JULY 1949

BUSINESS CONDITIONS

A REVIEW BY THE FEDERAL RESERVE BANK OF CHICAGO

Federal Reserve Support Policy Modified

Additional Steps Taken to Ease Credit Conditions

The closing days of June brought three important developments in Federal Reserve policy in the direction of further easing credit conditions. On June 28, the Federal Open Market Committee issued this statement:

The Federal Open Market Committee, after consultation with the Treasury, announced today that with a view to increasing the supply of funds available in the market to meet the needs of commerce, business, and agriculture it will be the policy of the Committee to direct purchases, sales, and exchanges of Government securities by the Federal Reserve Banks with primary regard to the general business and credit situation. The policy of maintaining orderly conditions in the Government security market and the confidence of investors in Government bonds will be continued. Under present conditions the maintenance of a relatively fixed pattern of rates has the undesirable effect of absorbing reserves from the market at a time when the availability of credit should be increased.

This statement was followed on June 29 by an announcement by the Board of Governors in connection with the elimination of consumer credit restrictions and the reduction in reserve requirements:

The authority under which the Board of Governors of the Federal Reserve System issued Regulation W, establishing minimum down payments and maximum maturities for consumer instalment credit, expires June 30, 1949 and the regulation will not be effective after that date. Notice to this effect is being sent to those who, in accordance with the regulation's provisions, have filed registration statements with a Federal Reserve Bank.

The temporary authority granted by Congress for increased reserves likewise expires June 30 and the Board has accordingly revised the supplement to Regulation D, under which the following reserve requirements will be effective with the beginning of the next reserve period (June 30 for central reserve city and reserve city member banks and July 1 for other member banks): Against net demand deposits—24 per cent for central reserve city member banks, 20 per cent for reserve city member banks, and 14 per cent for other member banks; against time deposits—6 per cent for member banks of all classes. The changed requirements will result in a reduction of approximately $800,000,000 in required reserves.

The decision to abandon maintenance of the existing rate pattern restored to the System some additional flexibility in using the important instrument of open market operations for the first time since early in the recent war. In the first six months of 1949, the System's portfolio of Government securities was reduced almost four billion dollars. Of this decline, more than three billion was in Treasury bonds, most of which represented market sales to hold down bond prices. These operations, either directly or indirectly, absorbed largely bank funds freed through the contraction in business loans and lower required reserves.

The accompanying table shows the changes in the portfolios of the Federal Reserve Banks and the weekly reporting member banks since April 27. In the period prior to the change in open market policy, System sales of bonds almost balanced the easing effect on bank reserve positions which had resulted from the release of about 1.2 billion dollars by the lowering of reserve requirements early in May. In the two weeks following the announcement by the Open Market Committee and the most recent reduction in reserve requirements, the reporting banks acquired almost as many Governments as in the previous two-month period. Purchases were more heavily concentrated in the short-term issues, however. No net sales of bonds were made by the System.

Although central reserve city banks were not directly affected by the change in reserve requirements, a substantial part of the demand for Governments came from New York banks, which received funds from outlying districts. Excess reserves of all member banks rose almost 800 million dollars to 1.4 billion in the week following the reduction in requirements, but had declined to 930 million by July 13.

YIELDS ON GOVERNMENTS DECLINE

Reflecting the System's withdrawal from the bond market and the concurrent reduction in reserve requirements, together with continued slackening in the demand for funds by business, the prices of all classes of Government securities showed sharp advances in the early part of July. Both the eligible and restricted long-term 2½'s rose more than a full point in the first two weeks of trading. Yields have declined correspondingly, as shown by the following comparison of yields (in per cent) on taxable securities by maturity classes:

	June 25	July 2	July 16
Bills, 3 months	1.158	1.052	0.928
Certificates, 9 to 12 months	1.21	1.16	1.02
Taxable issues, 3 to 5 years	1.41	1.36	1.25
Bonds, 7 to 9 years	1.65	1.60	1.55
Bonds, 15 years and over	2.38	2.34	2.26

Because of the heavy demand for Treasury bills, particularly in the week ended July 13, the Reserve Banks sold these issues from their portfolios to maintain an orderly market. Nevertheless, the bill rate was allowed to drop below one per cent on the issue dated July 14 for the first time since August 1948.

The change in open market policy removes the restraining influence of System sales of securities upon the amount of reserve balances, and a continued flow of funds into the Government market from commercial banks and nonbank investors as well would result in a further downward adjustment in interest rates.

CHANGES IN HOLDINGS OF GOVERNMENT SECURITIES, FEDERAL RESERVE BANKS AND REPORTING MEMBER BANKS APRIL 27 TO JULY 13, 1949

(In millions of dollars)

Type of Issue	Federal Reserve Banks		Reporting Member Banks	
	April 27 to June 29	June 29 to July 13	April 27 to June 29	June 29 to July 13
Bills	−457	−584	+5	+639
Certificates	−84	−88	+572	+259
Notes	−26	−2	−4	+31
Bonds	−1,125	—	+654	+147
Total	−1,691	−674	+1,227	+1,076

Industrial Area Trends

Midwest Production Centers Face Declining Demand

The course of business during the remainder of the year in the principal industrial areas of the Seventh Federal Reserve District—Chicago, Detroit, Milwaukee, and Indianapolis—will influence national business trends to an unusual degree. This will be true because these manufacturing centers have a dominant position in the output of automobiles, steel, machinery, and railroad equipment—all of which appear likely to face further readjustments to more normal market conditions in the months ahead.

Declining trends in production and employment in these major areas of steel consumption now are of deep concern not only to the local areas themselves but also to the nation's coal and iron mining sections, the Eastern steel producing districts, and to business and the public generally. The current downtrend which began in late 1948 and early 1949 in these Midwest areas quite probably will continue throughout the present year. Moreover, unless some improvement in the volume of orders for durable goods appears fairly soon, or at least a leveling occurs in such orders—an even sharper decline may be expected.

Throughout the war and postwar years, most business observers have said that a decline from peak levels of output to more "normal" production schedules was almost inevitable, and even necessary to correct wage-price-output distortions caused by abnormal shortages. This expected slackening now is in progress, and in fact well-advanced in many lines of business. Yet, fears of a return to a more normal tempo in business are widespread. In major Seventh District centers business and employment so far have receded slowly with minimum disruption to the Midwest generally. Based upon what actually has occurred, therefore, the present situation can be viewed as a "desirable" readjustment from the peak of inflation, and helping to provide the basis for more stable and enduring levels of business.

However, analysts have reasoned that the critical stage of the transition to more "normal" peacetime output and income would take place in the durable goods industries, and particularly in basic steel and automobiles. In the past, readjustments in this sector of production have proved more far-reaching than in the "soft" goods lines, probably because purchases of the former can be postponed longer. Moreover, readjustments in durable goods production often reflect the level of new investment, while in the "soft" goods lines production tends to reflect the level of consumption. Persistent declines in current orders for heavy goods and the relatively deeper production cutbacks which these portend, seem to be more significant in setting the current "bearish" tone of expectations in this District than the actual slackening in business activity to date. Widespread attempts are being made to foresee the turning point in the present business recession. While most observers still remain in doubt, the view that a "bottoming out" will occur in the first half of 1950 is gaining some new supporters mainly because of a belief that conservative buying in the past will require a re-entrance into the markets by that time.

MIDWEST INDUSTRIAL PATTERN

The automobile, steel, machinery, and transportation equipment industries are the "prime movers" of Midwest business, employing about 65 per cent of all factory workers in the four principal industrial areas combined. The favored market situation in these lines during the early postwar years—in the case of automobiles up to the present time—has been the chief factor supporting the District's business. It was primarily because of this strong demand that general business expectations in the Midwest remained higher during 1947 and 1948 than in some of the nation's other sections, notably the East Coast and West Coast areas, where readjustments in the nondurable goods industries were of greater local significance. Consequently recent indications that "holdover demand" has now come to an end in most durable goods lines have caused attention to be directed to current developments in the District's major industrial centers.

Despite continued high production of passenger automobiles and steel in this District, declining sales in such durable goods lines as motor trucks, major household appliances, office machinery, farm implements, and industrial equipment have resulted in a persistent 10-month drop in the combined manufacturing employment of the four principal industrial areas. Since January 1949 the rate of decline—averaging 1.5 per cent per month—has accelerated to the point where it now is somewhat greater than the national rate of less than one per cent. As would be expected, this employment and production drop has occurred not only in the plants producing the finished products, but even more so in the foundries, machine shops, stamping plants, and other subcontract and feeder industries. Such cutbacks are quickly translated into reduced orders for basic steel and to a considerable degree account for the 12-week drop of 7 per cent in Chicago District steel production, and the 20 per cent drop in national output.

Forty per cent of all steel consumed in the nation for metalworking purposes is used in Illinois, Indiana, Michigan, Wisconsin, and Iowa, the five states lying within the Seventh Federal Reserve District.[1] About one-fourth of all metalworking steel produced in the

[1] See *Iron Age*, May 1949. About 80 per cent of all steel is used by the metalworking industries, the balance is used directly for pipe lines, rails, construction, and other miscellaneous purposes.

nation is consumed in the Detroit, Chicago, and Milwaukee industrial areas. Sheet and bar steel are the types most heavily used in these Midwest areas, about half of all national production being consumed here. Approximately one-third of the total production of steel plate, pipe, tubes, iron, and "unclassified" steel products find their end use in these centers, as well as somewhat more than a fourth of the tin plate and structural steel.

HARD GOODS MARKET FACTORS

From the concentration of steel consumption and durable goods employment, and from the large growth of these activities in Midwest industrial areas during the last decade, two conclusions concerning business prospects seem evident: (a) the future trend of orders for finished durable goods will determine both the rate and the extent of the general business decline in Midwest centers, and (b) the level of employment and production in these areas will act as a barometer for steel production after the present inventory adjustment is completed.

Will there be sufficient replacement demand for automobiles at prices which provide a reasonable profit for manufacturers and dealers? Can farmers be induced by means of price cuts, and/or more efficient products to continue spending for new power tools and implements in the volume needed to maintain high production? Will the competitive pressures in general markets—now that the consumer is again in the dominant position—cause manufacturers and shippers to modernize their equipment at a rate sufficient to keep production schedules in the machinery and industrial equipment industries at a high level? Can consumers be induced to re-enter the market for household equipment through the offering of improved models at reduced prices? Finally, can the necessary cost-price-inventory adjustments continue to be effectuated in such a way as to avoid temporarily sharper declines to levels much lower than longer-run demand would indicate?

Precise answers to questions such as these can only be known as future events unfold. There is extensive evidence, however, in the findings of the Federal Reserve *1948 Survey of Consumer Finances* and numerous other reports on buying intentions and ability to pay that current consumer and business "needs" for up-to-date durable goods and allied financial resources are sufficient to maintain a high level of production in this District and elsewhere. As adjustments are working themselves out, the key word for consumers is *price;* for businessmen it is *cost;* and for general levels of employment and income in the Seventh District it is *timing*—all plus *confidence.* Cost-price reductions to be effective in stabilizing business must come before unemployment rises sharply and purchasing power is impaired—but such reductions cannot be either too small as to cause further buying postponement in anticipation of still greater cuts or too sweeping as to disrupt business and spread fears of a collapse. Admittedly, this is a difficult task.

Although Seventh District business radiates from its four principal cities—Chicago, Detroit, Milwaukee, and Indianapolis, 50 per cent of the population and nearly 45 per cent of manufacturing employment lie outside. Many of the subsidiary centers indeed are more "industrialized"—in the sense that their local prosperity is more dependent upon manufacturing industry—than the major areas mentioned above. Economic trends in these smaller production centers will be traced in a forthcoming issue of *Business Conditions.* The present article will be limited to trends in the four chief industrial areas.

CHICAGO[2]

Because the highly diversified character of Chicago's manufactures, services, and trade provides a better cross section of the nation's industrial pattern than any other industrial area, current developments are likely to approximate national trends more closely than will those in other Midwest centers. However, relatively heavy

[2] For a detailed discussion of economic trends of the last decade, see *Employment Production and Income in the Chicago Industrial Area,* Federal Reserve Bank of Chicago, 1948.

CHART 1

CHICAGO BUSINESS

PER CENT CHANGE 1ST HALF 1948 TO 1ST HALF 1949

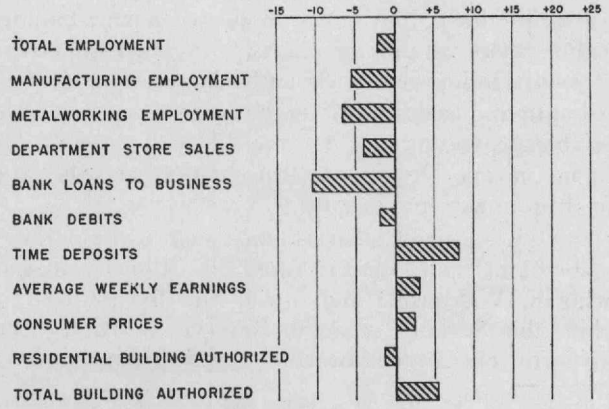
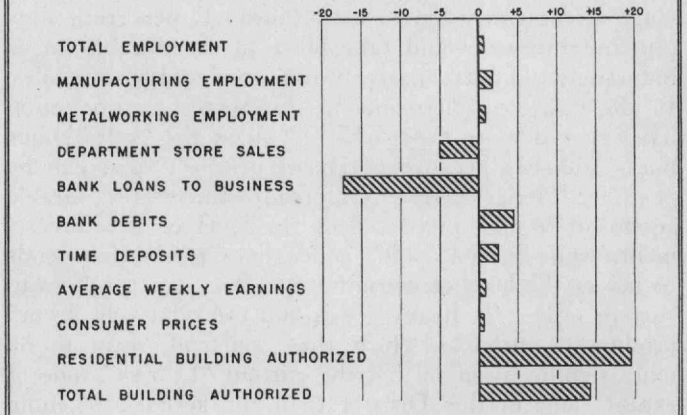


CHART 2

DETROIT BUSINESS

PER CENT CHANGE 1ST HALF 1948 TO 1ST HALF 1949



concentration of the production of ingot and fabricated steel and the great importance of machinery manufacture mean that the level of activity in durable goods industries will go far toward influencing the future level of business here.

Steel Consumption—The Chicago area is not only a leading producer of steel but also ranks second only to Detroit in steel consumption. However, unlike Detroit, where steel is largely limited to a few uses such as sheets and bars, Chicago's consumption is spread with remarkable evenness over the various types. The area uses about nine per cent of all steel produced in the nation and in no type is its consumption more than 22 per cent or less than seven per cent of national production.

Industrial Expansion—During the last decade Chicago has led other industrial areas in the dollar volume of investment in new plant and equipment, and this leadership appears to be continuing in the current year. An estimated 130 million dollars of new plant and equipment expenditure have been awarded in the area during the first six months of 1949 bringing the total since 1940 to 1.4 billion dollars. Major new plants in steel, oil refining, chemicals, and screw machine products, as well as lesser investments in industries producing food, electrical appliances, and nonferrous metals products have been contracted for this year.

Current Business Measures—Total manufacturing employment in the Chicago industrial area during the first half of 1949 is estimated to be 960,000, a decline of five per cent from the same period of 1948.[3] Metalworking employment—steel, machinery and transportation equipment—is off seven per cent; but total employment in all nonagricultural lines—2.28 million workers—is down less than three per cent from the year-ago level. This suggests the greater current weakness of manufacturing, and particularly metalworking, employment in comparison with trade and service activity. The value of industrial production is estimated to be at an annual rate of 11.5 billion dollars or also about five per cent under the year-ago rate.

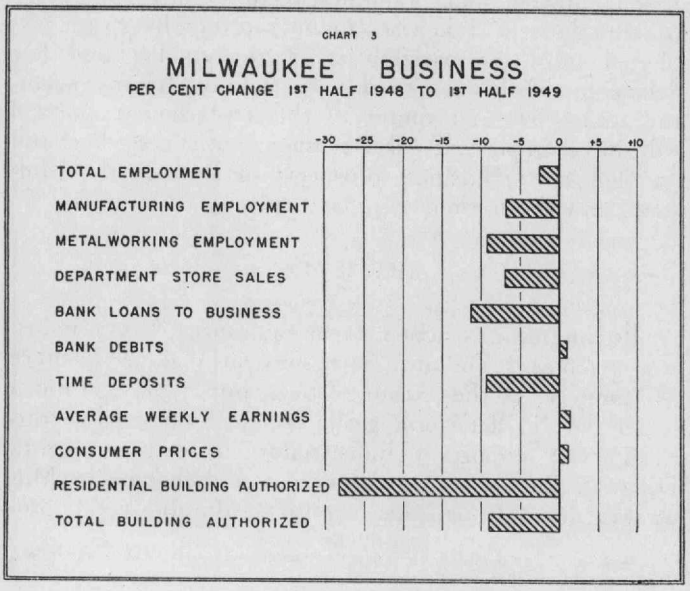
Department store sales and debits to individual accounts in commercial banks during the first half of this year are three per cent and two per cent, respectively, below the 1948 level. Here again the declines are somewhat less than the comparable drops for the nation as a whole, reflecting the continued market strength of the area's principal products.

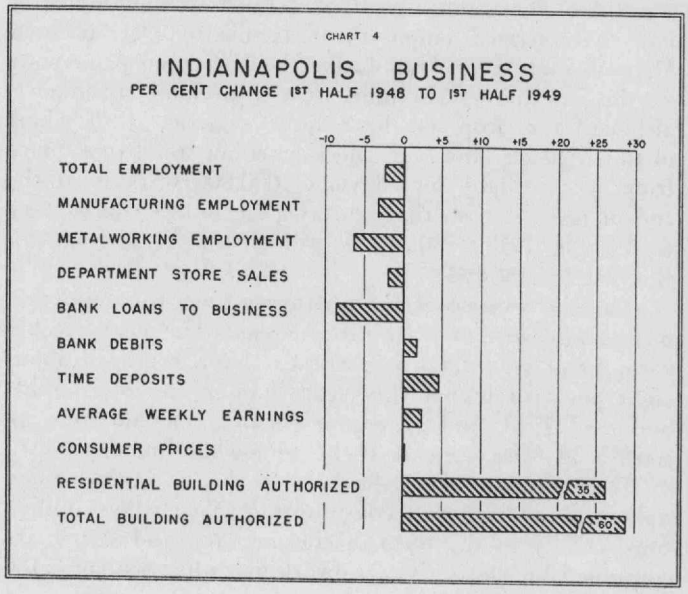
Aggregate personal income in the Chicago area in 1949 is at an estimated annual rate of 10.9 billion dollars, an amount which is still about five per cent above last year's first-half rate. Weekly earnings of industrial workers have averaged only three per cent higher in 1949 than a year ago, but earnings of salaried workers appear to have increased more. The cost of living for moderate income families in the area as measured by the Consumers' Price Index is only slightly—not quite two per cent—above 1948's level during the comparable months. General prices have declined nearly three per cent from the high point of September 1948, but not sufficiently to cancel out last summer's increases.

The greater rise in personal income as compared with consumer prices no doubt explains in part the eight per cent increase in time deposits in Chicago banks, an upward trend which applies also—though not in the same degree—to share accounts in savings and loan associations, savings bond purchases, and postal savings.

Short-Run Prospects—One factor seems likely to strengthen Chicago's fundamental economic position during the current readjustment period. There seems little doubt that this area's competitive position in basic steel production has improved during the last decade. Changed pricing practices caused by the basing point decision have highlighted the underlying strength which results from Chicago's combined advantages of convenience of raw material assembly and proximity to market. The continued westward movement of population—and hence

[3] This figure is somewhat higher than might be suggested for the same period by the recently released data of the 1947 Census of Manufactures. Variations in classification and reporting procedures, appear to account for most of the difference. Reconciliation of discrepancies and preparation of a revised series using strictly comparable classifications await the release of detailed census data.





steel consumption—during the last 10 years is the fundamental cause of the change, and in large part explains why local steel capacity now is being utilized more fully than in Eastern centers.

Continued decline in Chicago's own steel consuming industries, however, together with the slackening of production among steel using industries in other major Midwest centers, obviously would have adverse effects upon basic steel production here. Competitive advantage, if it persists, will mitigate but, of course, not fully counterbalance the effects of an extended decline in durable goods production, if such occurs.

DETROIT

Base of Employment—Not diversification, but rather highly integrated mass production industries enjoying a competitive advantage form the base of Detroit's employment and income. The last decade has seen an increase of over 50 per cent in Detroit's industrial employment reflecting substantial growth, but also making the area even more dependent upon manufacturing. The nature of the increase has been such as to give added importance to the production of automobiles, metals, and machinery. Since 1939 employment in plants producing automobiles and parts has increased by about 55 per cent, primary and fabricated metals by nearly 70 per cent, and machinery by more than 100 per cent.

More than half of Detroit's manufacturing workers today are employed in plants producing automobiles or parts, and at least another fourth are engaged in the production of metals and machinery. Detroit continues predominantly to be a durable goods producer, and its prosperity still rests primarily upon the national and world market for automobiles. It likewise is true that to a considerable extent national and world prosperity depends upon the output of Detroit's factories, so significant is the automobile industry as a consumer of raw and semifinished industrial materials.

Employment and Income—Although a definite firming occurred in June, a gradual slide-off in manufacturing has characterized employment trends in Detroit since December of 1948. This decline has occurred principally in the durable goods industries, especially machinery, although the drop has been quite general as elsewhere in the District. However, the slackening trend took place from an unusually high level of 600,000 workers at the end of last year, so that the average number of factory workers in 1949—580,000 is still above the average for the first half of 1948.

Largely because of fewer interruptions to production but also because of wage rate increases last year, weekly earnings of manufacturing workers have averaged about eight per cent higher this year than in the comparable period of 1948, and aggregate personal income from all sources likewise appears to be somewhat higher.

Steel Consumption—Detroit is the nation's leading industrial area in steel consumption. Nearly five million tons, chiefly in the form of sheets, bars, and strips, are consumed by Detroit's metalworking industries annually. This amount is more than double that consumed by any other industrial area except Chicago, and reveals the extreme importance of Detroit as a market for the nation's steel industry. Most of Detroit's needs are supplied from the Chicago and Pittsburgh-Youngstown steel districts. Although still largely dependent upon these sources of supply, important expansions locally have enabled Detroit to supply a larger part of its own needs than in prewar years.

General Business Trends—Department store sales in the Detroit area have declined in 1949 by about four per cent, as compared with 1948, a drop exactly equal to that of all such stores in the nation. Prices paid by Detroit consumers in 1949 have averaged about equal to those in effect during the same months last year. Although the differentials are not great, the higher income, lower sales, and equivalent prices may help to explain the 2.5 per cent rise in time deposits in Detroit's weekly reporting member banks, and other evidences of saving in the area, during the past year.

As a whole, the automobile industry so far has experienced no serious difficulty in selling the all-time record first-half production of 1949 cars and trucks. Third-quarter output schedules are expected to continue at or near present levels. Much more uncertain are prospects for the fourth quarter, with the general expectation that sales and therefore production will be below current levels. However, even though sales remained strong, work stoppages, either in the automobile plants themselves or in coal or steel, if extended, could reduce production markedly.

The market situation in automobiles poses one of the major questions facing business leaders in Detroit and throughout the nation. It is commonly pointed out that the proportion of over-age passenger cars is still very great, that the potential market has increased since prewar, and that automobile prices, since the recent reductions, are not out of line with prices in general. There is little doubt that a large replacement demand will continue if general business does not decline too severely. Regular model changes unquestionably will be instituted to stimulate it. Likewise, manufacturers have not exploited fully the possibilities of the smaller and less deluxe models within their various lines. In any event, the actual size and timing of this replacement demand will have important effects upon both the short-run and longer-run business prospects in Detroit, the Midwest, and the nation.

MILWAUKEE[4]

Production of tractors, farm equipment, heavy industrial machinery, and auto parts may not make Milwaukee as "famous" as the output of beer, but it plays a much larger part in determining the trend of business in this third most important industrial area of the Seventh District. The base of employment and income in Milwaukee not only depends heavily on durable goods pro-

[4] For long-run trends in Milwaukee production, employment, and income, see *Business Conditions*, August 1948 and October 1948.

duction, but more specifically is related to the output of capital equipment for the nation's factories, farms, mines, and construction companies. Along with these industries, however, Milwaukee is an important producer of food, beverages, clothing, shoes, and hosiery. Its dependence upon steel consuming industries approximates the pattern of the Chicago area more closely than that of Detroit.

Employment, Income, Sales—Manufacturing employment in the Milwaukee area during the first half of 1949 has averaged 175,000, about seven per cent below the level of the same period last year. The drop has occurred chiefly in the machinery industries and in the foundries, machine shops, stamping plants, and other steel fabricators. However, some of the decline has been general throughout all industries in much the same manner that the slide-off has occurred elsewhere.

Weekly earnings of workers in Milwaukee plants likewise have declined during the last six months, but average earnings of production workers during the first half of this year, nevertheless, are still fractionally above the same period in 1948. Prices paid by consumers this year also have averaged slightly higher than last, so that employed industrial workers have had about the same purchasing power in both years. However, reflecting the greater decline in employment—and in part exceptionally high levels of last year—department store sales are now six per cent under those of last year. This drop is greater than that in the Seventh District as a whole, and somewhat larger than the declines in other major Midwest centers.

Steel Consumption—Milwaukee ranks third among all industrial areas in the nation in steel consumed for metalworking purposes. The area ranks first in consumption of plate steel chiefly because of a huge output of large dimension gas and oil pipe. Hot rolled sheets and bars also are consumed in enormous quantities in Milwaukee factories producing auto bodies and frames, farm tools, and material handling equipment for industrial installation. Tinplate consumption, of relatively small importance in the area at present, seems likely to be greatly increased when two large new container plants are completed and in production.

Unlike Chicago and Detroit, Milwaukee turns out no ingot steel. Proximity to Chicago and Gary mills largely accounts for this fact, since more than two-thirds of the area's needs are supplied from this nearby source.

The Months Ahead—As other Midwest centers, Milwaukee must look to a firming of demands for durable goods to halt the current downward direction of general business trends. More specifically, future market developments in automobiles and in capital equipment for farms and factories will determine business levels in the period immediately ahead. Competitively, most of the area's firms appear strong, but heavy capital goods have been exceedingly sensitive in the past to cyclical changes in general business expectations. Now that the unusual demand situation of the postwar period is nearing an end, and a decline in capital expenditures for industrial purposes has set in, Milwaukee's heavy industries may be expected to reflect this sensitivity until such time as the readjustment is completed and general confidence is restored. As a sustaining factor the area can count on continued high production of road building and electric generating machinery. Furthermore, Milwaukee's important food, beverage, apparel, and leather industries appear to have passed through a large share of the readjustment in employment and production and may well act as a stabilizing force in future months.

INDIANAPOLIS

Economic Base—A decade of vigorous industrial growth has brought about a 20 per cent increase in total population, a 50 per cent rise in total employment, and a 100 per cent gain in manufacturing employment in Indianapolis. However, business and employment are less dependent upon manufacturing than is true of the other major industrial areas of the District. A broad diversification of manufacturing production likewise causes the area to rank well below the other major centers in durable goods output and steel consumption, but by the same token, results in a relatively lesser local dependence upon hard goods markets.

A wide range of products, nevertheless, are made by the 50 per cent of Indianapolis' manufacturing workers engaged in metalworking occupations. Body and engine parts for the automobile industry; bearings, castings, gears, and other machined parts for the industrial machinery; fabricated steel, particularly forgings and structural shapes; aircraft engines; containers; and fabricated nonferrous metals comprise the area's varied output. Electronic products, including radios, phonographs, television and telephone equipment, as well as furniture and building materials are likewise important consumers of metals. Production of telephone equipment will be greatly increased by a large plant now under construction.

Employment, Income, Sales—Nonagricultural employment has undergone a gradual decline since January of the current year. The average number of workers during 1949 is two and one-half per cent below the like period of last year, but manufacturing employment is down more than three per cent, and metalworking somewhat over six. Weekly earnings of employed industrial workers are about two per cent above last year, and prices paid by consumers have averaged about the same as a year ago.

The record of department store sales in Indianapolis was consistently better than that of other major District cities during the early months of 1949, but recent weeks have brought declines from year-ago levels which are about comparable. However, the higher volume during the early months has caused total sales for the first half of the current year to be within two per cent of last year's level.

In building construction also Indianapolis is showing a better 1949 record in comparison with last year than most other large Midwest centers. The large increase is accounted for in part by a few big industrial and public projects, but residential starts are also 35 per cent higher than last year, a significant increase in a year of national decline.

Interest Charge on the Public Debt

Annual Interest Payments Currently Over Five Billion Dollars

According to the Federal *Budget Document* for 1950, interest payments on the public debt amounted to 5,188 million dollars in fiscal year 1948, and will rise to an estimated 5,325 million dollars and 5,450 million in fiscal years 1949 and 1950, respectively. An annual interest charge of over five billion dollars has an important bearing on many phases of the nation's economy—the distribution of income, the money and capital markets, and the operations of the commercial banking system—as well as on economic activity as a whole.

The "burden" of the interest charge, the nation's ability to support a given amount of interest payment, is another important consideration. The interest "burden" is usually measured in terms of national income, the 1948 interest charge representing approximately 2.4 per cent of the national income for that year. Another measure of the size and significance of the interest charge lies in its relationship to other budget expenditures and budget expenditures as a whole. Interest payments in fiscal 1948 ranked as the third largest budget expenditure by function, exceeded only by expenditures for national defense and veterans' services. The 1948 actual figure constituted almost 15.5 per cent of total budget expenditures, and the estimates for 1949 and 1950 set aside for interest approximately 13 per cent of total budget expenditures in each of those years. Cash interest payments to the public—excluding discount accrual and payments to trust accounts and Government corporations and including all accrual on savings bonds redeemed—amounted to 3,871 million dollars in fiscal year 1948, more than 10.5 per cent of total cash payments by the Government. Unlike other budget items which, within certain limits, may be varied in amount according to current requirements or may even be eliminated from the budget, the interest cost incurred through previous financing operations constitutes a fixed obligation upon the Federal Government, subject to change only as securities are retired or refunded and as interest rates change.

AVERAGE DEBT RATE NOW OVER 2.2 PER CENT

In analyzing the current interest charge on the public debt and its development over recent years, use is made of two Treasury concepts known as the "computed annual interest charge" and the "computed annual interest rate." The computed interest charge represents the amount of interest payable annually on the debt outstanding as of a given date. It is neither a measure of interest actually paid nor an indication of the rate of return or yield on bonds sold at various prices above or below par. Rather, it indicates the amount of interest accruing and payable under the terms of the existing debt. The computed interest rate is the ratio of the computed charge to the total amount of interest-bearing debt outstanding, and is, in a sense, an average interest rate on the debt. The interest charge and the computed rate reflect not only the magnitude of the debt, but the composition of the debt and the level of interest rates as well.

The computed interest charge on the 249.9 billion dollars of interest-bearing public debt outstanding May 31, 1949 amounted to 5,584 million dollars, with a corresponding computed interest rate of 2.234 per cent. Marketable debt, which constituted 62 per cent of the total interest-bearing debt, accounted for 55 per cent of the total interest charge. Marketable issues carried a lower average rate, 2.001 per cent, than any of the other major debt classes—nonmarketable debt, special issues, or guaranteed debt. Within the marketable debt classification, Treasury bills and certificates of indebtedness, totaling some 40 billion dollars or over one-fourth of outstanding marketable issues, accounted for only 16 per cent of the interest charge on marketables and carried

Table 1

COMPARISON OF OUTSTANDING INTEREST-BEARING PUBLIC DEBT, COMPUTED INTEREST CHARGE, AND COMPUTED INTEREST RATE, BY TYPE OF DEBT AT SELECTED DATES

(Dollar amounts in millions)

Item	Debt Outstanding	Computed Annual Interest Charge	Computed Annual Interest Rate (Per Cent)
June 30, 1940			
Direct marketable debt:			
Treasury bills	1,302	*	.029
Certificates	—	—	—
Treasury notes	6,383	80	1.256
Treasury bonds	26,555	772	2.908
Other bonds	196	5	2.701
Total	34,436	858	2.491
Nonmarketable debt	3,167	92	2.908
Special issues	4,775	145	2.870
Guaranteed debt	5,498	109	1.978
Total debt	47,874	1,203	2.514
February 28, 1946			
Direct marketable debt:			
Treasury bills	17,032	64	.375
Certificates	41,413	362	.875
Treasury notes	19,551	248	1.270
Treasury bonds	121,635	2,827	2.324
Other bonds	180	5	2.675
Total	199,810	3,506	1.755
Nonmarketable debt	57,206	1,451	2.536
Special issues	20,897	522	2.498
Guaranteed debt	539	7	1.349
Total debt	278,451	5,486	1.970
May 31, 1949			
Direct marketable debt:			
Treasury bills	11,544	136	1.177
Certificates	28,710	346	1.206
Treasury notes	3,596	49	1.375
Treasury bonds	111,440	2,574	2.310
Other bonds	162	4	2.654
Total	155,452	3,110	2.001
Nonmarketable debt	62,523	1,646	2.600
Special issues	31,915	828	2.593
Guaranteed debt	20	*	2.345
Total debt	249,909	5,584	2.234

*Less than $500,000.

an average rate of 1.197 per cent.

A computed interest rate of 2.234 per cent on total direct and guaranteed debt compares with a rate peak at fiscal-year-ends in the last three decades of 4.339 per cent reached in June of 1921. From that date the average debt rate declined steadily, reaching a fiscal-year-end low of 1.925 per cent at the end of 1944, and increasing gradually again in the last five years. In Table 1, a comparison is made of the computed interest charge, the average interest rate, and total debt outstanding in the last few years. The selected dates in the table mark off two distinct periods—from June 30, 1940, a pre-World War II date, to February 28, 1946, the peak date in outstanding public debt, and from March 1, 1946, to the most recent available date, May 31, 1949. On June 30, 1940, the interest charge on the 48 billion dollars of outstanding debt was 1,203 million dollars and the average rate was 2.514 per cent. By February 28, 1946, the debt had risen to 278 billion dollars and the interest charge to 5,486 million while the average rate had dropped to 1.970 per cent.

The decline which occured in the average debt rate during the years of financing World War II was in marked contrast with the experience of World War I, when the interest rate turned sharply upward. Unlike the situation in World War I, interest payable to all lenders on issues sold since early 1941 has been fully taxable for the recipient and consequently represents an even lower borrowing cost than a simple rate comparison between the two war periods would show.

WARTIME INTEREST POLICY

Two important features of the financing of World War II made it possible for the Treasury to increase its outstanding debt so tremendously at a declining average rate of interest—one affecting the rate level, the other the debt structure. First, early in 1942 the Treasury and Federal Reserve established a stable pattern of rates on debt issues, commonly known as the interest curve, which permitted a range in interest rates from ⅜ of one per cent on 90-day Treasury bills to 2½ per cent on long-term bonds. Throughout the war years, new issues were offered at these established low rates.

Moreover, most of the refunding operations at the new rates were for securities originally issued at higher rates in previous years. On June 30, 1940, for example, there were some 26.6 billion dollars of Treasury bonds outstanding, carrying an average interest rate of 2.9 per cent. Between June 30, 1940, and February 28, 1946, eight of these bond issues, amounting to 7.5 billion dollars, matured. Of this 7.5 billion of maturing issues, 1.7 billion dollars was paid off in cash. The remaining 5.9 billion dollars of maturing bonds, which had carried an interest charge of 191 million dollars and an average rate of 3.2 per cent, was refunded into an equal amount of various new issues which had an annual interest charge of 102 million dollars and an average rate of 1.7 per cent. Thus, as a result of these exchange operations, the interest charge on the debt was reduced by some 89 million dollars. New bond issues offered during these years amounted to 102.2 billion dollars. Of this amount, 95.8 billion was offered for cash, increasing the total interest charge by the amount they carried. New bonds offered in exchange for maturing issues, other than Treasury bonds, carried an interest charge of 66 million dollars as compared with the 50 million dollar charge on maturing issues. Therefore, considering all exchange transactions involving either new or maturing bond issues in those years, there was a net reduction in the interest charge of 73 million dollars.

Perhaps even more important than the establishment of the rate pattern alone in reducing the average interest rate was the substantial use made in the war years of short-term securities bearing interest rates well below the average rate on outstanding issues. In mid-1940, short-term marketable debt consisted of Treasury bills only and amounted to 1,302 million dollars, approximately 3.7 per cent of total marketable debt. On February 28, 1946, short-term issues amounted to 58,445 million dollars, or almost 30 per cent of the marketable debt. The average interest rate on these short-term issues was only .7 of one per cent, and thus exerted a strong downward pull on the average rate on the total debt.

POSTWAR INTEREST POLICY

The period since February 28, 1946, has been characterized by forces operating almost in reverse of those in the war years. As Table 1 indicates, from early 1946 through May 1949, outstanding debt declined by approximately 29 billion dollars, the computed interest charge increased by almost 100 million dollars, and the average interest rate rose from 1.970 per cent to 2.234 per cent. The rise in the computed rate reflected higher average rates in each of the four major classes of debt. The rise in the rate on marketable issues reflected increases in the bill and certificate rates, partially offset by the refunding of maturing bonds with relatively high coupon rates into shorter-term, lower rate issues. The Treasury bill rate was released from the ⅜ of one per cent wartime level in July of 1947, and the certificate rate was permitted to rise from ⅞ of one per cent in the last quarter of 1947. The effect of the relaxation of controls on short-term rates on the average rate on marketable debt did not show up, however, until well into fiscal year 1948. One of the main factors contributing to the rise in the average rate on marketable debt early in the period was the retirement of large amounts of short-term debt bearing the relatively lower rates of interest. Although the average rate on marketable issues has increased in these recent years, there has been concurrently a rather marked decline in the interest charge on this class of debt—almost 400 million dollars—reflecting to a large degree the debt retirement and refunding operations which have taken place.

To the extent that the interest charge on total debt did continue to increase since the peak date in outstanding debt, it was a result of accelerated growth in two segments of the debt which have tended to carry

relatively high interest rates—special and nonmarketable issues. Because of increased available funds in Government trust accounts which must by law be invested in Government securities, the Treasury in the years between February 28, 1946 and the end of May 1949, increased the amount of outstanding special issues to Government trust accounts by some 11 billion dollars to a level of almost 32 billion. Cash obtained by the Treasury through the issuance of special obligations was to a large degree used to retire marketable debt. The interest rates on special issues are largely established by statute, either directly or indirectly in terms of the earnings requirements of the particular funds, and tend to be as high or higher than the average rate on the entire debt. As a result of this increase in the amount of these issues, the interest charge on specials rose by more than 300 million dollars—almost equaling the decline in the interest charge on marketable debt. On May 31, 1949 special issues outstanding constituted over 12.5 per cent of total debt, but because of relatively high rates accounted for almost 15 per cent of the total interest charge. The increase in the interest charge which resulted from nonmarketable debt operations reflected largely a growth of more than 5 billion dollars in the amount of outstanding nonmarketable issues, including the issuance in this period of new nonmarketable securities—Treasury bonds, investment series, and armed forces leave bonds—and the increase in accruals on United States savings bonds owing to a large volume of such bonds approaching maturity and reaching higher accrual brackets. Of some importance also was the rise in the rate paid on Treasury savings notes from 1.07 per cent to 1.40 per cent.

INTEREST RECEIVABLE BY LENDERS

The effect of interest payments upon the economy is dependent not only upon the total amount of such payments, but upon their distribution among the various elements of the economy. It is, therefore, necessary to analyze the debt charge from the standpoint of the various lending agencies. In Table 2, a comparison is made of debt holdings, interest receivable, and average rate of interest for each of the major classes of lenders which report in the Treasury Department's monthly survey of debt ownership. The table covers three dates—June 30, 1941, the earliest date for which detailed information on ownership data is available, February 28, 1946, the date of the debt peak, and March 31, 1949, the most recent date for which information is available.

The change in the amount of interest any one group receives reflects, as does the change in the total interest charge, issuance or retirement of debt by the Treasury, debt structure, and interest rate levels, plus one other factor—amount of sales or acquisition of securities by the lending group. Just prior to the outbreak of war in mid-1941, commercial banks were already the largest single holder of Government debt with more than 35 per cent of outstanding securities in their portfolios. The interest receivable on the 19 billion dollars of Governments held by commercial banks amounted to approximately 389 million dollars—or about 29 per cent of the total charge. Although only slightly more than half of commercial bank-held debt was in Treasury bonds, the interest on bonds accounted for three-fourths of total interest receivable by these institutions. "All other" investors, a classification which includes all nonfinancial businesses, individuals, savings and loan associations, etc., received the second largest portion of the interest charge, almost one-third of which was attributable to nonmarketable debt holdings. Government agencies and trust funds and the Federal Reserve Banks together ranked third. Life insurance companies accounted for about 10 per cent of total interest payable but their holdings carried the rate of interest next highest to the trust account rate which is weighted by higher rates on special issues.

The tremendous wartime deficit, on the one hand, and the small supply of private security issues and the limited demand for loans on the other, resulted in a sharp shift in the asset distribution, into Government securities, on the part of most lending and investing institutions during the war period. Between June 30, 1941, and February 28, 1946, commercial bank participation in war financing increased their debt holdings approximately 68 billion dollars to a level of 87 billion. Almost 22 billion dollars of the gain in bank holdings was in ⅞ per cent certificates of indebtedness, while Treasury bonds accounted for more than 35 billion. As a result of this wartime increase in security holdings, interest payable to commercial banks rose to some 1,450 million dollars on the date of the debt peak, but largely because of heavy investment in short-term issues, the

Table 2
COMPARISON OF GOVERNMENT SECURITY HOLDINGS, INTEREST CHARGE, AND AVERAGE INTEREST RATE, BY CLASS OF OWNERSHIP AT SELECTED DATES
(Dollar amounts in millions)

Item	June 30 1941	February 28 1946	March 31 1949
Holdings of interest-bearing debt:			
Commercial banks	19,187	86,613	54,845
Mutual savings banks	3,361	11,099	11,647
Life insurance companies	5,517	21,185	16,396
Fire, marine, and casualty insurance companies	1,353	3,019	4,236
U. S. Government agencies and trust funds, and Federal Reserve Banks	10,665	50,861	59,352
All other investors	14,665	105,675	103,115
Total debt outstanding	54,748	278,452	249,573
Computed annual interest charge:			
Commercial banks	389	1,451	1,091
Mutual savings banks	88	256	273
Life insurance companies	151	503	400
Fire, marine, and casualty insurance companies	36	68	92
U. S. Government agencies and trust funds, and Federal Reserve Banks	292	855	1,329
All other investors	380	2,354	2,388
Total interest charge	1,336	5,486	5,572
Computed interest rate (in per cent):			
Commercial banks	2.028	1.675	1.989
Mutual savings banks	2.618	2.303	2.344
Life insurance companies	2.737	2.372	2.439
Fire, marine, and casualty insurance companies	2.683	2.256	2.174
U. S. Government agencies and trust funds, and Federal Reserve Banks	2.738	1.681	2.315
All other investors	2.590	2.228	2.315
Average rate on total debt	2.438	1.970	2.233

average rate on bank holdings dropped to 1.675 per cent. For all classes of debt owners the average rate on Government holdings, at the end of February 1946, was lower than in mid-1941. Insurance companies retained the highest average rate of private holders. The rate on holdings by Government trust funds and Federal Reserve Banks showed the sharpest interest rate drop because of the Reserve System's heavy acquisition of low-rate Treasury bills. The largest recipient of interest payable on the 1946 date was "all other" investors.

In the period between February 28, 1946 and March 31, 1949, net debt retirement amounted to 29 billion dollars, but commercial bank holdings of Governments dropped by almost 32 billion dollars. Certificate holdings alone declined by 13 billion dollars and Treasury note holdings by some 12 billion. Since bank holdings of bonds dropped by only 6 billion dollars, bank portfolios consisted in early 1949 of a much larger proportion of longer-term, relatively higher-rate issues, and so, although there was a decline in interest charge on bank-held Governments, the average rate on them rose to 1.989 per cent. In spite of this rise, the average rate for bank holdings was the lowest of all ownership classes.

Life insurance companies experienced a decline in their Government security holdings of 5 billion dollars, second in size only to the commercial bank portfolio drop. Almost the entire amount of the reduction in these holdings consisted of bank-restricted Treasury bonds, amounting to 3.5 billion dollars, plus 1.5 billion of eligible bonds which were largely sold to the Federal Reserve Banks under the bond support program, and which account, in part, for the 9 billion dollar gain in holdings by Government agencies and the Reserve Banks. Mutual savings banks and fire and marine insurance companies made gains in their debt holdings as well as in their shares of the total interest charge. The holdings of "all other" investors since February 1946, declined by more than two billion dollars, but the interest charge on their holdings rose almost 35 million dollars. Mostly responsible for this was the accrual of interest on savings bonds and the rise in the certificate rate. While certificate holdings by this class declined a billion dollars, the higher rate on new certificates resulted in a rise in the interest charge on certificates held by "other" investors of almost 50 million dollars.

As of the end of the first quarter of 1949, 20 per cent of the 5.6 billion dollar interest charge on the public debt was payable to commercial banks, as compared with a 30 per cent share in mid-1941, about 25 per cent to Government trust funds and Federal Reserve banks, 10 per cent to insurance companies, 5 per cent to mutual savings banks, and the remaining 40 per cent to "all other" investors. Thus, only "other" investors held a larger proportion of the debt than in 1941 and received a larger share of the interest charge, almost two-thirds of which resulted from vastly increased holdings of savings bonds. Of the 1,355 million dollars of interest payable on bank-eligible bonds, about two-thirds was attributable to commercial bank holdings; and of the 449 million of interest payable on bills and certificates, 137 million, or over 30 per cent, went to commercial banks.

CASH INTEREST PAYMENTS

In evaluating the amount of interest actually payable by the Government each year, distinction must be made between cash and non-cash interest charge and between interest accrual and interest paid. Of the current 5.6 billion dollar interest charge, approximately 2.7 billion dollars represents non-cash interest "payable." Discount accrual on Treasury bills and United States savings bonds is the most important non-cash item, amounting to some 1.7 billion dollars. The remaining 1.0 billion of the non-cash figure consists of interest "payable" to Government trust funds—over 800 million on special issues and the remainder on public issues held by these accounts. In the case of savings bonds, except Series G bonds, which are sold at par, discount accrues at a varying, gradually increasing rate—an estimated 1,400 million dollars for calendar year 1949—but becomes payable when such bonds are redeemed. Actual cash interest payment on savings bonds occurs only when bonds mature or are redeemed before maturity. Only Series D bonds, among savings bonds now outstanding, are currently maturing.

Although interest payments to the Federal Reserve Banks on Government security holdings are considered cash payments, a considerable part of the interest costs on these securities will return to the Government, since, in effect, about 90 per cent of Federal Reserve Bank earnings are currently being paid into the Treasury as miscellaneous receipts. Such Reserve System payments to the Treasury amounted to 75 million dollars in fiscal year 1947, the first year the requirement went into effect, and about 100 million dollars in fiscal year 1948. The *Budget Document* for 1950 estimates Federal Reserve payments to the Treasury of 175 million dollars in fiscal 1949 and 250 million in 1950.

Despite the reduction in interest-bearing debt which has taken place in recent years, there is no indication as yet that the interest charge on the total public debt will decline in the next few years. Budget estimates for interest payments in fiscal year 1950 show a continued upward trend.

Discount accrual on savings bonds will continue to grow at an accelerated rate as bonds purchased during the war approach maturity, and as additional sales increase the size of that portion of the debt which carries the highest average interest rate. Further shifting of the debt structure from relatively low-rate marketable issues to higher rate special issues to Government trust funds will also tend to maintain the interest charge and the average rate at a higher level. Continuance by the Treasury of its present policy of refunding maturing longer-term issues into short-terms, particularly certificates of indebtedness, will tend to restrain the interest charge on the marketable debt and interest income for the major holders of marketable issues. The apparent end of the postwar period of public debt reduction and the beginning of a new rise in the debt in the current recession will also mean an increasing interest charge in the coming years.