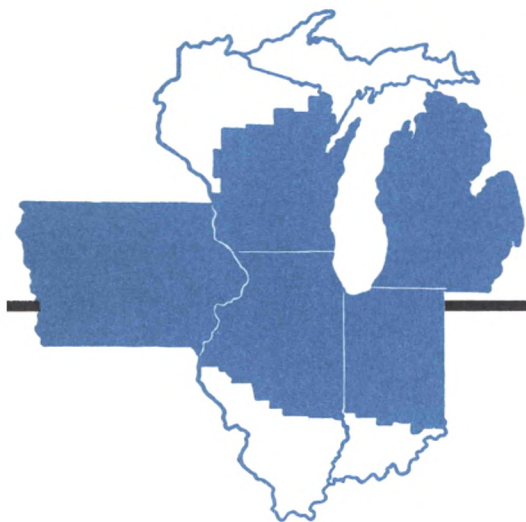


*A review by the* **Federal Reserve Bank of Chicago**

# Business Conditions

**1965 April**



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# THE Trend OF BUSINESS

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## Bulge in business borrowing

Loans to commercial and industrial businesses at the nation's major banks have risen sharply during the past few months. From late November through the first week of March, the net growth was more than 2,750 million dollars compared with an average increase of less than 150 million for comparable periods of the previous three years. Accelerated borrowing is not uncommon in December as businesses meet their tax, dividend and year-end needs, but this is usually offset by large net repayments after the turn of the year. This year repayments in January were much smaller than usual despite a strong December loan rise, and a further rapid gain in loans outstanding occurred during February.

In addition to their usual seasonal needs,

businesses normally require additional amounts of bank credit in periods of strong economic activity as more funds are needed for both working capital and investment in new plant and equipment. Undoubtedly this has been important in recent months.

Business borrowing may also rise sharply as a result of unusual temporary developments. There is evidence that a substantial portion of the recent upsurge was due to such special factors. Even after allowance for the probable effect of these factors, the December-February loan growth was well above the normal seasonal pace.

### Some temporary distortions

There are several special factors that explain a part of the sharp rise in business

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**BUSINESS CONDITIONS** is published monthly by the Federal Reserve Bank of Chicago. Dorothy M. Nichols was primarily responsible for the article "Trends in Banking and Finance—Bulge in Business Borrowing," and George W. Cloos for "Capital Expenditures—Further Orderly Rise Indicated."

Subscriptions to **Business Conditions** are available to the public without charge. For information concerning bulk mailings, address inquiries to the Federal Reserve Bank of Chicago, Chicago, Illinois 60690.

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loans at the major commercial banks in late 1964 and early 1965. Among them are: 1) the dock strike, which delayed delivery of goods in transit and extended the time needed for financing them; 2) the buildup of steel inventories in anticipation of a possible strike in that industry this spring, and 3) accelerated borrowing by foreigners partly in anticipation of the extension of the interest equalization tax to bank loans. In addition, it seems likely that some domestic businesses may have shifted forward plans to borrow funds on the assumption that within a relatively short time a rise in interest rates on bank loans would follow the November increase in the discount rate.

It is not possible to determine the extent to which these factors accounted for the unusually large winter loan growth. The distribution of the increase by business of borrower, compared with the pattern in other recent years, suggests that the effects of the dock strike on commodity dealers and food processors and of steel inventory building on metals users were fairly important. Credit demands, however, were greater than usual in all industry groups, and the increases were especially large at the New York banks. While available data do not separate foreign from domestic loans, it might be assumed that the relatively larger gains in New York reflect, at least in part, the dominant position of New York banks as international bankers.

Since the restoration of normal shipping schedules, commodity dealers have begun to reduce their borrowing. Moreover, by the first of March many banks apparently had reached or even exceeded the level of foreign loans allowable for the entire year under the voluntary restraint program guidelines—year-end 1964 amount plus 5 per cent. Probably not all of this credit is included in the figures for business loans. Given the wide-

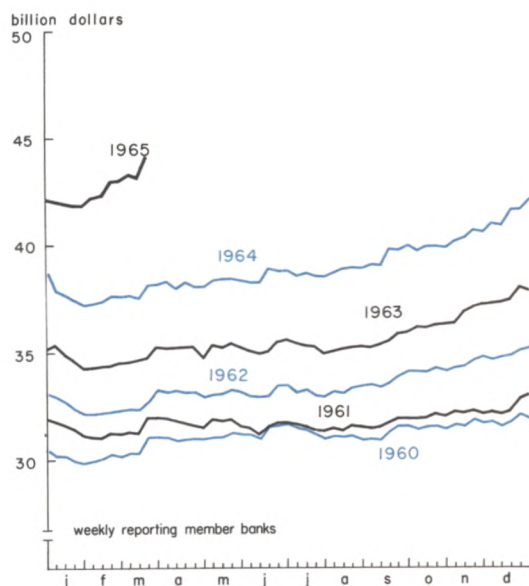
spread efforts to cut back on capital outflows, little further net growth should come from foreign loans through the rest of 1965. Steel users, however, can be expected to continue to require additional credit to finance the building of inventories so long as a strike threatens in the steel industry.

### Credit for business expansion

Because it is not possible to measure the extent of these temporary uses of bank credit, it is difficult to judge the strength of the underlying trend of demand. Although the loan upsurge was strongest in New York, gains in other areas also were large and broadly based among industries, suggesting a strong basic trend.

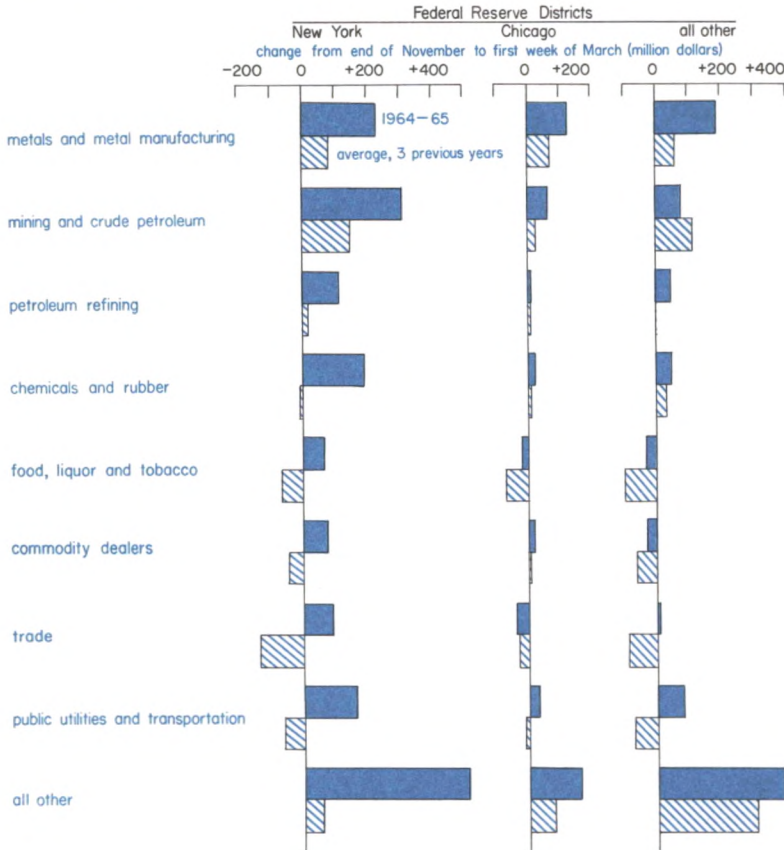
In earlier cyclical upswings, the rate of

### Business loans show strong rise in recent months





### Gains in business loans exceed normal pattern for all industry groups



Note: Data are for weekly reporting member banks. "All other" includes textiles, construction, services, all other not elsewhere classified, and all business loans of smaller banks.

of 1964, these business loans ran about 10 per cent above their year-earlier levels. Although this is by no means a sluggish performance, it was moderate as compared with expectations based on the earlier experience and also by comparison with the growth in other types of bank credit.

A major reason for the smaller reliance on bank credit earlier in the current upswing has been the very large amount of funds generated by corporations from internal sources—depreciation allowances and retained earnings. Although cash flows of corporations have continued to rise, they may currently be outpaced by rising needs for both working capital and plant and equipment expenditures.

growth in business loans reached a peak in the second year of the advance. In the 12 months ending February 1956, for example, the gain was 23 per cent. In the same period of 1959-60 it was 15 per cent. The second and third years of the current business expansion brought increases of 7 per cent and 8 per cent, respectively. Through most

Inventory levels, although remaining moderate in relation to sales, began to rise sharply in late 1964. Also requiring financing are the increases in receivables that have accompanied the record level of sales. As these needs are augmented by a high and rising investment in plant and equipment, some businesses are turning increasingly to outside sources for funds.

### Term loans rising

Bank borrowing is the major source of external financing for short-term funds although some of the very large and well-known corporations sometimes borrow by selling commercial paper. To an increasing extent, however, banks appear to be extending intermediate-term credit to business borrowers. Evidence released by the New York Federal Reserve Bank shows that 60 per cent of the outstanding business loans of the large New York banks have origi-

nal maturities of more than one year—so-called “term” loans.<sup>1</sup> In the first two months of 1965, term loans rose more than 600 million dollars at these banks while short-term loans declined 12 million, compared with declines of 130 million and 500 million dollars, respectively, in the same period a year ago.

A substantial portion of the recent increase in term loans probably represented credits to foreign borrowers. But there are reasons for expecting an increasing volume of term credits to domestic borrowers as a basic trend.

Most term loans are for periods under five

<sup>1</sup>Similar data for a number of large banks in the Cleveland Federal Reserve District suggest that term loans are somewhat less important outside New York; at the end of December 1964 they amounted to 46 per cent of total outstandings at those banks.

### Internal funds financed an increasing share of the growth in corporate assets through 1964

|                                                                             | 1956              | 1960 | 1963 | 1964* |
|-----------------------------------------------------------------------------|-------------------|------|------|-------|
|                                                                             | (billion dollars) |      |      |       |
| <b>Increase in corporate assets:</b>                                        |                   |      |      |       |
| Plant and equipment                                                         | 30                | 31   | 34   | 39    |
| Inventories                                                                 | 8                 | 3    | 4    | 3     |
| Receivables                                                                 | 9                 | 9    | 13   | 14    |
| Cash and U. S. Government securities                                        | — 4               | — 2  | 2    | 1     |
| Other financial assets                                                      | 5                 | 5    | 9    | 9     |
| <b>Sources of financing:</b>                                                |                   |      |      |       |
| Retained profits and depreciation                                           | 28                | 29   | 37   | 41    |
| Stocks and bonds                                                            | 8                 | 8    | 6    | 7     |
| Trade payables                                                              | 6                 | 5    | 7    | 6     |
| Federal income tax liabilities                                              | — 2               | — 2  | 1    | 1     |
| All other debt                                                              | 8                 | 6    | 11   | 11    |
|                                                                             | (per cent)        |      |      |       |
| Internal sources as per cent of increase in physical assets and receivables | 60                | 67   | 72   | 73    |

\*Preliminary.

SOURCE: Council of Economic Advisers.

years and many are under revolving credit arrangements wherein the borrower “takes down” the money through short-term notes, but the lender is committed to supply new funds up to a maximum stated in the contract for a period of perhaps two years or more. Often, term borrowing by businesses constitutes interim financing of capital expenditures which are later refunded through the sale of stocks or bonds. In addition, loans with maturities of up to seven or eight years may be paid down in instalments from internal funds. Large cash flows have made bank borrowing of this type a practicable alternative to bond market financing, and this practice is expected to grow as long as bank funds are readily available.

The borrower’s choice between alternative methods of financing depends mainly on rela-



tive terms. In addition to the contract rate of interest other important factors are: the length of time for which the funds are needed, the variability in the amounts needed, compensating balance requirements and the cost of securities flotation.

Interest rate levels and differentials—and expectations with respect to them—are important to this choice, affecting both the distribution of indebtedness between the alternative sources and the timing of bond sales. Rate relationships have been remarkably stable over the past two years, but while virtually no change has been recorded in bank loan rates, bond yields have moved up nearly one-fourth of 1 per cent during the past two years so that rates on bank loans have become relatively more favorable. In the past, the typical pattern has been for bank loans to be used as long as they are available in periods of rising interest rates and to be funded in

periods of reduced business activity when rates on capital issues are relatively low.

### Bank funds ample

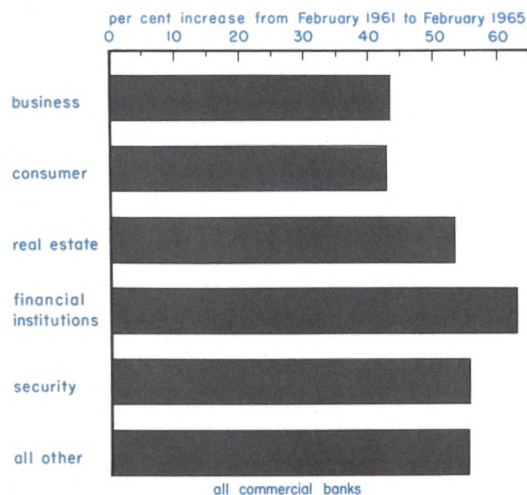
A basic factor influencing the use of bank credit by business is its availability. Banks have had ample funds to serve their customers' needs throughout the business upswing. Total bank credit has grown at an average rate of 8 per cent annually and, as indicated in the chart, business loans have expanded less rapidly than most other types of loans. Commercial and industrial loans accounted for 42 per cent of the loan portfolios of the leading city banks at the beginning of March compared with 45 per cent when the recovery began four years ago.

At the same time, more than four-fifths of the 70 billion dollar growth in total deposits since February 1961 has been in the form of time and savings accounts. Because of lower liquidity needs and higher interest costs of these funds, a larger share has been channeled into risk assets and investments with longer maturities and generally higher yields. A growing proportion of intermediate-term business loans would be consistent with that policy.

With the ability to bid for time deposits in the market for certificates of deposit and to compete effectively with other financial intermediaries for savings funds, the trend toward increasing longer-term loans to business may be expected to continue, given strong business needs and rates competitive with other financing sources.

All things considered, a rising trend of business borrowing from the banks does not appear to be either surprising or alarming. It stems largely from growing credit needs that would be expected to accompany continued business expansion, and it reflects, in part, an increasing share of that financing by

### Business loans have risen less than most other loans during four years of rising activity



the banks. Much of this credit, moreover, represents not new money creation but rather transfers from savings to investment in which banks are acting as intermediaries.

But even a strong basic demand for credit from business with growing reliance on bank financing could not be expected to sustain

the rate of business loan growth experienced in the first quarter of this year—nor would such a pace be desirable. As the effects of special and temporary influences disappear, a leveling off, and perhaps even a temporary decline, in outstandings is to be expected in the months immediately ahead.

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## Capital expenditures— further orderly rise indicated

**B**usiness expenditures for new plant and equipment have been rising since the second quarter of 1961. A Government survey of business plans released in mid-March indicates that these outlays will continue to increase throughout 1965. If so, the current rise in capital spending will have been under way for four and one-half years by year-end. In earlier periods of rising activity, these outlays have tended to increase disproportionately thereby helping to set the stage for recessions. Does such a danger exist at the present time?

For 1965, capital spending is expected to exceed 50 billion dollars. If achieved, this would be an increase of 12 per cent from 1964 which, in turn, had witnessed a rise of 14.5 per cent from 1963. Throughout the period, prices of capital goods have been approximately stable so that the “real” increase in outlays has been about the same as the rise in dollars.

The current projection has a good chance of being close to the actual total. In each of

capital outlays have proved to be within 3 or 4 per cent of the actual total for the year, and in several years have been “on the button.”

Current prospects for plant and equipment expenditures are of special interest to the industrial centers of the Seventh Federal Reserve District which produce about one-third of the nation’s machinery and equipment. Strengthened demand for these products has been a major factor in reducing unemployment in the states of the Midwest relative to that of the nation.

### **Capital outlays in the cycle**

Spending projects reported to the Department of Commerce can be expanded and augmented, or canceled, scaled down or postponed. Experience indicates, however, that sizable downward adjustments are unlikely unless the growth of overall demand for goods and services slows appreciably.

Peaks in capital expenditures and in total activity have been coincident except for 1953 when investment outlays reached their peak



one quarter later than overall activity. In postwar business revivals, on the other hand, capital expenditures continued to decline for at least one quarter, and more commonly two or three quarters after the beginning of an upswing in general activity.

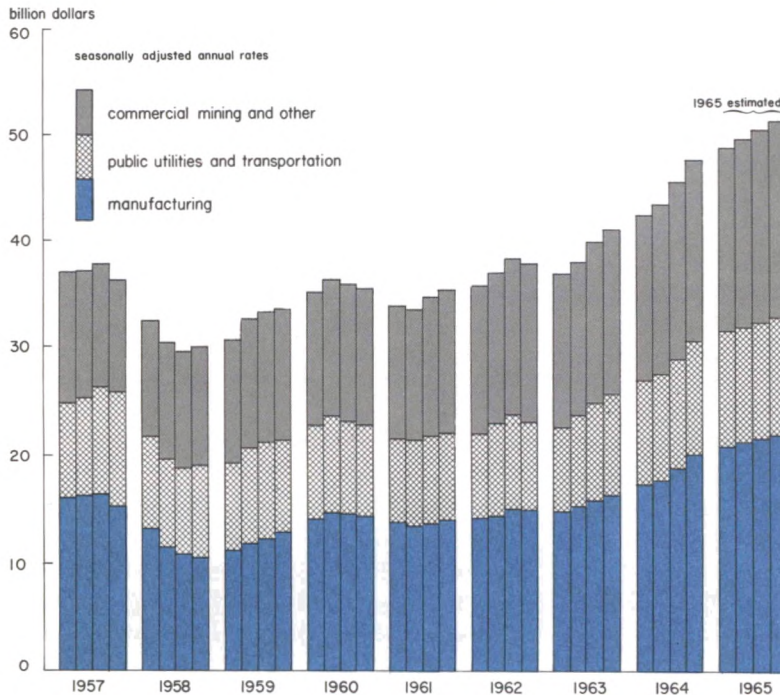
Business capital outlays are sometimes termed the “prime mover” of general business activity. In part, this is because vigorous prosperity almost always is accompanied by a high level of investment in plant and equipment and these expenditures are thought to be “multiplied” in terms of outlays on goods

and services purchased by consumers.

The postwar record shows clearly that “turns” in these expenditures have not preceded changes in general business, and capital outlays have not slowed down relative to general business prior to recessions with any regularity. But new orders for capital equipment, although somewhat erratic, *have* tended to decline before spending on these goods. No weakening in the flow of orders is evident as yet. New orders for machinery have trended upward for the past four years and in January were at a record high—10 per cent above the level of a year earlier.

At least of equal importance to the timing of capital outlays is the amplitude of the swings, which have been substantially greater than those for total spending. An outstanding example of the manner in which capital outlays can pick up momentum once a strong rise in general business is under way is found in the period from the first quarter of 1955 to the third quarter of 1957. The annual rate of capital expenditures then rose 47 per cent while total spending on goods and services increased 17 per cent. In the subsequent adjustment — from the third quarter of 1957 to the first quarter of

### Business plant and equipment expenditures are expected to rise throughout 1965\*



\*Includes outlays on fixed assets by businesses in the United States. Excludes agriculture, nonprofit organizations and spending charged to current expense.

1958—capital expenditures declined 14 per cent while gross national product dropped only 3 per cent.

Output of business equipment has shown greater fluctuations than total manufacturing output throughout the postwar period (see chart on page 13). Like new orders, changes in output of business equipment have tended to move ahead of expenditures. Payments for capital goods typically are delayed until delivery, although they may have been in the process of production for many months.

### Expected gains widespread

All major industries expect to increase capital expenditures in 1965—quite an unusual development even in years when total outlays rise sharply. This pattern is related to the fact that all industrial categories, with the exception of tobacco products, have reported increases in profits for 1964. The following table shows capital expenditure changes and changes in profits after taxes for major industries.

|                     | Capital expenditures |                           | Profits*     |
|---------------------|----------------------|---------------------------|--------------|
|                     | 1963 to 1964         | 1964 to 1965 <sup>e</sup> | 1963 to 1964 |
|                     | (per cent increase)  |                           |              |
| <b>Total</b>        | <b>14</b>            | <b>12</b>                 | <b>14</b>    |
| Mining              | 14                   | 10                        | 25           |
| Railroads           | 28                   | 15                        | 7            |
| Utilities           | 10                   | 6                         | 10           |
| Manufacturing       | 18                   | 16                        | 16           |
| Steel               | 36                   | 11                        | 28           |
| Machinery           | 22                   | 19                        | 29           |
| Motor vehicles      | 43                   | 11                        | 10           |
| Foods and beverages | 9                    | 11                        | 14           |
| Textiles            | 19                   | 34                        | 28           |
| Paper               | 31                   | 13                        | 20           |
| Chemicals           | 22                   | 24                        | 14           |
| Petroleum           | 15                   | 13                        | 7            |

<sup>e</sup>Estimated.

\*SOURCE: First National City Bank.

Factors, other than profits, of course, have played a role in the four-year upsurge in capital spending. Sustained growth in sales, gradual decline in unused capacity, technological improvements, the desire to cut labor costs per unit of output, the 7 per cent tax credit, liberalized depreciation guidelines, reductions in corporate income tax rate and the ready availability of funds from internal and external sources all have been important.

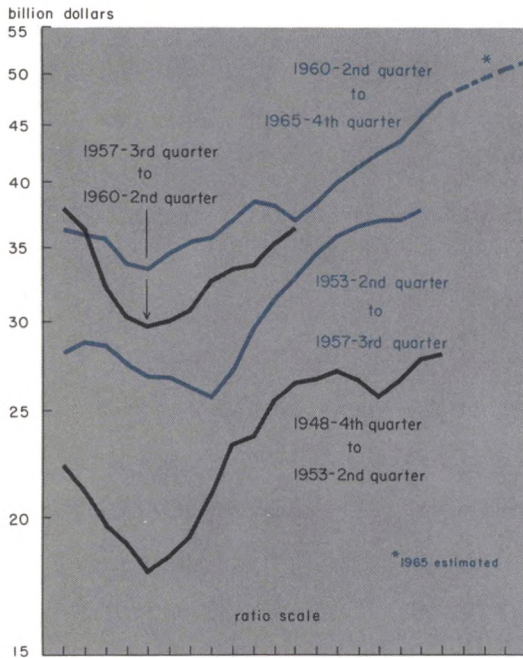
Corporate profits after taxes have increased each year since 1961, when the total was 21.9 billion dollars, to 1964, when it reached 31.7 billion. Most industries anticipate that profits will be maintained or increased in 1965. This prospect is supported by the reduction in the maximum tax rate on corporate income in the Revenue Act of 1964, from 52 per cent to 48 per cent effective on 1965 incomes.

Other Government actions have been intended to aid capital expenditures directly. In 1963 Congress approved a tax credit on purchases of new equipment for use in the United States (also applicable to a limited extent to used equipment). In its present form the tax credit is the equivalent of a more than 7 per cent, perhaps 10 per cent, reduction in the price of equipment, because the full purchase price can be depreciated for tax purposes.

In 1962 the Internal Revenue Service promulgated new depreciation "guidelines" which permitted much faster write-offs of equipment for many industries. The new depreciation regulations provided for a "reserve ratio test" after three years to see whether businesses actually were replacing equipment as rapidly as the "useful lives" suggested in the guidelines booklet. Possibly 60 per cent of business firms using the guidelines would have been required to slow down depreciation for tax purposes, subjecting them to



## Capital expenditure boom has outdistanced those associated with earlier postwar expansions



additional income tax. To avoid this, the reserve ratio test has been liberalized recently with an estimated saving to business of 600 million to 800 million dollars in taxes for 1965 and subsequent years.

### Industry highlights

Manufacturing has accounted for about two-fifths of total plant and equipment expenditures throughout the postwar period. In 1965, it is estimated, this proportion will rise to 43 per cent compared with 39 per cent in 1962.

Virtually all major groups of manufacturers will boost their capital outlays to record

highs in 1965. Expenditures of producers of *primary nonferrous metals* are expected to reach 660 million dollars—two and one-half times as much as the 1961 total—but still appreciably short of the amount spent in 1957. The failure of outlays of nonferrous metals producers to join other industry groups in reaching a new high this year reflects, in part, increased dependence upon foreign sources of copper and aluminum.

Capital expenditures of *motor vehicle* producers rose sharply in 1964 and are expected to increase 11 per cent further this year to a total of almost 1.7 billion dollars. At this level, expenditures of auto firms will be almost exactly the same as in 1956.

About 9.2 million cars and trucks were produced in 1955—an exceptionally large output. It was not until 1964 that output exceeded the 1955 total. This year's production is expected to be even higher. In recent months assemblies of vehicles have been at record levels and capacity to produce the more popular models has been strained. In addition, auto firms have vast modernization programs under way to improve quality and reduce costs.

The steady increase in auto and truck sales since 1961 has exceeded all but the most optimistic projections in contrast with the disappointing results that followed 1955. The recent capital spending survey indicates that auto industry capital outlays may reach a peak in the second quarter and then level off. Prospects appear favorable, however, that these expenditures will not follow a course similar to that of 1956-59 when they declined two-thirds.

*Steel firms* expect their spending on plant and equipment to amount to almost 1.9 billion dollars this year, surpassing the previous high reached in 1957. Like the motor vehicle industry, steel output set a record in 1955



that was not exceeded until last year.

In recent months steel firms have been pushing capacity to produce flat-rolled products—plates, sheets, strip and galvanized steel—to the utmost. Moreover, the industry is in the midst of a technological revolution. Oxygen converters are replacing open hearth furnaces, finishing capacity is being expanded and modernized and huge new projects are under way to convert low-grade taconite ores to pellets with a high iron content. The latter projects had been delayed by fears of discriminatory tax rates, dispelled by a referendum approved by the Minnesota electorate last November.

The upswing in demand for machinery and equipment has tended to raise backlogs of orders. Also, substantial changes in the nature of these goods has caused producers to replace and modernize obsolete facilities. This year, planned capital outlays of *electrical and nonelectrical machinery and equipment* producers total more than 2.7 billion dollars—far greater than ever before.

All major groups of nondurable goods manufacturers increased capital outlays sharply last year and expect to do so again in 1965. In each case new record highs are foreseen.

The *petroleum industry* is by far the largest capital spender of any manufacturing group. Outlays by producers of oil products are expected to reach 3.8 billion dollars this year. A large additional sum—about 2 billion dollars—will be spent on drilling and exploration, charged to current expense and not classified as capital expenditures.

The *chemical industry* like the electronics and aerospace industries is closely associated with new products developed by scientific research. Some segments of the chemical industry have been characterized by tight competition and “excess capacity” in recent years.

However, new and improved products and processes continue to be developed. Capital expenditures of chemical firms rose 22 per cent in 1964, and an even larger increase is planned for 1965.

*Foods and beverages* and *textiles* established records in capital outlays in 1948 that were unsurpassed until recent years. Expenditures of food processors even now are only moderately above the peak rates of the early postwar period. Much greater increases are reported by the textile firms which expect to spend over 1 billion dollars on plant and equipment in 1965—34 per cent more than the record high set last year. Profits of the textile industry have improved in recent years for various reasons including strong consumer demand, a lower cost for cotton and increased

## Plant and equipment expenditures by industry

|                       | Previous peak     | 1963         | 1964         | 1965 estimate |
|-----------------------|-------------------|--------------|--------------|---------------|
|                       | (billion dollars) |              |              |               |
| <b>Total</b>          | <b>1962 37.31</b> | <b>39.22</b> | <b>44.90</b> | <b>50.17</b>  |
| Mining                | 1957 1.24         | 1.04         | 1.19         | 1.31          |
| Railroads             | 1951 1.47         | 1.10         | 1.41         | 1.62          |
| Other transportation  | 1962 2.07         | 1.92         | 2.38         | 2.57          |
| Public utilities      | 1957 6.20         | 5.65         | 6.22         | 6.56          |
| Commercial and other* | 1962 13.15        | 13.82        | 15.13        | 16.58         |
| Manufacturing         | 1957 15.96        | 15.69        | 18.58        | 21.53         |
| Iron and steel        | 1957 1.72         | 1.24         | 1.69         | 1.88          |
| Nonferrous            | 1957 .81          | .41          | .48          | .66           |
| Electrical equipment  | 1961 .69          | .69          | .66          | .82           |
| Machinery             | 1957 1.28         | 1.24         | 1.64         | 1.92          |
| Motor vehicles        | 1956 1.69         | 1.06         | 1.51         | 1.67          |
| Foods                 | 1948 1.05         | .97          | 1.06         | 1.18          |
| Textiles              | 1948 .62          | .64          | .76          | 1.02          |
| Paper                 | 1957 .81          | .72          | .94          | 1.06          |
| Chemicals             | 1957 1.72         | 1.61         | 1.97         | 2.45          |
| Petroleum             | 1957 3.45         | 2.92         | 3.36         | 3.79          |

\*Includes communications.

## Fluctuations in output of equipment exceed changes in total manufacturing



efficiency in the production and use of man-made fibers. Textile firms also have benefited substantially from more rapid write-offs on machinery, which were permitted a year before the guidelines for most other industries were approved.

### Machine tools booming

Machine tool shipments, according to a Government projection, will rise about 20 per cent in 1965. If achieved, this would be double the total for 1961 and the highest since 1953 when Korean war orders were still being filled.

Machine tools are not to be confused with "machinery," of which they comprise a small but vital part. They consist of milling, drilling, broaching, grinding and planing machines and lathes that remove metal in chips and

shavings to produce parts with rigid dimensional specifications that commonly become components of other machines. In recent years less than 2 per cent of the value of all producers' durable goods purchased by United States firms has consisted of machine tools.

Demand for machine tools is highly variable and producers, therefore, have had to weather years of drought. From 1945 until the Korean war, domestic purchases of machine tools remained below the 250 million dollar

level. Another slack period occurred from 1958 through 1961. This industry did not participate appreciably in the short-lived 1958-60 expansion.

The fact that machine tool producers now are in the midst of their third boom since 1945 is in large part a reflection of the size and duration of the general expansion. It is also related to the fact that machine tool builders have developed revolutionary new products that turn out work more rapidly at closer tolerances.

A dramatic development has been the growing acceptance of numerical control of machine tools, commonly abbreviated N/C. These machine tools are operated by punched tapes and can produce a series of identical parts to exact dimensions with less dependence on skilled operators. Less than 1 per cent



of machine tools now in use are numerically controlled, but future applications of these systems are expected to be widespread. To the extent that industry here and abroad masters the necessary techniques, the upswing in machine tool purchases could be long-extended.

During 1964 and thus far in 1965, machine tool producers have been handicapped in increasing production because of shortages of machinists, draftsmen, engineers and other skilled workmen. They are attempting to break these bottlenecks by vigorous recruiting and apprentice training programs. Meanwhile, order backlogs and scheduled delivery times on new orders have lengthened substantially.

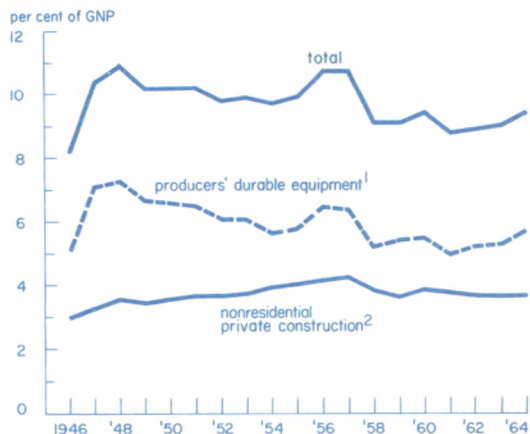
### The railroad resurgence

Capital expenditures of the railroads were near their postwar low in 1961 at less than 700 million dollars. If this year's projection of spending on structures and equipment by railroads is realized, outlays will total more than 1.6 billion dollars, almost two and one-half times the amount of four years ago, and will exceed the previous high reached in 1951.

More than many other industries, the railroads traditionally have deferred maintenance and capital expenditures in slack times and have allowed an increasing proportion of their freight cars to remain in the "bad order" category. Throughout the past year, there have been widespread reports of freight car shortages that have impeded the movement and production of goods.

The railroads have benefited to a large degree from the tax credit and the revised depreciation guidelines. Most rail equipment lasts more than eight years and qualifies for the full investment credit. At 12 years, the depreciable lines suggested in the official

### Fixed investment has accounted for smaller proportion of total output since 1957



<sup>1</sup>Includes farm machinery and items charged to current expense.

<sup>2</sup>Includes farm and nonprofit institutional construction.

guidelines for freight cars and locomotives are only about half as long as those used previously, thereby increasing cash flow. If the reserve ratio test had not been revised, the railroads would have incurred about 150 million dollars in additional tax liability this year.

More than 65 per cent of railroad capital expenditures currently are for freight cars and 15 per cent are for locomotives, compared with 50 and 10 per cent, respectively, a few years ago. Freight cars ordered today are quite different than those purchased during the last equipment buying wave of 1956-57. Cars average much larger and more of them are special purpose equipment designed to serve customers more efficiently.

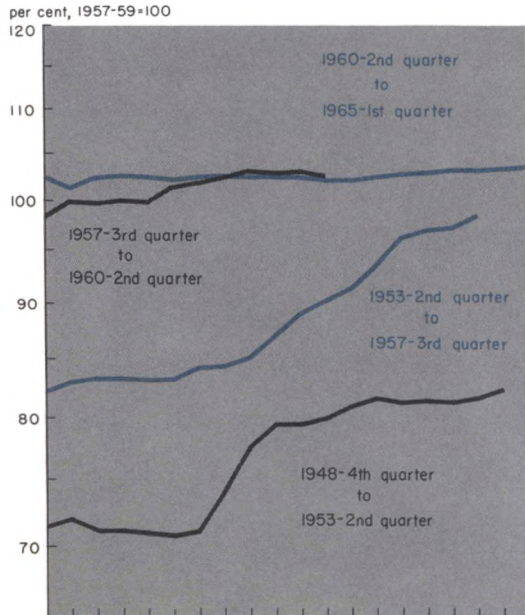
The 65,000 cars delivered in 1965, according to *Railway Age*, have a greater capacity than the 88,000 delivered in 1957.



In addition, freight cars have been improved to prevent damage to merchandise in transit and permit much faster loading and unloading. The number of long flat cars capable of handling shipments of autos, truck trailers and "containerized" freight are far short of needs. There are also large backlogs of orders for new tank and covered hopper cars.

Locomotives also have been improved. One thousand diesel-electrics were installed in 1964—400 below the total for 1956, the previous peak. Today's typical single engine locomotive has 2500 horsepower, and some have as much as 3000, compared with 1750 in the earlier year so that the total motive power installed last year probably was slightly greater than in 1956. A 20 per cent further increase in locomotive purchases is planned for 1965.

### Prices of machinery and equipment have risen slowly since mid-1963



### Foreign investments

American capital goods have been in strong demand in world markets throughout most of the postwar period. In 1964 exports of machinery exceeded 6 billion dollars. Probably more than 15 per cent of all capital goods produced in the United States last year were exported, and these shipments accounted for 45 per cent of total exports of finished manufactured goods. This is of special interest because United States wage rates are the highest in the world and capital equipment has a higher labor component than do most consumer goods. Output of business equipment declined very little in the 1960-61 recession, partly because exports remained strong.

It is possible that vigorous domestic demand for capital equipment and the lengthening of delivery schedules will slow foreign orders. One advantage of United States producers in international competition in recent years has been relatively short lead-times, but this is no longer the case for many products.

It is possible also that any slowing of direct foreign investment by United States firms under the current voluntary restraint program to improve the balance of international payments will retard exports of machinery and equipment. On the other hand, a reduction in direct foreign investments may tend to increase capital outlays in the United States.

### Too much, too soon?

A further expansion in capital spending is supported by the ready availability of financing from internal sources (retained earnings and depreciation) and from the money and capital markets; by the rise in expenditures on research and development by business, Government and private institutions (esti-

mated to exceed 20 billion dollars this year, double the 1957 level), and by the rapid pace of technological progress and the associated effects on obsolescence of existing commodities and equipment.

As late as the beginning of 1964, there were widespread complaints that capital expenditures were not rising rapidly enough in view of the general business prosperity. Now there is some concern that business is accelerating these programs too rapidly, with the result that a sharp reaction may lie ahead, perhaps in 1966.

In 1963, despite two years of expansion, capital expenditures amounted to only 6.7 per cent of the gross national product, lower

than in "recession years" such as 1954 or 1958. The postwar high for this ratio had been 8.8 per cent in 1947 and 8.4 per cent in 1956 and 1957. The ratio of capital spending to total output rose in 1964 and currently is about 7.5 per cent—almost exactly the postwar average. While current estimates may be revised, it appears that the rate of rise from the current level to year-end will be somewhat less than during the past year.

In some cases—notably machine tools, heavy presses and steel mill equipment—there have been reports of delays in deliveries. For all machinery producers, however, order backlogs were only 2.9 times shipments in January, compared with a ratio of 4.3 in early 1957 and 5.6 in 1953. Most capital goods producers are still actively seeking new business.

Doubtless, the average level of prices for capital goods has increased somewhat in the past year, but the rise has been small. Accurate measurement of price changes for capital goods is extremely difficult because of the number of individually negotiated contracts and changes in the nature of the products. Nevertheless, there can be little doubt that prices of capital goods have been relatively stable in the current expansion in contrast to the sharp increases in the expansions of the Korean war and the 1955-57 period when backlogs were very high relative to shipments.

Although recent trends suggest that capital spending excesses of the past are not yet in evidence, the possibility remains that the current rise could generate excessive momentum. To the extent that a sharp acceleration in outlays is avoided, the outlook for stable growth of output of capital goods industries will be improved.

### Cash flow—retained earnings and depreciation—finance a large share of capital outlays

