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BUSINESS CONDITIONS

A REVIEW BY THE FEDERAL RESERVE BANK OF CHICAGO

Credit Restrictive Measures Continued

Government Market Protected by Support Operations

Since mid-November credit policy has been directed to two major and somewhat conflicting objectives—(1) continued restraint of inflationary credit expansion and (2) support of the Government security market in order to maintain the established 2½ per cent rate on long-term Treasury issues. Prior to this time official concern had been with reducing the tendency of the heavy demand for long-terms to depress the yields on these securities. To offset this pressure, sales of 1.8 billion dollars of marketable issues were made from Treasury investment accounts earlier in the year in addition to 900 million dollars of the special investment series in October. The reversal in the bond market, which began in October and pushed the Victory Loan 2½'s down to 101 when the support program began, resulted from a number of interacting factors, including the issuance of the nonmarketable investment series, the increasingly heavy demand for business capital and credit, the greater availability of mortgages, and the market's reaction to rising yields on short-term money.

Meanwhile, short-term rates continued to rise, and by the first of the year the major adjustment following the un-freezing of the bill rate early in July appeared to have reached virtual completion, at least temporarily. A major step in the firming of short-term rates was the refunding of the January 1 certificates into a new one-year issue at 1½ per cent, an action which was anticipated by the market as a logical sequel to the gradual increase in rates beginning with the August refunding.

SUPPORT PROGRAM DEVELOPMENTS

The Federal Reserve Banks entered the market as purchasers of long and medium-term Governments in the week ended November 19. Treasury and Federal Reserve authorities were agreed on the advisability of protecting the long-term 2½ per cent yield and maintaining orderly conditions in the Government security market, in view of the necessity of heavy and frequent Treasury refunding operations, as well as the possible financial repercussions of instability in Government bond prices. The greatest signs of weakness were in the partially tax-exempt issues, where the market is particularly thin, and in the bank eligible issues—reflecting partly shifts by banks into shorter maturities in response to rising short-term rates and partly the growing competition for funds by business. Initially, the support level was established at prevailing prices with the Reserve Banks entering the market somewhat reluctantly as residual buyers. On December 24, however, the support levels were abruptly lowered to slightly above par on most of the fully taxable medium and long-term issues. At the same time, it was indicated that the Reserve System would actively and aggressively support the market at this new level.

Total market purchases of bonds by the Reserve Banks in the period November 5 through January 7 amounted to approximately 2.6 billion dollars, of which 1.4 billion were acquired after December 24. Of the total increase in bond holdings, approximately 2.2 billion was in the "over five-year" category. During November and December, purchases of 917 million of bonds were also made for Treasury investment accounts. The increase in Reserve Bank bond portfolios plus a 600 million expansion in Treasury notes was more than offset, however, by a net decline in holdings of Treasury bills and certificates for the period as a whole, largely through redemptions of maturing issues. As a net result, total Governments held by the System were reduced by more than 400 million dollars. Part of the selling which occurred late in December was, of course, attributable to the desire of commercial banks and others to take losses for tax purposes before the end of the year.

The immediate response of the market to support operations was increased stability, particularly in the restricted issues, while the decline in the bank eligibles slackened noticeably but continued for about two weeks. A short period of fairly heavy selling followed the lowering of the Federal Reserve support prices on December 24, but tapered off as it became apparent that the Reserve System was prepared to buy any amount of Treasury bonds at the new prices. No intermediate or long-term issues have gone below par. The support price of the key Victory Loan 2½'s is established at 100¼.

The most serious difficulty involved in the support program is that Reserve Bank purchases of securities add to commercial bank reserves which may become the basis of additional credit expansion and thus contribute to further undesirable increases in commodity prices. Under present inflationary conditions it is important, therefore, that the

(Continued on Page 5)

CHANGES IN GOVERNMENT SECURITY HOLDINGS OF WEEKLY REPORTING MEMBER BANKS IN LEADING CITIES NOVEMBER 5, 1947, TO JANUARY 7, 1948

(In millions of dollars)

Item	New York	Chicago	Other Leading Cities	Total
Bills.....	+ 1008	+ 133	+ 173	+ 1314
Certificates.....	— 114	— 111	— 312	— 537
Notes.....	+ 65	+ 105	+ 307	+ 477
Bonds.....	— 789	— 90	— 715	— 1594
Total U. S. Govern- ment Securities...	+ 170	+ 37	— 547	— 340

Economic Trends in Chicago

Area Maintains Position Among Nation's Industrial Centers

Early 1948 finds the Chicago industrial area¹ reasonably well established in its postwar pattern of business and employment, beset on all sides, however, by the economic pressures and distortions of rising prices. The immediate outlook is for continuation of the record prosperity in jobs, income, and profits which the area experienced during 1947. The most visible clouds in the economic sky are increasing realization that the current boom is highly dependent upon a "catching up" of war deferred demand and scattered signs of financial stringency among individuals and businesses.

Whether measured in dollar or physical terms, the past year has been a very prosperous one in Chicago as elsewhere. Total employment expanded five per cent, manufacturing employment was up seven per cent, aggregate personal income increased 15 per cent, and retail dollar sales were at least 16 per cent higher. All forms of credit increased markedly. Consumer prices rose 11 per cent to a new high. Manufacturing production continued at a peacetime peak, with record profits; the construction volume was limited only by the availability of materials and skilled labor.

By most measures, Chicago has about maintained its place among the nation's industrial centers during the war and postwar expansion era. Chicago's position as the second largest industrial area in the nation and the economic capital of the Midwest remains undisputed despite spectacular growth in many other, newer industrial areas. During the past eight years the Chicago area has become the nation's leading electronics center and has challenged—some say equaled—Pittsburgh's position in basic steel. Manufacture of machinery, chemicals, nonferrous metal products, and railroad equipment has grown at record or near record rates. In fact, all manufacturing industry groups in the area, except textiles and men's apparel, have registered outstanding gains in output, sales, and employment from prewar years.

As would be expected, not all industries in Chicago have grown equally in recent years. Some activities, such as home building, have lagged behind national trends, while others, e.g., radio and communications equipment manufactures, have moved well ahead of developments elsewhere. As a result, several industries for which Chicago has long been best known, e.g., meat packing, railroads, and men's clothing, have been outdistanced in terms of output and employment gains by newer industries not yet popularly identified with the area.

While the course of general business activity in the nation will be the most important influence upon business and employment trends in Chicago during 1948, the economic pattern of the area obviously will play an important part in determining how national economic and political develop-

ments will work themselves out here. Moreover, the size and structure of the Chicago area in turn will exert a significant influence upon Midwestern and national trends.

It becomes evident, therefore, that answers to a number of basic questions are essential to an appraisal of the current business and employment situation in Chicago and the short-run outlook for the area. What is the economic importance of the area in the nation? What is the economic structure of the area? How does the area differ economically from before the war? How sensitive is the area to cyclical variations in general business activity? What are the area's probable financing needs, including demand for bank loans?

CHICAGO IN THE NATION

When numbers of people are considered, the Chicago industrial area typically has four to six per cent of national totals; in dollar measures, the area usually accounts for a larger proportion of national business, five to eight per cent. Although some of these percentages declined during the war as striking expansions in business and employment occurred in other industrial centers, greater than average permanency of war-borne plant expansion and the magnitude of postwar industrial and allied developments have enabled Chicago for the most part to regain its prewar "share" of the American economy.

Currently, the area has approximately 3.6 per cent of the nation's population, 4.1 per cent of total labor force, 5.5 per cent of total nonagricultural employment, and 6.5 per cent of total manufacturing employment. Chicago area residents now receive about five per cent of all personal income in the nation, but a slightly larger fraction of total retail expenditures takes place in Chicago establishments. Local manufacturing plants contribute almost seven per cent to total national industrial production, and a still larger fraction of nondurable products. Nearly 6.5 per cent of all U. S. banking resources are presently found in Chicago.

ECONOMIC STRUCTURE OF THE AREA

The Working Population—In the absence of a com-

Many of the conclusions presented here have been developed from data provided and/or reviewed by: U. S. Bureau of Labor Statistics, U. S. Bureau of the Census, U. S. Bureau of Foreign and Domestic Commerce, Illinois Department of Labor, Illinois Department of Revenue, Illinois Public Aid Commission, Indiana Division of Employment and Security, University of Chicago, Chicago Housing Authority, Chicago Plan Commission, Illinois Bell Telephone Company, Peoples Gas Light & Coke Company, Territorial Information Department, Chicago Association of Commerce and Industry, and related agencies. Full responsibility for the findings, however, rests with this Bank.

¹Includes Cook, Du Page, Kane, Lake, and Will counties in Illinois, and Lake County in Indiana. "Chicago" or the "area" also refer to these six counties unless otherwise indicated.

plete census enumeration, it is always difficult to determine precisely an area's population. Projecting the April 1947 U. S. Bureau of the Census sample survey of the Chicago metropolitan area to cover the larger Chicago industrial area, the population of the latter would appear to fall between five million and 5.25 million persons. Several local population analysts, however, using supplementary sources of information, e.g., vital statistics, estimated migration, and housing measures, conclude that the present population of the Chicago area is 5.4 million or higher.

The area's active labor force is presently estimated to be roughly 2.6 million persons of whom more than 2.5 million are now at work (see Chart 1). Unemployment, which has averaged below 100,000 for four years, is believed to have been about 70,000 persons during the past year. Most of these unemployed have been individuals "between" jobs. Female workers comprise about 30 per cent of the area's labor force, as compared with 28 per cent before the war.

Base of Employment—Although Chicago is most commonly known as a manufacturing center, it would be incorrect to judge the area as overwhelmingly industrial, for such is not the case. Manufactures provide 43 per cent of total employment in Chicago's nonagricultural establishments; trade, 21; service, 11; transportation and public utilities, 10; finance, 5; and all other, 10 per cent.

A considerable part of the goods and services produced within the area are consumed locally, but neither Chicago nor any other industrial center produces all that it consumes or vice versa. Net "exports" from Chicago to other sections of the United States as well as overseas are vital to maintenance of current employment levels.

Minnesota and Michigan iron ore, nonferrous metals from the South and Far West, and mid-continent petroleum are key industrial raw materials for Chicago manufactures. Together with farm products from the Corn Belt and coal from the Appalachian and downstate fields, these raw materials in either crude or processed form comprise the principal imports for which the area's "export" labor is exchanged.

Manufacturing—Facilities, Employment, and Output—Few, if any, industrial areas in the nation have had a larger dollar volume of new plant and equipment during the past eight years than the approximately 1.5 billion dollars invested in Chicago. Such plant expansion represents roughly a 50 per cent value increase since before the war, with probably one-fifth of this gain occurring since V-J Day. No measure of growth in physical productive capacity is available, but this gain unquestionably is smaller because of the sharp war and postwar increases in industrial construction equipment costs.

Not only has this tremendous amount been spent for new plant and equipment in the area, but older facilities vacated by firms occupying new plants in turn have been bought and re-equipped by firms new to Chicago or established businesses undertaking expansion programs.

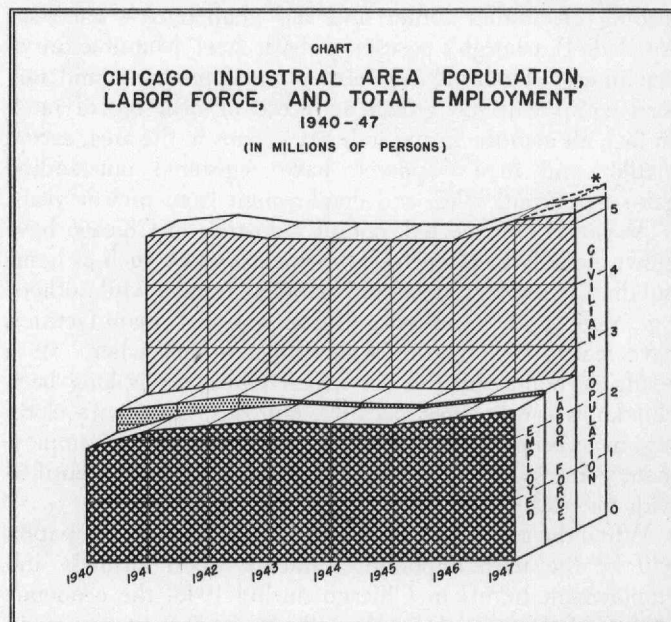
Chicago area manufacturing plants currently employ about one million persons. Nearly 600,000 workers are engaged in producing durable goods, with more than 245,000 in machinery—electrical and nonelectrical—and a somewhat smaller number in iron and steel products. Food and allied

products dominate the nondurable goods industries in Chicago, employing over 100,000 persons. Printing and publishing follow with about 80,000 employees.

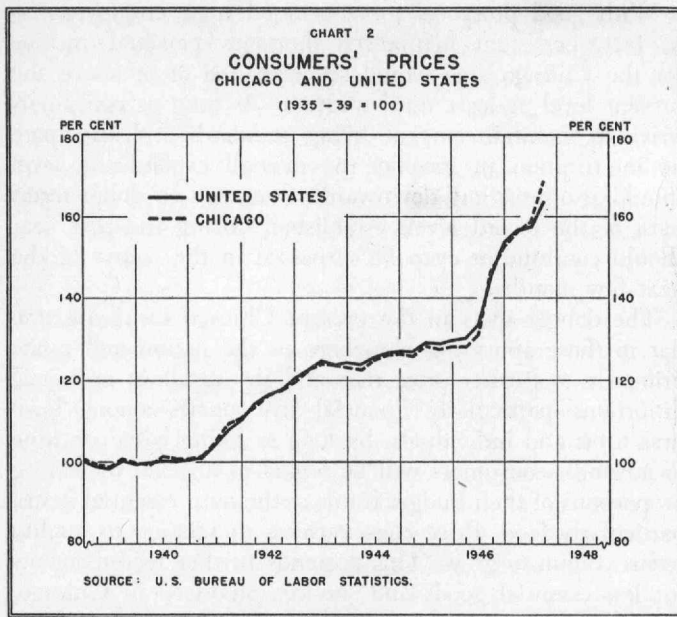
The total dollar value of manufacturing production in the Chicago industrial area during the past 12 months is estimated at approximately 11.5 billion dollars, roughly equal to the 1944 wartime peak, and three times as large as the 1939 product value. The value of industrial output of the area differs somewhat from the employment pattern given because of the relatively higher value output per worker in petroleum, chemicals, and food, attributable to a combination of higher-than-average (a) capital investment per worker and (b) cost of raw materials to be processed. Nondurable goods, although accounting for only 40 per cent of the employment, currently contribute slightly more than half of the area's total output value.

Personal Income and Expenditures—Total personal income received by individuals in Chicago is estimated to have exceeded 9.5 billion dollars during the past year. Included are profits, imputed and other rents, and dividends, as well as wages and salaries, and is nearly two and one-half times the immediate prewar level. Even more so than throughout the nation, rising prices in Chicago have reduced the purchasing power effectiveness of increases in personal income (see Chart 2). According to the U. S. Bureau of Labor Statistics, consumer prices in Chicago have risen 68.3 per cent since 1939 compared with 63.8 per cent in the United States. In terms of 1939 prices, the personal income figure given above is reduced to 5.8 billion dollars, or to about one and one-half times the prewar level. Higher income taxes further reduce the disposable income total for the area.

Consumers in Chicago increased their total expenditures for goods and services, excluding new housing equities, dur-



*The 1947 civilian population estimate is in large part a direct projection of the U. S. Bureau of the Census sample findings for April 1947 for the Chicago metropolitan area to the slightly larger Chicago industrial area. The higher estimate for the same year, shown by the broken lines, reflects the views of several local authorities.
SOURCES: Illinois Department of Labor and U. S. Bureau of the Census; partly estimated.



security underwritings, and in the size of individual loans made. The Chicago commodity exchanges continue to play a leading part in the pricing and marketing of grains and other products throughout the nation.

PRINCIPAL PREWAR-POSTWAR CHANGES

The size, location, and economic pattern of Chicago insure that the area cannot escape the effects of sweeping national economic trends. It has already been seen that the war and postwar years have brought tremendous growth to Chicago industry and commerce. National inflationary developments and general economic dislocations arising from the war can be documented thoroughly from Chicago experience. All dollar measures—production, sales, income, and expenditures—reflect the war and postwar price increases. In short, the Chicago of today—like most other industrial centers—is a much “bigger” area than before the war but to a greater extent in terms of dollars than in measures of physical growth, although these have shown substantial gains.

In many respects the war-postwar internal shifts in the structure of the Chicago area are more significant than the broad upward movement in levels of business activity recorded here. These structural changes provide insight into the direction of probable growth and development in the area. Changes in the economic pattern, moreover, indicate how the area is adjusting to the changing national and international needs of individuals and businesses, and the probable extent to which it is becoming more or less vulnerable to general cyclical variations in business and employment.

Chicago is now much more heavily dependent upon manufacturing for employment and income than before the war, but somewhat less than during the war. Total employment has increased by about 30 per cent, but manufacturing employment has risen by more than double this rate. Although the actual number of persons employed has increased in all categories of employment—transportation, public utilities, trade, service, finance, government—only contract construction and manufacturing are currently employing a significantly greater proportion of workers than in the prewar period.

Seven major industry groups—with durable products in the lead—account for most of the increased manufacturing employment since 1939. These are: iron and steel products, both primary and fabricated; electrical machinery, chiefly radio and communications equipment; nonelectrical machinery, largely machine tool accessories and general industrial machinery; transportation equipment, especially Diesel-powered locomotives and automotive parts; food, particularly candy and dairy goods; printing and publishing; and miscellaneous manufacturing, including scientific instruments, photographic equipment, and fabricated plastics. The manufacture of nonferrous metal products—stone, clay, and glass products—and chemicals also has increased importantly. Other Chicago industries experienced growth in employment, but to a lesser degree both relatively and absolutely (see accompanying table).

ing the year just ended to approximately 7.5 billion dollars, or more than double the 1939 volume. Here, again, price rises have far outdistanced gains in unit purchases. The over-all expenditure volume falls to 4.5 billion dollars when expressed in 1939 dollars.

Expenditures in food stores continue to dominate consumer buying and to an increasing extent as food prices have moved ahead of a generally advancing price level. Chicago food stores are currently receiving about 20 cents of every consumer dollar spent compared with less than 15 cents before the war.

Financial Developments—The role of Chicago as a financial center has increased appreciably since the outset of the war. Although still clearly second to New York in the volume of most types of financial transactions, Chicago financial institutions in recent years frequently have shown greater relative gains than their Eastern counterparts. Since 1939 the Chicago institutions have experienced larger percentage increases than the New York banks in: total loans and investments; commercial and industrial loans; loans to brokers and dealers in securities; real estate loans; total deposits; demand deposits of individuals, partnerships, and corporations; total assets; and demand deposits of other banks, a measure of growth in correspondent bank relationships. Both New York and Chicago, however, were commonly outdistanced by banks generally throughout the United States in relative gains in these measures, reflecting the extensive financial growth which has occurred in all sections of the nation primarily as a result of the war-caused rise in the public debt.

While quantitative data are not always available to support the view, there is considerable qualitative evidence that the Chicago financial community has achieved sufficient growth and maturity in recent years to pursue a more independent course of action on loan and investment policies than previously when precedents established in the East tended to be followed. Increases have been made in the activities of the Chicago Stock Exchange, in the volume of

CYCLICAL STABILITY

Cyclical changes in the level of general business activity and employment do not occur with precisely the same timing or force in all regions and industrial areas of the nation, although any broad economic trend will become locally evident in a comparatively short space of time. Accurate comparisons of economic trends in Chicago and other industrial centers are, of course, difficult to make because of inadequacy of comparable measures. Even if such comparisons were possible, however, it would be short-sighted to give primary attention to local differences rather than to the over-all problem of maintaining high levels of business and employment nationally.

Aggregate personal income and the number of industrial wage earners during prewar years in both Chicago and the State of Illinois experienced somewhat greater fluctuations than in the nation. These cyclical swings were more severe than in other industrial areas specializing to a larger extent in consumer nondurable goods, but less than in industrial centers more heavily dominated by metal products. The slightly above-average cyclical vulnerability of Chicago has been evident both during periods of upward and downward business movements.

If past experience is to be repeated, measures of income and employment in Chicago would be expected to show even more marked fluctuations than in prewar years, since the bulk of the war-postwar expansion has occurred in the relatively more sensitive industries. The same prospect to a slightly lesser degree, however, holds for the nation generally. Chicago's economy is still relatively well balanced between manufacturing and nonmanufacturing, 40-60 ratio in terms of employment. Postwar trends to date point toward closer approximation of the prewar balance between manufacturing and nonmanufacturing, i.e., 33-67 percentage distribution of employment.

The fundamental advantages of Chicago's location, particularly as long as the economic center of the nation continues to move west, are as real now as before the war, and may be expected to encourage further growth, although not on the scale to be achieved by less fully developed industrial centers. To an important degree, however, the nature and amount of future growth of the Chicago area will depend upon the success which is achieved locally in solving such critical problems as housing.

SHORT-RUN OUTLOOK

Inasmuch as most of the goods and services which are currently in greatest demand in both domestic and foreign markets, e.g., food, iron and steel, transportation equipment, most types of machinery, communications equipment, and petroleum and chemicals, comprise the principal manufactures of the Chicago industrial area, the local short-run outlook is favorable. While further striking gains cannot be anticipated in employment or industrial plant facilities principally because of manpower and materials limitations, a sharp upturn does not appear likely in unemployment or in idle industrial capacity for some months.

With good prospects for continued high employment—in fact, persistent manpower shortages—personal income for the Chicago area would seem assured at or above the present level at least until midyear. As long as consumers strive to maintain current living standards and anticipate no interruption in income, the over-all expenditure level should also resist any downward movement. In dollar terms most of the record levels established during the past year should continue or even be surpassed in the course of the next few months.

The danger spots in the present Chicago scene are similar to those appearing elsewhere in the nation and relate primarily to further price rises and the resultant economic distortions—particularly financial stringencies among business firms and individuals. So long as living costs continue to advance, consumers will be forced to allocate increasing proportions of their budget funds to the most essential items, particularly food. Price consciousness in relation to quality seems certain to grow. This portends further readjustments for less essential goods and services produced in Chicago. To market many of the less eagerly sought after products of the Chicago area will require a good deal more effort in 1948 than last year. Rising costs and prices cloud the horizon for most business firms. Ability to finance operations under inflationary conditions promises to pose increasingly difficult problems for many firms. While the short-run outlook is for further expansion in bank loans to business, it is probable that growing restraint will be exercised in credit advances.

These and other signs of weakness, which collectively could cause a general business readjustment, probably will lack sufficient force to offset inflationary pressures during at least the first half of the new year. The pattern of Chicago business and employment, moreover, promises to give the area relatively more favorable conditions than can be expected in many other industrial centers where there are a smaller number of industrial products and firms, and less emphasis on goods currently in greatest demand.

RELATIVE IMPORTANCE OF MANUFACTURING INDUSTRY GROUPS

CHICAGO INDUSTRIAL AREA 1939-47

(Per cent of total manufacturing employment)

Major Industry Group	Per Cent	
	1947	1939
Iron and steel and their products.....	20.1	21.2
Electrical machinery.....	12.5	7.8
Nonelectrical machinery.....	12.1	8.7
Food and kindred products.....	11.3	14.0
Printing and publishing.....	8.4	10.2
Textiles and apparel.....	6.2	9.0
Miscellaneous manufactures.....	5.7	5.7
Transportation equipment and automobiles.....	4.3	2.9
Nonferrous metals.....	4.2	3.6
Chemicals and allied products.....	3.8	3.7
Lumber and furniture.....	3.7	4.6
Paper and allied products.....	2.4	2.6
Stone, clay, and glass.....	1.9	1.8
Petroleum and coal products.....	1.9	2.3
Leather and leather products.....	1.5	1.9

SOURCE: Estimates based on Illinois Department of Labor and Indiana Employment and Security Division data.

CREDIT RESTRICTIVE MEASURES CONTINUED

(Continued from Inside Front Cover)

increase in bank reserves resulting from the support program be offset by concurrent reduction in other Federal Reserve credit or by other means. From another point of view, it has been pointed out that support purchases limit the degree to which measures of credit restraint can be effectively exercised. Continued gold inflow and the seasonal return flow of currency constitute additional sources of bank reserves with equally important inflationary potentials. It is the urgency of preventing further additions to the money supply which has given rise to the restrictive measures already taken and to proposals to place additional powers in the hands of the monetary authorities.

REDEMPTIONS A MAJOR FACTOR

The most important source of pressure on bank reserves during the past two months was a continuation of the Treasury's cash redemption policy. Beginning with November 1, the Treasury has redeemed in cash Federal Reserve holdings of maturing certificates amounting to 203 million in November, 138 million in December, and 400 million in January. This type of debt retirement is effective in exerting pressure on bank reserves because the reduction in reserves and deposits in commercial banks resulting from tax payments or war loan withdrawals is not offset by subsequent return of reserve funds to the banks, as is the case when the redeemed securities are held either by the commercial banks or by non-bank investors. In addition to the pay-offs of certificates, the Treasury also redeemed for cash approximately 100 million dollars from several weekly maturities of Treasury bills. From December 6 through January 15, 700 million of bills were retired, most of which were directly or indirectly from the Reserve Banks. Indications are that both banks and non-bank investors are taking a larger share of the new issues of bills, thus reducing Reserve Bank credit and excess reserves. The total reduction in Federal Reserve holdings of bills and certificates from November 5 through January 7 amounted to 2.6 billion and 800 million dollars, respectively.

The most recent step toward tighter credit, effective January 12, was an increase in the discount rate by the Federal Reserve Banks from one per cent to 1¼ per cent in line with the higher yields on short-term Governments—bringing this rate to a level ¼ higher than the yield on one-year certificates.

Other attempts to stem inflationary factors include emphasis on savings bond sales and an appeal to banks by the supervisory authorities issued late in November urging them to voluntarily exercise great caution in their lending policies. This statement emphasized the importance of the curtailment of loans for speculative purposes and safeguards against the over-extension of consumer credit, particularly with respect to the terms of instalment finance.

Reserve requirements for central reserve city banks have been raised from 20 to 22 per cent effective February 27, and there still remains to the Reserve authorities the power to increase requirements to 26 per cent for these banks in

New York and Chicago. The extent to which further action will be taken in the field of credit control depends, of course, on developments in commodity prices and the trend of commercial loans.

Although other controls will be maintained, it is expected that the most important restraint on credit expansion during the next few months will continue to be the Treasury cash surplus. Substantial refundings will, of course, be necessary, but the anticipated budget surplus resulting from heavy first quarter tax payments and cash acquired from an anticipated excess of sales over redemptions of savings bonds will be available for the retirement of a substantial portion of Reserve Bank holdings of the maturing issues.

POSITION OF MEMBER BANKS

Factors affecting the Government bond market in November and December were sharply reflected in the accounts of the reporting member banks. Although total Government security portfolios of these banks in the leading cities showed a net decline of 340 million dollars in the period November 5 through January 7, the breakdown in the changes in their holdings by type of issue, as shown in the accompanying table, indicates that a decline of almost 1.6 billion in bonds was largely offset by substantial expansion in Treasury bills. The increase in notes, which nearly balanced the decline in certificates, was largely a result of the December refunding operations. The substantial rise in bills was principally in New York where holdings of reporting banks rose 772 million from December 10 to January 7.

Despite fairly heavy withdrawals from war loan accounts, the Treasury drew down its balance with the Reserve Banks by about 700 million in the three weeks ended December 17, thus supplying reserves to member banks. Heavy disbursements to the market by the Treasury were required by sizable interest payments on the public debt, purchases in the market for Treasury accounts, and redemption of the unexchanged portion of the December certificate and bond maturities, a large part of which accrued to New York banks. Member banks also received reserve funds in December from continued gold inflow and a greater than normal increase in Federal Reserve float. As a result, even with the seasonal demand for currency, banks were able not only to retire Federal Reserve credit through the purchase of bills and repayment of borrowings, but also to build up their excess reserves.

In the two weeks following Christmas, the return flow of currency helped to maintain generally easy reserve positions. On December 30, excess reserves reached a peak of 1.6 billion, part of which was attributable to substantial Federal Reserve purchases of bonds in excess of sales of short-term issues. In the following week, however, redemption of Federal Reserve holdings of certificates plus substantial commercial bank purchases of Treasury bills caused a decline in Reserve Bank credit of 860 million, which was offset only in part by net Treasury disbursements and currency return, so that excess reserves on January 7 were approximately 1.1 billion—only slightly above the level of November 5.

Review of the Budget for Fiscal 1949

Surplus to be Used for Debt Retirement

Budget expenditures of the Federal Government for the second complete peacetime year since the end of World War II will amount to 39.7 billion dollars, as estimated in the President's Budget Message to Congress on January 12. Primarily responsible for the increase of approximately two billion in requirements over the current fiscal year is the inclusion of new or expanded programs proposed by the President. Net receipts are expected to total 44.5 billion in fiscal 1949, thus providing a surplus of 4.8 billion for debt retirement. Estimates of tax revenues are based on expectations of a continued high level of business activity, present prices, and no change in existing income tax legislation. These conditions assume an effective anti-inflation program.

Revised figures for the fiscal year ending June 30, 1948, indicate an anticipated surplus of almost 7.5 billion dollars—an upward revision of 2.8 billion over the prediction made in August of last year. This difference is attributable entirely to an increase in revenues, resulting largely from price increases which have occurred during the past few months. Application of the surpluses of both years to the retirement of Government securities would reduce the public debt to 246 billion by the close of June 1949. Recommendations for maintaining the surplus and using it to retire debt are in line with the objective of combatting or offsetting inflationary pressures.

HIGHER EXPENDITURES FORECAST

Analysis of the major components of Federal expenditures for the fiscal year 1948-49 indicates clearly that the transition in the economy of the United States to a normal peacetime basis is still far from completion. The message pointed out that 79 per cent of anticipated expenditures reflect the direct costs of the war, effects of the war, and efforts to prevent a future war. These include the categories "national defense," "international affairs," "veterans' benefits," "interest on the public debt," and "tax refunds." The two billion dollar increase in total expenditures over 1947-48 levels is attributable to the excess of the costs of proposed programs, which total 5.7 billion, over reductions in the costs of activities under existing legislation.

The biggest item in the budget—national defense—will cost 11 billion for fiscal 1949, compared with 14.3 billion for 1947 and 10.7 billion for 1948. Higher expenditure estimates for national defense for 1949 reflect recommendations for the inauguration of the proposed program for universal military training at a cost of 400 million.

With an increase of approximately 1.5 billion over the revised estimate for fiscal 1948 in requirements for international affairs and finance, this category occupies a place second only to national defense in the 1949 budget. The budget message stresses the importance of the European

recovery program which accounts for four billion of the seven billion dollar estimate of total international expenditures. An additional 440 million is proposed for other foreign-aid programs. Outlays for international activities under existing legislation will be smaller for fiscal 1949. Disbursements under the British loan agreement will be completed before the close of the current fiscal year, while Export-Import Bank loans and UNRRA assistance will be materially reduced. These reductions more than offset increased expenditures for foreign relief in army-occupied areas, which are estimated at one billion for fiscal 1948 and 1¼ billion the following year compared with approximately 500 million for fiscal 1947. Occupied area expenses are increased partly because of higher prices and partly because of the British dollar shortage, which made it necessary for the United States to assume the entire expense of dollar imports in the British and American zone in Germany.

Veterans' benefits remain a major component of the total budget. The estimated cost of the veterans' program shows a decline of about 500 million for fiscal 1949 as compared

TABLE 1
SUMMARY OF THE FEDERAL BUDGET
FISCAL YEARS 1947-49
(In millions of dollars)

Item	Estimated		Actual
	1949	1948	1947
Net receipts (see Table 2).....	44,477	45,210	43,259
Expenditures ¹			
National defense	11,025	10,746	14,281
International affairs and finance.....	7,009	5,533	6,540
Veterans' services and benefits.....	6,102	6,632	7,370
Social welfare, health, and security.....	2,028	1,960	1,379
Housing and community facilities.....	88	113	403
Education and general research.....	387	77	76
Agriculture and agricultural resources	906	614	1,248
Natural resources not primarily agricultural	1,626	1,179	628
Transportation and communication	1,646	1,563	587
Finance, commerce, and industry.....	190	372	238
Labor	116	97	120
General government	1,157	1,473	1,318
Interest on the public debt.....	5,250	5,200	4,958
Refunds of receipts.....	1,990	2,049	2,397
Reserve for contingencies.....	200	120
Adjustment to daily Treasury statement basis	464
Total expenditures	39,669	37,728	42,505
Excess of budget receipts over expenditures	4,808	7,483	754
Public debt at beginning of year.....	250,900	258,286	269,422
Reduction through excess of budget receipts over expenditures.....	-4,808	-7,483	-754
Reduction through change in Treasury cash balance	-51	-772	-10,930
Other changes in debt ²	+159	+869	+548
Total change in public debt.....	-4,700	-7,386	-11,136
Public debt at end of year.....	246,200	250,900	258,286

¹Includes general and special accounts and net expenditures of Government corporations and credit agencies.

²Includes excess of trust account expenditures and investments over receipts and changes in clearing account for Federal Reserve Banks.

RECEIPTS BASED ON EXISTING TAXES

with the current year and will be approximately 1.3 billion below the peak of fiscal 1947. Readjustment benefits—principally education, job-training, and unemployment allowances—are expected to be reduced by about 750 million. The President emphasized the need for confining educational benefits to constructive educational and vocational programs. Part of the economies expected in this area will be offset by additional outlays for pensions, hospital construction, and improvement of other facilities for the care of veterans.

Aside from the national defense and international programs, the most substantial increases in expenditures are for activities in the categories of social security, education, natural resources, and transportation. Recommendations for new legislation for social welfare, health, and security, including extension in the coverage of both the old age and survivors' insurance system and unemployment compensation and a national system of health insurance, would involve a cost of 116 million dollars for the fiscal year 1949.

The natural resources program calls for increased outlays above those for the current year of almost 450 million, largely reflecting atomic energy development and flood control. Estimates for the agricultural program are higher due to decreased net receipts of the Commodity Credit Corporation compared with fiscal 1948, but are substantially below 1947 levels. The major part of the 300 million dollar expansion in the cost of education and general research reflects a proposal to provide Federal grants to the states for elementary and secondary education.

Partial offsets to the higher outlays mentioned above consist of estimated reductions in other categories. In line with the anti-inflation program, costs of restoring price and rationing controls as well as the extension of rent control legislation are included in the budget. Expenses for general government will be reduced 300 million, largely reflecting recommended changes in the administration of surplus property disposal. Tax refunds will be somewhat smaller in fiscal 1949, but interest on the public debt will rise slightly as a result of increasing interest charges on a higher volume of non-marketable debt—accruals on savings bonds and special issues—which more than offset savings from retirement of marketable debt and from the refunding of some maturing high-coupon issues at lower rates.

The balance in the budget has been achieved primarily because of sustained high revenues rather than from any severe pruning of expenditures. Despite current prospects for tax reduction, the tentative prediction for budgetary receipts is based on a continuation of present tax legislation. The President's proposal for reduction in personal income taxes and for a corresponding increase in corporate taxes is mentioned in the message but not incorporated in the revenue estimates.

Net tax revenues are expected to reach 42.2 billion in fiscal 1949, approximately 1.3 billion greater than for the current year. Direct taxes on individuals were the highest on record for fiscal 1947 and will rise further in the current year and again in fiscal 1949. The combined increase in revenues from individual and corporate income taxes amounts to 5.5 billion from 1947 to 1948—more than offsetting the decline of 3.2 billion in excess profits tax revenues. This and a further rise of 1.3 billion for 1949 are attributed to the effect of increased prices on corporate profits and personal incomes. Excise taxes will rise for similar reasons. Some expansion in receipts from employment taxes is also expected because of higher incomes, but 350 million of the employment tax revenues represents receipts under the plan for the extended social insurance and proposed health insurance programs recommended by the President. These payments, however, would be transferred to trust funds and thus have no effect on net budgetary receipts.

Although total tax revenues show an estimated increase for fiscal 1949, a decline of approximately two billion dollars in miscellaneous receipts—largely through smaller receipts from sales of surplus property—will result in net budget receipts about 700 million smaller than for the current year.

DEBT RETIREMENT URGED

The surplus of receipts over expenditures for the two years ending June 30, 1949, will permit a reduction in the public debt of approximately 12 billion dollars. The budget message emphasizes that the retirement of privately held debt will be substantially greater than is indicated by the size of the surplus alone. It is estimated that trust accounts and other Government agencies will acquire about six billion dollars of Government obligations in the two-year period, making possible the retirement of a similar amount of securities held by other investors. Moreover, the excess of payments from the public over payments to the public, excluding intra-Governmental transactions and non-cash items such as accrual of interest on savings bonds, is expected to exceed the budgetary surplus by 250 million in fiscal 1948 and by more than two billion in fiscal 1949. This cash surplus is the more significant concept in the determination of funds available for debt retirement. The text of the message states that "In the management of the public debt, the major goal will be the achievement of the maximum anti-inflationary effect."

TABLE 2
BUDGET RECEIPTS
FISCAL YEARS 1947-49
(In millions of dollars)

Item	Estimated		Actual
	1949	1948	1947
Direct taxes on individuals.....	23,322	22,793	20,408
Direct taxes on corporations	10,158	9,548	9,676
Excise taxes	7,476	7,320	7,270
Employment taxes ¹	2,843	2,409	2,089
Customs	378	394	494
Less: Appropriations to trust funds ¹ ...	2,022	1,627	1,459
Net tax revenues.....	42,155	40,837	38,428
Miscellaneous receipts	2,322	4,378	4,881
Total net budget receipts.....	44,477	45,210	43,259

¹Includes proposed legislation.

LIFO Method of Inventory Valuation

Adopted by Increasing Number of Companies

The last-in-first-out or LIFO method of inventory valuation is a comparatively recent management-accounting development and has been permitted generally for Federal income tax purposes only since the Revenue Act of 1939.¹ Relative to the older "cost or market" methods of inventory valuation, LIFO makes it possible to minimize fluctuations which would occur in net earnings solely because of changes in prices.

Since 1939 the LIFO method has been adopted in a growing number of industries, particularly manufacturing. In the Chicago area at the present time one or more companies apply LIFO to some portion of their inventories in at least 24 manufacturing lines (see Table 1). Among nonmanufacturers the use of LIFO has been much less extensive. This is partly the result of the absence of sizable inventories in a number of industries such as utilities, finance, and services. The use of LIFO in retailing has been retarded by difficulties of combining the prevailing retail method of inventory valuation with the requirements of the LIFO procedure. In December of last year, however, the Bureau of Internal Revenue suggested a procedure which department stores and other retailers are now studying.

METHOD OF APPLICATION

The LIFO method is applied separately to individual products rather than to over-all inventories. Therefore, the percentage of inventory handled under LIFO will vary from one company to another, depending upon the number of different products chosen by managements for such inventory valuation treatment.

Companies using LIFO also have the option of applying it to individual products at any one or combination of the several stages of the productive process, i.e., finished goods, goods in process, and materials in the raw state. If raw materials as well as semi-finished and finished goods containing these raw materials are valued under LIFO, companies are required to keep records appropriate to ascertain at any given time the number of raw material units at each of the three stages of productive process.

LIFO puts business operations substantially on a replacement cost basis. This can best be illustrated by looking at the usual formula for calculating cost of sales:

Cost of sales equals opening inventory plus purchases (and processing costs) less closing inventory.

¹Non-ferrous metal producers and tanners were permitted to use LIFO under the Revenue Act of 1938.

This article is an expansion of the Appendix of the Federal Reserve Bank of Chicago study, *A Financial and Economic Survey of the Meat Packing Industry, 1947 Supplement*, and has been reproduced here in response to requests.

If the number of physical units in the opening and closing inventories is the same, and if the value per unit is held unchanged, it is clear that the cost of goods sold is represented simply by the outlays for the goods required to *replace* those goods which were sold (including processing expenses, etc.). In essence, LIFO accomplishes this by pricing inventory units into cost of goods sold in reverse order to that of acquisition. Assume, for example, a beginning inventory of 10 units at \$5 a unit and purchases as follows during the year:

Lot 1—20 units at \$6 a unit
 Lot 2—60 units at \$7 a unit
 Lot 3—20 units at \$8 a unit

If during the year sales comprise 100 units, all the units purchased in lots 1, 2, and 3 are considered to be the ones sold for costing purposes. The final inventory then consists of the 10 units on hand at the start of the year. Cost of sales equals \$700 and ending inventory \$50.

Corporations which use LIFO follow certain requirements laid down by the Bureau of Internal Revenue for income tax purposes. Under these requirements a corporation indicates the number of physical units to be included in the inventory in the base year and values these units at cost. As long as year-end prices remain at the base-year level, inventory values, cost of sales, and net earnings obviously remain the same under LIFO and alternative methods of inventory valuation. As indicated, inventory valuation by the LIFO and cost or market methods results in different year-to-year inventory values, cost of sales, and net earnings when prices vary from those existing in the base year. Three general situations may be distinguished.

TABLE 1
 CHICAGO AREA INDUSTRIES IN WHICH ONE OR MORE COMPANIES ARE NOW MAKING USE OF THE LIFO METHOD OF INVENTORY VALUATION

<u>Manufacturing</u>	
Animal food	Jute bag
Box	Mattress and bed spring
Candy	Meat packing
Cheese	Oil refining
Cigar	Plumbing
Cosmetic	Railroad equipment
Cotton	Rendering
Die and casting	Shoe lace
Diesel engine	Tanning
Excelsior	Tube and iron fabricating
Food packing	Winery
Gum	Zinc smelting
<u>Other</u>	
Coffee wholesaling	Paper wholesaling
Frozen food wholesaling	Produce jobbing
Lumber mill and yard	Retail men's store
Office supply	Wool dealer

1. *Physical quantity of inventory remains at or above the base-year level.* In this situation the difference in inventory values, cost of sales, and net earnings in any given year between the LIFO and cost or market methods of inventory valuation will be due solely to price fluctuations, termed the "price effect." When prices rise above those of the base year, cost of sales will be higher and closing dollar inventories and net earnings lower under LIFO than under inventory valuation at cost or market (see Table 2). The converse is true when prices fall below those of the base year.

Under LIFO there are at least three ways of valuing those units in the final inventory which exceed the base-year number, namely (1) at cost of earliest units purchased during the year, (2) at cost of latest units purchased during the year, and (3) at average cost of units purchased during the year. The specific way chosen from among the three foregoing possibilities is one of the factors which determine the absolute difference between the results from using LIFO on the one hand or cost or market on the other.

2. *Physical units are voluntarily allowed to fall below the base-year level.* In this situation there runs counter to the "price effect" of LIFO on inventories, cost of sales, and net earnings what may be termed the "quantity effect." This arises from the fact that under LIFO below-base-year physical units are entered into cost of sales at base-year prices. Which of these two effects will predominate depends on the particular circumstances of each situation. If in a later year the inventory is returned to the base-year level, the units added must be priced at actual cost and that cost continued to the extent that these units are reflected in future inventories.

3. *Physical units fall below the base-year level because of conditions beyond the company's control—"involuntary*

liquidation" so-called. This is one of the problems which was encountered by companies operating on a LIFO basis during the war. Because of prevailing conditions of abnormal demand and relatively short supply, such companies were unable to avoid the liquidation of their LIFO base inventories which had been carried since prior to the war. Inasmuch as prices increased after 1941, this wartime liquidation of base-year units meant charging to cost of sales units at a relatively low price and resulted in an increase in earnings on the books. Special provision in the Federal income tax law, however, now enables taxpayers who have experienced "involuntary liquidation" to restore the original inventory at base-year prices when goods subsequently become available provided the necessary election was made in the year of liquidation.² The difference between prices in the year of restoration and prices in the base-year is chargeable against net earnings in the year in which the inventory was liquidated involuntarily, and income taxes for that year are thereby reduced.

EFFECT ON EARNINGS AND BALANCE SHEET ITEMS

The principal significance of the LIFO method is that through its use price changes in any given year influence net earnings to a much smaller degree than under the cost or market. In periods of rising prices, earnings of LIFO companies are relatively lower; but in periods of falling prices, earnings of such companies are higher than they would be under the cost or market rule. Although year-to-year fluctuations are lower under LIFO, over longer periods of time, both methods should result in about the same average earnings level. From a long-run point of view, therefore, no one method provides any predictable income tax advantage, given continuation of flat rate and carryback-carryforward provisions in the tax statutes similar in scope to those currently in force.

Another significant point of difference is in the balance sheet items affected by the unit value at which inventories are carried. Thus, not only the inventory item and net earnings, but also current assets, total assets, working capital, and even net worth, might be considerably different in any given year for a company using the LIFO method of inventory valuation than it would be for the same company if it used cost or market methods.

Because of the sharp rise in prices in 1947 and the lesser percentage increase in inventories, the "price effect" outweighed any "quantity effect" for most, if not all, companies using LIFO. The logical conclusion relative to earnings in 1947 would therefore seem to be that the method of inventory valuation had an important influence on the level of individual company earnings; that earnings of companies using LIFO were stated on a more conservative basis; and that had all corporations used LIFO, earnings in per cent of net worth would be somewhat less than those currently being reported.

²Permission to restore LIFO base inventories is limited to a period of three years after the declared cessation of hostilities. Some companies using LIFO have set up Reserves for Profits Realized on Involuntary Inventory Liquidation in anticipation of such inventory restoration at higher than base-year prices.

TABLE 2
ILLUSTRATIVE COMPARISON OF EFFECTS OF LIFO AND COST OR MARKET METHODS OF INVENTORY VALUATION ON INVENTORIES, COST OF SALES, AND NET EARNINGS

Explanation	LIFO Methods ¹			Lower of Cost or Market Method
	Ending Inventory Units in Excess of Base-Year Number Valued According to			
	Cost in Order of Acquisition	Cost in Reverse Order of Acquisition	Average Cost During Year	
Inventory at beginning of year—10 units.....	\$ 50	\$ 50	\$ 50	\$ 60 ²
Purchases during year				
20 units at \$6 per unit....	120	120	120	120
60 units at \$7 per unit....	420	420	420	420
20 units at \$8 per unit....	160	160	160	160
Total purchases	700	700	700	700
Inventory at end of year				
20 units	110	180	120	160 ³
Cost of goods sold.....	640	620	680	600
Net earnings ⁴	60	80	70	100

¹Base-year inventory equals 10 units and base-year price is \$5 per unit.

²Cost and market price are \$6 per unit.

³Market price is \$8 per unit.

⁴Assumes sales of \$1,200 and all other expenses of \$500.

SEVENTH FEDERAL



RESERVE DISTRICT

