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Chapter Title: Financing Cash Requirements

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# 1

# Financing Cash Requirements

The position of the company treasurer [1] is unique in that whereas other officers are accountable for sales and production goals they themselves set, the treasurer is responsible for keeping the company solvent while paying the bills others engage for. Normally, the resale of assets would provide enough cash for their replacement; but on the cyclical upswing, with its rapid accumulation of earning assets, receipts from customers are exceeded by expenditures, and the treasurer must finance the deficits by recourse to the money market. Real drama, therefore, lies in the play between the company and the money market, with the company's alternating needs for and surfeits of cash providing the elements of motivation.

## Channels of Cash Flows

The cyclical pattern of a company's contact with the money market has its primary origins in income-producing transactions. If total transactions are screened for those involving cash only, and then are classified under the following headings, it will be possible to follow the flow of cash through these channels as the business cycle unfolds:

| *Business transactions* | *Money-market transactions* |
|---|---|
| Operating budget | U.S. and other marketable securities |
| Receipts from customers | Notes payable, short-term |
| Production payments | Notes payable, long-term |
| Income tax payments | Bonds |
| Dividend payments | Preferred stock |
| Capital budget | Common stock |
| Investments and advances | |
| Expenditures on plant | |
| Other nonoperating assets | |

[1] This title is meant to designate the *function,* rather than to indicate the officers or committees who, in any instance, may perform the actual services usually regarded as "financial."

The primary division into business transactions and money-market transactions is intended to illuminate the functional role of the treasurer, who, though he may participate in investment decisions, is not the one primarily charged with the responsibility for general business strategy and management of assets. The management of the company's relations with the money market, however, is solely his responsibility and is of little interest to the others so long as things go well. In this light he takes the middleman's role, standing between the business managers and the money market, informed of his tasks by the former and vetoing their plans only upon the unfavorable response of the latter.

Business transactions may be further classified into operating and capital budget categories in order to show the relative importance of each class of transactions in determining the company's need for funds or, as the case may be, its ability to return funds to the money market. In the operating budget are cash receipts from customers plus all cash transactions having to do with the acquisition of goods and services on current account—payments to the factors of production for services rendered (i.e. rent, wages, interest, dividends) and payments to vendors for services or materials destined for delivery to customers. All these payments except income taxes and dividends are combined under the title "production payments." The capital budget category includes expenditures for noncurrent assets: investments and advances to subsidiaries or other companies; land, plant, and equipment; and other permanent or semipermanent assets.

Though it has the advantage of being closely related to practice, the above classification system is not without some doubtful cases, the disposition of which as made here would not be defended too vigorously. One such case is the treatment of dividends as an operating transaction.[2] Another is the classification of investments and advances. They were included among business transactions on the ground that they were entered into primarily to obtain sales outlets, manufacturing facilities, or sources of supply; and they were excluded from the money-market section on the ground that they constitute an advance payment for goods or services.

In addition to these classification problems, an ambiguity of unknown magnitude lies in transactions in United States and other marketable

[2] The division of transactions into business and money-market categories may encounter some practical difficulties, but it is based upon a fairly clear distinction. Money-market transactions are intended here to mean those in which money principal is received or returned. The subsequent factor-cost payments (interest, dividends), on the other hand, are registered as operating expenditures on business account. It may be further noted that the money market as we view it by the nature of our data, is broader than those which are technically described as "organized," e.g. the bill market, the capital market, etc.

securities, which come under the money-market heading. Companies often purchase tax notes (Treasury savings notes, Series C and D) and surrender them to the collector on payment dates. Clearly, such purchases are not money-market transactions but merely prepayments of taxes.

The cash transactions of a large industrial corporation during 1948 and 1949 are given in Table 1, which reports the company's experience as follows:

For 1948, in the operating area, receipts from customers less the payments for production, income taxes, and dividends resulted in an excess of payments over receipts amounting to $4,296,000. Added to this net outflow of cash was that for plant expenditures in the capital budget area. Thus, the total business transactions (payments, $323,285,000; receipts, $311,822,000) obliged the treasurer to cover the deficit, $11,463,000, either by drawing down his cash balance or by resorting to the money market. Anticipating the need of more, not less, cash he borrowed $19 million (net), which, after covering the deficiency arising from business transactions, added $7,537,000 to his bank balance. The net borrowing of $19 million resulted from current bank loans of $15 million, a term loan of $10 million, and the net purchase of $6 million of United States securities.

In 1949 a net cash surplus resulted from business transactions. When bookings fell below the previous year and unfilled orders dropped 34 per cent, operations brought in net receipts of $31,418,000, which, after covering plant expenditures, etc., left $27,025,000 to be disposed of. Of this sum the treasurer placed $20 million in government securities, leaving the remainder in cash. There was a small amount of bank borrowing, probably by a subsidiary, and the short-term loan agreement was redrawn to convert the $15 million current debt to term loans; but these transactions had only a minor effect on the net cash flow.

## Counterflow between the Corporation and the Money Market

With a perfectly frictionless access to the money market, the treasurer might, if it seemed appropriate to do so, never vary his cash balance, but merely offset an excess of business payments or receipts by borrowing or repaying. As a matter of fact, this is roughly what does happen. The alternating surpluses and deficits in the business-transaction area produce a counterflow of cash toward and away from the money market, giving a seesaw effect. When the business end of the board goes down in a cash deficit, the money-market end of the board rises in borrowing. And so with the reverse. The treasurer's cash balance is like an adjustable fulcrum,

TABLE 1

TRANSACTIONS AFFECTING CASH, ALLIS-CHALMERS MANUFACTURING COMPANY, 1948 AND 1949
(thousands of dollars)

| | 1948 | | 1949 | |
|---|---|---|---|---|
| | *Cash Payments Dr.*[a] | *Cash Receipts Cr.*[a] | *Cash Payments Dr.*[a] | *Cash Receipts Cr.*[a] |
| *Business transactions* | | | | |
| Operating budget | | | | |
| Receipts from customers | | 311,799 | | 341,417 |
| Production payments | 307,537 | | 292,866 | |
| Income tax payments | 3,365 | | 10,934 | |
| Dividends | 5,193 | | 6,199 | |
| Subtotals | 316,095 | 311,799 | 309,999 | 341,417 |
| Subtotal difference | 4,296 | | | 31,418 |
| Capital budget | | | | |
| Investments and advances | 0 | | 0 | |
| Expenditures on plant | 7,190 | | 4,115 | |
| Other nonoperating assets | | 23 | 278 | |
| Subtotals | 7,190 | 23 | 4,393 | 0 |
| Subtotal difference | 7,167 | | 4,393 | |
| Total business transactions | 323,285 | 311,822 | 314,392 | 341,417 |
| Difference | 11,463 | | | 27,025 |
| *Money-market transactions* | | | | |
| U.S. and other marketable securities | 6,000 | | 20,000 | |
| Notes payable, short-term | | 15,000 | (15,000) | 453 |
| Notes payable, long-term | | 10,000 | | (15,000) |
| Bonds | | 0 | | 0 |
| Preferred stock | | 0 | | 0 |
| Common stock | | 0 | | 0 |
| Total money-market transactions | 6,000 | 25,000 | 20,000 | 453 |
| Difference | | 19,000 | 19,547 | |
| *Total payments and total receipts* | 329,285 | 336,822 | 334,392 | 341,870 |
| Effect on cash | | 7,537 | | 7,478 |

SOURCE: Annual reports of the company, and Tables 3 and A-2.

[a] The system of notation to be followed throughout the text calls for payments to be entered in the debit column and receipts in the credit column.

to be moved up or down to overcome the friction of imperfect money markets, or in response to managerial caution born of uncertainty.

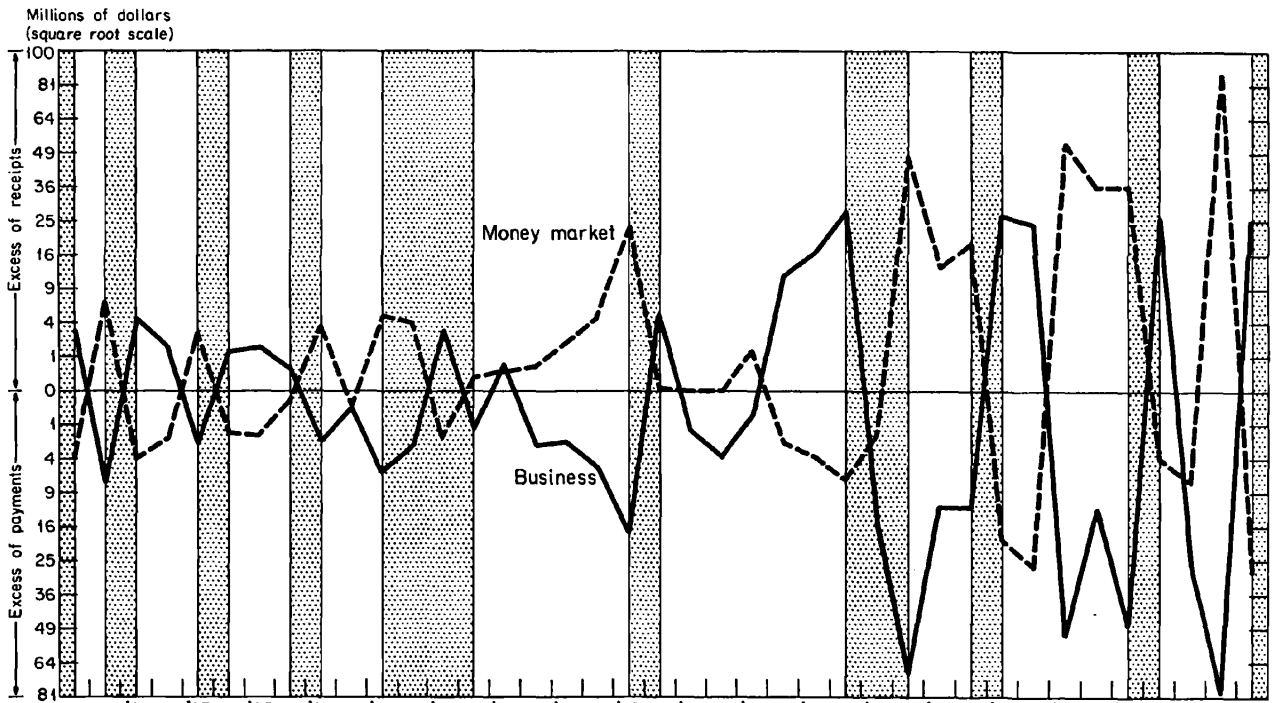
An examination of historical data, first for a single company and then for a group, will reveal this seesaw process at work. The Allis-Chalmers Manufacturing Company has been selected for the single-company studies because its experience is probably representative of heavy industry and its published reports are available for many years. The cash transactions of Allis-Chalmers for each year from 1919 through 1957 are shown in Table 3, at the end of this chapter. The counterflow of cash in business and money-market channels during this period is shown on Chart 1.[3] Business transactions are represented by the solid line, an excess of receipts over payments being plotted above zero and an excess of payments over receipts below it. Flow of cash from and to the money market is represented by the broken line, with net borrowing shown above zero and net repayment below. In almost every year of the 1919-57 span the seesaw effect is clearly evident. An excess of business payments is accompanied by drafts upon the money market; an excess of business receipts produces, in most instances, a return of cash to the financial sector.

General confirmation of the seesaw effect may be sought by reference to Chart 3, which describes the experience of a sample of large corporations. Here again, the excess of business expenditures is generally offset by calls upon the money market, and the excess of business receipts is accompanied by the return of cash to the money market. Repayments in the years when cash receipts on business account exceed payments are not as consistent, however, as are borrowings in the years of excess business expenditure. One reason for this difference is obvious. For an individual company, in most years when business expenditures exceed receipts a call upon the money market is the enabling act for the excess payments. An excess of receipts, on the other hand, confronts the treasurer not with arithmetic necessity but, rather, with a choice of holding cash or of returning it. Here, a thousand motives converge with the elements of surprise and uncertainty. Yet the selected course of action is persistently that of returning the surplus to the market, through either the purchase of securities, the repayment of debt, or the retirement of stock. There are, of course, strong managerial reasons for return if possible. No treasurer wants to be caught with a towering cash balance; it is fair game for customers, employees, stockholders, and tax collectors acting under Section 102 of the Internal Revenue Code. Moreover, the high cash condition generally comes about through a redundancy and, hence, liquidation of earning assets; thus, the most economical thing to do is to repay the debt

[3] The shaded areas of Chart 1 and others in the text represent the contraction phases of business cycles. For the National Bureau reference cycle dates see note 6, below.

## CHART 1

Flow of Cash on Business and on Money-Market Accounts, Allis-Chalmers Manufacturing Company, 1919-57

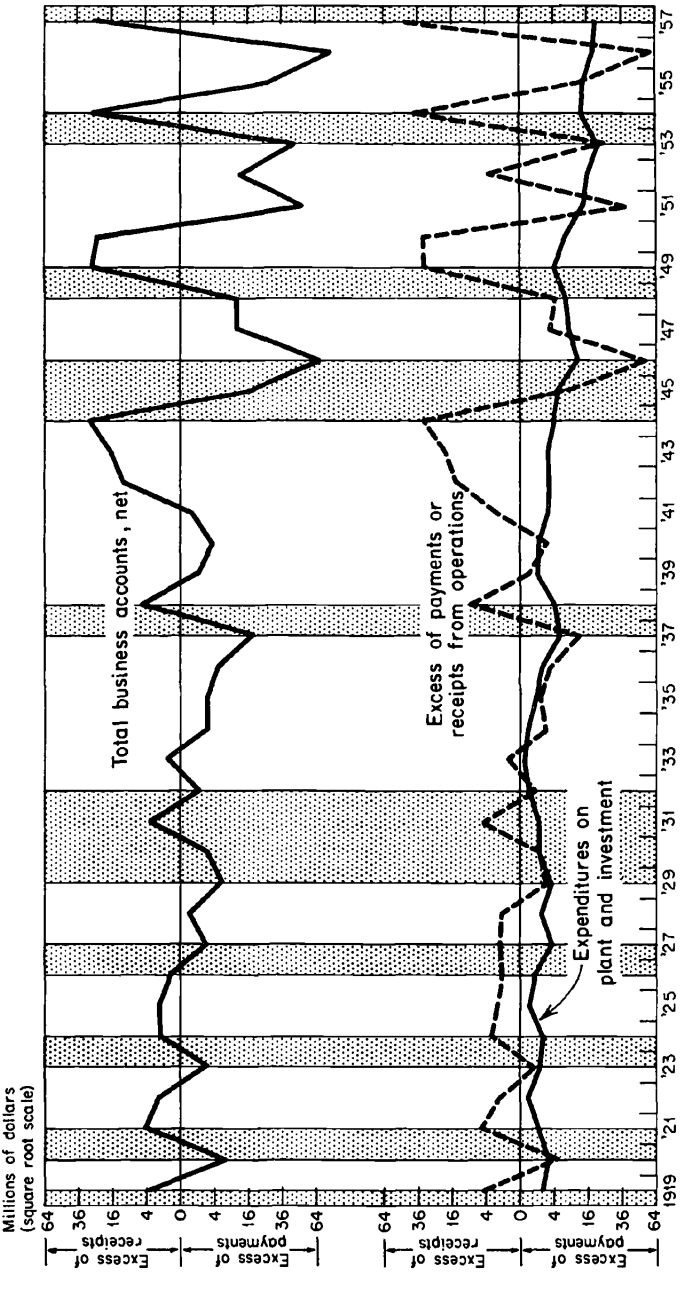



SOURCE: Table 3.

Shaded areas represent NBER business cycle contractions; white areas, expansions.

CHART 2

Flow of Cash on Operating Budget, Capital Budget, and Total Business Accounts, Allis-Chalmers Manufacturing Company, 1919-57




SOURCE: Table 3.
Shaded areas represent NBER business cycle contractions; white areas, expansions.

which provided the assets in the first place. This act not only gets rid of the cash (which earns no return for the stockholders), but also removes the jeopardy that lies in the nearest financial maturity, and avoids the interest cost of the debt.

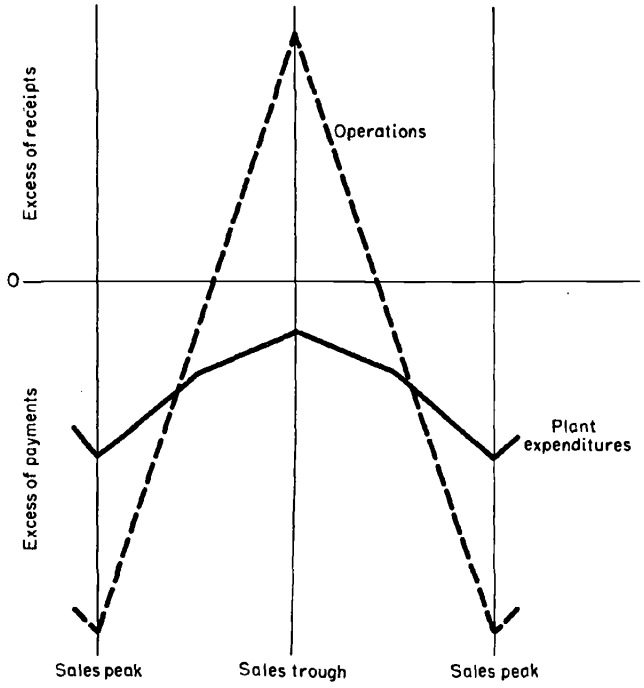
## Cyclical Fluctuations in Cash Flows

The volume and direction of these counterflows, and the relative force of the currents feeding into them, may be illuminated by relating their course to changes in business generally. In the examination of both single-company and group data, the curve for business transactions and its two components (operating and capital budget transactions) will be observed first, since the motive force in the counterplay between corporation and money market comes from this area. Afterwards, the curve for aggregate money-market transactions, and then those for its components, will be studied.

### *One Company's Experience, 1919-57*

The sales (billings) of Allis-Chalmers do not coincide precisely with all measures of the business cycle. For instance, they generally lag behind by one year at the troughs in the Federal Reserve index of industrial production, and show no evidence of the 1924 and 1927 contractions. Since the production period is substantial, the rate of activity is probably guided more by new orders or order backlogs than by billings. But short of demanding absolute congruence, one can observe clearly the effect of the business cycle on the activity of the company. The curve for cash moving to and from the company in business transactions shows major bursts of excess payments in the peak years of 1920, 1929, and 1937, in 1946, when the company resumed civilian production, and in 1951 and 1956 (Chart 2). Excess receipts occur in the sharp contraction years of 1921, 1938, 1949, and 1954, and in 1931 (rather than 1930), when the order backlog dropped. During the war years this company, like others engaged in war production, had excess receipts, because the government financed operations largely through progress payments and advances.

The two components of the net flow of cash on business account (operating transactions plus capital budget transactions, i.e. expenditures on plant and investments) offer an interesting study in cyclical behavior. Repetitive patterns can be observed, and it may be permissible to generalize these patterns in the following diagram:




The approach to and recession from major turning points is gradual for the plant expenditure curve. In contrast, the operations curve snaps violently from the deep deficit of the boom to the huge excess receipts of the early contraction, a movement shown in 1920-21, 1923-24, 1929-31, 1937-38, 1946-49, 1953-54. From peak receipts in the first sharp contraction year, it moves irregularly, though persistently, toward the deep deficits of the next boom, i.e. in 1921-23, 1924-29, 1931-37, 1949-51, and 1954-56. Exactly what its course is as the cycle trough is approached and passed does not appear clearly, because on an annual basis the first contraction year and the trough year are often one and the same. In those depressions in which they are not, excess receipts appear in the company trough years, 1922 and 1933. Perhaps with quarterly data the experience at other trough years could be determined also.

The question was raised a moment ago whether operating or nonoperating requirements gave the stronger stimulus in determining whether cash was to be drawn from the money market or returned to it. It may be argued that operations provide the marginal determinant, on the grounds that the operations curve, in its passages from excess of receipts to excess of payments and back again, more nearly corresponds to the

total business curve, both in direction and in reach above or below the zero line, than to the gentler capital expenditure curve, which stays in the net payment area. The reasons for the abrupt changes in the curve of net payments (receipts) in operations should be considered briefly.

On the business upswing, production rates are stepped up in response to new orders or to higher sales forecasts. Conventional turnover rates applied to higher sales or to sales forecasts result in larger inventories. Standard collection periods applied to higher sales result in larger receivables.[4] Speeded-up production payments coupled with laggard collections may result in cash deficits if the rate of increase in operations is steep (as in the company peak years of 1920, 1923, 1929, 1937, 1946, 1951, and 1956). At other times, when the growth is not so steep (for example, from 1924 to 1928), the race between collections and production payments may fall to either.

On the downswing, receipts in excess of expenditures might be expected. Production rates are cut back to adjust inventories to levels consistent with lower sales or sales forecasts. Lower sales diminish receivables. Hence, a process develops where more is collected than this year's sales while less is produced and paid for. The sharper the downturn and the higher the level from which the drop begins, the greater will be the accumulation of excess receipts, as is shown by Allis-Chalmers' experience in 1921, 1931, 1938, and 1949. What happens in a long contraction is not easy to generalize, although it is possible that collections may tend to outstrip operating payments all the way into the first recovery year; and as recovery sets in the gap may become narrowed and then reversed to a deficit as the pace of expansion quickens.

As was evident from Chart 1, the curve showing the excess of payments or receipts on business account tells generally what to expect in net cash movement to and from the money market. Cash was returned to the money market in each year in which Allis-Chalmers had excess receipts, except in 1933 and 1938. In 1933, excess receipts were small; and the distribution of a few shares of common stock had no real financing implications. In 1938, the company simply did nothing with its excess cash receipts. In 1939 and 1940, the company made excess expenditures by drawing upon

[4] It has long been customary to look upon noncash charges in the income account as sources of funds which may be disposed for any corporate purpose. A study of the fluctuating gap between sales and collections will show that this view is subject to modification according to the phase of the business cycle in which the observed experience takes place. Sales revenue locked up in receivables is enforced investment. Cash thus uncollected cannot be disposed by choice. Increments in such frozen assets always take place on the upswing, just when the pressure for plant expenditures is greatest. On the downswing, the process is reversed and cash is unlocked; but by then the plant investment pressure is off, too.

its 1938 cash balance and did not have to tap the money market at all. In 1945, the company could again make excess business expenditures and, in addition, return cash to the market out of its 1944 balance; thereafter, however, it had to go into the market to cover excess payments. The same thing happened in 1955. With these exceptions, the reciprocal play between the money market and transactions on business account obtained throughout the period. And in the curve showing net cash flow to and from the money market, major booms and contractions are reflected faithfully, except in the defense period.

## Cyclical Behavior of Cash Flows for a Group of Large Manufacturing Companies

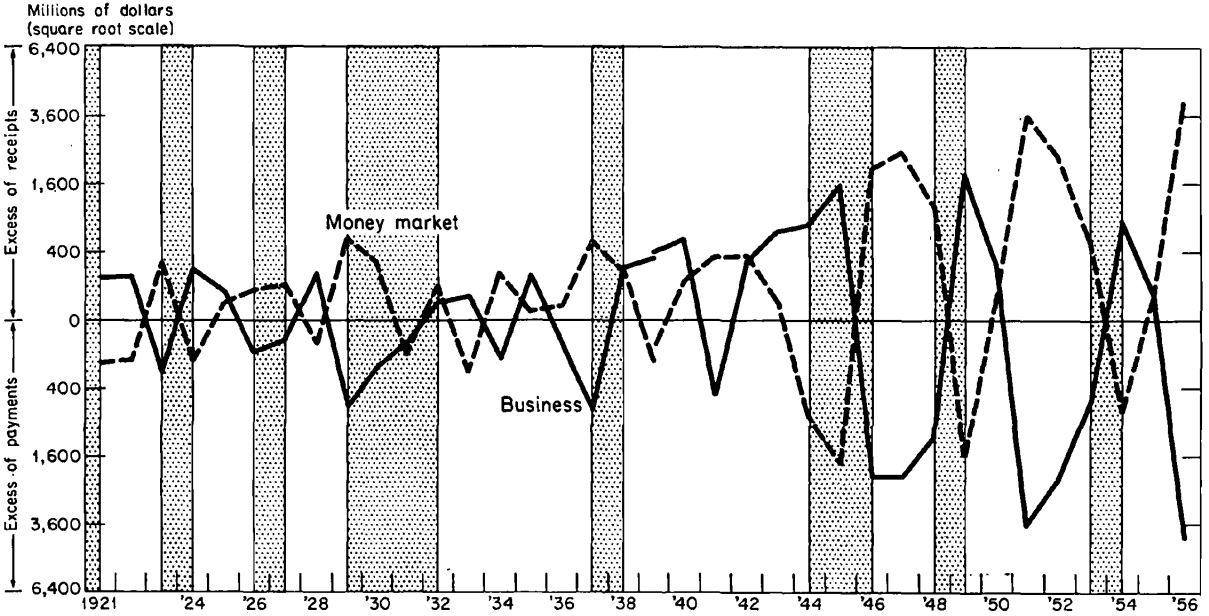
We turn next to the cyclical behavior of the cash flows of large corporations taken in the aggregate. For this purpose we use two samples, one, prepared by the National Bureau of Economic Research, covering 1921-39, the other, prepared by the Board of Governors of the Federal Reserve Board (FRB), covering 1939-55. We have chosen 1939 as the least disruptive date for the terminus of one series and the beginning of the other, and on this date the figures merely overlap with no attempt at jointure on our part.

The NBER sample covers 84 large companies in the following major classifications: automobile and truck, 7; building material and equipment, 8; chemicals, 7; food, 6; iron and steel, 8; machinery, 14; meatpacking, 4; petroleum, 13; rubber, 6; textiles, 7; tobacco, 4. The statements of the annual receipts and payments of cash by this group of companies appear in Table A-10 and comprise the 1921-39 data for Chart 3.

The FRB regularly compiles financial data for 295 large corporations, of which 198 are manufacturing companies. The distribution of companies in the latter group (the one we use) is as follows: food, 30; tobacco, 4; rubber, 4; petroleum, 23; chemicals, 32; iron and steel, 18; nonferrous metals, 14; machinery and electrical equipment, 46; automobiles, 9; other transportation equipment, 18. The financial statistics include the balance sheets and the following selected items from the income accounts: sales, depreciation, net income before and after federal income taxes, and dividends. American corporate history since 1939 is characterized by the incurrence of tremendous income tax liabilities; and the ambiguities, referred to earlier, arising out of the purchase of U.S. tax notes and other Treasury obligations plague the analyst with a truly insoluble problem. *When* did the tax payment take place? In legal terms, the event occurred on the settlement date; and it is this interpretation which governs the statement of cash receipts and payments for both the FRB sample, 1939-55

## CHART 3

### Flow of Cash on Business and on Money-Market Accounts, Large Manufacturing Corporations, 1921-56




SOURCE: Tables A-10 and A-11 (lower panel).
Shaded areas represent NBER business cycle contractions; white areas, expansions.

(as given in the upper panel of Table A-11), and the NBER sample, 1921-39.

But from the point of view of practical financial management the *payment* takes place when the treasurer converts cash to U.S. securities, thus voluntarily placing himself on a de facto "pay-as-you-go" basis.[5] Thus, on the government side, the Treasury receives the tax dollars currently as the taxes "accrue," while the Internal Revenue Service receives only old, receipted "tax bills" as the tax notes are surrendered in lieu of cash.

In brief, the dilemma reduces to a matter of choosing whether to say that tax cash went out when the securities were purchased or when they were surrendered. Adopting the first view, an alternative statement of cash receipts and payments was made up (for the FRB sample only, 1939-55) in which the reserve for federal income taxes has been offset by U.S. securities held against it; and this statement is given in the lower panel of Table A-11. It is this portion of the table that is plotted on Chart 3 and forms the basis of our discussion in the text. This choice was made for several reasons, not the least of which was that the resulting picture more nearly corresponds with that of the business cycle.

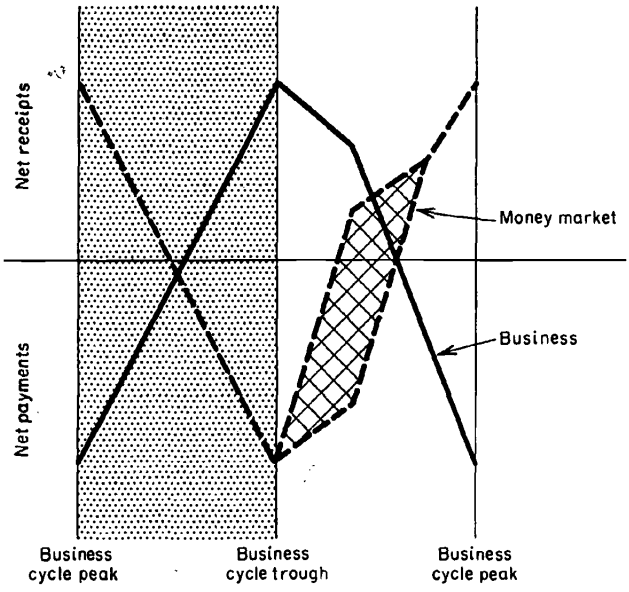
A study of Chart 3 shows that the curves, while mindful of the business cycle turning points,[6] clearly reveal a repetitive pattern as their successive cycles unfold: the heavy solid line depicting business payments (receipts) shows net expenditure of cash at prosperity peaks and net gain of cash at depression troughs; the light broken line, representing the corporations'

[5] Indeed, in offering the annual report to stockholders, it has been the frequent practice of corporations to state the tax liability net of U.S. securities owned and held in anticipation of the settlement, showing, of course, the amount of securities so held. On this point, *Accounting Research Bulletin #43* of the American Institute of Accountants states that the deduction of U.S. Treasury securities from tax liabilities, "although a deviation from the general rule against offsets is not so significant a deviation as to call for an exception in an accountant's report on the financial statements" (H. A. Finney and H. E. Miller, *Principles of Accounting, Intermediate,* 5th ed., Englewood Cliffs, N. J., 1958, p. 418).

[6] The National Bureau monthly reference dates of business cycles during the span of years covered by this paper are given below. Calendar-year dates, used throughout this paper, are shown in parentheses where they differ from the years in which the monthly date occurs.

| *Trough* | *Peak* | *Trough* |
|---|---|---|
| Apr. 1919 | Jan. 1920 | Sep. 1921 |
| Sep. 1921 | May 1923 | June 1924 |
| June 1924 | Oct. 1926 | Nov. 1927 |
| Nov. 1927 | Aug. 1929 | Mar. 1933 (1932) |
| Mar. 1933 (1932) | June 1937 | June 1938 |
| June 1938 | Feb. 1945 (1944) | Nov. 1946 |
| Oct. 1946 | Nov. 1948 | Nov. 1949 |
| Oct. 1949 | July 1953 | Aug. 1954 |
| Aug. 1954 | July 1957 | Apr. 1958 |

relationship to the money market, shows substantial intake of cash at business peak and repayment in depression. The reciprocal patterns may be roughly generalized in the following diagram.




Excluding 1942-46 inclusive, when corporations could not be expected to behave normally, the correspondence of this pattern to the movement of five and one-half business cycles, 1921-54, as measured by the National Bureau's index of conformity, is 100 per cent.[7]

During contraction, the curve of business payments (receipts) marches resolutely from the deep net expenditures which mark the boom to the net receipts which mark the depression nadir. This condition of net receipts also tends to characterize the first year of recovery, but the path it establishes is not at all stable. Sometimes, as in 1922, 1928, and 1939, net receipts are even greater than at the nadir; in 1925, 1950, and 1955, smaller than at the nadir. In 1934, they passed directly to the net expenditure zone.

In two cycles, the corporate sector did not fully behave as expected. In 1927, marked by most indexes as a minor recession year, corporations were still spending more than they collected from customers (albeit at a lesser

[7] For a description of the method of measuring the degree of conformity of a particular series to business cycles, see Wesley C. Mitchell, *What Happens during Business Cycles* (New York, NBER, 1951), pp. 15 ff.

rate than in 1926, the peak) and, at the same time, were drawing upon the money market for funds to cover the deficit. It was not until 1928 that they belatedly responded in the usual way. In the sharp business contraction of 1937-38, the net business curve rose promptly to the receipts zone; but five companies, three in petroleum and two in steel, borrowed funds exceeding the repayments of the other 79 to keep the money-market curve in the payments zone. Belatedly, in 1939, when net business receipts were even higher than in 1938, the money curve passed to the repayment zone.

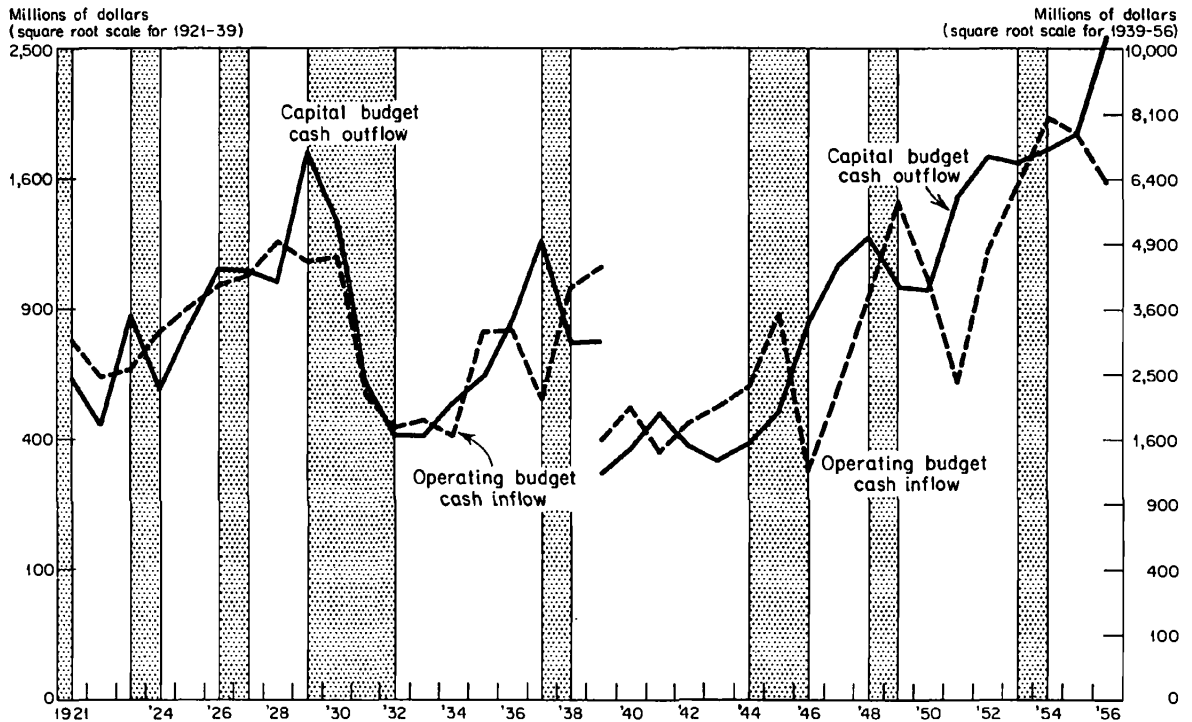
The money-market curve is less forthright in its movements than the business curve. With the exceptions just noted, it moves promptly to the repayment zone at the trough. But its course through recovery is variable. It may stay in the repayment zone while the business curve is still in the net receipts area, but it will more probably move to the receipts zone; in any case, at the business peak, it is invariably at its accustomed place.

The wartime period offers an unusual view of corporate money flows. From the sharp depression of 1938, and the continuing liquidation of 1939 and 1940, the companies, in 1941, suddenly plunged into an expansion both of plant and current earning assets, undertaking a deficit program equalled only during the booms of 1929 and 1937. But, immediately after December 7, 1941, controlled-materials plans went into effect and plant expansion was restricted by certificates of necessity to suit war requirements. Hence, in no subsequent war year were plant expenditures as large. Even though profits after taxes were lower than in 1941, corporations climbed sharply during 1942 into the net-receipts zone and there maintained a steady climb throughout the war, mainly because of restricted inventories, high depreciation rates on new investment, prompt collection, and advances and progress payments by customers. Having no business use upon which to employ excess funds, they returned the funds to the money market, repaying long-term debt where possible. In making these repayments, they were encouraged also by a tax incentive.

In 1945, net receipts from operations reached a climax when the President proclaimed September 30 as the legal end of the war for contract and tax purposes. This meant the cleanup of war-contract inventories and the receivables for them. It meant that the remaining depreciable value of the emergency plant facilities (which had been given a five-year life) would be charged to income. There was probably a moment in the life of each corporation in the brief period between September 30 and the end of, say, June 1946, when it had never been more liquid. But in 1946, the story as a whole was drastically different. Every available device, from the sale of marketable securities to the floating of new common-stock issues, was employed to draw funds from the money market, in order to make vastly increased plant outlays (this was the postwar conversion for which

## CHART 4

### Flow of Cash on Operating Budget and on Capital Budget Accounts, Large Manufacturing Corporations, 1921-56

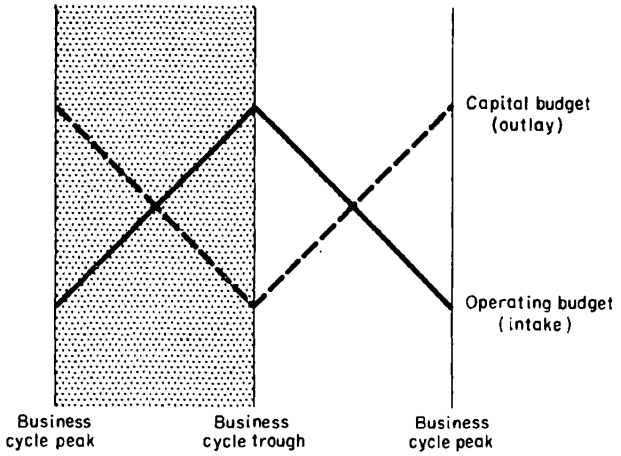



SOURCE: Tables A-10 and A-11 (lower panel).
Shaded areas represent NBER business cycle contractions; white areas, expansions.

so many companies had built reserves) and to restore civilian-oriented inventories. This process, both technical and financial, continued through 1947 and, at only a lesser rate, through 1948, with money vastly in excess of 1929 still being drawn from the market even in that year. And then, suddenly, the civilian pipelines were full.

We have noted that the characteristic of a downturn is excess cash receipts in operations; and the operations account is affected mainly by production cutbacks, as will be seen in Chapter 4, concerning the flow of goods and services. But cutbacks are not capricious; rather, they are orderly responses to sales (or to new orders, or to sales forecasts). It would add considerably to our understanding of business cycle processes if the prime mover in the withdrawal of cash from the income stream could be identified. This cannot be done on logical grounds alone nor with annual data such as are presented here. Quarterly data hold sufficient promise; so they should be tested experimentally.

Having observed the cyclical interplay between the business and the money-market curve, it will be useful to examine briefly the two constituents of the business curve, the capital and the operating budgets (Chart 4). Again having in mind the business cycle reference dates, we can observe four full cycles (excluding 1942-46) and three half-cycles. The characteristic behavior may be generalized in the following diagram.




At the business peak, capital expenditures exceed the receipts from operations, the latter having fallen because of the build-up of current earning assets. But once the peak is passed, capital outlays drop, and current earning assets are liquidated, thereby setting up the conditions which characterize the trough—collections not only exceed production payments

but more than cover the capital outlays, thus putting the companies, as a group, in a position to return the excess cash to the money market. As recovery progresses, capital expenditures are stepped up; and net cash receipts from operations fall off because of the expansion of current earning assets. This progression continues until the cash deficits reach their zenith at the peak of prosperity.

For an individual company, in the preceding section, we were able to conclude that it was generally the operating budget rather than the capital budget that sent the company to the money market. But for many companies taken as a group, no such generalization is warranted. We have in the group something of the analogy to a pair of shears—it is impossible to declare which blade does the cutting.

In our preceding discussion, we have treated the money market as a single entity, which, of course, it is not. Both the company treasurer and the lender take advantage of its compartmentalization. As we have already noted, the movement of aggregate cash absorbed from or returned to the money market conforms to the business cycle with high fidelity. But what of the several individual channels which together make up the total flow, such as bonds, stocks, demand notes, U.S. securities, etc.? Do they flow in concert with each other and with the business cycle?

To this question, the evidence gives an equivocal answer. The indexes of conformity for the various classes of financial instruments are given in Table 2. In the prewar period equities conformed perfectly, while long-term debt more often than not moved inversely to the cycle.[8] In the postwar period long-term debt conformed positively, and stocks showed no conformity. The shift in the behavior of long-term debt was paralleled by the shift in U.S. and other marketable securities, which conformed inversely before the war, positively after the war. Only short-term notes conformed positively in both periods.

A comparison of the curves for long- and short-term debt (Chart 5) reveals certain cyclical characteristics. In the contraction year of 1921, short-term debt was reduced, while long-term debt was increased. This pattern reappears in 1927, 1930, 1939, and 1954. It suggests that in the first contraction years, short-term debt is reduced, either by the release of cash generated via the liquidation of earning assets or by the funding of

[8] In his definitive study of the volume of corporate bond financing, over a much longer period than is covered here, W. Braddock Hickman observes that the net changes in bonds outstanding show a tendency toward decrease during the expansion phase of the business cycle and toward increase during the contraction phase, and that this general pattern was more pronounced for industrials than for rails or utilities. He shows also that these movements in bonds were usually inverse to those in corporate stock issues. (See *The Volume of Corporate Bond Financing since 1900,* New York, NBER, 1953.)

TABLE 2

INDEXES OF CONFORMITY TO BUSINESS CYCLES, MONEY-MARKET TRANSACTIONS AFFECTING CASH, LARGE MANUFACTURING CORPORATIONS, 1921-54

| | | | Full Cycle | | |
|---|---|---|---|---|---|
| | *Expansion* | *Contraction* | *T-T* [a] | *P-P* [b] | *Both* |
| NBER SAMPLE, 4 CYCLES, 1921-38 | | | | | |
| Aggregate cash to and from money market | +100 | +50 | +100 | +100 | +100 |
| Common stock | +100 | +100 | +100 | +100 | +100 |
| Preferred stock | +100 | +100 | +100 | +100 | +100 |
| Combined stock | +100 | +100 | +100 | +100 | +100 |
| Combined long-term debt | 0 | −50 | −50 | −33 | −43 |
| Short-term notes | +50 | 0 | +50 | +33 | +43 |
| U.S. and other marketable securities | 0 | −50 | −50 | −100 | −71 |
| FRB SAMPLE, 1½ CYCLES, 1948-54 | | | | | |
| Aggregate cash to and from money market | +100 | +100 | +100 | +100 | +100 |
| Combined stocks | −100 | 0 | −100 | +100 | 0 |
| Bonds | +100 | 0 | −100 | +100 | 0 |
| Long-term notes | −100 | +100 | +100 | +100 | +100 |
| Combined long-term debt | +100 | 0 | +100 | +100 | +100 |
| Short-term notes | +100 | +100 | +100 | +100 | +100 |
| U.S. and other marketable securities | +100 | +100 | +100 | +100 | +100 |
| COMBINED SAMPLE, 5½ CYCLES, 1921-38, 1948-54 | | | | | |
| Aggregate cash to and from money market | +100 | +67 | +100 | +100 | +100 |
| Common and preferred stock | +60 | +67 | +60 | +100 | +78 |
| Long-term debt | +20 | −33 | −20 | 0 | −11 |
| Short-term notes | +60 | +33 | +60 | +50 | +56 |
| U.S. and other marketable securities | +20 | 0 | −20 | −50 | −33 |

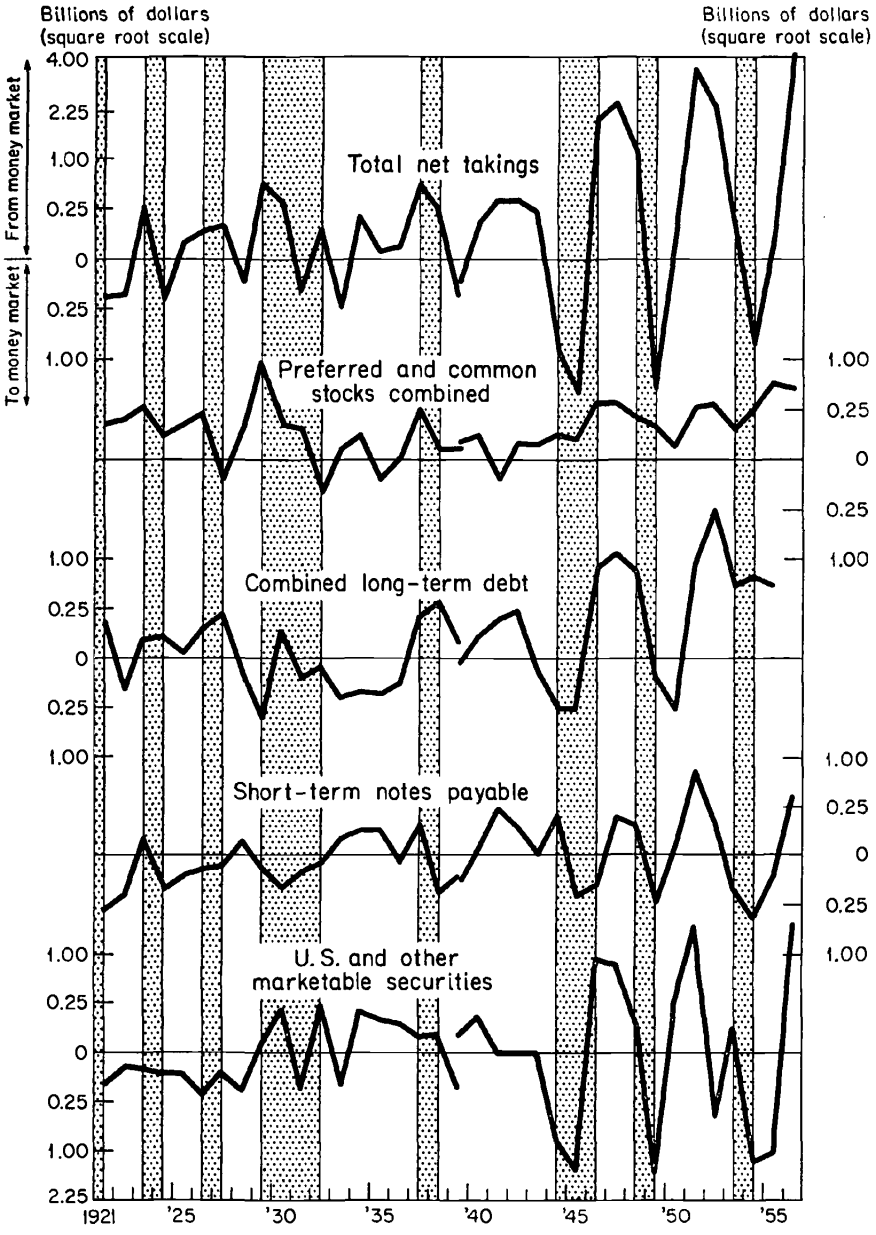
NOTE: All indexes are computed on the basis of changes between calendar peak and trough years. For a description of the method of measuring the degree of conformity of a particular series to business cycles, see Wesley C. Mitchell, *What Happens during Business Cycles*, New York, NBER, 1951, pp. 15 ff.

[a] *T-T* = trough-to-trough.

[b] *P-P* = peak-to-peak.

## CHART 5

### Cash Flow via Selected Money-Market Transactions, Large Manufacturing Corporations, 1921-56




SOURCE: Tables A-10 and A-11 (lower panel).
Shaded areas represent NBER business cycle contractions; white areas, expansions.

short-term debt in order to lengthen maturities. But, observed alone, the curve for long-term debt, 1921-39, and for bonds, 1939-55, would seem to go contrary to the aggregate money-market curve more often than it moves parallel. In five reference expansions, bond transactions twice moved opposite to the trend. One instance was caused by the spectacular retirement of long-term debt in 1929, a movement fairly attributed, it would seem, to refunding on the favorable terms offered by the equity market. In six contraction phases, bonds and long-term debt increased four times. How many of these instances might be attributable to funding short-term debt it is impossible to glean from aggregate data.

The frequency with which all classes of financial channels share in the aggregate flow is low, indeed. Of five reference peak years, only 1937 and 1948 show all classes of financial instruments bringing money into the corporate group. The list would have included 1923 except that U.S. securities drained funds away. Of five reference troughs, only at that in 1924 were all channels carrying funds back to the market. Whatever may be the direction of the aggregate flow, the individual channels seem not bound equally to share the direction—they may, in fact, flow the other way. It would seem, on grounds of logic, at least, that no one of the channels flows entirely independently of one or more of the others. But the factors which govern the amount and direction of the individual channel flows are too complex to perceive in the group data. Indeed, they are often obscure enough in a single company.

We must not leave the subject of money-market transactions without calling attention to the expanded role of U.S. securities in the financial structure of corporations since 1943. As a source of money needed for earning assets during 1946, 1947, and 1948, government securities supplied $1,807 million; short-term notes, $180 million; long-term notes, $521 million; capital stock, $851 million; and bonds, $2,200 million. In 1949, as a repository for temporarily idled cash, government securities were made the vehicle for returning to the money market about $1,500 million out of a net total of $1,644 million. Again in 1951, when every source was called upon, the governments provided $1,658 million out of a total requirement of $3,607 million, a source larger than any other two combined.

TABLE

PAYMENTS AND RECEIPTS OF CASH, ALLIS-CHALMERS
(thousands

| | 1919 | | 1920 | |
|---|---|---|---|---|
| | *Dr.* | *Cr.* | *Dr.* | *Cr.* |
| *Business transactions* | | | | |
| Operating budget | | | | |
| Receipts from customers | | 33,298 | | 29,556 |
| Production payments | 21,421 | | 29,543 | |
| Income tax payments | 4,549 | | 2,368 | |
| Dividends | 2,621 | | 1,917 | |
| Subtotals | 28,591 | 33,298 | 33,828 | 29,556 |
| Subtotal difference | | 4,707 | 4,272 | |
| Capital budget | | | | |
| Investments and advances | | | | |
| Expenditures on plant | 1,609 | | 2,774 | |
| Other nonoperating assets | | | | |
| Subtotals | 1,609 | 0 | 2,774 | 0 |
| Subtotal difference | 1,609 | | 2,774 | |
| Total business transactions | 30,200 | 33,298 | 36,602 | 29,556 |
| Difference | | 3,098 | 7,046 | |
| *Money-market transactions* | | | | |
| U.S. and other marketable securities | 3,944 | | | 6,829 |
| Notes payable, short-term | | | | |
| Notes payable, long-term | | | | |
| Bonds | | | | |
| Preferred stock | | | | |
| Common stock | | | | |
| Total money-market transactions | 3,944 | 0 | 0 | 6,829 |
| Difference | 3,944 | | | 6,829 |
| *Total payments and total receipts* | 34,144 | 33,298 | 36,602 | 36,385 |
| Effect on cash | 846 | | 217 | |

3

MANUFACTURING COMPANY, 1919-57
of dollars)

| 1921 | | 1922 | | 1923 | | 1924 | |
|---|---|---|---|---|---|---|---|
| *Dr.* | *Cr.* | *Dr.* | *Cr.* | *Dr.* | *Cr.* | *Dr.* | *Cr.* |
| | 25,635 | | 20,970 | | 24,755 | | 29,019 |
| 17,136 | | 16,827 | | 23,103 | | 23,784 | |
| 1,100 | | 160 | | 300 | | | |
| 2,186 | | 2,186 | | 2,186 | | 2,186 | |
| 20,422 | 25,635 | 19,173 | 20,970 | 25,589 | 24,755 | 25,970 | 29,019 |
| | 5,213 | | 1,797 | 834 | | | 3,049 |
| 312 | | 315 | | 609 | | 1,666 | |
| 675 | | | 164 | 751 | | | 87 |
| 987 | 0 | 315 | 164 | 1,360 | 0 | 1,666 | 87 |
| 987 | | 151 | | 1,360 | | 1,579 | |
| 21,409 | 25,635 | 19,488 | 21,134 | 26,949 | 24,755 | 27,636 | 29,106 |
| | 4,226 | | 1,646 | 2,194 | | | 1,470 |
| 3,962 | | 1,828 | | | 2,742 | 1,395 | |
| 3,962 | 0 | 1,828 | 0 | 0 | 2,742 | 1,395 | 0 |
| 3,962 | | 1,828 | | | 2,742 | 1,395 | |
| 25,371 | 25,635 | 21,316 | 21,134 | 26,949 | 27,497 | 29,031 | 29,106 |
| | 264 | 182 | | | 548 | | 75 |

## *Financing Cash Requirements*

TABLE 3

| | 1925 | | 1926 | |
|---|---|---|---|---|
| | *Dr.* | *Cr.* | *Dr.* | *Cr.* |
| *Business transactions* | | | | |
| Operating budget | | | | |
| Receipts from customers | | 30,143 | | 31,671 |
| Production payments<br>Income tax payments | 25,429 | | 27,817 | |
| Dividends | 2,701 | | 2,701 | |
| Subtotals | 28,130 | 30,143 | 30,518 | 31,671 |
| Subtotal difference | | 2,013 | | 1,153 |
| Capital budget | | | | |
| Investments and advances | | | | |
| Expenditures on plant | 199 | | 462 | |
| Other nonoperating assets | 7 | | 244 | |
| Subtotals | 206 | 0 | 706 | 0 |
| Subtotal difference | 206 | | 706 | |
| Total business transactions | 28,336 | 30,143 | 31,224 | 31,671 |
| Difference | | 1,807 | | 447 |
| *Money-market transactions* | | | | |
| U.S. and other marketable securities | 1,817 | | 122 | |
| Notes payable, short-term | | | | |
| Notes payable, long-term | | | | |
| Bonds | | | | |
| Preferred stock | | | | |
| Common stock | | | | |
| Total money-market transactions | 1,817 | 0 | 122 | 0 |
| Difference | 1,817 | | 122 | |
| *Total payments and total receipts* | 30,153 | 30,143 | 31,346 | 31,671 |
| Effect on cash | 10 | | | 325 |

## *Financing Cash Requirements*

(*Continued*)

| 1927 | | 1928 | | 1929 | | 1930 | |
|---|---|---|---|---|---|---|---|
| *Dr.* | *Cr.* | *Dr.* | *Cr.* | *Dr.* | *Cr.* | *Dr.* | *Cr.* |
| | 33,986 | | 38,191 | | 42,913 | | 44,230 |
| 30,464 | | 35,184 | | 42,921 | | 41,840 | |
| 2,134 | | 1,755 | | 2,497 | | 3,772 | |
| 32,598 | 33,986 | 36,939 | 38,191 | 45,418 | 42,913 | 45,612 | 44,230 |
| | 1,388 | | 1,252 | 2,505 | | 1,382 | |
| | | | | 950 | | | |
| 4,035 | | 1,453 | | 2,214 | | 1,594 | |
| | 271 | 14 | | 113 | | | 313 |
| 4,035 | 271 | 1,467 | 0 | 3,277 | 0 | 1,594 | 313 |
| 3,764 | | 1,467 | | 3,277 | | 1,281 | |
| 36,633 | 34,257 | 38,406 | 38,191 | 48,695 | 42,913 | 47,206 | 44,543 |
| 2,376 | | 215 | | 5,782 | | 2,663 | |
| | 7,219 | 286 | | 505 | | | 1,656 |
| | | | | | 2,000 | 2,000 | |
| | 14,440 | | | 350 | | 1,107 | |
| 18,149 | | | | | | | |
| | | | | | 3,710 | | 5,534 |
| 18,149 | 21,659 | 286 | 0 | 855 | 5,710 | 3,107 | 7,190 |
| | 3,510 | 286 | | | 4,855 | | 4,083 |
| 54,782 | 55,916 | 38,692 | 38,191 | 49,550 | 48,623 | 50,313 | 51,733 |
| | 1,134 | 501 | | 927 | | | 1,420 |

## *Financing Cash Requirements*

TABLE 3

| | 1931 | | 1932 | |
|---|---|---|---|---|
| | *Dr.* | *Cr.* | *Dr.* | *Cr.* |
| *Business transactions* | | | | |
| Operating budget | | | | |
| Receipts from customers | | 24,593 | | 16,018 |
| Production payments<br>Income tax payments | 18,521 | | 16,761 | |
| Dividends | 1,815 | | 161 | |
| Subtotals | 20,336 | 24,593 | 16,922 | 16,018 |
| Subtotal difference | | 4,257 | | 904 |
| Capital budget | | | | |
| Investments and advances | | | | |
| Expenditures on plant | 1,177 | | 287 | |
| Other nonoperating assets | | 8 | | 47 |
| Subtotals | 1,177 | 8 | 287 | 47 |
| Subtotal difference | 1,169 | | 240 | |
| Total business transactions | 21,513 | 24,601 | 17,209 | 16,065 |
| Difference | | 3,088 | 1,144 | |
| *Money-market transactions* | | | | |
| U.S. and other marketable securities | 10 | | 220 | |
| Notes payable, short-term | | | | |
| Notes payable, long-term | 2,600 | | | |
| Bonds | | 103 | 84 | |
| Preferred stock | | | | |
| Common stock | | 412 | | 430 |
| Total money-market transactions | 2,610 | 515 | 304 | 430 |
| Difference | 2,095 | | | 126 |
| *Total payments and total receipts* | 24,123 | 25,116 | 17,513 | 16,495 |
| Effect on cash | | 993 | 1,018 | |

## *Financing Cash Requirements*

(*Continued*)

| 1933 | | 1934 | | 1935 | | 1936 | |
|---|---|---|---|---|---|---|---|
| *Dr.* | *Cr.* | *Dr.* | *Cr.* | *Dr.* | *Cr.* | *Dr.* | *Cr.* |
| | 15,417 | | 20,883 | | 34,786 | | 56,587 |
| 14,734 | | 23,145 | | 36,066<br>63 | | 57,008<br>445<br>2,344 | |
| 14,734 | 15,417 | 23,145 | 20,883 | 36,129 | 34,786 | 59,797 | 56,587 |
| | 683 | 2,262 | | 1,343 | | 3,210 | |
| 156 | | 325 | | 709 | | 1,936 | |
| | 119 | | 172 | 158 | | | 359 |
| 156 | 119 | 325 | 172 | 867 | 0 | 1,936 | 359 |
| 37 | | 153 | | 867 | | 1,577 | |
| 14,890 | 15,536 | 23,470 | 21,055 | 36,996 | 34,786 | 61,733 | 56,946 |
| | 646 | 2,415 | | 2,210 | | 4,787 | |
| 201 | | | 42 | | 714 | | 1,775<br>2,100 |
| 54 | | | 105 | | 656 | 15,005 | |
| | 579 | | 383 | | 579 | | 15,412 |
| 255 | 579 | 0 | 530 | 0 | 1,949 | 15,005 | 19,287 |
| | 324 | | 530 | | 1,949 | | 4,282 |
| 15,145 | 16,115 | 23,470 | 21,585 | 36,996 | 36,735 | 76,738 | 76,233 |
| | 970 | 1,885 | | 261 | | 505 | |

## *Financing Cash Requirements*

TABLE 3

| | 1937 | | 1938 | |
|---|---|---|---|---|
| | *Dr.* | *Cr.* | *Dr.* | *Cr.* |
| *Business transactions* | | | | |
| Operating budget | | | | |
| Receipts from customers | | 82,946 | | 80,655 |
| Production payments | 87,430 | | 66,279 | |
| Income tax payments | 1,840 | | 2,836 | |
| Dividends | 6,203 | | 2,663 | |
| Subtotals | 95,473 | 82,946 | 71,778 | 80,655 |
| Subtotal difference | 12,527 | | | 8,877 |
| Capital budget | | | | |
| Investments and advances | | | | |
| Expenditures on plant | 5,445 | | 4,029 | |
| Other nonoperating assets | | 8 | | 84 |
| Subtotals | 5,445 | 8 | 4,029 | 84 |
| Subtotal difference | 5,437 | | 3,945 | |
| Total business transactions | 100,918 | 82,954 | 75,807 | 80,739 |
| Difference | 17,964 | | | 4,932 |
| *Money-market transactions* | | | | |
| U.S. and other marketable securities | | | | |
| Notes payable, short-term | | | | |
| Notes payable, long-term | 2,100 | | | |
| Bonds | | 25,325 | | |
| Preferred stock | | | | |
| Common stock | | 145 | | 11 |
| Total money-market transactions | 2,100 | 25,470 | 0 | 11 |
| Difference | | 23,370 | | 11 |
| *Total payments and total receipts* | 103,018 | 108,424 | 75,807 | 80,750 |
| Effect on cash | | 5,406 | | 4,943 |

## *Financing Cash Requirements*

(*Continued*)

| 1939 | | 1940 | | 1941 | | 1942 | |
|---|---|---|---|---|---|---|---|
| *Dr.* | *Cr.* | *Dr.* | *Cr.* | *Dr.* | *Cr.* | *Dr.* | *Cr.* |
| | 74,250 | | 84,446 | | 126,000 | | 195,236 |
| 71,319 | | 83,037 | | 119,088 | | 171,081 | |
| 933 | | 1,268 | | 2,275 | | 8,093 | |
| 2,220 | | 2,664 | | 2,664 | | 1,776 | |
| 74,472 | 74,250 | 86,969 | 84,446 | 124,027 | 126,000 | 180,950 | 195,236 |
| 222 | | 2,523 | | | 1,973 | | 14,286 |
| 966 | | 1,202 | | 2,438 | | 3,174 | |
| | 8 | | 16 | | | | 116 |
| 966 | 8 | 1,202 | 16 | 2,438 | 0 | 3,174 | 116 |
| 958 | | 1,186 | | 2,438 | | 3,058 | |
| 75,438 | 74,258 | 88,171 | 84,462 | 126,465 | 126,000 | 184,124 | 195,352 |
| 1,180 | | 3,709 | | 465 | | | 11,228 |
| | | | | | | 25,007 | |
| | | | | | 3,000 | 3,000 | |
| | | | | | 9,250 | | 25,750 |
| | | | | 10,908 | | | |
| 0 | 0 | 0 | 0 | 10,908 | 12,250 | 28,007 | 25,750 |
| 0 | | 0 | | | 1,342 | 2,257 | |
| = | | = | | | | | |
| 75,438 | 74,258 | 88,171 | 84,462 | 137,373 | 138,250 | 212,131 | 221,102 |
| 1,180 | | 3,709 | | | 877 | | 8,971 |

## *Financing Cash Requirements*

TABLE 3

| | 1943 | | 1944 | |
|---|---|---|---|---|
| | *Dr.* | *Cr.* | *Dr.* | *Cr.* |
| *Business transactions* | | | | |
| Operating budget | | | | |
| Receipts from customers | | 280,264 | | 400,274 |
| Production payments | 237,234 | | 329,822 | |
| Income tax payments | 21,193 | | 35,268 | |
| Dividends | 2,220 | | 3,697 | |
| Subtotals | 260,647 | 280,264 | 368,787 | 400,274 |
| Subtotal difference | | 19,617 | | 31,487 |
| Capital budget | | | | |
| Investments and advances | | | | |
| Expenditures on plant | 2,589 | | 3,958 | |
| Other nonoperating assets | | 16 | | 393 |
| Subtotals | 2,589 | 16 | 3,958 | 393 |
| Subtotal difference | 2,573 | | 3,565 | |
| Total business transactions | 263,236 | 280,280 | 372,745 | 400,667 |
| Difference | | 17,044 | | 27,922 |
| *Money-market transactions* | | | | |
| U.S. and other marketable securities | 18,495 | | 10,143 | |
| Notes payable, short-term | | | | |
| Notes payable, long-term | | 15,000 | 10,000 | |
| Bonds | | | 15,627 | |
| Preferred stock | | | | 28,993 |
| Common stock | | | | |
| Total money-market transactions | 18,495 | 15,000 | 35,770 | 28,993 |
| Difference | 3,495 | | 6,777 | |
| *Total payments and total receipts* | 281,731 | 295,280 | 408,515 | 429,660 |
| Effect on cash | | 13,549 | | 21,145 |

## *Financing Cash Requirements*

(*Continued*)

| 1945 | | 1946 | | 1947 | |
|---|---|---|---|---|---|
| *Dr.* | *Cr.* | *Dr.* | *Cr.* | *Dr.* | *Cr.* |
| | 288,711 | | 112,228 | | 196,238 |
| 252,882 | | 149,227 | | 219,559 | |
| 41,275 | | 15,266 | | | 25,400 |
| 4,340 | | 4,316 | | 5,192 | |
| 298,497 | 288,711 | 168,809 | 112,228 | 224,751 | 221,638 |
| 9,786 | | 56,581 | | 3,113 | |
| 4,915 | | 12,419 | | 8,367 | |
| 149 | | 53 | | | 47 |
| 5,064 | 0 | 12,472 | 0 | 8,367 | 47 |
| 5,064 | | 12,472 | | 8,320 | |
| 303,561 | 288,711 | 181,281 | 112,228 | 233,118 | 221,685 |
| 14,850 | | 69,053 | | 11,433 | |
| | 7,681 | | 22,964 | | 14,000 |
| 14,428 | | 25,572 | | | |
| | | | 14,962 | | |
| 13 | | | 17,329 | | |
| | | | 17,678 | | |
| 14,441 | 7,681 | 25,572 | 72,933 | 0 | 14,000 |
| 6,760 | | | 47,361 | | 14,000 |
| 318,002 | 296,392 | 206,853 | 185,161 | 233,118 | 235,685 |
| 21,610 | | 21,692 | | | 2,567 |

## *Financing Cash Requirements*

TABLE 3

| | 1948 | | 1949 | |
|---|---|---|---|---|
| | *Dr.* | *Cr.* | *Dr.* | *Cr.* |
| *Business transactions* | | | | |
| Operating budget | | | | |
| Receipts from customers | | 311,799 | | 341,417 |
| Production payments | 307,537 | | 292,866 | |
| Income tax payments | 3,365 | | 10,934 | |
| Dividends | 5,193 | | 6,199 | |
| Subtotals | 316,095 | 311,799 | 309,999 | 341,417 |
| Subtotal difference | 4,296 | | | 31,418 |
| Capital budget | | | | |
| Investments and advances | | | | |
| Expenditures on plant | 7,190 | | 4,115 | |
| Other nonoperating assets | | 23 | 278 | |
| Subtotals | 7,190 | 23 | 4,393 | 0 |
| Subtotal difference | 7,167 | | 4,393 | |
| Total business transactions | 323,285 | 311,822 | 314,392 | 341,417 |
| Difference | 11,463 | | | 27,025 |
| *Money-market transactions* | | | | |
| U.S. and other marketable securities | 6,000 | | 20,000 | |
| Notes payable, short-term | | 15,000 | (15,000) | 453 |
| Notes payable, long-term | | 10,000 | | (15,000) |
| Bonds | | | | |
| Preferred stock | | | | |
| Common stock | | | | |
| Total money-market transaction | 6,000 | 25,000 | 20,000 | 453 |
| Difference | | 19,000 | 19,547 | |
| *Total payments and total receipts* | 329,285 | 336,822 | 334,392 | 341,870 |
| Effect on cash | | 7,537 | | 7,478 |

## *Financing Cash Requirements*

(*Continued*)

| 1950 | | 1951 | | 1952 | |
|---|---|---|---|---|---|
| *Dr.* | *Cr.* | *Dr.* | *Cr.* | *Dr.* | *Cr.* |
| | 350,290 | | 423,809 | | 507,038 |
| 295,901 | | 428,488 | | 443,678 | |
| 13,889 | | 23,182 | | 48,022 | |
| 9,345 | | 10,050 | | 12,060 | |
| 319,135 | 350,290 | 461,720 | 423,809 | 503,760 | 507,038 |
| | 31,155 | 37,911 | | | 3,278 |
| | | 4,583 | | | 0 |
| 7,477 | | 10,004 | | 15,543 | |
| 22 | | 0 | | 137 | |
| 7,499 | 0 | 14,587 | 0 | 15,680 | 0 |
| 7,499 | | 14,587 | | 15,680 | |
| 326,634 | 350,290 | 476,307 | 423,809 | 519,440 | 507,038 |
| | 23,656 | 52,498 | | 12,402 | |
| 20,000 | | | 26,000 | 11,000 | |
| 453 | | | 26,000 | | 5,000 |
| 7,000 | | | | | 42,000 |
| | 33 | | 235 | | 222 |
| 27,453 | 33 | 0 | 52,235 | 11,000 | 47,222 |
| 27,420 | | | 52,235 | | 36,222 |
| 354,087 | 350,323 | 480,807 | 480,544 | 530,440 | 554,260 |
| 3,764 | | 263 | | | 23,820 |

## *Financing Cash Requirements*

TABLE 3

| | 1953 | | 1954 | |
|---|---|---|---|---|
| | *Dr.* | *Cr.* | *Dr.* | *Cr.* |
| *Business transactions* | | | | |
| Operating budget | | | | |
| Receipts from customers | | 512,640 | | 498,505 |
| Production payments | 483,437 | | 423,735 | |
| Income tax payments | 41,150 | | 21,416 | |
| Dividends | 12,855 | | 14,526 | |
| Subtotals | 537,442 | 512,640 | 459,677 | 498,505 |
| Subtotal difference | 24,802 | | | 38,828 |
| Capital budget | | | | |
| Investments and advances | | 0 | 1,636 | |
| Expenditures on plant | 21,353 | | 9,893 | |
| Other nonoperating assets | | 270 | 1,781 | |
| Subtotals | 21,353 | 270 | 13,310 | 0 |
| Subtotal difference | 21,083 | | 13,310 | |
| Total business transactions | 558,795 | 512,910 | 472,987 | 498,505 |
| Difference | 45,885 | | | 25,518 |
| *Money-market transactions* | | | | |
| U.S. and other marketable securities | | 40,000 | 26,962 | |
| Notes payable, short-term | 3,750 | | 18,000 | |
| Notes payable, long-term | | | | 5,750 |
| Bonds | | | | |
| Preferred stock | | | | 34,885 |
| Common stock | | 104 | | 243 |
| Total money-market transactions | 3,750 | 40,104 | 44,962 | 40,878 |
| Difference | | 36,354 | 4,084 | |
| *Total payments and total receipts* | 562,545 | 553,014 | 517,949 | 539,383 |
| Effect on cash | 9,531 | | | 21,434 |

SOURCE: Annual reports of the company. Cash payments are entered in debit column;

## *Financing Cash Requirements*

(*Concluded*)

| 1955 | | 1956 | | 1957 | |
|---|---|---|---|---|---|
| *Dr.* | *Cr.* | *Dr.* | *Cr.* | *Dr.* | *Cr.* |
| | 522,586 | | 543,816 | | 561,821 |
| 486,970 | | 560,052 | | 476,344 | |
| 31,189 | | 28,254 | | 23,560 | |
| 16,468 | | 16,680 | | 16,840 | |
| 534,627 | 522,586 | 604,986 | 543,816 | 516,744 | 561,821 |
| 12,041 | | 61,170 | | | 45,077 |
| | | 4,000 | | 3,117 | |
| 12,056 | | 14,431 | | 16,229 | |
| 1,794 | | 457 | | 545 | |
| 13,850 | 0 | 18,888 | 0 | 19,891 | 0 |
| 13,850 | | 18,888 | | 19,891 | |
| 548,477 | 522,586 | 623,874 | 543,816 | 536,635 | 561,821 |
| 25,891 | | 80,058 | | | 25,186 |
| 7,320 | | | 35,589 | | |
| | | | 50,000 | 28,000 | |
| 250 | | 250 | | 250 | |
| | 282 | | 467 | | 277 |
| 7,570 | 282 | 250 | 86,056 | 28,250 | 277 |
| 7,288 | | | 85,806 | 27,973 | |
| 556,047 | 522,868 | 624,124 | 629,872 | 564,885 | 562,098 |
| 33,179 | | | 5,748 | 2,787 | |

receipts, in credit column.