THE BUSINESS REVIEW

FEDERAL RESERVE BANK OF PHILADELPHIA

MARCH 1, 1944

Broad revisions by the War Production Board in the outlook for supplies of some 450 basic materials used in war and essential civilian industry reflect changes in military requirements for equipment and supplies, characterized by continuing reductions in some categories partly offset by substantial increases in others; sharp expansion in productive facilities for many crude and some semiprocessed materials; and maintenance of a high level of raw material imports over the greater part of last year. On the basis of the Board's revised Material Substitutions and Supply List, an easier situation prevails, or is in early prospect, with respect to most metals, while supplies of a large number of chemicals and plastics are becoming increasingly tight.

Improvement in the outlook for supplies of iron, steel and most of the nonferrous metals except tin, suggests the possibility of resuming or increasing the production of civilian goods by metal consuming industries later this year. Such a development is definitely in prospect, but to a very limited extent, particularly in the case of larger plants whose entire productive facilities may continue in munitions production until hostilities end on one of the two major fronts. In reappraising the raw material situation, the War Production Board emphasized that the improved outlook for metals referred primarily to ores and other crude forms; that supplies of partly processed metals continued largely insufficient for both military and essential civilian needs; and that manufacturing facilities and manpower remained generally tight.

A more immediate implication of the changed raw material picture is the probability that the domestic output of some metals will be substantially curtailed, pending an increase in the demand from munitions industries, or until such time as additional processing facilities are released from war work and more labor can be spared to meet the growing needs of the civilian economy. A move in this direction is now under way, as evidenced by the cancellation of several contracts for incompleted steel-making projects and recent curtailment in the production of aluminum. Such reductions, while helping to prevent the accumulation of surpluses to further unbalance a difficult demand-supply situation, would be directly in line with a continuing need to conserve fuel, machinery, and manpower for urgent war requirements.

Imports of ores already have started to decline to the extent that a number of small contracts with foreign producers have been permitted to lapse. Another "straw in the wind" is the unannounced but officially confirmed report that the War Production Board has tentatively established a broad policy regulating the size of stockpiles of critical materials. Curtailed imports are indicated under present circumstances for the additional reason that a substantial tonnage of ocean shipping could thus be diverted to meet the expanding requirements of our armed forces overseas.

The remaining aspect of the current raw material situation concerns the apparent need to

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The Economy of The Third Federal Reserve District
The Mineral Industries

The Third Federal Reserve District is one of the richest storehouses of mineral wealth of the United States. After more than a century of mineral extraction this district still produces a greater dollar value of mineral output than almost any other area of comparable size. This is especially significant since the district produces practically none of the rare minerals that have a high scarcity value.

Compared with manufacturing and agriculture, the mineral industries occupy an intermediate position. In 1939 the district produced more than 300 million dollars worth of mineral products. This was about one-sixth of the value added by manufacturing in the district but a third greater than the value of its agricultural products. Its mineral industries employ about 134,000 workers, or 12 per cent of all workers in agriculture, manufacturing, and mining.

Mineral Wealth of the Third District

The energy-producing minerals are overwhelmingly predominant in the mineral products of the district. Eighty-five per cent of its mineral output in 1939 consisted of coal, petroleum, and natural gas. The relative importance of the leading mineral products is shown in Table 1.

TABLE 1
ESTIMATED MINERAL PRODUCTION OF THE THIRD DISTRICT—1939

Product	Value (Millions)	Per cent of total
Anthracite	$187	60%
Bituminous coal	42	13
Petroleum	30	10
Cement rock	6	2
Natural gas	5	2
Slate	3	1
Iron ore	2	1
Other minerals	36	11
Total	$311	100%

This district is the only major producer of anthracite in the United States. The deposits are confined to a small area of less than 500 square miles in eastern Pennsylvania. This coal, a hard and smokeless fuel used chiefly for domestic heating, accounts for 60 per cent of the mineral output of the district.

In contrast to its virtual monopoly of anthracite deposits, the district includes only a small part of the vast bituminous or soft coal deposits of western Pennsylvania. Nevertheless, the eleven bituminous coal-producing counties of the district contributed 13 per cent of the district's mineral output in 1939.

Petroleum ranks third in value of mineral products. Although the oil fields of Pennsylvania are for the most part in the western end of the state, some of the most productive pools are found within the Third District. Natural gas, so frequently found with petroleum, is of only minor importance in the mineral output of the district.

The other mineral products which make up 15 per cent of the district's mineral output are chiefly iron ore and a variety of common rock products. The common rock industries include cement rock, slate, sand and gravel, clay, sandstone, ganister, trap rock, and granite.

Early Development of the Mineral Industries

The iron deposits of this district played a conspicuous part in its industrial development. Iron ore has been mined almost continuously for over two centuries. Iron manufacturing began in colonial times, and eastern Pennsylvania became an important center of production by reason of its extensive deposits of the ore and a plentiful supply of wood for charcoal used as fuel in the smelting process. In that early period iron smelting had to be carried on near the source of raw materials owing to the lack of transportation facilities.

The real development of the mineral industries occurred after transportation facilities opened up larger markets. This took place about 1840, which marks the culmination of the canal-building era. From 1840 to 1870 the iron ore mines of the district made their great contribution to the iron and steel industry of the United States. An important factor in the development of iron and steel manufacture was the presence of anthracite used as a fuel in the smelting process.

For the two decades from 1850 to 1870 this district produced about 50 per cent of the iron ores of the United States. However, the growing volume of Lake Superior ore and the gradual change to beehive coke gave rise to Pittsburgh as the iron and steel center. Thereupon iron mining in the district declined both relatively and in actual tonnage. In 1899 the district produced only 10 per cent of the country's output.

Anthracite, which became the leading mineral of the district, is alleged to have been discovered in 1762. For many years an article of curiosity, it was of no commercial importance until 1830 when approximately 200 thousand tons were produced.

The period from 1830 to 1870 was characterized by a slow but steadily rising production of anthracite. Markets had to be cultivated and adequate means for transporting the coal to the markets had to be provided. Consumer prejudice was overcome by developing household furnaces specially adapted for hard coal and by improved colliery equipment to clean and size the coal properly. At the same time the transportation difficulties were solved by the construction of railroads and canals into the anthracite region.

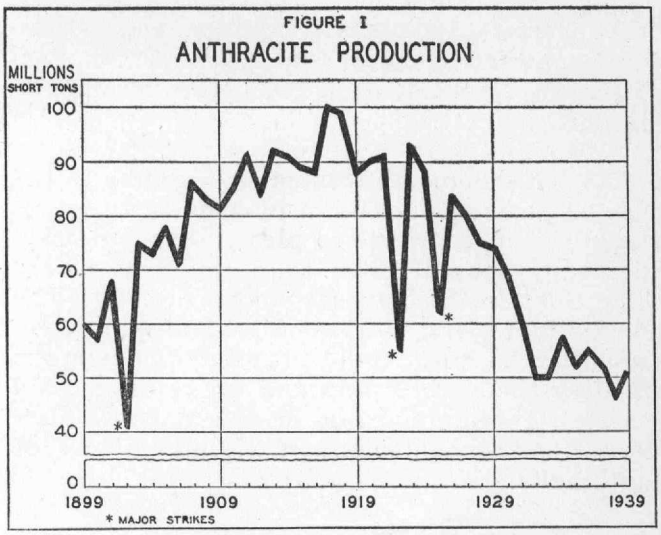
The greatest development in anthracite mining occurred during the period from 1870 to 1900; production increased from 16 to 60 million tons. Its suitability for household heating and cooking gained wider appreciation because of its dustless and smokeless qualities. Industrial markets were likewise developed; the smaller sizes were used by the railroads, public utilities, and manufacturing industries.

Recent Trends in Anthracite Production

Production of anthracite during the forty years ending with 1939 is characterized by two well-defined trends. Production rose, as Fig. I shows, from an annual output of 60 million tons in 1899 to a peak of 100 million tons in 1917. From that year to 1939 production receded to a level of 50 million tons—a decline of 50 per cent.

The expansion of the industry from the turn of the century to 1917 was a natural continuation of its earlier growth. The rate of growth was considerably diminished, however, because of the growing use of soft coal for domestic

FIGURE I



heating, particularly in the markets remote from the anthracite region. Another factor was the extension of gas for cooking and hot water heating. Since the anthracite industry was earning substantial profits, little effort was made to meet the new competition or to seek new markets for anthracite.

The rise of substitute fuels, which arrested expansion in the period prior to 1917, caused an actual decline of serious proportions in the period from 1917 to 1939. Though production increased during the First World War, the war had an adverse effect upon the industry. Confronted by greatly increased demand for the product and a seriously curtailed supply of labor, anthracite had to be rationed. In areas where bituminous coal was available consumers turned to soft coal, and after the war many of them continued to use bituminous coal especially since anthracite prices had gone up quite sharply.

The shift to alternate fuels was further accelerated by the anthracite strikes in 1922 and 1925-26. The shortage of anthracite as a result of these interruptions in production was met by substitute fuels. The anthracite industry never fully recovered the markets lost to competitive fuels after the 1925-26 strike. The strikes were not the sole cause but they hastened the shift to other fuels already in progress for some time.

As a low-priced, all-purpose fuel bituminous coal is anthracite's largest competitor. However, the traditional market which anthracite alone supplied for many years was invaded by fuel oil, coke, natural gas, manufactured gas,

fuel briquets, hydro-electric power, and anthracite imported from Russia. Of these, fuel oil made the greatest inroads on the normal anthracite market.

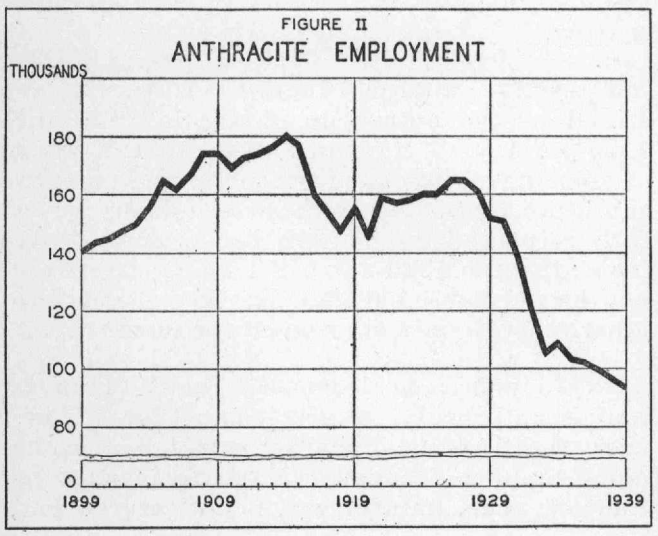
As a result of the tremendous growth in the use of gasoline, fuel oil, a by-product of petroleum refining, became so plentiful that refiners naturally sought other than their customary channels for the disposal of this product. The domestic heating market proved especially responsive because fuel oil offered automatic heating. Sale of heating and range oil in 1939 in the New England and Middle Atlantic markets was the equivalent of 27 million tons of anthracite.

Employment in the Anthracite Industry

Since anthracite is the principal mineral industry of the Third District, it is the largest employer of mine labor. In 1899 the industry employed 140,000 workers in the mining and preparation of coal for the market. Throughout the 40-year period from 1899 to 1939 employment in general followed the trend in production. The industry absorbed a steadily increasing number of workers until 1914, but as Fig. II shows, employment declined rather consistently from 1914 to 1939.

Throughout most of the period before the First World War while the industry was expanding it provided steadily growing opportunity for employment. However, the peak in employment occurred in 1914 when the industry employed 180,000 workers, whereas production continued to rise until 1917-18. During the war years the industry was confronted by an increasing demand for coal and a diminishing supply of labor. Despite the falling employment, output was expanded by increasing the number of days of operation, which rose from 245 days in 1914 to 293 days in 1918.

FIGURE II



The contraction of the anthracite industry in the latter part of this period had a serious effect upon employment. From a peak of 180,000 on the payrolls in 1914 employment declined to 93,000 in 1939—a decrease of almost 50 per cent. Unfortunately, the adverse effects upon labor are not fully revealed by the declining trend in employment because it was accompanied by a shrinkage in working time. There was a decrease in the average number of days worked from almost full-time employment in 1918 to 183 days in 1939. A factor contributing to the diminishing labor requirements, especially during the thirties, was the growing mechanization of the industry. The throwing out of work of thousands of workers and the partial employment incident to reduced working time caused very great hardship. Since they lived in an essentially one-industry area the idle miners had almost no opportunity for alternative employment.

The Anthracite Problem

The welfare of 1,000,000 people in the five hard coal counties—Lackawanna, Luzerne, Carbon, Schuylkill, and Northumberland—is dependent primarily upon the anthracite industry. Railroad, trade and related service occupations are also heavily dependent on coal mining. Manufacturing in these counties employed only about two-thirds as many workers as mining in 1940; many of the industries are silk and other textiles, employing women. Employment in these industries has declined considerably since 1939.

The 50 per cent contraction in production and employment in the anthracite industry has been accompanied by an almost equal reduction in wages. During the last decade, 1929 to 1939, over $300 million was spent by the WPA and other types of public assistance for the relief of the unemployed in these counties. Population declined about 23,000. Under pressure of widespread unemployment many workers migrated to industrial centers in southeastern Pennsylvania, New York, and New Jersey.

During the thirties, "bootleg" mining expanded because of the continued decline of colliery operations and the lack of alternative employment opportunities. A recent survey revealed that in March 1941 over 12,000 miners were engaged in this activity, producing about 5,000,000 tons annually.

Although it has suffered a severe contraction, the anthracite industry is by no means doomed to extinction. Its decline is attributable primarily to the inroads of competitive products—not the exhaustion of deposits. About 70 per cent of the original deposits are still untouched despite more than a century of mining. The problem of maintaining production at recent levels or recovering some of the lost markets may be approached from two different angles. One is through economical mining and the other is through effective marketing.

The cost of extracting and preparing coal for the market at best offers only limited opportunities for improvement. Despite technical advances such as machine cutting, mechanical underground loading and strip mining, labor still constitutes about 60 per cent of production costs.

Other elements in the cost structure offer little prospect of reduction. Royalties, taxes, and freight rates are inflexible. The cost of pumping out mine water is increasing. In 1937 each ton of coal produced required the pumping of 33 tons of mine water, which was treble the 1921 rate.

Effective marketing of anthracite seems to offer better prospects than reducing production costs. About 80 per cent of the annual output is used for domestic heating. This is the market for which the fuel is best adapted. It is also the market in which it has suffered the greatest loss. Since it has been replaced so largely by fuel oil on the basis of consumer convenience rather than cost, the industry must meet this competition.

The industry already has made considerable progress in this respect. Controlled combustion is insured by mechanical stokers, which automatically feed the coal and remove the ashes from the furnace. Sales of mechanical stokers for burning anthracite attained an annual volume of 12,000 by 1940.

Greater automaticity in anthracite-burning equipment, more effective advertising of such devices, and improved service by anthracite dealers are the most promising avenues to increased use of this fuel.

The industrial market for anthracite consists of railroads, public utilities, and some manufacturing industries. Formerly this market was quite substantial but now it accounts for only 10 per cent of the output. Both bituminous coal and fuel oil have invaded this market, which is extremely sensitive to price competition. It is doubtful whether anthracite can regain much of this business.

There is some evidence of a revival of interest in the use of anthracite as a foundry cupola and blast furnace fuel and also as a substitute for coke to manufacture carbureted water gas for general city use. Research programs are in progress to develop non-fuel uses for anthracite, such as the production of synthetic textiles, plastics, carbon black and filtering materials. Total demand for anthracite for all of these purposes would not be very extensive at best.

Other Mineral Industries—
Bituminous Coal

Most of the bituminous coal of the district comes from the Cambria and Clearfield county deposits which are part of the vast Appalachian coal beds cutting across western Pennsylvania. Although nationally bituminous coal is a much larger industry than anthracite, in the Third District the bituminous industry is much smaller. Compared with anthracite, the bituminous industry of the district produced, in 1939, little more than one-third as much tonnage, about one-fifth as much value and employed about one-third as many workers.

Bituminous coal production expanded during the first two decades of the present century and declined in the next two decades. Production rose from 19 million tons in 1899 to 30 million tons in 1919. Soft coal is essentially an industrial fuel, and the rising output of the district's bituminous coal was marketed in the growing industrial centers of the northeastern United States.

Between 1919 and 1939 bituminous coal production declined from 30 to 19 million tons—a decrease of 37 per cent. Although there was a

reduction of output by the entire soft coal industry of the United States during this period, owing chiefly to the rapid rise of petroleum, the rate of decrease in this district was more than twice that of the country. The greater decline in the district is attributable to the competition of other coal-producing areas—notably Kentucky and West Virginia—whose producers have some cost advantages over this district.

Employment in the district's bituminous coal industry has followed the same general trend as production. In 1899 the industry employed approximately 26,000 workers, which rose during the period of expanding production to 42,000 workers in 1919. The subsequent contraction of the industry caused a shrinkage of employment to 29,000 workers by 1939.

Petroleum

Since 1899 the trends of petroleum production in the Third District have been practically the reverse of those of its coal output. Unlike coal, petroleum output declined steadily from the opening of this century until the early 1920s, after which production increased sharply.

The Bradford field in McKean County is the principal source of petroleum produced within the Third District. This field, located in the northwestern corner of the district, is a part of the Appalachian oil-producing area cutting across western Pennsylvania in a northeast to southwesterly direction.

As a part of the pioneer oil-producing area of the United States, the Bradford field had its greatest development late in the 19th century. As a result of the early exploitation of its petroleum resources, the oil production of the district was slowly declining during the first quarter of the present century. Production tapered off from approximately 4 million barrels in 1899 to about 2½ million barrels in 1921, and even this diminishing flow was obtained only by continuous pumping.

The Bradford oil field was revived in the early twenties by the application of water flooding. The flow of oil was greatly increased by injecting water into the oil-bearing sands that had been responding poorly to the ordinary methods of pumping. As a result of water flooding, oil production in the district steadily rose to 14 million barrels in 1939. Though a very small part of total American output, the oil from this district commands premium prices because of its high quality. The best grades of lubricating oil are obtained from this petroleum, which has a paraffin base.

Limestone

Limestone accounts for the largest proportion in tonnage and value of the common rock products. It is used as a raw material for cement manufacturing, as a fluxing stone in iron and steel manufacturing, as a road material for constructing and resurfacing highways, and as a raw material to make pure lime utilized in agriculture, the building trades, and in numerous manufacturing industries.

The cement industry is the largest consumer of limestone. The rich limestone deposits of Lehigh and Northampton counties gave rise to an important cement manufacturing industry in this region. In 1900 this area produced about 70 per cent of the cement of the United States. The limestone in this region was known as cement rock because it contained enough clay to make it ideal for cement manufacture by adding small quantities of pure limestone.

Since 1900 cement mills have sprung up in numerous areas throughout the United States. The development of a standard formula of cement manufacturing ingredients permitted the utilization of limestone deposits inferior to those of the Lehigh Valley. Largely as a consequence of this technical development, the cement industry of the Third District lost its former supremacy.

The Mineral Industries in War

The importance of mineral raw materials in a period of national emergency is not often fully appreciated. The mechanized character of modern warfare creates unprecedented demands for minerals of every kind. Although the United States has an abundance of mineral wealth, the war is taking a heavy toll on reserves. Demand became particularly acute after this country entered the war, because increased difficulties of shipping forced ever greater reliance upon domestic supplies.

In time of war conservation must give way to the urgency of immediate needs, with the result that mineral reserves are rapidly depleted. Moreover, the requirements for war cause greater drains upon some minerals than others.

Depletion of reserves is more serious with respect to the fuel minerals than the metals. Unlike metals, fuels once used are irretrievably gone—there is no reclamation of scrap as in metals.

From the beginning of this century to 1939 solid fuels have supplied a constantly diminishing proportion of our national energy requirements. Anthracite and bituminous coal supplied 90 per cent of our energy needs in 1899 but only 47 per cent in 1939. Meanwhile, petroleum increased from 5 to 32 per cent. If these trends continue during the war and after, the mineral industries of the Third District will face additional readjustments owing to the predominance of solid fuels in its mineral economy. However, if the war should bring about a drastic reduction in our national reserves of petroleum, the mineral industries of the Third District may take on added importance.

In a subsequent release an appraisal will be made of the effect of the war upon the mineral industries of the Third District and the implications with respect to their post-war prospects.

Business and Banking

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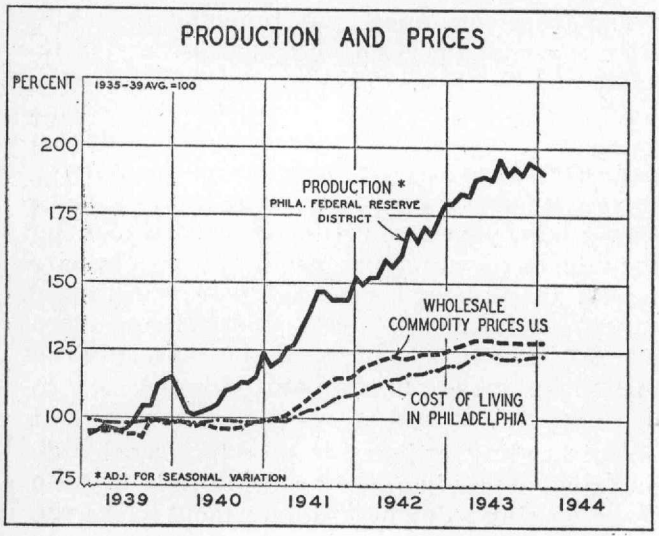
make resubstitutions for certain materials formerly in ample supply and only recently grown scarce. A case in point is plastics, used in place of metals on an increasing scale through the first two years of war. Resubstitutions are not without precedent in this war, as very early in the conflict the supply of various chemicals fell short of total requirements. Substitutes were obtained, but later replaced by the original materials when supplies eased sufficiently to permit a resumption of their use in less essential products or processes.

Industry and trade. Industrial production in this district on an adjusted basis decreased somewhat further from December to January, owing principally to small declines in the output of durable and nondurable manufactures. In the aggregate output was less than 3 per cent below last fall's peak, and showed a gain of 6 per cent over January 1943.



The influence of reductions authorized in the output of specific types of munitions was apparent in the lower rate of operations in heavy industries during January. The decline in output at plants making lighter products, chiefly on civilian account, reflected the persistence of a tight labor situation, and in some instances, continued difficulty in obtaining supplies of certain crude and semi-processed materials. Productive activity in both durable and consumers' goods lines in January was about 5 per cent greater than a year earlier.

The number of wage earners employed in Pennsylvania factories decreased slightly in January and was little larger than a year ago. Employment continues close to the November peak—the highest reported in two decades—suggesting that a wartime ceiling may have been reached in manufacturing industries. The volume of wage disbursements also showed a small decline in January, but was about one-tenth greater than a year earlier. Payroll increases over 1943 occurred in all major lines except leather products, where productive activity has been curtailed for many months by the limitations imposed on the consumption of raw materials.

The weekly income of wage earners at reporting plants in Pennsylvania averaged somewhat less in January than in December, reflecting a small decline in the average number of hours worked per man to just under 45 a week, a level maintained or exceeded through the last five months of 1943. Average hourly earnings con-

tinued at $1.03 for the third successive month, the highest in records back through 1927.

Emergency shipments of anthracite to areas of acute shortage, and continued substitution of bituminous coal are easing the critical supply problem for solid fuels used primarily for heating. But recent upward revisions in estimated requirements for the full year serve to emphasize that a relatively tight situation may persist for a considerable period beyond the present crisis. Anthracite needs are expected to total 66 million tons in 1944, as against 60 million tons produced in each of the two preceding years. Domestic and export requirements for bituminous coal have been estimated at approximately 620 million tons, or 5 per cent above the quantity mined in 1943.

The production of anthracite on a daily basis increased somewhat further in January, and was the largest for that month since 1941. Continued gains through the first half of February reflected the almost universal adoption of a seven-day work-week authorized by the Administrator for Solid Fuels to meet the immediate requirements of consumers and to permit rebuilding of depleted stockpiles. Colliery operations are to be maintained on this basis to the end of February. Output of bituminous coal in Pennsylvania also increased from December to January, although the tonnage produced remained below the high levels prevailing last fall. Operations in this field continued to expand in early February.

Manpower and, to a lesser extent, material shortages are reflected in a continuing decline in building and construction activity since the turn of the year. Scheduled cut-backs in operations during the current half-year are expected to release for more essential needs another 100,000 employees in building trades throughout the country, reducing the total by July 1, 1944 to a new wartime low of approximately 700,000, according to the War Manpower Commission.

The sharp downward trend of new contract awards over a large part of 1943 and further moderate reductions in January of this year are indicative of the extent to which emphasis has shifted to production for direct war needs since the completion of the bulk of military installations, industrial and other facilities some months ago. In this district, the value of contracts awarded totaled less than $10 million in January, a reduction of over one-fourth from a year earlier, and the smallest for that month since 1935. The sharpest declines from 1943 were in contracts for public works and utilities.

With the volume of primary distribution by rail and motor truck expanding from relatively low levels reached over the year end, the nation's carriers, particularly the railroads, are facing a growing shortage of manpower. Thus, such easement of a persistently tight transportation situation as might have been expected later this year from increases in rolling stock may be offset by a continuing loss of railway personnel. Total freight-car loadings in this section in January were about one-tenth greater than a year earlier, with an even larger increase indicated in the volume of freight, owing to heavier loadings per car.

Activity in wholesale markets expanded considerably during January, when retailers made large commitments for spring goods and to replenish stocks of staple merchandise reduced by heavy consumer purchases in the preceding two months. Sales of dry goods were nearly double the dollar volume reported in December, with much less pronounced gains occurring in the case of shoes, groceries, and paper. Increases over January 1943 were shown in all reporting branches of the trade except shoes and electrical supplies. Inventories in the aggregate were maintained in January at about the level of a year earlier, although wide fluctuations occurred in individual lines.

The continuance of an unusually strong demand from consumers was reflected in smaller than seasonal decreases during January in the value of retail sales in the majority of reporting lines in this district. After adjustment for usual seasonal changes, the index of sales by department stores rose by one-fourth. Sales also were somewhat above expectations at establishments specializing in women's apparel and shoes, but they declined more than usual at men's apparel stores. Gains over a year ago were substantial, except at furniture stores, and at shoe stores where the influence of rationing was apparent in a sharp decline in the value of sales.

Outstanding orders for merchandise by department stores increased considerably in January, reversing a downward movement in the pre-

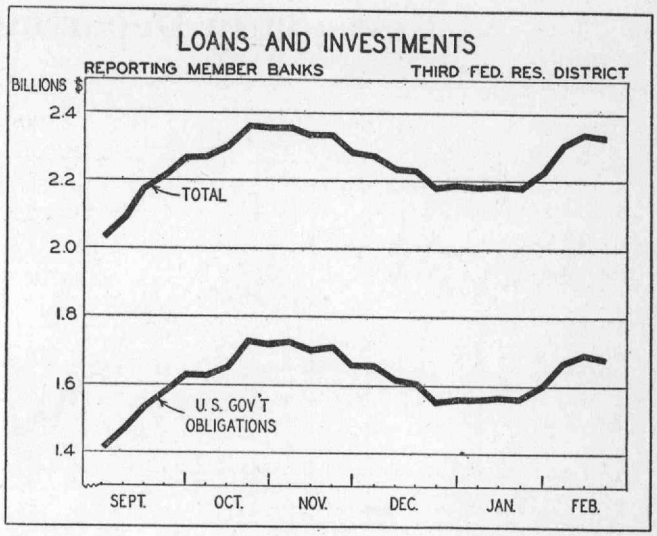
ceding five months. Retail inventories showed mixed changes in the month; on an adjusted basis supplies at department and women's apparel stores increased considerably, while some decline was reported by shoe stores. Stocks at the end of January were only slightly below the dollar volume of a year earlier at department stores, but considerably lower at shoe and furniture stores. A large percentage increase persisted in the case of women's apparel.

Banking conditions. Sales of Treasury securities to nonbank investors during the Fourth War Loan Drive exceeded over-all quotas in the country as a whole and in each of the three states which lie wholly or partly in the Third Federal Reserve District. Figures in detail, including sales of saving bonds and savings notes through February, await release of final data by the Treasury.

The growth in bank credit in this district was less than that reported during the drive held last fall. At reporting banks loans and investments expanded $240 million in the period from September 1 to October 6, during which the Third Drive was conducted. The increase was only $145 million in the corresponding weeks bridging the Fourth Drive, although banks were given an opportunity to invest limited portions of their savings deposits in specified issues. The increase during this last period was principally in holdings of Governments, but included also some $20 million of advances to purchase or carry such securities and an additional $10 million of commercial and other loans.

Outstanding credit and deposits at the reporting banks are still below the record high points reached on October 20. Changes in deposits in the four weeks ended February 16 were typical of those in loan drive periods. Adjusted demand deposits decreased $191 million, while balances of the United States Government moved up more than $300 million.

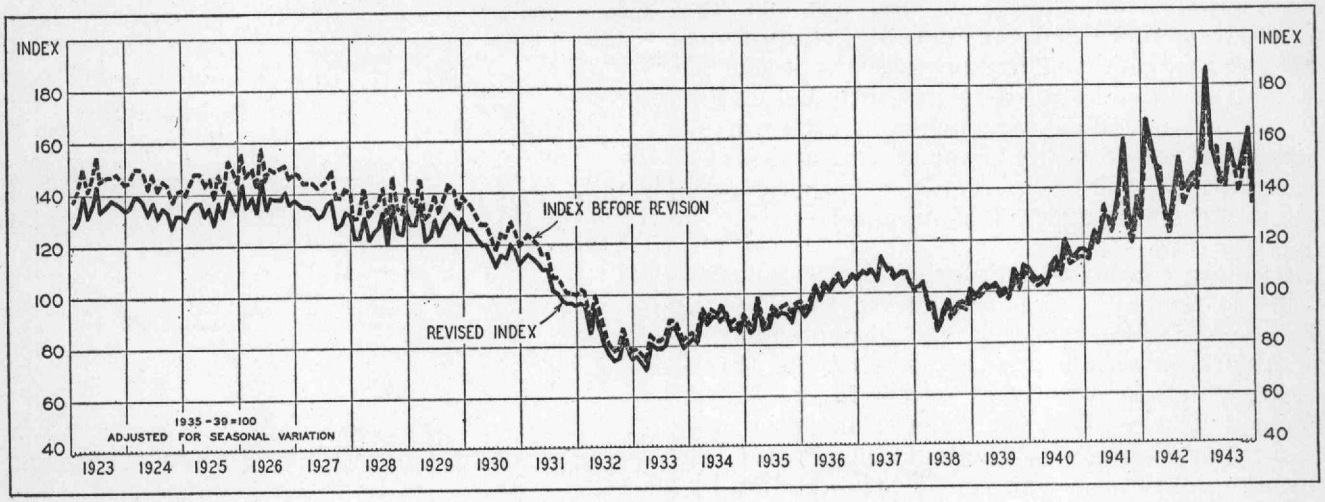
Combined reserves of all member banks declined $43 million to $609 million in the four latest weeks. The district gained heavily in commercial transactions with other sections, but this inflow of funds was more than balanced by large cash payments to the Treasury and a moderate demand for currency. Reserve Bank credit was reduced, principally by a decline of $38 million to $132 million in Treasury bills held under the repurchase option.



While recognizing that all efforts during the war period must be directed to the consummation of war objectives, banks and others look forward to the time when conversion of the economy to the ways of peace will take place. The development of an adequate bank policy and program must take into account such elements as the financial requirements of business in reconverting their facilities and the shifting of deposits that may occur during the post-war period.

Surveys of deposit ownership conducted by the Reserve Banks contribute to the factual basis upon which both of these problems may be appraised and in so doing prove helpful to individual banks in the evolution of their own plans. The last survey, undertaken in July, was summarized in an article on the "Growth and Distribution of Demand Deposits", which appeared in the **Business Review** some months ago. Banks are now being asked to supply information as of February 29 to bring this material up to date. Gains in deposits in the period from June 1939 to June 1943 were relatively greater in the South and West than in the Northeastern section of the country, in which the Third Federal Reserve District is located. During the last half of 1943 trends by areas followed much the same pattern. Monthly averages of total deposits showed gains of 6, 5, and 7 per cent respectively at member banks in the Philadelphia, New York, and Boston Reserve Districts between June and December, as compared with increases ranging from 8 to 18 per cent in the other nine districts.

Revision in Department Store Sales Index



The index of department store sales in the Third Federal Reserve District has been revised to include more comprehensive data that have become available. Similar revisions are under way at each of the other Federal Reserve Banks. Revised district figures will be combined into a national index to be published by the Board of Governors of the Federal Reserve System.

For some time it was recognized that the sales index reflected a downward bias, owing largely to insufficient representation of chain stores and stores in small communities. To correct this deficiency, additional stores were solicited and added to the reporting sample in 1935 and later years. As a result, reporting stores now account for approximately 80 per cent of total department store sales in the district.

Although these additions to the reporting sample added considerably to the accuracy of current information, it was only recently that adequate data became available for use in adjusting indexes for earlier years. At the request of the Board of Governors of the Federal Reserve System, the Bureau of the Census of the U. S. Department of Commerce recently prepared some special tabulations of department store sales in 1929 and 1939 for each of the Federal Reserve Districts. This information was the basis for the index revision.

The index of total sales in this district is a weighted combination of the index for Philadelphia and an index for the remainder of the district. No revision was necessary in the case of Philadelphia because so large a proportion of the city's total sales is included in reports from cooperating stores. The index of sales in the district outside Philadelphia, however, was revised and adjusted to 1929-39 census levels. Weights used to combine the two index series were also revised. They are now based on value of sales during the base period, 1935-1939.

Effect of the Revision

Comparisons of sales over short intervals of time were not changed materially by this revision; the correction did not exceed one per cent in any single year. The effect of the revision, however, was more apparent over long periods of time. For example, the revised index shows that sales in both 1942 and 1943 were greater than in any other year on record, whereas the former index indicated that sales in 1943 were smaller than in 1926 and that sales in 1942 were smaller than in any year from 1923 through 1927.

Over the entire life of the series (1923-1943) the revised district index shows an increase of 12 per cent, whereas the old index indicated an increase of only 2 per cent. The greater part of the adjustment was made between 1929 and 1939, when both adjustment to Census levels and revision of weights were involved. Adjustments prior to 1929 and subsequent to 1939 involved revision of weights only.

Note: Revised district indexes are included in the table on page 12. Revised figures for past years may be secured upon request.

BUSINESS STATISTICS

Production

Philadelphia Federal Reserve District

Indexes: 1923-5 =100	Adjusted for seasonal variation					Not adjusted		
	Jan. 1944	Dec. 1943	Jan. 1943	Per cent change Jan. 1944 from Mo. ago	Per cent change Jan. 1944 from Year ago	Jan. 1944	Dec. 1943	Jan. 1943
INDUSTRIAL PRODUCTION	154p	157	146r	− 2	+ 6	153p	155	144
MANUFACTURING	160p	163	150	− 2	+ 6	158p	161	148
Durable goods	256p	260	243	− 2	+ 5	.....	.....	.....
Consumers' goods	93p	95	89r	− 2	+ 5	.....	.....	.....
Metal products	187	189	177r	− 1	+ 5	179	181	170r
Textile products	67p	71	67	− 6	0	69p	70	69r
Transportation equipment	698	717	625r	− 3	+ 12	705	740	633r
Food products	120p	122	102r	− 2	+ 18	119p	120	100r
Tobacco and products	117	123	138	− 5	− 15	97	89	114
Building materials	41p	41	54	+ 1	− 25	35p	38	45
Chemicals and products	169	166r	148	+ 2	+ 14	165	164r	145
Leather and products	105p	107	104r	− 2	0	109p	101	108r
Paper and printing	95	95	91	0	+ 5	95	96	91
Individual lines								
Pig iron	88	103r	104r	−15	− 16	85	102r	101r
Steel	142	148r	137r	− 4	+ 4	139	139r	134r
Silk manufactures	83	87	77	− 4	+ 8	85	88r	79
Woolens and worsteds	57p	60	58	− 5	− 2	57p	57	58
Cotton products	47	45r	59	+ 3	− 20	47	49r	60
Carpets and rugs	51p	50	50	+ 2	+ 2	51p	50	50
Hosiery	72	77	77	− 7	− 7	75	75	80
Underwear	150	152	158	− 1	− 5	147	150	155
Cement	41p	41	80	0	− 49	29p	33	56
Brick	56	56	71	0	− 20	52	55	66
Lumber and products	33	32	30	+ 3	+ 10	30	31	27
Bread and bakery products	.....	.....	.....	− 3*	+ 9*	121	124	111
Slaughtering, meat packing	127	119	91	+ 7	+ 40	139	129	100
Sugar refining	141	174	112	−19	+ 26	97	113	77
Canning and preserving	151p	150	118r	+ 1	+ 27	149p	151	114r
Cigars	117	122	138	− 4	− 15	96	88	113
Paper and wood pulp	86	85	84	+ 1	+ 2	85	86	83
Printing and publishing	97	97	92	0	+ 5	97	98	92
Shoes	120	133	125	−10	− 4	123	113	128
Leather, goat and kid	90p	82	84r	+10	+ 7	95p	89	89r
Paints and varnishes	107	100r	101	+ 7	+ 6	96	97r	91
Coke, by-product	164p	171	161	− 4	+ 2	164p	175	161
COAL MINING	75	75	66r	0	+ 13	76	75	67r
Anthracite	73	72	64r	+ 1	+ 14	73	72	64r
Bituminous	90	95	83	− 6	+ 9	102	100	94
CRUDE OIL	383	394	450	− 3	− 15	368	371	432
ELECTRIC POWER—OUTPUT	405	403	374	0	+ 8	429	431	397
Sales, total	430	443	391	− 3	+ 10	442	456	403
Sales to industries	368	379	326	− 3	+ 13	357	360	317
BUILDING CONTRACTS								
TOTAL AWARDS†	38	44	165	−14	− 77	42	48	183
Residential†	38	37	64	+ 4	− 40	31	36	52
Nonresidential†	54	57	190	− 5	− 71	59	62	205
Public works and utilities†	26	43	398	−40	− 93	33	52	510

* Unadjusted for seasonal variation.
† 3-month moving daily average centered at 3rd month.
p—Preliminary.
r—Revised.

Local Business Conditions*

Percentage change—January 1944 from month and year ago	Factory Employment		Factory Payrolls		Building permits value		Retail Sales		Debits	
	Dec. 1943	Jan. 1943	Dec. 1943	Jan. 1943	Dec. 1943	Jan. 1943	Dec. 1943	Jan. 1943	Dec. 1943	Jan. 1943
Allentown	0	− 2	0	+13	− 93	+ 91	−53	+ 6	0	+24
Altoona	0	+ 8	−10	+ 9	− 89	− 92	−56	+13	+ 1	+35
Harrisburg	0	− 3	+ 1	+ 7	− 25	− 45	−46	+22	+ 6	+38
Johnstown	0	− 5	0	+11	+ 11	− 47	−54	+20	− 8	+18
Lancaster	0	+12	+ 3	+25	+ 40	+ 82	−53	+10	− 3	+35
Philadelphia	0	+ 3	0	+13	− 43	+ 33	−49	+ 6	− 5	+22
Reading	0	− 3	+ 1	+ 7	+ 91	+240	−54	+ 7	− 3	+19
Scranton	0	+21	− 4	+33	− 97	+992	−56	+25	−12	+23
Trenton	.....	.....	.....	.....	− 50	+645	−59	+10	−21	+25
Wilkes-Barre	0	+ 1	− 6	+ 2	− 68	− 9	−54	+19	− 6	+29
Williamsport	− 1	− 2	+ 1	+ 9	+ 14	+236	.....	.....	− 4	− 4
Wilmington	− 2	+ 7	− 3	+20	− 11	+304	−59	− 4	−24	+18
York	− 1	− 6	+ 1	+ 3	+628	− 63	−55	+11	−10	+24

* Area not restricted to the corporate limits of cities given here.

Employment and Income

in Pennsylvania

Industry, Trade and Service

Indexes: 1932 =100	Employment			Payrolls		
	Jan. 1944 index	Per cent change from Dec. 1943	Per cent change from Jan. 1943	Jan. 1944 index	Per cent change from Dec. 1943	Per cent change from Jan. 1943
GENERAL INDEX	138	− 2	+ 2	330	− 2	+12
Manufacturing	189	− 1	+ 1	491	− 1	+11
Anthracite mining	49	− 1	− 2	91	− 6	+46
Bituminous coal mining	80	− 1	−13	375	− 2	+20
Building and construction	41	−10	− 7	106	− 6	− 2
Quar. and nonmet. mining	83	− 9	−23	263	−10	−17
Crude petroleum prod.	135	0	− 2	232	+ 3	+16
Public utilities	98	0	− 2	139	0	+ 7
Retail trade	133	− 8	+22	174	− 5	+22
Wholesale trade	103	− 2	− 6	144	− 1	+ 2
Hotels	100	− 1	+ 5	161	− 2	+14
Laundries	100	0	− 9	171	+ 8	+ 4
Dyeing and cleaning	93	− 3	+ 2	146	− 4	+ 6

Manufacturing

Indexes; 1923-5 =100	Employment*			Payrolls*		
	Jan. 1944 index	Per cent change from Dec. 1943	Per cent change from Jan. 1943	Jan. 1944 index	Per cent change from Dec. 1943	Per cent change from Jan. 1943
TOTAL	122	− 1	+ 1	200	− 1	+11
Iron, steel and products	131	− 1	+ 1	275	− 1	+10
Nonferrous metal products	193	+ 1	0	423	+ 2	+13
Transportation equipment	179	+ 1	+13	301	− 3	+17
Textiles and clothing	82	− 1	− 6	121	− 1	+ 5
Textiles	75	− 1	− 6	112	− 1	+ 5
Clothing	110	− 1	− 6	162	− 2	+ 6
Food products	123	− 1	+ 7	182	− 1	+20
Stone, clay and glass	88	− 3	− 5	127	− 5	+ 6
Lumber products	49	− 3	− 5	77	− 4	+11
Chemicals and products	122	− 1	+ 1	210	0	+14
Leather and products	77	− 1	−16	117	+ 4	− 7
Paper and printing	103	− 1	+ 2	147	0	+11
Printing	94	− 2	+ 2	128	0	+12
Others:						
Cigars and tobacco	57	− 2	−12	80	0	− 1
Rubber tires, goods	153	0	+28	317	+ 4	+46
Musical instruments	96	− 3	+29	180	− 3	+52

* Figures from 2889 plants.

Hours and Wages

Factory workers Averages January 1944 and per cent change from year ago	Weekly working time*		Hourly earnings*		Weekly earnings†	
	Average hours	Ch'ge	Average	Ch'ge	Average	Ch'ge
TOTAL	44.8	+ 3	$1.031	+ 6	$46.00	+ 9
Iron, steel and prods.	46.2	+ 3	1.093	+ 4	50.49	+ 8
Nonfer. metal prods.	46.3	+ 3	1.002	+ 9	46.34	+12
Transportation equip.	47.0	− 1	1.181	+ 7	55.49	+ 5
Textiles and clothing.	39.6	+ 2	.745	+ 9	29.38	+12
Textiles	40.7	+ 2	.768	+ 8	31.17	+11
Clothing	37.0	+ 1	.688	+11	25.67	+13
Food products	42.8	+ 3	.805	+10	34.67	+13
Stone, clay and glass.	39.3	+ 4	.915	+ 7	35.80	+10
Lumber products	44.2	+ 2	.742	+12	32.62	+15
Chemicals and prods.	45.1	+ 8	1.032	+ 4	46.47	+11
Leather and prods.	41.3	+ 2	.735	+ 7	30.46	+10
Paper and printing	43.1	+ 4	.886	+ 6	38.43	+ 9
Printing	40.2	+ 4	1.034	+ 7	41.65	+10
Others:						
Cigars and tobacco	42.3	+ 3	.603	+ 9	25.49	+12
Rubber tires, goods	45.2	+ 4	1.016	+11	45.89	+15
Musical instruments	51.5	+14	.946	+ 4	48.70	+18

* Figures from 2740 plants. † Figures from 2889 plants.

Wholesale trade Unadjusted for seasonal variation	Per cent change Jan. 1944 from: Month ago	Year ago
Sales		
Total of all lines	+17	+19
Boots and shoes	+ 4	−14
Drugs	− 3	+ 2
Dry goods	+94	+32
Electrical supplies	−22	− 3
Groceries	+12	+25
Hardware	−20	+14
Jewelry	−10	+15
Paper	+18	+44
Inventories		
Total of all lines	− 1	0
Dry goods	− 5	− 6
Electrical supplies	− 9	−30
Groceries	+ 1	+22
Hardware	+ 2	− 4
Jewelry	+13	−11
Paper	− 7	− 4

Source: U. S. Department of Commerce.

Prices	Jan. 1944	Per cent change from: Month ago	Year ago	Aug. 1939
Basic commodities (Aug. 1939 =100)	179	0	+ 3	+ 79
Wholesale (1926 =100)	103	0	+ 1	+ 38
Farm	122	0	+ 4	+100
Food	105	− 1	0	+ 56
Other	98	0	+ 2	+ 22
Living costs (1935-1939 =100)				
United States	124	0	+ 3	+ 26
Philadelphia	123	0	+ 3	+ 26
Food	135	− 1	+ 4	+ 45
Clothing	132	0	+ 5	+ 34
Rent	107	0	0	+ 4
Fuels	109	0	+ 3	+ 13
Housefurnishings	125	0	+ 2	+ 25
Other	117	+ 1	+ 2	+ 16

Source: U. S. Bureau of Labor Statistics.

Indexes: 1935-1939 =100	Adjusted for seasonal variation: Jan. 1944	Dec. 1943	Jan. 1943	Per cent change Jan. 1944 from: Month ago	Year ago	Not adjusted: Jan. 1944	Dec. 1943	Jan. 1943
RETAIL TRADE								
Sales								
Department stores—District	174p	139	158	+25	+10	123p	256	112
—Philadelphia	164	127	156	+29	+ 6	120	242	114
Women's apparel	153	140	135	+ 9	+13	132	231	116
Men's apparel	119p	134r	115	−11	+ 4	123p	246r	115
Shoe	141	133	169	+ 6	−17	110	160	132
Furniture	.....	.....	.....	−45*	0*	.....	.....	.....
Inventories								
Department stores—District	149p	139	150	+ 7	− 1	131p	128	132
—Philadelphia	147	137	151	+ 7	− 2	131	129	134
Women's apparel	195	177	165	+10	+18	170	174	144
Shoe	98	100	113	− 2	−13	85	90	99
Furniture	.....	.....	.....	− 1*	−12*	.....	.....	.....
FREIGHT-CAR LOADINGS								
Total	140	140	127	0	+10	133	134	121
Merchandise and miscellaneous	136	137	126	− 1	+ 7	126	130	118
Merchandise—l.c.l.	89	88	79	0	+13	83	87	74
Coal	136	136	115	0	+18	152	146	129
Ore	200	149	190	+34	+ 5	76	74	72
Coke	189	208	174	− 9	+ 9	218	225	200
Forest products	129	128	119	+ 1	+ 9	105	109	96
Grain and products	139	134	129	+ 4	+ 8	135	139	125
Livestock	153	138	115	+11	+33	154	149	116
MISCELLANEOUS								
Life insurance sales	113	92	94	+23	+20	107	99	89
Business liquidations								
Number	.....	.....	.....	0*	−73*	10	10	39
Amount of liabilities	.....	.....	.....	+10*	−69*	8	7	26
Check payments	188	161	154	+17	+22	186	193	153

*Computed from unadjusted data. p-Preliminary. r-Revised.

BANKING STATISTICS

Reporting member banks (000,000's omitted)	Feb. 16, 1944	Changes in—: Four weeks	One year
Assets			
Commercial loans	$ 261	+$ 6	+$ 17
Loans to brokers, etc.	46	+ 9	+ 20
Other loans to carry secur.	20	+ 10	+ 9
Loans on real estate	38	− 1	− 9
Loans to banks	4	+ 4	+ 4
Other loans	107	+ 4	− 15
Total loans	$ 476	+$ 32	+ 26
Government securities	$1610	+$121	+$542
Obligations fully guar'teed	69	− 2	.....
Other securities	175	.....	− 56
Total investments	$1854	+$119	+$486
Total loans & investments	$2330	+$151	+$512
Reserve with F.R. Bank	362	− 35	− 71
Cash in vault	28	− 1	+ 1
Balances with other banks	84	+ 2	− 20
Other assets—net	62	+ 3	− 2
Liabilities			
Demand deposits, adjusted	$1488	−$191	−$ 57
Time deposits	169	− 2	+ 2
U. S. Government deposits	619	+ 316	+ 494
Interbank deposits	348	− 5	− 30
Borrowings	1	+ 1	+ 1
Other liabilities	13	.....	+ 2
Capital account	228	+ 1	+ 8

MEMBER BANK RESERVES AND RELATED FACTORS

Philadelphia Federal Reserve District (Millions of dollars)	Changes in weeks ended— Jan. 26	Feb. 2	Feb. 9	Feb. 16	Changes in four weeks
Sources of funds:					
Reserve Bank credit extended in district	−29.8	−35.2	− 8.2	+37.0	− 36.2
Commercial transfers (chiefly interdistrict)	+44.2	+51.5	− 1.9	+28.7	+122.5
Treasury operations	−16.6	−14.0	− 6.8	−76.6	−114.0
Total	− 2.2	+ 2.3	−16.9	−10.9	− 27.7
Uses of funds:					
Currency demand	+ 0.6	+ 2.6	+ 6.4	+ 2.0	+ 11.6
Member bank reserve deposits	− 6.8	− 5.4	−19.6	−11.5	− 43.3
"Other deposits" at Reserve Bank	+ 3.9	+ 5.1	− 3.7	− 1.3	+ 4.0
Other Federal Reserve accounts	+ 0.0	+ 0.0	+ 0.0	− 0.1	+ 0.0
Total	− 2.2	+ 2.3	−16.9	−10.9	− 27.7

Member bank reserves (Daily averages; dollar figures in millions)	Held	Required	Excess	Ratio of excess to required
Phila. banks				
1943: Feb. 1-15	$410	$362	$48	13%
1944: Jan. 1-15	370	357	13	4
Jan. 16-31	384	367	17	4
Feb. 1-15	354	336	18	6
Country banks				
1943: Feb. 1-15	252	185	67	37
1944: Jan. 1-15	272	215	57	26
Jan. 16-31	274	214	60	28
Feb. 1-15	271	208	63	30

Federal Reserve Bank of Phila. (Dollar figures in millions)	Feb. 16, 1944	Changes in: Four weeks	One year
Discounts and advances	$ 1.0	−$ 0.2	+$ 0.6
Industrial loans	4.4	+ 0.0	+ 0.2
U. S. securities	810.3	+ 25.2	+ 409.1
Total	$815.7	+$25.0	+$409.9
Fed. Reserve notes	1163.3	+ 12.5	+ 287.4
Member bk. deposits	609.3	− 43.3	− 61.2
U. S. general account	21.8	− 5.2	+ 11.4
Foreign deposits	134.1	+ 3.0	+ 67.8
Other deposits	9.9	+ 4.0	+ 4.5
Total reserves	1127.7	− 55.6	+ 104.7
Reserve ratio	58.2%	− 1.9%	− 17.5%