

# MONTHLY *Business Review*

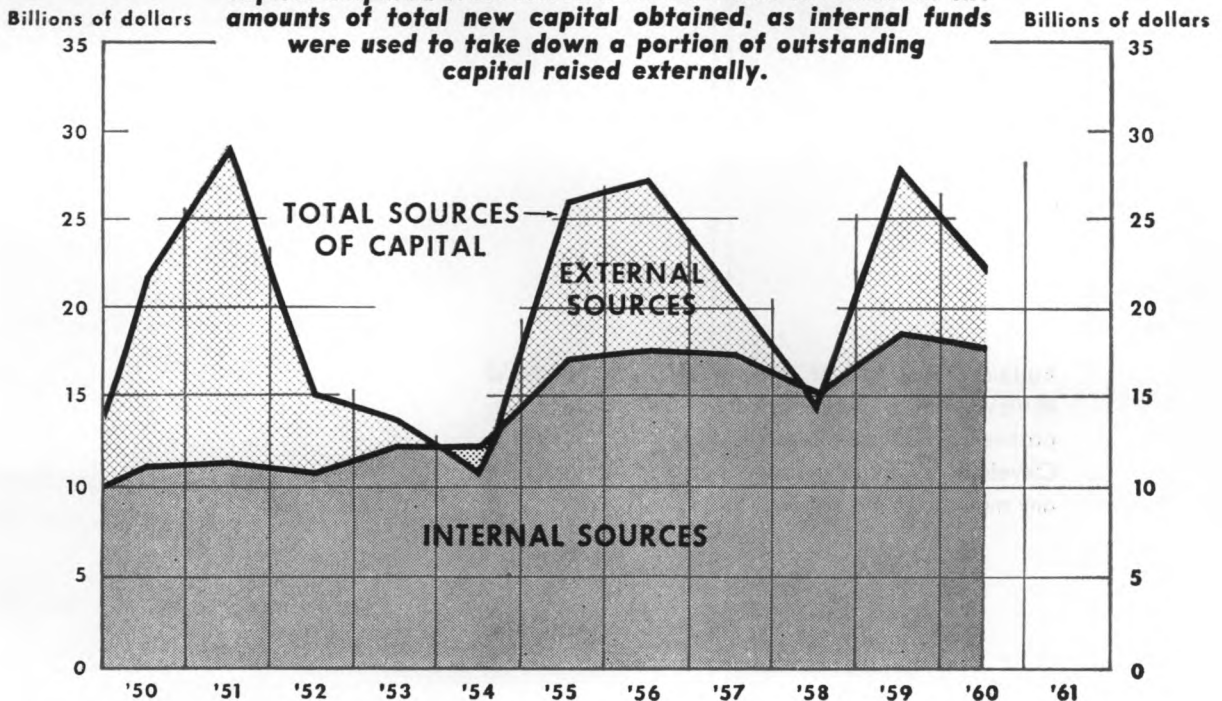
FEDERAL RESERVE BANK of CLEVELAND

*February 1962*

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**In the period between 1950 and 1960, inclusive, manufacturing corporations in the United States acquired \$200 billion in new capital. The bulk of this capital was obtained from internal sources. In both 1954 and 1958, capital acquired from internal sources was in excess of the amounts of total new capital obtained, as internal funds were used to take down a portion of outstanding capital raised externally.**



Source of data: Securities and Exchange Commission.

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# Financing Manufacturing Corporations, 1950-1960

**N**EW capital for the expansion of fixed assets of a manufacturing corporation as well as for working capital needs may be obtained either from the income generated by the operations of an enterprise or from external sources, i.e., money and capital markets. In the period between 1950 and 1960, inclusive, manufacturing corporations in the U. S. acquired \$229 billion in new capital.<sup>(1)</sup> The bulk of this capital was obtained from "inside" the manufacturing corporations, while the remainder was obtained from the "outside".

The acquisition of new capital in the past decade seems to have been a prime requisite for manufacturing corporations attempting to stay in step with the constantly increasing demands of a high-level and expanding economy. Thus, a substantial part of new capital obtained was directed toward increasing productive capacity, the carrying of larger inventories, and the providing of greater amounts of trade credit. At the same time, the burgeoning scientific and technological advances of the past decade implied that, in order to stay competitive, new capital had to be obtained to finance research and development facilities and to introduce new and more efficient methods of production and distribution, so that manufacturing corporations could realize certain economies of scale and other competitive advantages.

A build-up of the capital requirements of manufacturing corporations in the past decade suggests immediately a number of pertinent questions. For example, what sources of

capital are available? How do corporations decide which of the alternative sources should be tapped? What are the criteria for making such judgments? In the pages that follow, we attempt to answer these and other questions by reviewing the sources of capital utilized by manufacturing corporations in the U. S. between 1950 and 1960, inclusive, and to suggest some of the reasons these sources were selected. It should be remembered, however, that in all cases the ultimate sources of capital which are tapped will depend on the cost and availability of capital, the purpose for which it is to be used, the capital structure of the acquiring firm, and the general outlook for business conditions.

## Internal Sources

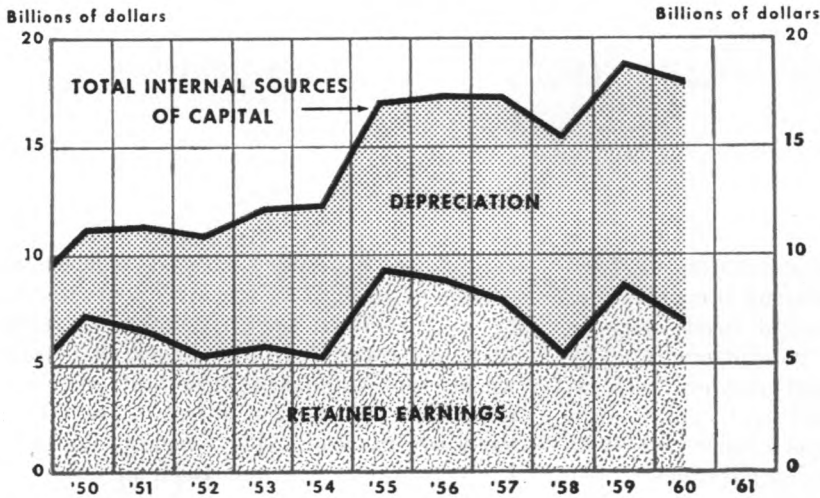
The growing dependence upon internally generated funds as a source of new capital during the past decade is shown in the chart on the cover of this issue. During 1950-1960, inclusive, approximately \$161 billion, or nearly 70 percent, of the total amount of new capital acquired by manufacturing corporations was derived from corporate income. Putting it another way, in the same 11-year period, the amounts of internal capital generated annually by manufacturing corporations expanded by approximately 60 percent.

A primary reason for the growing reliance upon internal funds is the stability associated with this source of capital. The growing dependence upon internal funds may thus reflect management's desire to avoid some of the restrictions associated with the use of external sources.

Internal sources of capital are derived

(1) All data used in this article are taken directly or derived from figures published by the Federal Trade Commission and the Securities and Exchange Commission.

## SOURCES OF INTERNAL CAPITAL



From 1950 through 1960, the annual amounts of capital generated by depreciation charges advanced from \$4 billion to \$11 billion, or from 36 percent to 60 percent of total internal sources. Over the same period, retained earnings as a percent of the total declined correspondingly.

Source of data: Federal Trade Commission and Securities and Exchange Commission.

entirely from the gross income of manufacturing corporations. Due to common corporate accounting practice, however, it is necessary to separate internal sources into depreciation and retained earnings.

*Depreciation.* The major importance of depreciation allowances as a source of capital for manufacturing corporations is readily discernible in the accompanying chart. From 1950 through 1960 the annual amounts of capital generated by depreciation charges advanced from \$4 to \$11 billion. As a proportion of the total internal sources of capital for manufacturing corporations, depreciation increased from 36 percent to 60 percent during the same 11-year period.

The concept of depreciation as a source of capital is sometimes confusing to the casual observer due to the fact that depreciation is also treated as a business expense. To the accountant, depreciation is recognized as the loss in value of certain fixed assets, resulting from physical deterioration and normal obsolescence over time. Theoretically, depreciation allowances during a given accounting period should equal the reduction in the value

of fixed assets which occurred within that period.

Although depreciation is listed as an expense, and is deducted from gross income, unlike other business expenses, a corporation does not surrender any cash in connection with depreciation expense. Depreciation is thus often referred to as a "noncash" expense. Furthermore, the inclusion of depreciation as a business expense reduces the taxable income of a corporation by an equal amount. As a result, the corporation is permitted to retain a larger portion of its total cash intake, so that the "cash flow" of a business enterprise is enlarged through the inclusion of depreciation charges.

The increase in cash flow resulting from depreciation allowances permits the recovery of all or part of past investments in certain fixed assets. Corporate management may elect, in turn, to reinvest the recovered capital in fixed assets or increased working capital; or it may decide to return the capital to the original suppliers, i.e., creditors and stockholders. In most instances, however, funds generated through depreciation are used

either to replace or expand corporate assets.

*The Growth of Depreciation Allowances.* The increase in the volume of depreciation allowances of manufacturing corporations from 1950 through 1960 was due in part to the expansion of the asset base upon which depreciation charges are determined.

In addition, the increase in depreciation allowances beginning in 1950 also reflected the rapid amortization privileges granted on defense facilities during the Korean conflict. In an effort to induce a quick expansion of industrial capacity for defense purposes, the Internal Revenue Act was amended in 1950 to permit corporations to "write off" specific facilities within a five-year period. The law required that the National Security Resources Board determine whether rapid amortization privileges would be granted to an applicant, and in those cases where the Board approved, a Certificate of Necessity was issued. The annual amounts of depreciation resulting from this legislation steadily declined, however, after reaching a peak in 1957.

Another reason for the expansion of depreciation allowances from 1950 through 1960 is connected with the speeding-up of depreciation, i.e., accelerated depreciation. Throughout the postwar period, a great deal of discussion has centered on the adequacy of the methods of determining depreciation allowances as required by the Internal Revenue Code. Those who have proposed liberalization of depreciation allowances have advocated over the years a number of changes in methods of determination, some of which have already been legislated. These proposals have included: (1) the abandonment of the use of "original cost" and the adoption of "replacement cost" as the base for depreciation; (2) a reduction in the number of years over which all assets may be fully depreciated regardless of their connection with national defense; (3) permitting corporations to "charge off" a significant part of the total depreciation allowance at the time of installation or during the early stages of the life of an asset, an approach commonly referred to as accelerated depreciation; and (4) intro-

duction of investment tax allowances which would permit a corporation to deduct directly a portion of the cost of a newly acquired asset from its liability at the time of installation without reducing the amount of depreciation allowance which is usually permitted for tax purposes.

In 1954, the Internal Revenue Code was amended to permit corporations to deduct a larger amount of depreciation during the initial years of the life of an asset. At that time, however, the length of time over which assets could be fully "written off" and the methods for determining the total amount of depreciation expense on various assets were not altered. Nevertheless, the adoption of accelerated methods of depreciation resulted in a closer alignment of annual depreciation charges with the decline in the productive efficiency of equipment.<sup>(2)</sup>

In 1958, the Internal Revenue Code was again amended to permit a corporation to charge off 20 percent of the value of newly acquired equipment, in addition to the regular annual depreciation charge, during the first year in which the equipment is used. However, the legislation limited the 20-percent write-off to an annual investment of \$10,000 in additional equipment with a life of six years or more, thereby providing assistance mainly to small business firms.

In recent years, discussion has intensified among businessmen, government officials, and professional economists concerning the liberalization of depreciation allowances as one means of encouraging increased productivity among U. S. manufacturing firms. As part of a program to shorten the depreciable life of many types of assets, one industry was permitted recently to write off specific assets over a shorter period of time than the Internal Revenue Code usually allows; the possibility of extending such a program to other industries is currently being considered. In addition, legislation was proposed in the Congress last year which would have permitted a

(2) For a discussion of accelerated depreciation methods adopted in 1954, see "Depreciation Allowances as a Source of Corporate Funds", this *Review*, September 1957.

tax credit, or investment allowance, against new investments in productive equipment. The proposed investment allowance was a part of a larger proposal for changes in the tax laws which was deferred until the current session of the Congress.

*Retained Earnings.* Unlike depreciation, retained earnings between 1950 and 1960, inclusive, were a relatively volatile source of capital for manufacturing corporations, ranging from a low of \$5.2 billion in 1952 to a high of \$9.3 billion in 1955. In addition, during the period under review, retained earnings declined steadily as a proportion of total internal capital for manufacturing corporations.

The declining importance of retained earnings as a source of new capital may be explained in part by the failure of corporate profit margins to remain at early postwar levels. From 1950 through 1960 the net income of manufacturing corporations fell from 7.1 percent to 4.4 percent of total sales. Putting it another way, while the sales of all manufacturing corporations increased approximately 90 percent between 1950 and 1960, inclusive, the "after-tax", or net, income of these same firms advanced only 19 percent.

On the other hand, the dividend policy pursued by boards of directors of manufacturing corporations has served, in many instances, to limit the amount of net income available for reinvestment. While the proportion of net income devoted to cash dividend payments during any particular period may be affected by various internal considerations, the cash needs of the organization during the subsequent period, the success of corporate operations in the preceding period, and a desire on the part of management to pay a stable dividend—the policies adopted by many manufacturing corporations during the period under review resulted in a larger relative amount of net income being devoted to cash dividends. For example, while from 1950 through 1955, the cash dividend payments of manufacturing corporations averaged 48.1 percent of total net income, in the

period from 1955 through 1960, the proportion of net income allocated to dividend payments averaged 51.1 percent. Thus, the net income retained for reinvestment purposes was reduced by corporate policy.

These two factors—narrower profit margins and larger dividend ratios—combined with the steady increase in depreciation allowances to reduce the relative share of retained earnings as a source of internal capital—from 64 percent to 40 percent—between 1950 and 1960, inclusive.

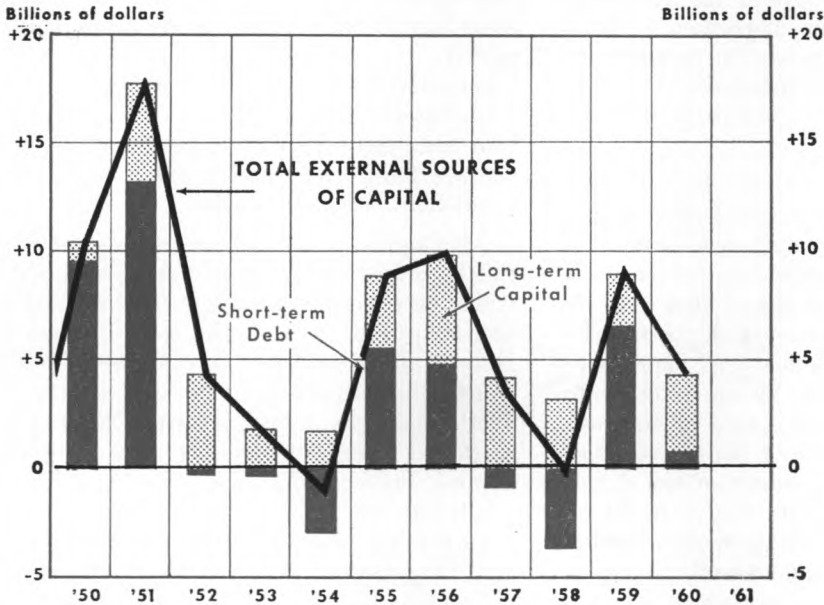
### External Sources

The utilization of external sources of capital by manufacturing corporations followed an uneven pattern during the period under review. It is apparent, however, that outside capital was far less important to manufacturing corporations than internal sources, as only 30 percent of the additional capital acquired during the 11-year period was provided by external sources.

External sources of capital tapped by manufacturing corporations may be classified in a number of ways: (1) on the basis of "venture capital" (which represents a part of the equity component of the financial structure) versus borrowed capital; (2) by distinguishing between the flow of funds directly from owner to user and the flow of funds to a financial intermediary which, in turn, supplies the user; and (3) by the length of time over which the capital will be employed. In this discussion, the third alternative is used, i.e., short-term credit as contrasted with intermediate- and long-term capital.

*Short-term credit.* Short-term borrowing is usually defined as any credit transaction in which the borrower agrees to return the funds within a period of 12 months. The ebb and flow of short-term credit between corporate users and the money market is closely related to both the seasonal and cyclical patterns of business activity which most manufacturing corporations experience. During periods of seasonal or cyclical expansion,

## SOURCES OF EXTERNAL CAPITAL



*Short-term debt and long-term capital each accounted for roughly half of the total external capital acquired by manufacturing corporations during 1950-1960, inclusive. The use of long-term capital, however, was characterized by greater stability.*

Source of data: Federal Trade Commission and Securities and Exchange Commission.

manufacturing firms may depend heavily on the money market to finance temporary increases in working capital, e.g., larger inventories and higher levels of trade credit. Conversely, as the period of expansion passes and working capital needs decline, manufacturing firms will return the short-term funds to the suppliers in order to avoid the cost of holding such funds.

The importance of short-term credit to manufacturing corporations is reflected in the fact that, between 1950 and 1960, inclusive, approximately 14 percent of the additions to total capital, and nearly one-half of the external sources of capital utilized, were provided by short-term borrowing.

The principal sources of short-term credit for manufacturing corporations are trade credit, commercial bank loans, the issuance of commercial paper, and accruals of tax liabilities.

Trade credit remained the primary source

of short-term credit for manufacturing corporations from 1950 through 1960. During that period, credit extended by the suppliers of manufacturing corporations, most of whom were also manufacturing firms, provided roughly 45 percent of the short-term capital needs of the users. The bulk of short-term credit for manufacturing corporations is thus, in a sense, an inter-industry supply of capital. Heavy reliance upon trade credit is due mainly to its availability, the lack of an explicit cost connected with its use, and a usual flexibility in credit terms.

Commercial banks provide both direct and indirect short-term credit for manufacturing corporations. Bank loans provided 15 percent of the additional short-term capital for manufacturing corporations between 1950 and 1960, inclusive. Short-term business loans usually carry a maturity ranging from 30 to 90 days, although many are extended for as long as 12 months. In addition, commercial banks may permit the borrower to renew the

loan at maturity which, in turn, could carry the extension of credit beyond the 12-month definition of short-term borrowing. Since commercial banks also invest in commercial paper issued by manufacturing corporations, the former also serve as a source of indirect credit.

Manufacturing corporations have found commercial paper a convenient and economical method of acquiring short-term funds. In recent years such corporations have accounted for approximately 40 percent of all corporate organizations issuing commercial paper. The preference for this method of short-term borrowing may stem from an opportunity to borrow at a lower effective rate of interest. The cost advantage derived from the issuance of commercial paper is a result of the differential between the stated rate of interest on commercial bank loans and the money market rates which apply to commercial paper; it may also result from an opportunity to avoid the maintenance of compensating balances which usually accompany commercial bank loans. It should be remembered, however, that the ability to acquire short-term funds through the issuance of commercial paper is limited to large manufacturing corporations with good credit ratings.<sup>(3)</sup>

Reserves for accrued taxes constitute another source of short-term credit for manufacturing corporations. Because corporations are required to pay income taxes quarterly, they are able to employ the accrued taxes to meet very short-term capital needs until the income tax payment period arrives. From 1950 through 1960, income tax accruals provided a little over \$3 billion in short-term funds for manufacturing corporations.

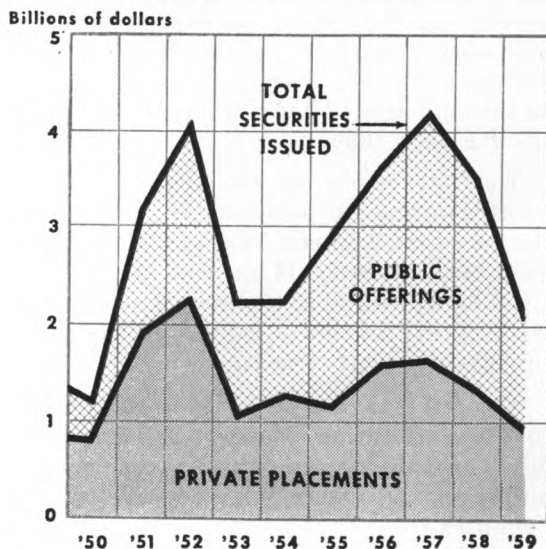
*Long-term Capital.* Long-term capital acquired from external sources by manufacturing corporations between 1950 and 1960, inclusive, amounted to approximately \$36 billion, or nearly 16 percent of total capital additions. As indicated in the accompanying chart, the demand for long-term capital by

manufacturing corporations was characterized by greater stability than the demand for short-term credit. Such stability is due in part to the relative absence of seasonal and other short-term factors in determining long-term capital needs; it is also due to the fact that long-term funds are used primarily to acquire fixed assets and provide additions to permanent working capital.

Although the postwar period has witnessed the introduction of several new methods by which corporations may acquire intermediate- and long-term capital, the sale of securities has remained the major means used by manufacturing corporations. In the years 1950 to 1960, inclusive, manufacturing corporations attracted nearly 80 percent of their long-term capital through the sale of new securities. Although total new security sales include both bonds and stocks, approximately 70 percent of the securities issued by manufacturing corporations in the period under review were in the form of bonds.

There are a number of factors which help

### TOTAL NEW SECURITIES ISSUED BY MANUFACTURING CORPORATIONS



Source of data: Securities and Exchange Commission.

(3) For a discussion of the use of commercial paper as a source of short-term credit, see "Commercial Paper to the Fore", this Review, October 1960.



to explain the predominance of bonds in corporate security issues. While both types of securities (bonds and stocks) involve payments to security holders, i.e., dividend payments to stockholders and interest payments to bondholders, corporations are permitted to treat interest payments on bonds as a business expense. Interest payments are thus deducted before the taxable income of a corporation is determined. Dividend payments to stockholders, however, may not be treated as a "before-tax" expense, and can be paid only from the net income or the retained earnings of the corporation. On the other hand, the payment of interest is usually a legal obligation of the corporation, whereas the payment of dividends is left to the discretion of the board of directors. In practice, however, dividends have increasingly become a fixed payment which management views as another cost of capital.

The nature of capital markets in the post-war period has also been an influencing factor in the predominance of bonds in the security issues of manufacturing corporations. The rapid growth of financial intermediaries, e.g., life insurance companies, pension funds, fire and casualty insurance companies, and investment trusts, is perhaps one of the most significant changes in the structure of capital markets. As these financial intermediaries have increased in both size and number they have, in turn, become a major source of capital for business enterprise. Due to various legal restrictions covering the investment activity of many financial intermediaries, some invest heavily in corporate bonds while being permitted to hold only limited amounts of corporate stock.

An indication of the appetite of many of these financial institutions for investment outlets is that, in many instances, they have purchased entire flotations of corporate bonds. Such a situation may reduce for a manufacturing corporation the expense associated with marketing securities; it may also permit the issuing corporation to avoid the loss of time and expense involved in meeting the

legal requirements necessary for a large public issue of securities and to reach agreements on covenants within the bond indenture which would not be possible when dealing with many public security holders.

It is not surprising, therefore, that many manufacturing corporations have tailored their new bond issues to meet the standards of various financial intermediaries. According to estimates of the Securities and Exchange Commission, approximately 50 percent of all securities issued by manufacturing corporations during 1950-1959, inclusive, were direct or private placements, i.e., the entire issue was sold to a financial intermediary.

Finally, although the relatively high price which investors have been willing to pay for corporate stocks in recent years has encouraged the sale of additional stock, the desire on the part of management to limit the number of stockholders and the demands upon corporate earnings may also have prompted the use of bonds as the primary means of acquiring long-term capital.

Another means used to acquire external capital by manufacturing corporations is the *term loan*. Term lending has become increasingly popular as a way of financing the purchase of additional plant and equipment. Such loans extend usually from one to ten years, and perhaps can be best described as an intermediate-term source of funds. Repayment of the loan is arranged usually on an instalment basis, which provides both a lower cost of capital for the borrower and increased security for the lender. In addition, the use of the proceeds of the loan usually increases the productive and earning capacity of the borrower which, in turn, generates the income necessary for the payment of both interest and principal. As a result, commercial banks have been attracted to making term loans from the standpoint of security as well as the higher yield which accompanies a loan of longer duration.

Large manufacturing corporations have, in many instances, found term loans a more economical and convenient means of raising

capital than the flotation of additional securities. For the small manufacturing firm with little or no access to capital markets, the term loan may be the only means of acquiring long-term capital. Finally, since term loan agreements are determined through direct negotiation between lender and borrower, the borrower has an opportunity to tailor the loan contract to permit a more efficient use of the loan proceeds.

In seeking new sources of intermediate- and long-term capital, manufacturing firms have also turned to the use of "rented capital", i.e., assets acquired by the means of lease arrangements. Although lease financing involves borrowing physical assets, it results in a contractual obligation which is essentially the same as that incurred in borrowing funds. As a recent innovation in external financing for manufacturing corporations, equipment leasing makes available the use of up-to-date

production, office, and transportation equipment while permitting a company to purchase the use of these assets in a manner similar to the purchase of electric power and telephone services. A firm is thus able to avoid the immobilization of capital which ownership entails.

Leasing has been especially attractive to small manufacturers and to firms competing in industries in which the equipment used is subject to fast obsolescence because of rapid improvements in design and operation. The need for additional capital is a common characteristic among such organizations, and often they are further handicapped by limited sources of external capital. Leasing arrangements permit the use of necessary equipment while at the same time conserving the limited capital sources at their disposal.<sup>(4)</sup>

(4) For a review of leasing, see "Leasing's Role in Machinery Financing", *New England Business Review*, Federal Reserve Bank of Boston, September 1961.

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## NOTES ON FEDERAL RESERVE PUBLICATIONS

Among the articles recently published in the monthly business reviews of other Federal Reserve banks are:

"Should the Income Tax Be Overhauled?", Federal Reserve Bank of Kansas City, December 1961.

"Municipal Borrowing for Industrial Development." Federal Reserve Bank of Chicago, January 1962.

"Recovery, Market Interest Rates, and Monetary Policy", Federal Reserve Bank of Philadelphia, January 1962.

*(Copies may be obtained without charge by writing to the Federal Reserve Bank named in each case.)*

# Recovery In A Heavy-Industry District

**T**HE HIGH DEGREE of specialization in durable-goods manufacturing in Ohio and Western Pennsylvania is well known. Thus, wide fluctuation in the activity of such industries during the course of a business cycle usually has an especially marked impact upon the economy of the Fourth Federal Reserve District. The fact that the 1960-61 recession was not as severe, in terms of industrial activity, as that of 1957-1958 was reflected first in the pattern of industrial activity in the District during the recession and then during the recovery of 1961. Such a turn of events is shown by a review of some of the heavy industries which are of special importance to the Fourth District.

## National Industrial Developments as Background

During 1961 industrial activity was characterized by the end of a recession early in the year and a subsequent quick return to a record high as shown by the Federal Reserve Index of Industrial Production. Industrial production declined by approximately 8 percent from its pre-recession peak in January 1960 to the recession trough during February 1961.<sup>(1)</sup> The mildness of that decline is apparent when it is compared with the corresponding decline of nearly 15 percent which occurred in the index between July 1957 and April 1958, the months which marked the peak and trough, respectively, of industrial production in those years.

The index of industrial production moved up briskly after the recession low in February 1961, largely as a result of rapidly expanding auto and steel production, as well

as a turnaround in manufacturers' inventories, which occurred sooner in 1961 than in 1958. In 1961 manufacturers' inventories started increasing just two months after the recession trough, and by September were back to within 1 percent of their previous high. In contrast, after the trough of the 1958 recession, manufacturers' inventories had continued to decline for eight more months until they reached a point 9 percent below their previous peak.

Thus, beginning in March 1961, industrial production marched steadily upward until September, when a decline of two percentage points was sustained. That decline was at least in part due to work stoppages in the automotive industry and work interruptions in the South caused by hurricane damage. It may have also reflected a perceptible sluggishness in consumer spending. Industrial production then resumed its climb, once more breaking new high ground in November. When the year ended, the index of industrial production stood at 115, approximately 5 percent above its level in the first half of 1960 and 13 percent above the cyclical low of February 1961.

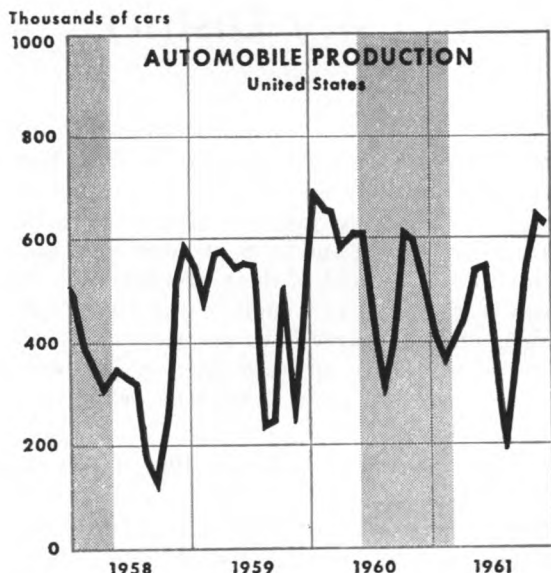
With this general discussion of industrial production as background, we now consider in detail the activity of the heavy industries which bulk large in the economy of the Fourth District. These industries are of course also important in terms of their impact upon industrial production nationally.

## Auto Industry

During 1961, the auto industry on balance contributed substantially to the recovery in business, by producing cars at a rapid rate after the first quarter. Total domestic production in 1961 amounted to approximately 5.5

(1) Turning points cited here apply only to the production index. General business activity in the 1960-61 cycle turned down in the spring months, with the peak month conventionally dated as May 1960.

Passenger car production of 5.5 million in 1961 was substantially higher than the 4.2 million produced in 1958.



Source of data: Ward's Automotive Reports

million automobiles. That figure compared quite favorably with 1958, the last previous period of business recovery, when only 4.2 million were produced,<sup>(2)</sup> but was below the 6.7 million produced in 1960. The showing in 1961, as compared with 1958, was somewhat striking in that 1961 began with a record inventory in dealers' stocks amounting to approximately one million new cars, or 38 percent more inventory than had existed at the beginning of 1958.

The relatively favorable showing in 1961 production resulted from good model acceptance, the growing interest in compact cars (partly at the expense of foreign imports) and the mildness of the '60-'61 recession. Climbing rapidly from a strike-affected low of 351,000 domestic car sales during September (a seasonally-low month) automobile dealers sold an estimated 535,000 cars in October. This was within 1 percent of the

(2) Auto output in 1958, however, was affected by an auto strike which was more serious than the partial shutdowns in the fall of 1961.

year-earlier figure, which was a record for October. During November car sales increased even further, totaling 585,000 — an all-time high for the month. On a seasonally adjusted basis, domestic car sales during the fourth quarter were running at an annual rate of approximately 6.5 million.

As 1961 ended, a further increase in sales of about 7 percent above the rate of the fourth quarter of 1961 was needed to attain in 1962 the much-sought sale of 7 million domestic cars. Whether or not such a total can be achieved will depend largely upon just how much of a buying surge occurs in the spring of this year. However, it appears, at this time, that production during the winter months of 1962 will not be aimed at reducing dealers' stocks as was the case during the first quarter of 1961, when production fell to 1,188,000, the lowest quarterly figure in ten years. Dealers' new car inventories at the end of December 1961 were approximately 821,000 units, or 18 percent below the number in inventory at the end of December 1960.

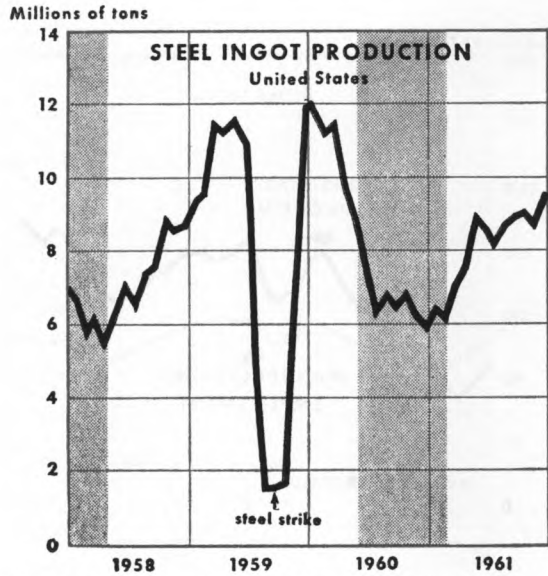
### Steel Industry

The pattern of steel production in 1961 followed closely, and in part shaped, the course of general business activity. After a year of working off steel inventories, manufacturers of metal products finally found it necessary to increase their buying of steel at the end of the first quarter. In response to inventory replenishment and the influence of higher automotive requirements for the second quarter, steel ingot production spurted sharply in January and March and continued to increase through April and May.

The impetus of the auto and steel industries during this phase of the recovery was quite striking. Although "automotive products" and "iron and steel" together account for one-tenth of the coverage of the Index of Industrial Production, the two industries were responsible for one-third of the rise in the index between February and May.

Lower steel production during the third quarter, largely because of seasonal factors,

Steel production recovered sharply late in the first quarter of 1961.



Source of data: American Iron and Steel Institute.

was then followed by further increases in production and orders during the fourth quarter. By mid-November, the high rate of orders was being interpreted widely as a sign that inventory building was once again beginning with an eye toward labor-management negotiations in the steel industry. Such a development has important implications for the pattern of steel production during 1962. Thus, as 1961 ended, it appeared that again in 1962 the steel industry might play the leading role in shaping the course of business activity that it had in 1959.

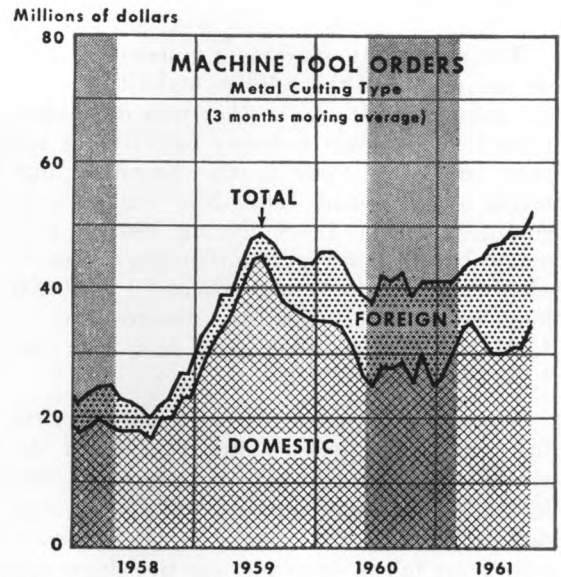
For 1961 as a whole, production of 98 million tons of steel compares with the 85 million tons produced during the recovery year of 1958 and the 99 million tons produced in 1960. Certain aspects of the industry's experience during 1961 tended to promote a spirit of caution in assessing the steel outlook for 1962, although all forecasts have been for a larger steel year this time. Among such relatively sober aspects of the '61 course of events were: resurgence of steel imports,

weakening in the price structure of selected steel-product lines, and a continuation of the competitive inroads made by substitute materials.

*Steel in the Fourth District.* Throughout 1961, steel production in the Fourth District followed a pattern similar to but lower than the national average. For the twelve months of 1961, production in the District averaged 94 percent of the 1957-1959 average compared with 104 percent in the U.S.

Of the four steel producing areas in the District, production rates in the Youngstown area (88 percent) and in the Pittsburgh area (91 percent) remained substantially below the national average throughout the year. Accounting usually for approximately three-quarters of the total Fourth District tonnage, these two areas are large producers of steel pipe and wire products. That these two areas were below the national average reflected the fact that the demand for pipe and wire during 1961 was relatively low, as compared with earlier years.

*Foreign orders have added new stability to the machine tool order cycle.*



Source of data: National Machine Tool Builders' Association

In contrast the output indexes for the Cleveland area (106 percent) and the Cincinnati area (111 percent) moved somewhat above the national average as demand for sheet steel and other items for the automobile, appliance and capital goods industries moved up briskly after February.

### Machine Tool Industry

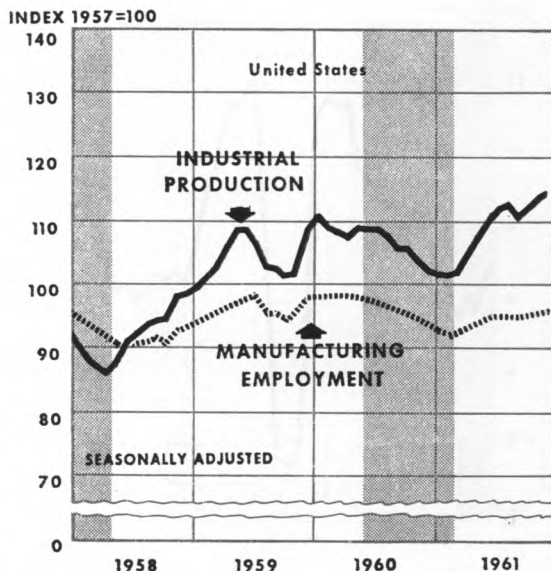
Activity in the machine tool industry in 1961 was supported primarily by the growing volume of foreign orders, which thus contributed stability to the industry during a period of reduction in domestic demand. As the accompanying chart shows, foreign orders lessened substantially the impact of the recession on the machine tool industry; in addition, they were entirely responsible for the increase in orders during the second quarter. By the fourth quarter a topping out of foreign orders was compensated for by a resurgence of domestic demand. Preliminary data for November indicate that new orders in the industry, as measured by the charted three-month average, were at their highest rate since 1957.

### Rubber Industry

The constantly increasing number of cars on the road and the relative stability in new car sales, together with other uses of rubber, helped to maintain industry activity for the year relatively close to the previous high levels of 1959 and 1960. New rubber consumption in the U. S. during 1961 is estimated by the Rubber Manufacturers' Association to have been approximately 1,500,000 long tons, or less than the record level of 1,628,000 tons in 1959, and less than the 1,558,000 tons in 1960.

Although shipments of passenger-car tires for original equipment and for export declined approximately 17½ percent from 1960 levels, further increases in replacement tire demand during 1961 held the total year-to-year short-fall in passenger-car tire shipments to a mere 3 percent.

*Manufacturing employment has shown no net gain since early 1958, while production has risen substantially.*



Source of data: Board of Governors of the Federal Reserve System and U. S. Department of Labor.

### Employment and Unemployment

Despite the shallowness of the business downturn of 1960-1961, unemployment remained a significant problem. During the recovery the unemployment rate remained close to a 7-percent level until November, despite the strong upturn in business.

Reductions in unemployment tend to lag behind the advance of other activity series during business expansions. This is so mainly because employers generally lengthen the working hours of employees already on payrolls before adding to their labor force; also, output per manhour tends to rise in the early stages of recovery. But the stickiness of employment during the 1961 recovery was somewhat more marked than usual; it has constituted a problem for the nation which is widely recognized.

Manufacturing employment was a continuing part of this problem during the year. An

accompanying chart shows that, despite the rising trend of production nationally, there has been no net gain in manufacturing employment since early 1958. On the other hand, although manufacturing employment has shown no growth in recent years, total employment continued to increase to the highest levels ever attained.

The effects of the recent employment-unemployment situation in the Fourth District is revealed in the number of areas of substantial labor surplus. Since 1957, a larger proportion of major labor market areas in the District have been classified as "areas of substantial unemployment" than in the U. S. as a whole.

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## *Around the Fourth District—*

During the week ended January 31, the 26 Fourth District banks that report weekly increased their *bank credit* by \$31 million. It was the first net gain in bank credit since the turn of the year.

\* \* \*

The index of *steel production* in the Cleveland-Lorain district posted its second consecutive 9-point gain in the week ended January 20, but dropped a point during the following week. The mid-January index reading of 154 (1957-59 — 100) was exactly twice as high as in the corresponding week one year ago, during the recession, but 10 points short of its position two years ago.

\* \* \*

Preliminary reports from Fourth District *department stores* indicate that sales during January showed some gain from December, after adjustment for seasonal variation.

\* \* \*

*Automobile sales* in Cleveland have been somewhat lacking in vigor during January. Volume declined in the third week of the month, contrary to the seasonal pattern.

*(The above items are based on various series of District or local data, which are assembled by this bank and distributed upon request in the form of mimeographed releases.)*



FOURTH FEDERAL RESERVE DISTRICT