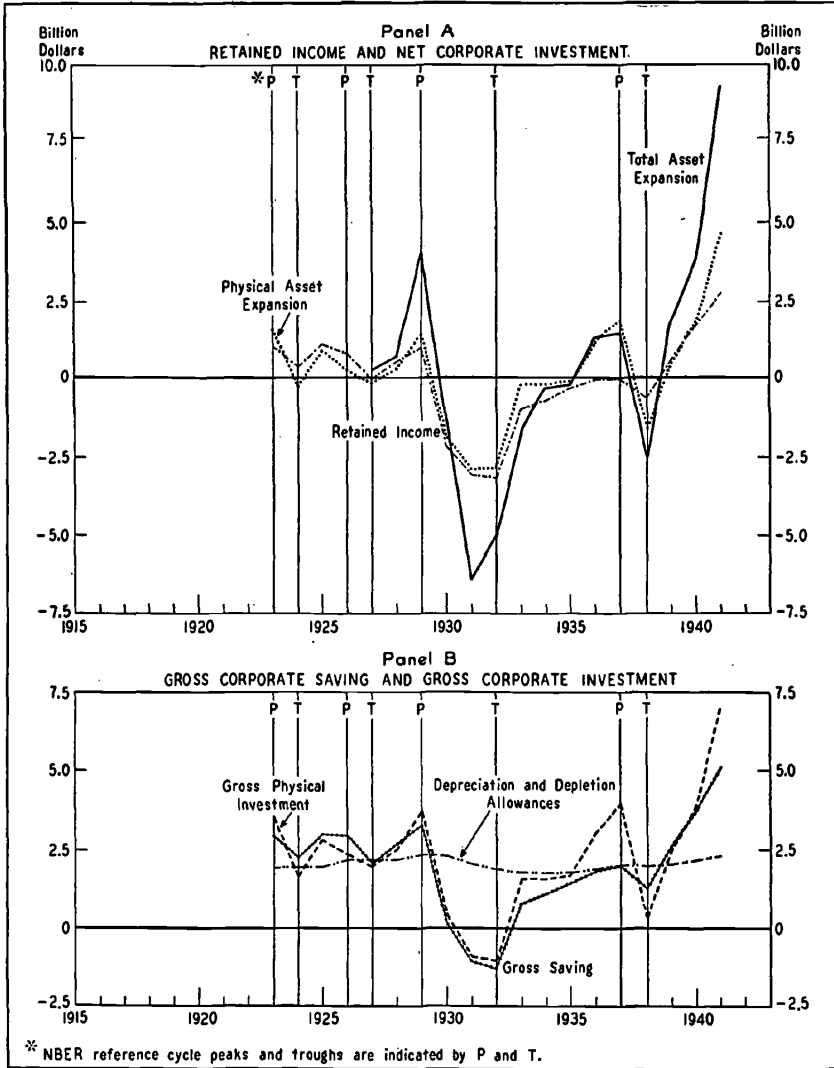
From the chart it can be seen that the history of corporation financing over the years 1923-41 can be divided into several distinct periods. The first period, 1923-29, was characterized by substantial accumulations of physical assets in years of cyclical expansion and by only slight reductions in these same assets during years of cyclical contraction. It is found that the net balance of external financing over this period was negative; in other words, corporations released funds on balance to the rest of the economy. During these years retained earnings, amounting to \$4.5 billion, exceeded the \$3.8 billion increase in physical assets by \$0.7 billion, and this excess of savings was utilized only to accumulate financial assets, thus releasing funds to the other sectors of the economy.

In contrast to the preceding seven years, the years 1930-35 were characterized by a pronounced contraction of assets, both physical and financial, by a net absorption of funds from external sources, and by net dissaving, that is, by dividend payments in excess of net income. It is worth noting that the net dissaving of \$10.4 billion during this period was more than twice as large as the amount saved during the years 1923-29. Despite the contraction of their activities during this period, manufacturing and mining corporations actually absorbed financial resources from the outside to the extent of \$2.1 billion. This net reliance on outside funds was accounted for by the liquidation of financial assets in excess of the retirement of liabilities. Therefore, during this period, manufacturing and mining corporations were recalling funds, on balance, from the rest of the economy.

Physical asset expansion, unaccompanied this time by any considerable accumulation of financial assets, was resumed in 1936 and 1937. The expansion was mainly in inventory and was financed entirely from external sources. Despite the fact that their assets were growing during these

³ External financing is indicated in the chart by the difference between the lines representing total asset expansion and retained income; net balance of external financing by the difference between the lines representing physical asset expansion and retained income.

Chart 16—CORPORATE SAVING AND ASSET EXPANSION, ALL MANUFACTURING AND MINING CORPORATIONS, 1923-41



There is no clear evidence of long-term change over the period 1923-41 in the relative importance of internal funds in financing asset expansion by all manufacturing and mining corporations.

two years, corporations were dissaving on balance, although on a greatly reduced scale as compared with the preceding depression years.⁴

Physical asset expansion was interrupted by the cyclical contraction of 1938, but was resumed in the following years, during which large increases in both physical assets and financial assets were registered. In 1939 and 1940 retained income and physical asset expansion were approximately equal, but in 1941 physical asset expansion was financed to a considerable extent from external sources.

For the entire period 1923-41, Table 4 shows that all manufacturing and mining corporations combined registered *net dissaving* of \$1.7 billion and *net absorption* of external financing of \$5.5 billion. Thus, their physical asset expansion during that period (\$3.9 billion) was financed, on balance, entirely from external sources. Income retention was the main source of funds in the twenties and again in the years 1939-41, but the heavy net dissaving of the thirties more than counterbalanced this accumulation of internal resources. As already mentioned, the data reveal no persistent tendency for retained income to become either more or less important relative to net balance of external financing over the nineteen-year period.

Gross Corporate Saving and Investment

In the preceding section emphasis was on corporate saving and investment net of depreciation. Panel B of Chart 16, on the other hand, offers a direct comparison of measures of gross corporate saving and investment for the years 1923-41. A few general observations on these series can be made. First, the amount of depreciation accruals showed very little response to changes in business conditions; cyclical fluctuations in gross corporate saving are accounted for almost entirely by fluctuations in retained income.

Secondly, the depreciation component of gross corporate saving was, in general, much greater than the retained income component. Depreciation accruals were made in each year while income retention was negative in a considerable number of them, particularly during the thirties. Even in those years, however, in which income retention was positive, retained income was in most cases only a fraction of depreciation accruals.

⁴ This is true only for all companies combined; in some individual cases, even in 1936 and 1937, retained income was the main source of financing. Manufacturing corporations alone registered small positive amounts of retained income in 1936 and 1937, but these amounts were negligible relative to the amount of external financing employed (Chart 1, Chapter 3).

Table 4—USE OF INTERNAL AND EXTERNAL FINANCING DURING
CYCLICAL EXPANSIONS AND CONTRACTIONS
All Manufacturing and Mining Corporations ^a
(in millions)

Expansion and Contraction Periods	External Financing (Net Balance)			Retained Income	Net Physical Asset Expansion	Depre- ciation and Depletion	Gross Physical Investment
	Long- Term ^b	Short- Term ^c	Total				
<i>Cyclical Expan- sion Periods: ^d</i>							
1923 ^e	\$462	\$95	\$557	\$972	\$1,529	\$1,959	\$3,488
1925-26	-409	-317	-726	1,829	1,103	4,061	5,164
1928-29	1,185	-959	226	1,423	1,649	4,525	6,174
1933-37	3,247	1,305	4,552	-2,151	2,401	9,259	11,660
1939-41 ^f	1,163	778	1,941	5,012	6,953	6,437	13,390
<i>Cyclical Contraction Periods:</i>							
1924	-541	-58	-599	311	-288	1,931	1,643
1927	113	-233	-120	-54	-174	2,138	1,964
1930-32	-654	1,333	679	-8,344	-7,665	6,125	-1,540
1938	580	-1,549	-969	-659	-1,628	1,957	329
Period 1923-41:	\$5,146	\$395	\$5,541	\$-1,661	\$3,880	\$38,392	\$42,272

^a Unpublished estimates from data compiled by George Terborgh.

^b The sum of changes in paid-in equity and long-term debt less the sum of changes in securities held and miscellaneous investments and advances.

^c The sum of changes in short-term liabilities less the sum of changes in cash and receivables.

^d The peak years have been included with expansions, and the trough years with contractions, because in most cases the annual amounts of income and investment are higher for the peak year than for the preceding year, and lower for the trough year than for the preceding year.

^e No data are available for 1922.

^f No data are available after 1941.

Finally, resources absorbed from the outside, as measured by the net balance of external financing, were a minor component of the total amount of resources used in gross corporate investment. Only in 1936 and 1937 did the funds absorbed from the outside approach the gross amount of funds saved by corporations through income retention and depreciation accruals; in all other years gross corporate saving supplied the major share of the necessary financial resources.⁵

⁵ As stated in Chapter 2, external financing and gross corporate saving cannot be considered alternative sources of financing corporate investment. The comparison in the text is made merely to illustrate the difference resulting from the inclusion of depreciation accruals in corporate saving.

*Internal and External Financing During
Cyclical Expansions and Contractions*

The salient features of cyclical changes in physical asset expansion, income retention, and external financing are described in Table 4 where the relevant information is arranged by periods of cyclical expansion and contraction. The data show first that corporations accumulated physical assets, on balance, in all expansion phases and reduced these assets, that is, disinvested in all contraction phases. Secondly, income retention and net absorption of external financing characterized expansion phases, while net dissaving and net release of external financing was characteristic of contraction phases.⁶

Finally, corporations tended, in general, to absorb both long- and short-term financing during periods of expansion, but exhibited no clearly defined pattern of behavior with respect to the use of these two types of funds during periods of asset contraction. In some contraction periods short-term funds were absorbed on balance while long-term funds were released; the reverse was true in other contraction periods.

LARGE MANUFACTURING CORPORATIONS

*Net Asset Expansion, Retained Income
and External Financing, 1915-43*

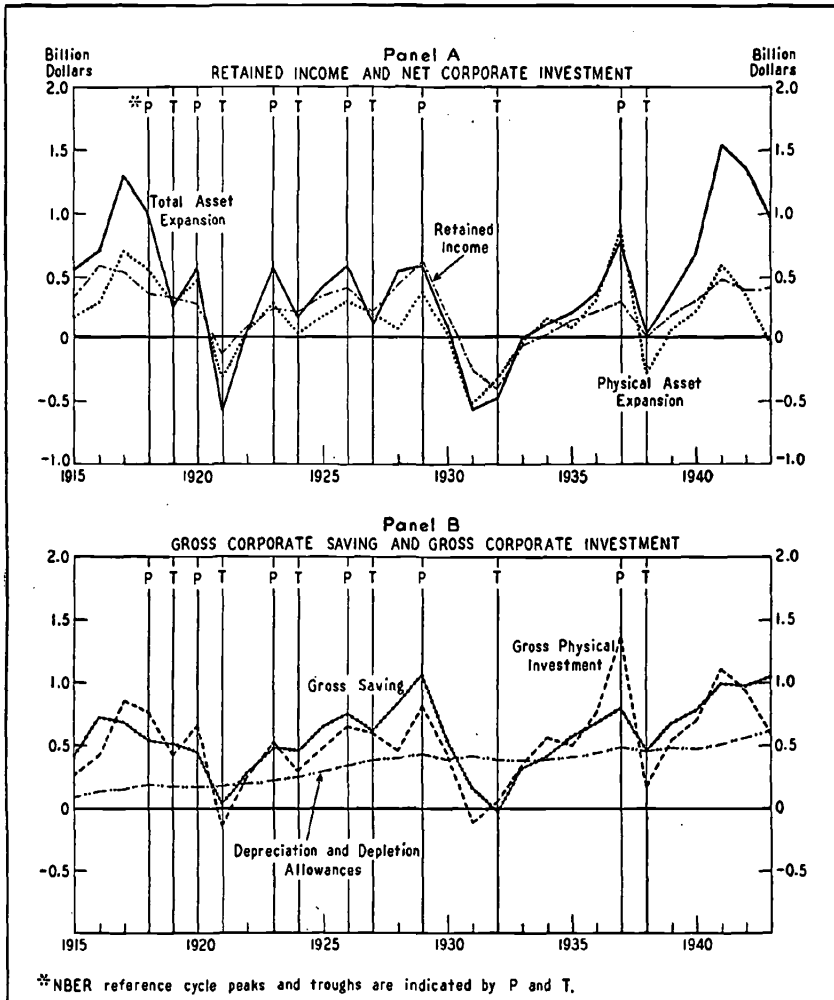
The behavior of large corporations was similar to that of all manufacturing and mining companies combined in that their rates of asset expansion and income retention followed a distinct cyclical pattern, that these changes conformed well to reference cycle turning points, and that no definite shift occurred over the years 1915-43 in the relative importance of internal and external sources of financing⁷ (Panel A, Chart 17).

In the first expansion period (1915-20) retained income supplied 56 percent of the funds used in total asset expansion and virtually all—97 percent—of the funds used in the expansion of physical assets. Thus,

⁶ A few exceptions to these generalizations may be noted. There was net dissaving during the expansion period 1933-37, and net release of external financing during the expansion period 1925-26; on the other hand, income was retained in the contraction year 1924, and external financing was absorbed on balance in the contraction period 1930-32.

⁷ The sample of 31-45 large companies, described in Appendix A, has been used for this analysis. As already mentioned in Chapter 4, page 27, this sample, as well as the sample of small- and medium-sized companies, includes only established concerns, whereas the aggregate data for all corporations include both newly organized and older firms. Size differences were not, therefore, the only factor responsible for differences of behavior observed in comparing all corporations with the sample groups.

Chart 17—CORPORATE SAVING AND ASSET EXPANSION, SAMPLE OF LARGE MANUFACTURING CORPORATIONS, 1915-43



Large manufacturing corporations depended mainly on retained income for financing asset expansion over the period 1915-43, with no evidence of persistent change in degree.

the financing of total asset growth required considerable recourse to the capital markets during these years by large corporations, but this was due mainly to their accumulation of financial assets. In the sense that this accumulation of financial assets represents a release of funds to the rest of the economy, it may be said that the net balance of external financing, or the net dependence of large corporations on external resources, amounted to only 3 percent of the expansion of their physical assets. Funds drawn from the outside came principally from the security markets and banks; the use of trade credit declined on balance.

The period 1922–30 differed from 1915–20 in several important respects. Retained income exceeded physical asset expansion by 73 percent, there being a substantial net release of external financing. The use of bank credit and of long-term funds was reduced, and only in the case of trade credit was there a net absorption of outside resources.

The period 1934–37 also has unique characteristics. During those years retained income provided for the same proportion of total asset expansion (49 percent) as of physical asset expansion, while external financing became a factor of major importance. It is important to note that external funds were obtained in 1934–37 mainly on a short-term basis; for the first time since the early twenties notes payable to banks increased by a substantial amount while cash balances were reduced. Furthermore, accrued liabilities (mainly tax accruals) became an important component of short-term financing in those years. Long-term financing provided for only a moderate part of the asset expansion.

During the period 1939–43, retained income once more assumed proportions comparable to those of the twenties, exceeding physical asset expansion in all years, except 1941 when there was a small net absorption of external financing. For the entire period, retained income amounted to 150 percent of physical asset expansion, as compared with 169 percent for 1922–29, and to 37 percent of total asset expansion, as against 84 percent in 1922–29. External financing was on a substantial scale during those five years, but the fact that an even greater amount of funds was used by corporations during these years for accumulating financial assets means that there was a net release of resources to other sectors of the economy to the extent of \$600 million.

Turning now to the periods of asset contraction, it is found that in 1921 there was net dissaving as well as net release of external financing. Substantial resources were released through the repayment of bank loans and the reduction of accrued liabilities (mainly taxes); the amount of

trade credit and long-term external funds in use was increased, but not sufficiently to offset the reduced use of the other types.

The period 1931–33 was likewise characterized by net dissaving and net release of external financing. As in 1921, bank debt and accrued liabilities were reduced while trade credit and long-term financing in use increased. An important difference, however, between the two contractions is found in the behavior of cash balances, which declined in 1921 but expanded considerably in 1931–33. The explanation seems to be that cash was utilized to a large extent in 1921 in the repayment of short-term debt, but that in 1931–33 reliance on short-term debt, notably notes payable to banks, had been so reduced that the conversion of other assets into cash soon virtually retired short-term obligations and thereafter produced increasing balances of cash.

Finally, the year 1938 differed from the other contraction years in two respects: large corporations incurred no dissaving and external resources were released on balance. As in 1931–33, bank debts and accrued liabilities were reduced while trade credit and long-term funds in use registered net increases. Cash balances were again accumulated on a substantial scale.

There are striking differences between the behavior of large manufacturing concerns and all manufacturing and mining corporations combined when the aggregate figures for the whole period 1923–41 are reviewed. Large corporations registered *income retention* to the extent of \$3.7 billion during this period, accompanied by a *net release* of almost \$1 billion in financial resources to other sectors of the economy; all companies combined, as stated in the preceding section, registered *net dissaving* and a *net absorption* of external financing (Table 5). In other words, large concerns retained almost \$1 billion more than was required for their net physical investment, while all manufacturing and mining companies combined financed their physical asset expansion entirely from external sources. On the other hand, large corporations and corporations of all sizes combined behaved similarly in that they exhibited no persistent change over the entire period in their degree of reliance on external versus internal funds.

Gross Corporate Saving and Investment

The depreciation accruals of large companies were much like those of all manufacturing and mining corporations combined, showing almost no response to cyclical changes in business conditions (Panel B, Chart 17).

Table 5—USE OF INTERNAL AND EXTERNAL FINANCING DURING
CYCLICAL EXPANSIONS AND CONTRACTIONS
Large Manufacturing Corporations ^a
(in millions)

Expansion and Contraction Periods	External Financing (Net Balance)			Retained Income	Net Physical Asset Expansion	Depre- ciation and Depletion	Gross Physical Investment
	Long- Term ^b	Short- Term ^c	Total ^d				
<i>Cyclical Expansion Periods:</i>							
1915-18	\$-258	\$210	\$-48	\$1,184	\$1,140	\$356	\$1,496
1920	171	-45	126	189	314	108	422
1922-23	50	-37	13	344	349	413	762
1925-26	-283	18	-265	772	500	628	1,128
1928-29	-574	-26	-600	1,054	454	830	1,284
1933-37	113	623	736	663	1,409	2,095	3,504
1939-43	-1,847	1,244	-603	1,797	1,197	2,656	3,853
<i>Cyclical Contraction Periods:</i>							
1919	200	-231	-31	225	188	101	289
1921	9	-123	-114	-85	-199	108	-91
1924	-31	-154	-185	223	35	239	274
1927	25	-41	-16	231	217	374	591
1930-32	83	-364	-281	-522	-808	1,193	385
1938	207	-482	-275	1	-270	457	187
Period 1923-41:	\$-1,323	\$369	\$-954	\$3,668	\$2,711	\$7,504	\$10,215
Period 1922-43:	\$-2,257	\$781	\$-1,476	\$4,563	\$3,083	\$8,885	\$11,968

^a 1915-21, National Bureau of Economic Research sample of 31 large corporations; 1922-43, National Bureau of Economic Research sample of 45 large corporations.

^b The sum of changes in paid-in equity and long-term debt less the sum of changes in securities held and miscellaneous investments and advances.

^c The sum of changes in short-term liabilities less the sum of changes in cash and receivables.

^d Net balance of external financing excludes some unallocated items. As a result, the sum of this balance and retained income differs slightly from the amount of net physical asset expansion.

Consequently, the observed cyclical fluctuations in gross savings are accounted for almost exclusively by the retained income component of the total. The depreciation series for large concerns, however, exhibits a distinct upward trend not observable in the series for all companies. This trend is largely accounted for by the growth of depreciable fixed assets owned by the sample concerns; it may also be due, in part, to changes in the rates of depreciation accruals over the period covered.

In general, retained income accounted for a larger proportion of gross

savings for large manufacturing corporations than for all manufacturing and mining corporations combined; yet the aggregate amount retained by large concerns over the period 1922-43 was only 51 percent of the aggregate amount of depreciation.

And finally, the absorption of external financing was negligible compared with the gross savings of large manufacturing concerns. As mentioned above, these companies released funds, on balance, to the rest of the economy over the period 1922-43. There was a net absorption of external financing in some years, but even then the external sources provided, in all but one year, for only a minor fraction of the total amount of resources used for gross physical investment. The exceptional year is 1937, when the net balance of financing drawn from external sources was about comparable in size with the gross amount of corporate saving.

*Internal and External Financing During
Cyclical Expansions and Contractions*

A pattern of cyclical changes in physical investment and in the internal and external components of new financing is less distinct for large manufacturing corporations than for all manufacturing and mining companies combined. Physical assets of the former increased in the expansion phases of all cycles covered by the data but failed to behave uniformly in the contraction phases. Physical assets expanded in the relatively mild cyclical contractions of 1919, 1924, and 1927 (at a lower rate than during expansions) though they contracted in the more severe contractions of 1921, 1930-32, and 1938. Income was retained in all expansion phases and during the milder contractions (1919, 1924, and 1927), but there was net dissaving on balance in the more severe contractions of 1921 and 1930-32, and a negligible amount of saving in 1938.

As Table 5 shows, the expansion phases of cyclical fluctuations occurring between 1915 and 1943 were not uniformly characterized by either net absorption or net release of external financing. There was a positive net balance of external financing during the expansions of 1920, 1922-23, and 1933-37, but a release, on balance, of external financing during the expansions of 1915-18, 1925-26, 1928-29, and 1939-43. In contrast, the contraction phases of the period were characterized uniformly by net release of external financing.

The behavior of large manufacturing corporations with respect to their increased or decreased use of short-term versus long-term funds in the different phases of cyclical fluctuations is somewhat mixed for the years

1915-43. Uniformity of behavior is found for the contraction phases: on balance, short-term financing was released and long-term financing was absorbed; but, since the absorption of long-term funds was invariably less than the release of short-term funds, there was, on balance, a reduction in the use of external financing. Among the expansion phases, however, there were instances when a net absorption of long-term financing was accompanied by a net release of short-term financing and other instances when the opposite was the case.⁸

SMALL MANUFACTURING CORPORATIONS⁹

Net Asset Expansion, Retained Income, and External Financing, 1919-43

Like large concerns, small- and medium-sized manufacturing corporations have experienced wide cyclical fluctuations in asset expansion and retained income but a notably smaller degree of conformity to the reference cycle turning points than the large companies (Chart 18, Panel A).¹⁰ Reflecting a much less prosperous recent history than large corporations, the rates of asset expansion and retained income of small companies moved in a generally downward trend over the entire period 1919-43. As to the relative importance of retained income and external financing, the data for both groups of corporations are similar in that no clear tendency is observed for one component to gain or lose relative to the other.

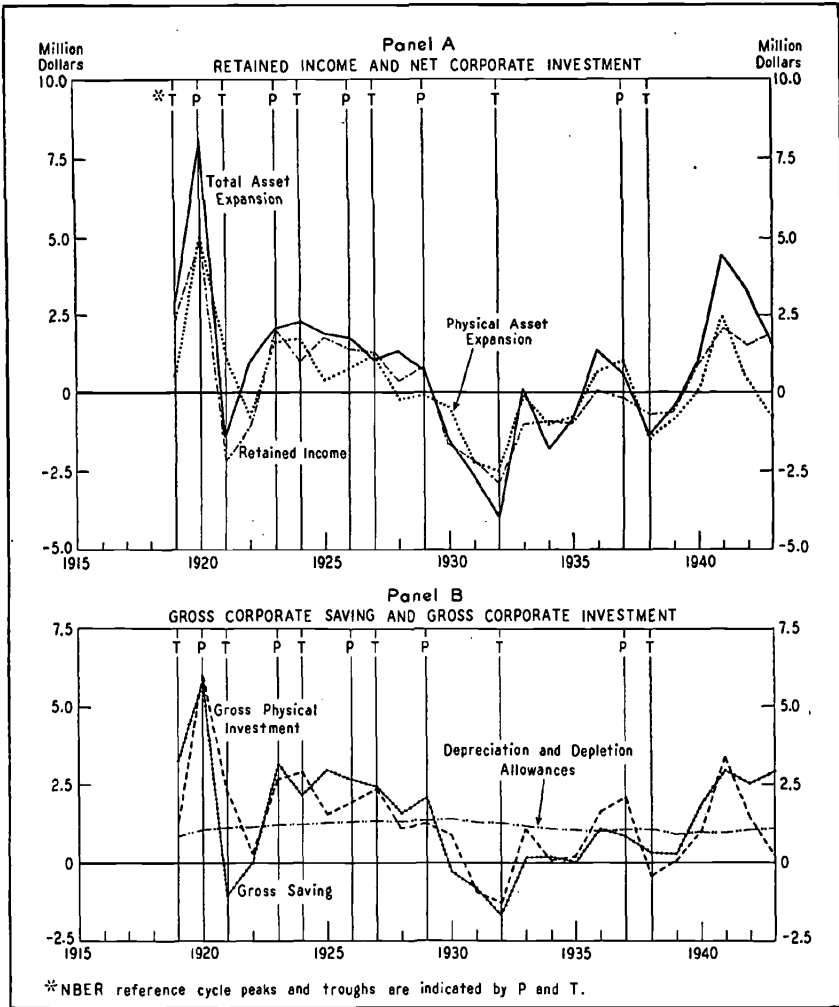
Both total asset expansion and physical asset expansion of small companies were highest in the early years, 1919-20, when retained income amounted to 67 percent of total asset expansion; but the savings of these concerns in this two-year period exceeded physical asset expansion by 34 percent, the excess being released to other sectors of the economy through the accumulation of financial assets.

⁸ It may appear surprising that a net absorption of long-term funds by large corporations is found in all contraction phases, but in only three out of seven expansion phases. The reason is that, although the amount of new security issues was much greater in expansions than in contractions, large companies acquired large amounts of marketable securities in expansions, and these acquisitions in some cases more than counterbalanced new issues, the result being a net release of long-term funds. While the amount of new issues was much smaller in the contraction phases, purchases of marketable securities were reduced to an even greater extent, with the result that there was a net absorption of long-term funds.

⁹ A sample of 73 Wisconsin companies, described in Appendix A, has been used for this analysis.

¹⁰ It is interesting to note that, unlike the data for large concerns, the physical asset expansion series for Wisconsin companies responded with a one-year lag to the cyclical contractions of business in 1921, 1924, and 1927. The Wisconsin series, however, responded to later cyclical contractions (1930-32 and 1938) without a lag.

Chart 18—CORPORATE SAVING AND ASSET EXPANSION, SMALL- AND MEDIUM-SIZED WISCONSIN CORPORATIONS, 1919-43



Small- and medium-sized corporations exhibited no change over the period 1919-43 in the extent of their reliance on internal funds for financing asset growth.

After the cyclical contraction of 1921, total assets increased continuously through 1929. Increases in physical asset expansion, however, lasted a shorter period—1923–27. Retained income exceeded physical investment in most of the years 1923–29, and the use of external financing was, on balance, reduced over that period.

The thirties were characterized, on the whole, by contraction rather than expansion of assets; only in the years 1936 and 1937 did total and physical assets increase. With the exception of 1936, when a small amount of income retention took place, net dissaving occurred in all years. External financing was absorbed, on balance, during the contraction years 1930–35 as well as during the expansion years 1936 and 1937, but there was a net release of financial resources to other sectors of the economy, and substantial net dissaving, in the contraction years 1938–39.

Finally, the years 1940–43 were characterized by pronounced expansion of both physical and financial assets and, for the first time since the twenties, by income retention on a large scale. Retained income was approximately three times as great as physical asset expansion during those four years, permitting a substantial reduction, on balance, in the use of external financing.

Taking a general view of the 1923–41 period, certain differences between the behavior of small- and medium-sized corporations and those of large size may be noted. Thus, the small companies registered a net contraction of physical assets over this period, as compared with the net expansion of the large concerns (Table 6). Income was retained in both cases, but it was smaller, on a relative basis, for small- and medium-sized concerns than for large corporations.

Gross Corporate Saving and Investment

As with large companies, the cyclical fluctuations in gross saving of small- and medium-sized concerns are almost entirely accounted for by fluctuations in income retention; depreciation accruals were remarkably stable over the entire period 1919–43 (Panel B, Chart 18). Though retained income was greater than depreciation in some years, it amounted to only a small fraction of depreciation accruals for the entire twenty-five-year period, owing to the net dissaving which occurred for a considerable number of years (mainly during the thirties).

The amount of funds drawn by small- and medium-sized manufacturing companies from external sources exceeded their gross saving in some

Table 6—USE OF INTERNAL AND EXTERNAL FINANCING DURING
CYCLICAL EXPANSIONS AND CONTRACTIONS
Small- and Medium-Sized Manufacturing Corporations ^a
(in thousands)

Expansion and Contraction Periods	External Financing (Net Balance)			Retained Income	Net Physical Asset Expansion	Depre- ciation and Depletion	Gross Physical Investment
	Long- Term ^b	Short- Term ^c	Total ^a				
<i>Cyclical Expan- sion Periods:</i>							
1920	\$-294	\$323	\$29	\$4,966	\$5,009	\$1,041	\$6,050
1922-23	2,837	-2,973	-136	898	760	2,299	3,059
1925-26	-1,988	-53	-2,041	3,058	1,018	2,488	3,506
1928-29	-539	-847	-1,386	1,099	-294	2,613	2,319
1933-37	2,198	701	2,899	-3,126	-298	5,327	5,029
1939-43	-4,215	236	-3,979	5,562	1,144	4,960	6,104
<i>Cyclical Contraction Periods:</i>							
1919	-708	-1,182	-1,890	2,263	370	863	1,233
1921	1,451	1,965	3,416	-2,122	1,267	1,055	2,322
1924	1,148	-453	695	944	1,640	1,188	2,828
1927	-86	67	-19	1,204	1,176	1,263	2,439
1930-32	-906	2,355	1,449	-6,671	-5,170	3,841	-1,329
1938	-213	-497	-710	-703	-1,446	1,047	-399
Period 1923-41:	\$-830	\$613	\$-217	\$26	\$-294	\$21,797	\$21,503
Period 1919-43:	\$-1,315	\$-358	\$-1,673	\$7,372	\$5,176	\$27,985	\$33,161

^a National Bureau of Economic Research sample of 73 Wisconsin corporations.

^b The sum of changes in paid-in equity and long-term debt less the sum of changes in securities held and miscellaneous investment and advances.

^c The sum of changes in short-term liabilities less the sum of changes in cash and receivables.

^d Net balance of external financing excludes some unallocated items. As a result, the sum of net balance and retained income differs slightly from the amount of net physical asset expansion.

early years and again in 1936-37; but, for the most part, external resources were a minor component of the total amount of resources used for gross physical investment, and, for the entire period 1919-43, a net release of external financing was registered by these concerns.

Internal and External Financing During Cyclical Expansions and Contractions

The financial behavior of small manufacturing corporations shows little evidence of a definite cyclical pattern. Physical assets were accumulated

in four out of six expansions and in four out of six contractions. From 1919 to 1927 accumulation of physical assets characterized both expansions and contractions, while during the entire second part of the period—1928–43—net physical disinvestment prevailed.

Income was retained in all expansions but one (1933–37) and in three out of six contractions (1919, 1924, and 1927). Net dissaving occurred in the other three contraction phases.

External financing was, on balance, released in four out of six expansions (1922–23, 1925–26, 1928–29, and 1939–43) and in three out of six contractions (1919, 1927, and 1938). These reductions generally occurred in the long-term component of external financing, in both expansions and contractions, while the short-term component followed no consistent pattern of behavior.

SUMMARY OF CONCLUSIONS

1. The importance of retained income, as a source of financing the net physical investment of manufacturing corporations, fluctuated widely and somewhat erratically over the years studied, but there is a tendency for both internal and external financing to be absorbed in periods of heavy investment.

2. All manufacturing and mining corporations dissaved on balance over the period 1923–41, drawing on external sources to finance their entire net physical investment. In contrast, large corporations saved more than was necessary to finance their net physical investment and were able to release resources, on balance, to the rest of the economy. The small- and medium-sized concerns studied here had an entirely different financial history. In sharp contrast to large concerns, the physical assets of small companies contracted. They registered a small amount of income retention, but reduced on balance the amount of external financing used.

3. A study of corporate behavior in periods of cyclical expansion and contraction shows that all manufacturing and mining companies combined invested in physical assets, retained income, and absorbed external financing during expansion phases and that they disinvested in physical assets, dissaved, and released external financing on balance during contraction phases of business cycles. The cyclical pattern, however, is much less distinct, particularly with respect to external financing, for the samples of large- and of small- and medium-sized companies. Large com-

panies reduced the use of external financial resources in all contraction phases, but their behavior was not uniform in expansion phases. Small companies absorbed external funds on balance in some contractions as well as in some expansions, but net releases of financial resources are also found in some expansions and some contractions.