

FEDERAL RESERVE BANK
OF ST. LOUIS

THE BUSINESS REVIEW



FEDERAL RESERVE BANK OF PHILADELPHIA

AUGUST 1, 1944

PRODUCTIVE activity in the country slackened slightly further from May to June, as the output of factory products continued a gradual downward tendency from the record level of last November. Total employment in non-agricultural lines showed some gain in the month, reflecting principally a seasonal rise in the number of workers employed in the transportation and utility industries. Factory employment decreased a little further in June.

Since July 1 the War Manpower Commission has exercised supervision over employment shifts by male workers in an effort to overcome the scarcity of labor persisting throughout a few industries and in certain areas. Early in the month official estimates indicated that approximately 200,000 additional workers were required in war essential industries and services. Shortages have become especially pronounced at steel mills, and in such lines as lumbering, mining, and railroad transportation.

Raw material supplies have continued to ease in a few instances, notably in the case of the light metals, aluminum and magnesium. But some forms of steel again are in short supply, and large consumers have been directed to reduce inventories to minimum working levels. Reserves of copper still are insufficient to permit the release of substantial tonnages for civilian use, as consumption continues high in war industries. The lumber situation has grown increasingly tight, necessitating sweeping Governmental controls to assure meeting the more essential needs over the remainder of this year.

The decline in inventories at manufacturing plants has continued well into the second quarter of the year, reflecting further liquidation of holdings of raw materials and goods in process. The Department of Commerce estimated that total stocks in producing establishments at the end of May were about \$200 million less than a year earlier and the smallest since the middle of 1942. Additional reductions in over-all inventories were predicted for this summer, although the Department indicated that changing emphasis in parts of the war production program might be reflected in wide fluctuations in certain munitions categories.

Reconversion is progressing very slowly, and only in the case of approved programs inaugurated in areas where manpower is in adequate supply. The current shortage of steel, the still critical position of certain other raw materials, and the difficulty of securing component parts have delayed the production of some authorized items considered essential to the civilian economy. Measures taken thus far to implement the War Production Board's plan for piecemeal reconversion include the easing of regulations on the use of aluminum and magnesium, permission to produce experimental models, and authorization to place orders for machine tools. About mid-August the Board plans to put into effect a final directive, the "spot authorization order," which would permit regional offices to relax limitation and conservation orders in the case of individual manufacturers having munitions-free facilities and manpower necessary to proceed with civilian production.

The Economy of the Third Federal Reserve District

Pre-War Trends in Factory Employment—1899-1939

Manufacturing is the cornerstone upon which the economic life of the Third District has been built and upon which much of its future prosperity depends. The factories of this district still employ one-third of its working population despite the growth of numerous service industries such as retail trade, transportation, public utilities and others.

Manufacturing employment in this district increased about one-sixth in the four decades of the present century when other areas were undergoing rapid industrialization. There were pronounced disparities between the trends of individual industries. Some grew as much as 300 per cent, others declined as much as 80 per cent. Such differences can not be ignored in an appraisal of postwar prospects because the past trend of each industry is one of the best indications of its future course.

In the absence of district data, it has been necessary to use figures for individual industries of the state of Pennsylvania. About 70 per cent of Pennsylvania's manufacturing employment falls within the district, and with certain exceptions, such as electrical machinery, glass, coke, and steel works and rolling mills, the major portion of each of the leading industries, listed in the accompanying table, is in the district.

AVERAGE NUMBER OF WAGE EARNERS IN PENNSYLVANIA'S
PROMINENT MANUFACTURING INDUSTRIES: 1899-1939

| Industry | 1899 | 1939 | Per cent change |
|--|---------|---------|--------------------|
| Large expansion | | | |
| Women's clothing..... | 8,300 | 32,600 | +292 |
| Electrical machinery, apparatus and supplies..... | 7,800 | 29,600 | +279 |
| Bread and bakery products..... | 7,400 | 25,100 | +239 |
| Men's clothing..... | 17,200 | 50,100 | +191 |
| Knit goods..... | 21,600 | 56,900 | +164 |
| Petroleum refining..... | 3,300 | 8,200 | +148 |
| Canning and preserving..... | 2,200 | 5,200 | +135 |
| Moderate expansion | | | |
| Silk and rayon goods..... | 21,000 | 36,700 | + 75 |
| Boots and shoes, except rubber..... | 9,100 | 14,700 | + 61 |
| Steel works and rolling mill products..... | 94,800 | 141,800 | + 50 |
| Confectionery..... | 5,200 | 6,000 | + 15 |
| Decline | | | |
| Shipbuilding..... | 7,100 | 6,600 | - 7 |
| Glass..... | 19,400 | 16,500 | - 15 |
| Clay products and non-clay refractories..... | 15,700 | 12,900 | - 18 |
| Leather—tanned, curried, and finished..... | 13,400 | 8,100 | - 39 |
| Coke..... | 9,300 | 5,500 | - 41 |
| Woolen and worsted goods..... | 24,600 | 12,800 | - 48 |
| Blast furnace products..... | 16,100 | 5,700 | - 65 |
| Cotton goods..... | 15,600 | 3,200 | - 80 |
| Total—nineteen industries..... | 319,100 | 478,200 | + 50 |
| Total—all manufacturing..... | 733,800 | 858,300 | + 17 |

The nineteen industries shown in the table comprised 43 per cent of the factory workers in 1899 and 56 per cent in 1939. With a few exceptions for which complete data are unavailable, the table includes the most prominent industries in 1939. Because of the widespread interest in the prospects for post-war employment, number of wage earners is used in this analysis of pre-war industrial trends.

Roughly, the industries may be divided into (1) those experiencing large expansion, (2) those undergoing moderate growth, and (3) those experiencing decline.

Industries with large expansion 1899 to 1939

The **women's clothing industry** ranks first among Pennsylvania's leading industries in respect to rate of growth since the beginning of the century. In 1899, it employed 8,300 workers; by 1939 employment reached 32,600—a threefold increase. However, as will be seen in Chart I, the expansion has been by no means steady. The market for women's ready-made apparel began to grow rapidly about 1880 with the rising importance of mechanization, heavy immigration of European labor, and a rising standard of living as more of the country's rich resources were successfully exploited. Furthermore, with improved means of transportation and communication, style changes quickly penetrated every part of the country. The rapid increase in this industry both in Pennsylvania and in the United States between 1899 and 1909 largely reflected the continuation of these developments. By the outbreak of the First World War, the trend for the country as a whole began to level off, for by this time women's ready-made clothing had been accepted by virtually all classes. Very little stimulus was received from the prosperity of the twenties. In Pennsylvania, on the other hand, the industry declined from 1909 to 1919, and like the industry throughout the country, shared little in the prosperous decade which followed.

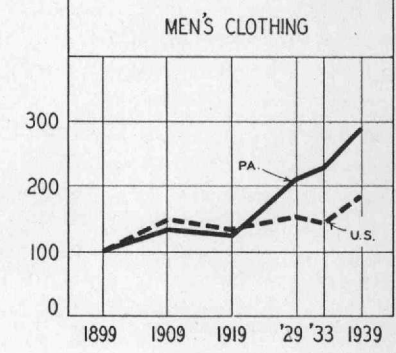
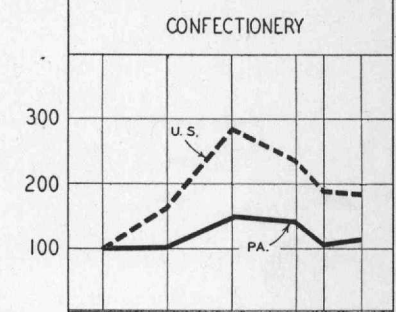
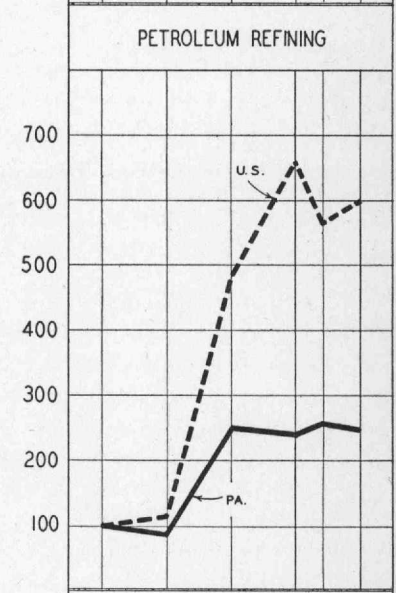
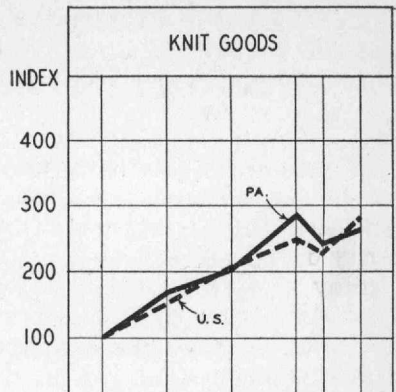
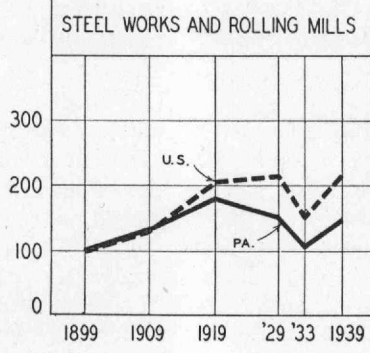
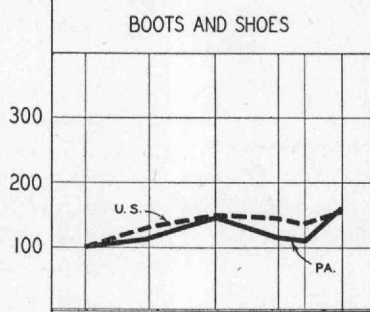
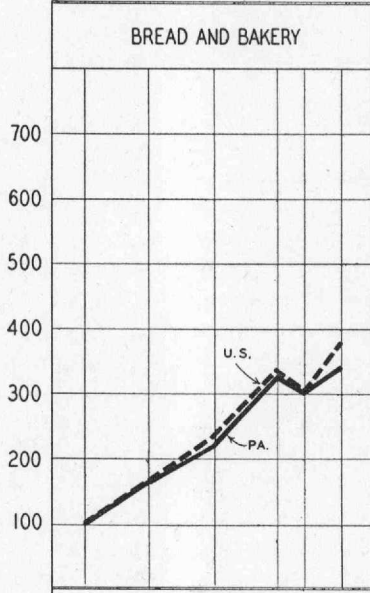
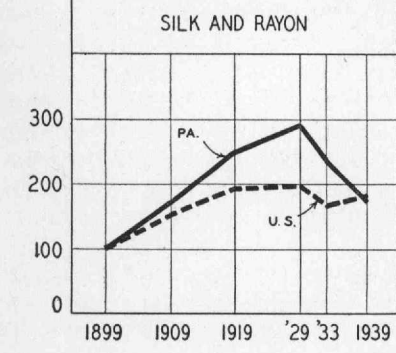
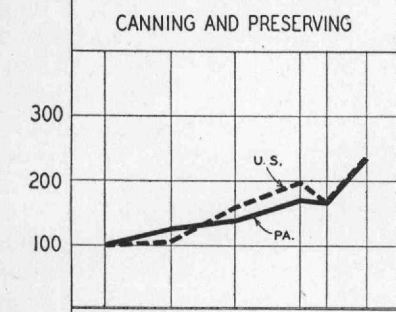
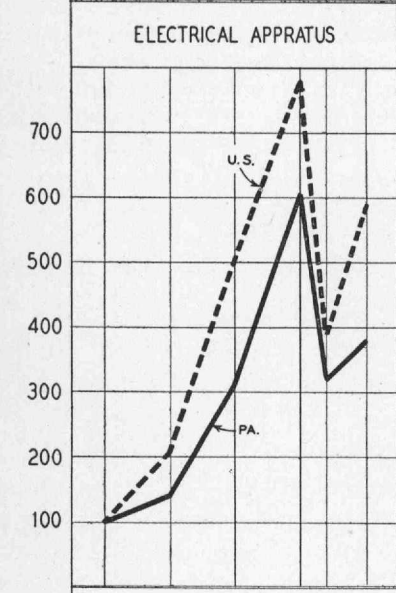
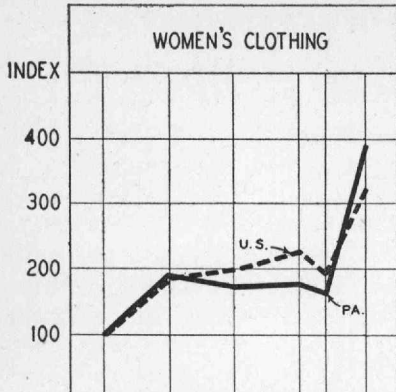
The depression beginning in 1929 brought about a contraction in the industry which was more serious nationally than locally. The great-

CHART I
GROWING INDUSTRIES
IN
PENNSYLVANIA

1899 TO 1939

INDEX OF EMPLOYMENT

1899 AVG.=100



est expansion in Pennsylvania occurred between 1933 and 1939, the number of wage earners increasing 26 per cent. To a large extent this gain was the result of firms moving into those sections of the state where large supplies of inexpensive and relatively unorganized female labor were available. Since labor represents a large part of over-all costs in the manufacture of women's clothing, such labor offered a genuine competitive advantage.

Ranking next to the women's clothing industry in rate of growth over the past forty years is the **electrical machinery industry**. This includes the manufacture of products which in a short span of time have revolutionized industrial and everyday life. The products include equipment required by electrical power companies, telephone and telegraph companies, broadcasting stations, railroads, hospitals, and also radios, phonographs and some household appliances. It is essentially a producers' goods industry. Inventions of new types of equipment, constant improvements in existing equipment, and price reductions made possible by the development of large scale production methods have contributed to an ever-increasing demand for these products. Thus, tremendous expansion characterized the industry over the first three decades of this century, raising employment over 500 per cent in Pennsylvania and almost 700 per cent for the country as a whole.

The depression temporarily halted this growth, reducing employment by about 50 per cent both in Pennsylvania and in the United States. By 1939, the industry on a nation-wide basis had recovered about half of this loss but in Pennsylvania it regained less than one-fifth of its depression loss. Nevertheless, the future of this industry is limited only by the ability to devise new and better products. For unlike an industry such as women's clothing, its potential market is virtually unlimited. At the same time, the problem of extreme cyclical fluctuation is a serious one not only for the industry but for areas in which it plays a large part.

Third among Pennsylvania's leading industries which have experienced large growth is the **bread and bakery products industry**. Demand for the products of this industry is relatively inelastic, and its development has been contingent chiefly upon the decline of home baking and the growing urban population. Urbanization increased the number of persons within reach of marketable areas of local

bakeries and afforded women many new opportunities and interests outside of the home. But for a shift in dietary habits over this period which reduced per capita bread consumption, expansion of this industry would have been even greater.

The trend of the industry in Pennsylvania, as shown in Chart I, is almost identical with that of the country as a whole—steady growth interrupted only slightly by the decline of consumer purchasing power in the early thirties. Migration to gain competitive advantages is impossible since the perishability of its products necessarily limits competition to local markets. For this reason the future of the industry in Pennsylvania will depend largely upon the nature and size of its population and the amount and distribution of consumer incomes. Owing to physiological limitations, however, a continuous rise in the standard of living will not bring about a proportionate increase in this industry.

Men's clothing has become increasingly important in Pennsylvania's industrial structure. Employment in this industry increased 190 per cent in Pennsylvania between 1899 and 1939 in contrast to 90 per cent for the country as a whole. It will be seen in Chart I that prior to 1919, Pennsylvania followed the almost level trend of the United States, but from that year to 1939 it expanded rapidly and consistently. Labor difficulties in New York City sent many firms to Pennsylvania, and particularly to Philadelphia.

Philadelphia has benefited by its proximity to New York, the center of garment manufacturing. Philadelphia specialized in men's clothing of intermediate quality but in recent years the price range has been broadened to include both high- and low-priced clothing. Gains at the expense of some other clothing centers also reflect a policy of manufacturing unbranded products on which the retailers get more substantial mark-ups.

The **knit goods industry** of Pennsylvania also has expanded rapidly during the past four decades. Knit goods include full-fashioned and seamless hosiery, knitted cloth, knitted underwear, knitted outerwear, and gloves and mittens. Of these, hosiery accounts for about 60 per cent of the total employment in the industry. To this important component may be attributed much of the growth of the industry both nationally and locally.

It will be noted in Chart I that this industry made steady progress in the United States over the first three decades of this century but even better progress in Pennsylvania. Growth before 1919 reflects normal increases in consumption which grew out of the expanding population and rising standards of living. However, the expansion in Pennsylvania, between 1919 and 1929, was largely a result of the rapid strides made by the full-fashioned hosiery branch of the industry after the First World War. In this period, per capita consumption of women's full-fashioned hosiery increased more than three-fold, from 1.8 pairs per year to 7.6 pairs. Style changes in this period were largely responsible for this increase. Shorter skirts gave hosiery new emphasis; sheerer hosiery, made of silk, which became fashionable required frequent replacement; and the development of varied shades called for hosiery to match different costumes.

Per capita consumption of full-fashioned hosiery, stimulated by price declines, continued to increase over the thirties, reaching 10.4 pairs per year in 1939. Pennsylvania, however, did not benefit from this expanded market to the same extent as the country as a whole. In fact, the knit goods industry in this state had recovered only half of its depression losses by 1939 while in the rest of the country it was considerably above its 1929 level.

The onset of the depression brought extreme price competition to the hosiery industry, and to survive, every opportunity to cut costs was explored. Thus, the situation in Pennsylvania is largely attributable to the migration of the industry to southern states to take advantage of cheaper labor. The average wage in Pennsylvania hosiery mills was 45 cents per hour in 1933 as compared with 32 cents in North Carolina. Furthermore, tax exemptions and free factory sites were offered as special inducements by certain localities.

Realizing the seriousness of southern competition, northern manufacturers and the union embarked upon a rehabilitation program in the late thirties. In order to prevent further declines in this area, the union agreed to accept wage reductions on the condition that such savings would be utilized to buy new equipment in order to raise general operating efficiency.

The number of wage earners in the **petroleum refining industry** of Pennsylvania increased

about one and one half times between 1899 and 1939. In comparison with other Pennsylvania industries this appears to be a rapid rate of growth but when contrasted with the increase of slightly over 500 per cent in the industry for the United States as a whole, it becomes less significant. Petroleum refining in this state is concentrated along the Delaware River from Philadelphia to Marcus Hook where oil tankers may unload in deep water and large markets are readily accessible.

The development of the automobile in the first two decades of the twentieth century accounts for the tremendous expansion in refining both locally and nationally. Subsequent to 1919, the trend of the industry in Pennsylvania leveled off while the national trend continued upward as consumption attained new heights, interrupted only temporarily by the early depression years. Pennsylvania's position is explained by the fact that most refineries built since 1919 have been located to take care of other growing markets—in California, Texas, New Jersey, and Ohio.

Petroleum consumption at a high level will undoubtedly continue in the future. Pennsylvania's share of the refining industry will be contingent upon the portion of the total market falling within a radius of her refineries and cheap methods of transportation to keep her refineries supplied with crude oil.

The growth of the **canning and preserving industry** reflects changes in living habits accompanying increased urbanization of population. The products of this industry include canned and pickled fruits and vegetables, preserves and jams, canned and cured fish, and quick frozen foods. Canned products are overwhelmingly the most important and thus are largely responsible for the trend of the industry.

Improvement in technology in the canning branch of the industry was an important factor in widening the market, first through a better product which eliminated the original prejudice against canned goods and secondly through making possible a tremendous variety of out-of-season food products. Furthermore, productivity was substantially increased so that number of wage earners considerably understates the real growth of the industry.

Food processing plants must be located near their source of raw materials. Pennsylvania with its wealth of diversified fruit and truck farms holds fourth place among the states in

value of products although it ranks ninth in number of wage earners. It will be seen in Chart I that employment in Pennsylvania grew more rapidly than in the United States between 1899 and 1909 and also between 1933 and 1939. Potential markets arising from population growth and higher incomes may be supplied more and more by fresh foods stored in freezing lockers. However, further development of new products such as commercially frozen and dehydrated foods may offer avenues for expansion.

Industries with moderate expansion between 1899 and 1939

Thus far in the twentieth century, Pennsylvania has led the rest of the states in production of **silk and rayon goods**. In 1939 almost one-third of the workers in this industry were employed in Pennsylvania. Its products of yarn, thread, and broad and narrow cloth more than filled the needs of the knit goods and clothing industries located in this state.

Prior to 1919, very little rayon was produced commercially, so the growth of the silk and rayon goods industry was almost wholly attributable to silk. In the nineteenth century, the silk industry had its beginning in Paterson, New Jersey. Technological advances toward the end of the century, however, made possible the use of less skilled labor, and silk mills began to spring up in the nearby anthracite and cement towns of Pennsylvania where a plentiful supply of female labor was available. Labor difficulties in Paterson around 1910 and thereafter, resulted in actual migration of mills from New Jersey to Pennsylvania. These two developments explain the more rapid expansion of the industry locally than nationally during the first two decades of the twentieth century.

During the twenties, silk consumption in the United States reached its peak while rayon consumption more than doubled. Since the processing of rayon is similar to that of silk, the silk and rayon weaving industry of eastern Pennsylvania rapidly adopted the new synthetic yarn. The products of this industry found a ready market in this area for the manufacture of clothing and knit goods. Furthermore, over this decade, Pennsylvania continued to expand at the expense of other localities—primarily Connecticut, New Jersey, and New York. Pennsylvania gained 8,000 workers while the industry as a whole gained only 4,000.

The depression caused a sharp setback to the expansion of the silk and rayon industry in Pennsylvania. Employment declined 9 per cent in the United States in contrast to 20 per cent in this state. Moreover, the industry in Pennsylvania continued to decline while nationally it recovered somewhat after 1933. This situation is due largely to a shift of the industry to the South. North Carolina, South Carolina, and Virginia increased their share of total employment from about 4 per cent in 1929 to more than 25 per cent in 1939 while Pennsylvania declined from 47 per cent to 31 per cent. Obviously the industry is still of great importance in Pennsylvania, but its failure to hold its own here in spite of its proximity to large local markets is of serious concern.

Over the first two decades of the twentieth century, Pennsylvania was the leading state in the leather tanning industry with a well-developed market in Philadelphia. This factor and proximity of large consumer markets stimulated development of the **boot and shoe industry**. It will be seen in Chart I that up to 1919, the Pennsylvania shoe industry paralleled that of the United States.

After 1919, however, the industry suffered a decline which was far more pronounced locally than nationally. The local decline was due not so much to depressed conditions in the industry as to actual migration of the industry to the Middle West following a shift in source of raw materials and markets. Leather tanning expanded in those areas having easy access to the by-product hides of the large meat-packing houses of Chicago, and the rapid development of the West as a whole gradually altered the pattern of consumer markets. Thus over the twenties, Pennsylvania fell behind Illinois and Wisconsin in the number of wage earners employed in the shoe industry.

Pennsylvania staged a remarkable recovery between 1933 and 1939—employment increased 46 per cent in contrast to 14 per cent for the country as a whole. This growth is due to the nature of the industry in this state—Pennsylvania specializes in misses' and children's shoes. Consumption of this type of footwear increased steadily between 1934 and 1939, a total increase of 22 per cent compared with 18 per cent in per capita consumption of all types of shoes. Pennsylvania's share of the total production of this line of footwear rose from 13 per cent in 1930 to 19 per cent in 1938, indicating that production of misses' and children's shoes was concentrat-

ing more and more in this area. By specializing in a rapidly growing line, the industry here is more than holding its own.

The largest of Pennsylvania's industries is **steel works and rolling mills**. In the nineteenth century, Pennsylvania offered the ideal combination of raw materials and markets for this industry, and by 1899 it had become well established in the state, accounting for over half of the workers employed in steel works and rolling mills of the United States.

Between 1899 and 1909, the industry grew rapidly in response to the growing demands for industrial equipment and construction materials. The First World War resulted in even greater demands for the products of this industry, but at the same time afforded a stimulus to areas outside of Pennsylvania. The outcome was a more rapid expansion for the industry in the United States as a whole than in this state.

Steel producing centers outside of Pennsylvania attained greater prominence over the decade of the twenties. Employment in the industry as a whole increased 5 per cent but declined 15 per cent in Pennsylvania. The introduction of by-product coke in 1915 divorced the steel industry from its long-standing dependence upon Pennsylvania's Connellsville coke which was the standard fuel as long as only the beehive method of coking was known. Steel-producing centers along the Great Lakes had the advantages of low cost ore transportation from the Minnesota fields and of nearness to one of the greatest steel consuming centers—the automobile industry in Michigan, which was also a rich source of scrap. Furthermore, during the twenties steel consumption shifted to a large extent to light steel used for automobiles, refrigerators, washing machines, and other durable consumers' goods. Pennsylvania, on the other hand, was primarily a producer of heavy steel used for industrial equipment. It was this fact, however, which contributed to its recovery after the steep slump of the early thirties since revival first manifested itself in renewal of obsolete and worn out plant equipment.

The **confectionery industry** is of long standing in Pennsylvania, dating back at least 150 years. It has tended to concentrate in the larger cities of the state, particularly Philadelphia, to keep down costs of distribution and to take advantage of the unskilled female labor. However, a notable exception is Hershey, a small commu-

nity devoted almost entirely to confectionery production. The Hershey chocolate plant is one of the largest in the world.

Like other food industries, demand for the products of the confectioner has been influenced by the long-time growth of population, less home preparation of foods, and rising income. Increasing consumption was stimulated also by the multiplication of retail outlets, popularization of five and ten cent bars and improved packaging which enlarged marketable areas for branded products.

The more rapid growth of the industry nationally than locally is due to its development in the West, notably Chicago. The industry's peak employment of 76,000 workers reached in 1919 reflects the abnormally large demand of a boom year. By 1929 employment had declined to 64,000, due to advances in mechanization. The contraction of income during the depression years had a marked effect on this industry as a whole. By 1939, employment in Pennsylvania showed some improvement. With almost 60 per cent of its output consisting of molded chocolate bars and penny goods, in contrast to less than 30 per cent in the United States, the local industry was in a much better position to ride out the depression and to benefit from the first increases in purchasing power.

Declining industries—1899-1939

Shipbuilding in the United States has been a feast or famine industry. Production fluctuates from one extreme to another, rising to great heights in times of war and contracting sharply in times of peace, owing to our inability to compete with the low costs of foreign builders. It has been estimated that in 1931 American-built merchant ships cost 50 to 60 per cent more than similar ships built abroad. In view of this, shipbuilding in the United States has been dependent largely upon naval construction and Government subsidies to the merchant marine. What conditions in this industry will develop after the war, of course, cannot be predicted at this time.

The Delaware River Valley was an important shipbuilding center as far back as the Colonial period, and its shipyards were among the first to pioneer in the construction of steel hulls. The opportunities for westward expansion in the United States diverted efforts from shipbuilding and maritime affairs. From 1899 to 1909, as shown in Chart II, shipbuilding other than that

done in Government establishments continued on its downward course but the decline was greater in Pennsylvania than in the United States. The First World War gave the industry a tremendous stimulus. The Government entered the business when it created the Emergency Fleet Corporation to buy, build, and operate ships. Shipways were increased from 184 to 1,200 and during the war period 2,300 ships were built, more than were constructed in the twenty years preceding and the twenty years following the war. All ship construction on the ways at the time of the Armistice was completed, which explains the sustained high level of employment as late as 1919. The expansion of employment between 1909 and 1919 was greater in Pennsylvania than in the United States—about 1500 per cent as compared with 850 per cent.

Post-war efforts to maintain shipbuilding activity met with little success. The United States Shipping Board was authorized in 1920 to make loans for private ship construction and the Postmaster General was authorized to let mail-carrying contracts to merchant ships, but these efforts to stimulate demand were woefully inadequate in view of the huge legacy of war-built tonnage. In Philadelphia, the Hog Island shipyard and Cramp's shipyard were closed. The major activity still carried on was the construction of oil tankers by the Sun Shipyards at Chester and ship repairing by the Delaware River shipyards of Pennsylvania, Delaware, and New Jersey.

Capital to revive shipbuilding was offered under favorable terms by the Jones-White Act of 1928 but again the results were disappointing. By 1929 employment in Pennsylvania and the United States was about 90 per cent below the 1919 levels.

The Merchant Marine Act of 1936 provided more effective means for stimulating the industry. A definite program was set up to build 500 vessels at the rate of 50 a year and the Government paid for a substantial part of the costs of construction under the national defense budget. The first contracts under the ten-year program to replace the obsolescent merchant marine were let in 1938. Pennsylvania benefited but not to the same extent as the remainder of the United States. Employment in Pennsylvania increased about 20 per cent between 1933 and 1939 in contrast to 50 per cent in the United States.

Glass manufacturing is a prominent industry of Pennsylvania because of its abundance of fuel and raw materials. Although container glass manufacturing is one of the leading industries of the southern New Jersey section of the Third District, most of the glass manufacturing of Pennsylvania is centered in the Pittsburgh area, outside of the Third Federal Reserve District.

Marked technical progress was made over the twenties. One of the most important developments was the perfection of a continuous process for manufacturing plate and window glass. By 1929, about 80 per cent of window glass was produced by the new process. In the container branch, productivity increased 42 per cent between 1923 and 1931. Wage earners per unit of product for the industry as a whole declined at an average annual rate of 5.6 per cent over this decade which accounts for a large part of the decline in employment. In recent years the glass industry has introduced a variety of new products, such as safety glass, building blocks, and fiber glass products. These developments have assisted materially in bringing about a recovery since 1933 and may be expected to play a significant part in determining the future of the industry.

The clay and pottery industry covers a large variety of products made from a common raw material—clay. The principal products are: building materials, such as brick, terra cotta, and tile products; refractories; chinaware and sanitary ware; and porcelain products. A large proportion of the output is used in building and construction, and therefore, production is characterized by pronounced cyclical irregularity.

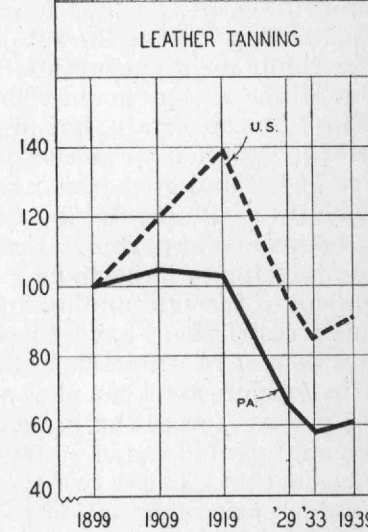
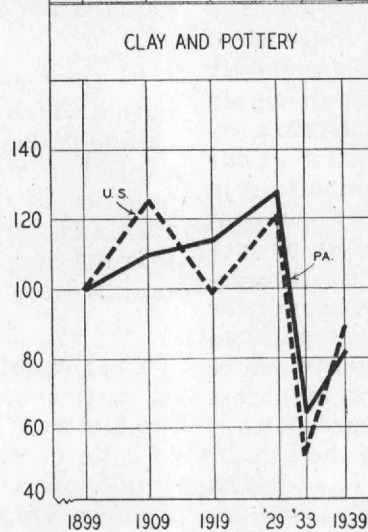
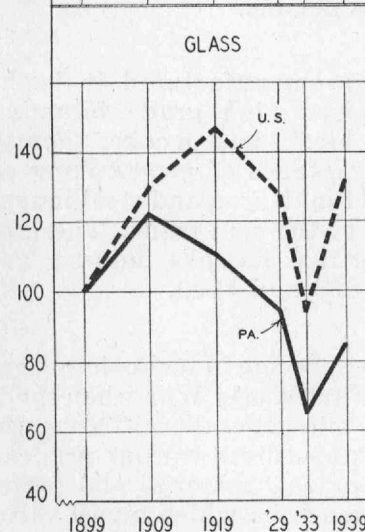
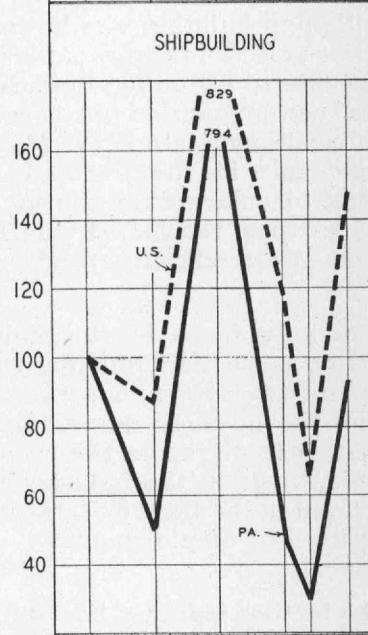
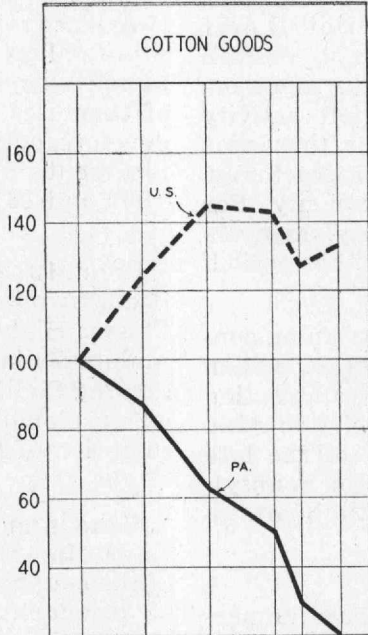
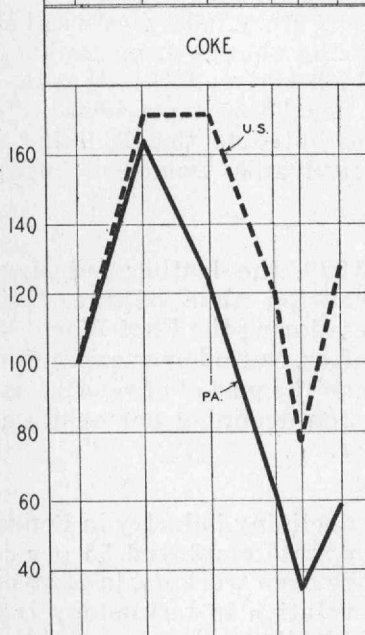
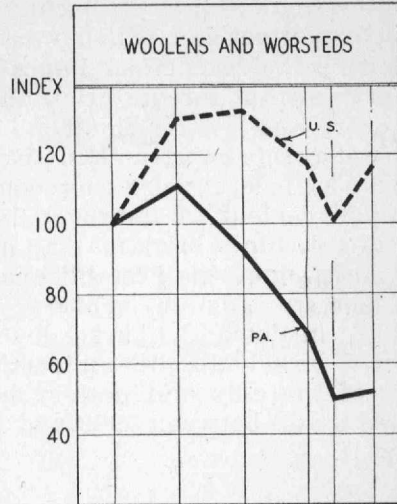
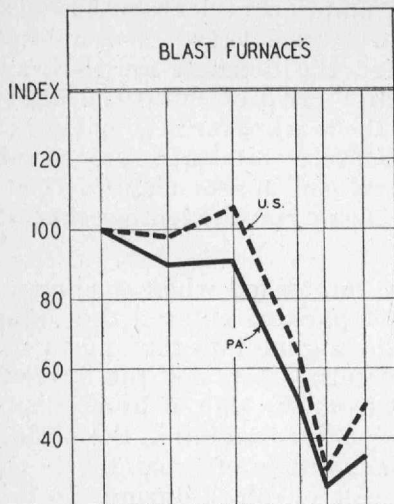
Pennsylvania has a rich supply of mineral resources suitable for the production of these products. Refractories, used in the metallurgical industries, are especially important in this state. In 1939, refractory manufacturing employed about one-half of the workers in the clay and pottery industry of Pennsylvania in contrast to less than one-fifth in that of the United States.

The industry grew rapidly during the nineteenth and first part of the twentieth centuries. Behind this expansion was the growing demand of the West for building materials, drainage pipes, street paving materials, and the demand resulting from the general rise in the standard of living throughout the country. As would be expected, the industry grew more rapidly nationally than locally between 1899 and 1909.

CHART II
DECLINING INDUSTRIES
IN
PENNSYLVANIA

1899 TO 1939

INDEX OF EMPLOYMENT
1899 AVG. = 100



Following 1909, there occurred a decline in construction activity which was further accentuated by the restrictions imposed by the war. More important for the brick and tile division, however, was the development of steel re-enforced concrete construction. By 1910 building brick was meeting growing competition from Portland cement of improved quality and reduced cost. Since brick making is a local industry consisting of small establishments with small overhead costs, employment responds rapidly to changes in demand. These developments contributed largely to the contraction in employment of the clay and pottery industry of the United States between 1909 and 1919, shown in Chart II.

Although building was largely curtailed over the war period, in certain areas, notably eastern war centers, including Philadelphia, there occurred an expansion of construction activity which continued into 1919. Moreover, there was an increase in the demand for refractories, needed to enlarge metallurgical capacity. For these reasons, the industry in Pennsylvania experienced a moderate growth over this period.

The dependence of this industry upon construction is further illustrated by its expansion over the twenties and subsequent contraction during the business depression of the thirties. Although it shared in the recovery of the late thirties, by 1939 the industry both in Pennsylvania and in the United States was still below its 1899 level of employment.

The leather industry has encountered numerous difficulties in the first four decades of the present century. Since the supply of hides is dependent upon meat consumption, it is frequently far out of line with demand. The foreign supply has also been uncertain, but in recent years imports have supplied an increasing portion of our needs. In kid and goat tanning, so important in the vicinity of Philadelphia, about 98 per cent of the skins are imported. Uncertainty of supply, and declining imports as a result of the development of foreign tanning industries and war shipping restrictions have further complicated the problem of raw materials. Buying raw materials in foreign markets plus a slow manufacturing process forces the tanner to make financial commitments long in advance of the sale of finished leather. These two factors have led to tremendous price fluctuation in both raw materials and finished products.

Per capita consumption of leather has been declining, especially since 1919. The automobile has diminished the demand for shoe and harness leather, unit drive of industrial equipment has reduced the market for belting leather, and the use of substitute materials, such as fabrics, plastics, and rubber, in shoe manufacturing has made serious inroads on the leather market.

Competition was intensified when shoe manufacturers and meat packers entered the industry. The former have gone into tanning to stabilize their raw material costs and the latter to increase revenues from the sale of by-products. The rise of heavy leather tanning in the Middle West to gain the advantage of proximity to the meatpacking houses took place during the first two decades of this century. The westward shift was facilitated by the change from tanbark to tannin extract which reduced the dependence of tanneries upon local forest products. These developments contributed to the declining employment in Pennsylvania tanneries between 1909 and 1919.

From 1919 to 1939, the leather industry of Pennsylvania paralleled that of the United States. High prices, during the First World War and immediately after, caused over-expansion of tanning facilities and the period of readjustment was prolonged by the declining per capita consumption of leather.

Coke is another declining industry in Pennsylvania. In 1899, the state employed 55 per cent of the country's coke oven workers, in 1939 only 25 per cent. A revolution in technology is the explanation of this decline.

In 1899 coke was manufactured in beehive ovens which required high grade bituminous coal to make good blast furnace coke. Pennsylvania had the advantages of good coking coal and a ready market in its iron and steel industry within easy reach of the coal fields. Therefore, it is not surprising that its coke industry grew rapidly between 1899 and 1909.

The revolutionary change in technology began at the time of the First World War when the by-product oven came into general use. This method of coke manufacture utilizes various grades of bituminous coal as a raw material and permits the recovery of gases from which a vast variety of valuable by-products are manufactured.

Thereupon, coke plants were established in other areas that supplied bituminous coal and afforded markets for metallurgical coke and by-product gas. This explains the declining trend in employment in Pennsylvania between 1909 and 1919 in spite of continued growth for the country as a whole.

Over the next decade Pennsylvania continued to lose, relative to the United States as a whole, and the industry in this state replaced most of its beehive with by-product ovens. A declining demand for blast furnace coke with improved efficiency of fuel utilization and the growing use of ferrous scrap in steel manufacturing largely account for the general decline in employment over this and the next decade. In 1913, 2,173 pounds of coke were required to produce one net ton of pig iron and ferro-alloys in contrast to 1,781 pounds in 1940. Also partially responsible for declining employment was a substantial increase in productivity of coke oven operation and cyclical contraction of demand for metal products in the thirties.

The woolen and worsted industry, like leather, encountered numerous problems which retarded its growth, particularly after the First World War. The industry prospered between 1899 and 1919. With the rising standard of living, per capita adult consumption of wool piece goods increased from 5.7 square yards in 1899 to 7 square yards in 1909, and the abnormal conditions of the war brought about an even greater increase in demand. By 1919 the war demand had disappeared and for the country as a whole employment was only slightly above the 1909 level. In Pennsylvania, employment was considerably below 1909 owing largely to a contraction of 56 per cent in output of worsted suitings and dress goods and of 34 per cent in output of yarns.

After the First World War per capita consumption of wool piece goods turned downward and by 1929 had fallen to less than 4 square yards. Closed automobiles and better heated buildings made woolen clothing unnecessary, and other fabrics, particularly rayon, gained in popularity. However, for some time the industry was not responsive to consumer demand and lighter woolen fabrics were not developed until a substantial part of its markets were lost to competitive fabrics.

Over this period an increasing proportion of the industry's output consisted of goods subject to short-run style changes which required sub-

stantial adjustments in equipment. These conditions intensified the problem of excess capacity built during the war boom. In Philadelphia, the war had stimulated the development of specialized weaving mills which did no spinning. Few of these became integrated in the following years and they were seriously affected by the mill liquidation of the late twenties. Technological developments, particularly the automatic loom, increased productive capacity and reduced employment. The competitive position of those firms which did not keep pace with these improvements was weakened further by the problem of obsolescence.

The depression in the early thirties eliminated some of the excess capacity. As shown in Chart II, considerable recovery was made on a national basis between 1933 and 1939 although to a much lesser extent in Pennsylvania. Undoubtedly the migration of mills from Pennsylvania to Rhode Island and other New England states, begun in 1919, was partially responsible for this.

The blast furnace products industry has not declined as rapidly as the falling employment trend suggests because productivity has increased tremendously during the past four decades. Larger furnaces have increased capacity three and four fold with only a slight increase in the size of crews required to operate them. Operating efficiency has been raised by such developments as improved burdening practices, higher temperatures, and greater mechanization. Between 1899 and 1909 the greatest increase in output occurred—79 per cent—to meet the increasing demand for metal products for industrial expansion. Yet employment declined both nationally and locally because productivity was almost doubled during this period.

Production was 20 per cent higher in 1919 than in 1909 but productivity failed to make rapid strides over the war years and employment increased slightly. Huge wartime demands called inefficient plants into production and other plants were unable to halt production to install improvements. The depression of 1921, however, afforded an opportunity for plant improvement and the Department of Labor estimates that by 1926 almost all plants had modernized to the extent of eliminating the old hand methods of casting and charging. The decade of 1919 to 1929 recorded the greatest increase in productivity. Wage earners per unit of product declined at an annual rate of 8.7 per cent, a record surpassed only by the automobile industry.

Other factors that accentuated the decline of employment over these years were increased substitution of scrap for pig iron in steel mills, and improved methods of steel manufacture which utilized less pig iron per ton of steel.

Output fell rapidly in the early years of the depression. By 1933 it was 70 per cent below the 1929 level and employment declined 50 per cent. Some recovery was made by 1939 but Pennsylvania lagged considerably behind the United States as a whole.

The cotton goods industry is the only one of the prominent industries of Pennsylvania that has declined steadily from 1899 to 1939. It had been established here, largely in the Philadelphia area, in the 19th century with the aid of experienced immigrant labor. The industry specialized in the finer types of cotton goods—fancy woven fabrics, lace, lace curtains, and tapestries. Most Philadelphia firms did weaving only and they were smaller than the average for the industry as a whole.

The rise of cotton manufacturing in the South which had the advantage of lower cost labor spelled the decline of the industry in Pennsylvania as well as New England. Although the southern mills first specialized in coarse cotton goods, it was not long before they entered the finer goods branch. Between 1899 and 1909, the combined production of fine woven fabrics of Georgia, North Carolina, and South Carolina increased from less than 10 million square yards to over 100 million square yards. Production in Pennsylvania, on the other hand, increased from 31 million to 33 million square yards. Production of some items such as ticking, denims, cottonades, and yarns showed actual decreases in Pennsylvania.

Between 1909 and 1919 production of woven goods in Pennsylvania decreased 29 per cent and yarns 31 per cent, in contrast to decreases of 6 and 13 per cent respectively in the United States. By this date severe contraction in capacity had taken place in this state. Total spindles in Pennsylvania declined from 307,000 in 1899 to 209,000 in 1919 while looms were reduced from 7,000 to 4,000 over this period. The southern mills had created more capacity than was warranted in view of the demand for cotton goods but because they were more modern and could draw upon cheaper labor, they held a superior competitive position over the northern mills.

Despite the availability of technological improvements, many northern firms were unable to take advantage of them because of inadequate financial resources, and owing to the depressed condition of the industry very little outside capital was invested. As seen in Chart II, both Pennsylvania and the United States followed a downward trend over the decade of the twenties and into the depression years.

With the upturn in consumer incomes in the latter half of the thirties, consumption increased. Nationally, the industry benefited from this, but in Pennsylvania employment continued to decline.

In a long established industrial area like Pennsylvania, decline of certain industries is inevitable. Industrial decentralization is stimulated by such developments as the discovery of natural resources, the westward movement of population, the extension of electrical power distribution lines, technological changes, mechanization of manufacturing processes, and improved transportation facilities.

Industries will naturally gravitate to low cost areas. If fuel or power is a large item in the cost structure as in glass, aluminum, paper, and cement manufacturing, areas with newly developed coal, petroleum, or natural gas resources offer a strong attraction to these heavy fuel consuming industries. On the other hand, low wage areas are especially attractive to high labor cost industries such as full-fashioned hosiery and cotton textiles. Decentralization is facilitated by improved technology which permits utilization of lower grade raw materials as in coke manufacturing and by mechanization which reduces the dependence upon skilled labor as in glass manufacturing. Improved transportation facilities are beneficial to both old and new industrial centers because the raw materials of larger areas are made available and larger markets can be reached.

Economic activity is always in a state of flux. In the foregoing discussion it has been observed how some Pennsylvania industries have been employing more workers and others fewer. At the same time more and more workers have found employment in service activities which have been attaining increased prominence. Another development, not revealed by this analysis, is the rise of new manufacturing industries, such as radio, plastics and synthetic fibers. These lines, as yet small in comparison with the well

established industries, will be analyzed in a forthcoming study. The future of manufacturing in Pennsylvania depends upon efficient utilization of all resources at her disposal. With good management and plant modernization the available resources can be used to produce a wide range of new and improved products for

which local resources are particularly adapted.

Before attempting a more specific appraisal of postwar prospects of manufacturing in this district it would be well to inquire how the war affected our industries. This will be the subject of the next study.

Business and Banking

Industry and trade. Industrial production in the Philadelphia Federal Reserve District decreased somewhat in June, reflecting reductions in the output of both factory products and fuels. The decline in manufacturing was attributable to lower activity in certain heavy industries, particularly transportation equipment. In nondurable goods lines output was maintained at about the May level. Total productive activity in the six months ended June was virtually unchanged from a year earlier. In this period factory operations approximated those prevailing in 1943, production of solid fuels was substantially greater, but the output of crude petroleum showed a pronounced decline.

A growing shortage of manpower in Philadelphia, the adjacent industrial counties of Chester, Delaware, Montgomery, Bucks, in Pennsylvania, Camden, Gloucester and a small part of Burlington in New Jersey, has resulted in the reclassification of the area as a critical labor market by the War Manpower Commission. A 48-hour week becomes effective in essential industries September 1, and war procurement agencies are directed to divert new contracts into areas where an easier labor situation prevails, providing the required materials can be produced.

Employment, payrolls, and total working time in Pennsylvania factories did not change significantly from May to June. The number of wage earners and aggregate employee-hours worked showed small declines from a year ago, but the volume of wage payments was about 4 per cent greater. Comparable increases over the twelve months were reported in the payrolls of durable and nondurable goods industries. Throughout the four years of defense and war activity, however, wage disbursements in heavy goods lines almost tripled, as against an increase of only 60 per cent in the case of lighter products.

In the six months ended June, employment, payrolls, and hours in Pennsylvania factories

showed trends entirely different from those which prevailed through earlier periods of defense and war production. The number employed showed the first prolonged decline since early 1940, although the decrease from December to June amounted to only about 3 per cent. Wage payments tended to stabilize in this period, following a steep rise that began about the middle of 1940. Total working time, while fluctuating rather narrowly in recent months, is somewhat below the wartime peak reached late last fall, reflecting some decline in munitions production since November 1943.

Anthracite and bituminous coal mines continue short of manpower, and in spite of recent increases in the productivity of their working forces, the supply of solid fuels in the coal year ending March 31, 1945 is expected to fall below estimated requirements. According to the Solid Fuels Administration, the deficit will amount to approximately 5 million tons of anthracite and 16 million tons of bituminous coal, respectively $7\frac{1}{2}$ and $2\frac{1}{2}$ per cent of anticipated needs this coal year. Although the production of both fuels so far this year has been exceeding the 1943 volume, domestic consumption and export needs have risen more proportionately, and reserves are below normal working levels.

Construction activity in the country as a whole has risen slightly since the early spring, following a steady decline which began in the summer of 1942. The War Production Board anticipates a further slight rise in operations over the near future, as the volume of privately financed building continues to more than offset the uninterrupted decline in public construction in progress for nearly two years. The value of new contracts awarded in June increased nationally and locally, although in both instances contract totals for the first half year were sharply smaller than in 1943.

Growing conditions for crops over a large part of this district have deteriorated since early July, owing to continued high temperatures and insufficient rainfall. Most late planted crops, including many garden vegetables, are badly in need of rain in the southeastern counties. The growth of pastures has been retarded considerably in recent weeks and the second cutting of hay is expected to yield much less than the season's first harvest. Grain crops are being harvested, with high yields reported; the production of wheat in Pennsylvania is expected to be the largest on record. Fruit prospects continue unusually favorable in spite of the dry weather. A shortage of farm labor persists.

Primary distribution by rail continues well above year ago levels in this district, as in the country. Business at wholesale slackened somewhat from May to June, reflecting declines in all reporting lines except groceries and hardware. Sales also were smaller than a year earlier, but in the six months ended June they showed a gain of 5 per cent over the 1943 period. Inventories decreased in most lines during June; they were slightly larger than twelve months earlier, owing principally to increased holdings of dry goods, groceries, and hardware.

The value of sales at department and women's apparel stores in this district declined more than they usually do in June, and at men's apparel stores a small decrease was contrary to seasonal expectations. Sales by shoe stores rose appreciably on an adjusted basis. Increases over a year ago and the first six months of 1943 were reported by department and women's apparel stores, but dollar volume showed a decline in both comparative periods in the case of men's apparel and shoes. Sales by furniture stores declined sharply in June to about the level of a year earlier. Inventories at department and women's apparel stores exceeded the dollar volume reported in June 1943 but they showed considerable declines at establishments specializing in shoes and furniture.

Banking conditions. Offerings of marketable securities in the Fifth War Loan Drive ended on July 8, but subscriptions for savings bonds and savings notes, applying toward the record goals, continued through the balance of the month. The over-all quota of \$16 billion set for all non-bank investors throughout the nation was considerably exceeded.

Bank credit expanded sharply over the period of the Drive both in this district and in the country as a whole. Statements of reporting banks in leading cities show an increase of 11 per cent in the Third Federal Reserve District and 14 per cent in the United States between June 14 and July 12. The actual change in this district was an increase from \$2,210 million to \$2,450 million, a record high level from which there was only a moderate recession in the week following. Credit was extended chiefly through investment operations. Purchases in the market, from customers and on direct subscriptions, raised the investment in Governments by approximately \$200 million; more than one-half of this increase was in Treasury certificates of indebtedness and the remainder largely in Treasury bills. Loans also increased somewhat, reflecting in part advances to purchase or carry Governments, but such paper continued to be only a small proportion of the total loan portfolio.

While modified in part by the extension of bank credit, changes in the deposit structure were similar to those shown in other drive periods. Customers' balances were drawn upon heavily to pay for the new securities. At reporting banks in this district adjusted demand deposits declined from an all-time high of \$1,831 million on June 14 to \$1,554 million on July 19. But gains in war loan accounts were larger, with the result that total deposits at these institutions rose to new peaks approximating \$2 $\frac{3}{4}$ billion. At this level they were \$100 million above the high point reached late in the Fourth Drive and they showed an increase of about one billion dollars over June 1940, when defense preparations got under way.

The movement of funds into reserve-free war loan accounts reduced reserve requirements considerably, but there was a decline also in reserve balances, amounting to \$63 million in the four weeks ended July 19. This decline was due principally to payments made to the Treasury; currency demand also increased somewhat. The decline in member bank reserves was modified by gains in interdistrict commercial transactions. Little net change was shown in the volume of Reserve Bank credit extended locally. Discounts for member banks continued very small, and an increase of \$7 million in Treasury bills held by this Bank under repurchase option raised this account to only \$132 million, an amount one-half as large as peak holdings late last year.

BUSINESS STATISTICS

Production

Philadelphia Federal Reserve District

| Indexes: 1923-5 = 100 | Adjusted for seasonal variation | | | | | | Not adjusted | | |
|------------------------------------|---------------------------------|----------|-----------|-----------------|----------|-----------------------|--------------|----------|-----------|
| | June 1944 | May 1944 | June 1943 | Per cent change | | | June 1944 | May 1944 | June 1943 |
| | | | | Mo. ago | Year ago | 1944 from 6 mos. 1943 | | | |
| | | | | | | | | | |
| INDUSTRIAL PRODUCTION | 146p | 149 | 149r | -2 | -2 | 0 | 145p | 147 | 148r |
| MANUFACTURING | 150p | 153 | 157r | -2 | -4 | 0 | 148p | 151 | 155r |
| Durable goods | 230p | 237 | 251r | -3 | -8 | -3 | | | |
| Consumers' goods | 95p | 95 | 94r | 0 | +1 | +3 | | | |
| Metal products | 183 | 185 | 178r | -1 | +3 | +4 | 185 | 182 | 180r |
| Textile products | 70p | 70 | 72r | 0 | -4 | -3 | 68p | 67 | 71 |
| Transportation equipment | 578 | 604 | 678r | -4 | -15 | -5 | 577 | 625 | 675r |
| Food products | 125p | 124 | 114r | +1 | +10 | +17 | 114p | 116 | 104r |
| Tobacco and products | 83 | 96 | 114 | -14 | -28 | -19 | 89 | 93 | 123 |
| Building materials | 35p | 35 | 39 | -1 | -10 | -21 | 37p | 36 | 42 |
| Chemicals and products | 162p | 157 | 158 | +3 | +3 | +6 | 162p | 159 | 158 |
| Leather and products | 108p | 112 | 110r | -4 | -1 | -4 | 105p | 102 | 107r |
| Paper and printing | 97 | 94 | 95r | +3 | +2 | +4 | 96 | 95 | 94r |
| Individual lines | | | | | | | | | |
| Pig iron | 113 | 97r | 115 | +16 | -2 | -1 | 107 | 101r | 109 |
| Steel | 138 | 131r | 138 | +5 | 0 | +1 | 141 | 138 | 141 |
| Silk manufactures | 89 | 86 | 88 | +3 | +1 | +2 | 84 | 83r | 84 |
| Woolen and worsteds | 63p | 64 | 64r | 1 | -1 | -1 | 61p | 61 | 62r |
| Cotton products | 48 | 46 | 59 | +5 | -19 | -2 | 46 | 45 | 56 |
| Carpets and rugs | 56p | 54 | 55 | +5 | +3 | -20 | 55p | 53 | 54 |
| Hosiery | 72 | 70 | 80 | +3 | -10 | -11 | 70 | 70 | 79 |
| Underwear | 145 | 142 | 161 | +2 | -10 | -9 | 145 | 143 | 161 |
| Cement | 28p | 29 | 37 | +3 | -25 | -20 | 33p | 32 | 44 |
| Brick | 48 | 47 | 61 | +3 | -20 | -47 | 50 | 50 | 63 |
| Lumber and products | 32 | 33 | 28 | -3 | +14 | +13 | 32 | 30 | 28 |
| Bread and bakery products | 128 | 126 | 110 | +2 | +10* | +10* | 126 | 123 | 114 |
| Slaughtering, meat packing | 84 | 107 | 85 | -22 | -1 | +30 | 121 | 126 | 103 |
| Sugar refining | 169p | 166 | 150r | +2 | +13 | +24 | 122p | 127 | 108r |
| Canning and preserving | 82 | 95 | 114 | -14 | -2 | -18 | 88 | 92 | 123 |
| Cigars | 85 | 84 | 85r | +2 | +1 | 0 | 85 | 84 | 84r |
| Paper and wood pulp | 99 | 96 | 96 | +3 | +3 | +4 | 95 | 97 | 96 |
| Printing and publishing | 132 | 131 | 135 | +1 | -3 | -5 | 125 | 119 | 129 |
| Shoes | 85p | 95 | 85r | -10 | 0 | -3 | 86p | 87 | 86r |
| Leather, goat and kid | 96 | 94 | 94 | +2 | +3 | +7 | 98 | 100 | 95 |
| Paints and varnishes | 168 | 164 | 156 | +3 | +8 | +6 | 168 | 170 | 156 |
| Coke, by-product | 86 | 88 | 50 | -2 | +72 | +13 | 84 | 86r | 49 |
| COAL MINING | 81 | 84 | 47 | -4 | +72 | +12 | 81 | 84 | 47 |
| Anthracite | 122 | 116r | 71 | +6 | +72 | +13 | 108 | 104r | 63r |
| Bituminous | 360 | 366 | 406 | -2 | -11 | -11 | 375 | 381 | 422 |
| CRUDE OIL | 440 | 439 | 415 | 0 | +6 | +7 | 418 | 409 | 394 |
| ELEC. POWER—OUTPUT | 449 | 441 | 427 | +2 | +5 | +9 | 436 | 423 | 414 |
| Sales, total | 344 | 342 | 325 | +1 | +6 | +11 | 348 | 348 | 328 |
| Sales to industries | | | | | | | | | |
| BUILDING CONTRACTS | | | | | | | | | |
| TOTAL AWARDS† | 45 | 39 | 46 | +15 | -1 | -62 | 46 | 38 | 46 |
| Residential† | 17 | 14 | 33 | +20 | -48 | -61 | 18 | 15 | 35 |
| Nonresidential† | 56 | 44 | 60 | +27 | -6 | -59 | 57 | 47 | 61 |
| Public works and utilities† | 106 | 117 | 48 | -10 | +120 | -62 | 100 | 82 | 46 |

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

Local Business Conditions*

| Percentage change—June 1944 from month and year ago | Factory employment | | Factory payrolls | | Building permits value | | Retail sales | | Debits | |
|---|--------------------|-----------|------------------|-----------|------------------------|-----------|--------------|-----------|----------|-----------|
| | May 1944 | June 1943 | May 1944 | June 1943 | May 1944 | June 1943 | May 1944 | June 1943 | May 1944 | June 1943 |
| | Allentown | 0 | -5 | +3 | +8 | -90 | +129 | -5 | -1 | +23 |
| Altoona | 0 | -2 | 0 | +8 | +28 | -32 | -10 | +13 | +13 | +20 |
| Harrisburg | +3 | 0 | +3 | +5 | +280 | +104 | -12 | 0 | +26 | +26 |
| Johnstown | +1 | -6 | +4 | +11 | -60 | -72 | -7 | +24 | +11 | +15 |
| Lancaster | +1 | +1 | +1 | +7 | -81 | +4 | -8 | +3 | +13 | +55 |
| Philadelphia | -1 | -5 | -3 | +1 | -57 | -63 | -13 | +2 | +28 | +25 |
| Reading | +1 | -6 | +1 | 0 | +21 | -5 | -11 | +4 | +23 | +22 |
| Scranton | +1 | +18 | +4 | +37 | +3 | +249 | -10 | +18 | +73 | +93 |
| Trenton | | | | | -17 | +16 | -9 | -3 | +21 | +59 |
| Wilkes-Barre | +2 | -1 | +5 | -3 | -22 | +24 | -7 | +17 | +9 | +16 |
| Williamsport | +1 | -10 | +1 | -7 | +58 | +76 | | | +9 | -14 |
| Wilmington | +1 | -6 | -1 | -2 | +26 | -20 | -3 | +16 | +37 | +29 |
| York | +4 | -6 | +5 | 0 | -62 | -64 | -7 | +10 | +19 | +26 |

* 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 | | |
|----------------------------------|-----------------|----------------------|-----------|-----------------|----------------------|-----------|
| | June 1944 index | Per cent change from | | June 1944 index | Per cent change from | |
| | | May 1944 | June 1943 | | May 1944 | June 1943 |
| GENERAL INDEX | 133 | 0 | -3 | 335 | 0 | +6 |
| Manufacturing | 185 | 0 | -3 | 501 | 0 | +4 |
| Anthracite mining | 49 | +1 | -5 | 99 | +1 | +60 |
| Bituminous coal mining | 79 | 0 | -8 | 364 | -1 | +50 |
| Building and construction | 47 | +2 | -4 | 121 | -9 | -1 |
| Quar. and nonmet. mining | 84 | -1 | -19 | 277 | -1 | -10 |
| Crude petroleum prod. | 136 | +1 | -2 | 246 | +4 | +15 |
| Public utilities | 97 | 0 | -3 | 144 | 0 | +5 |
| Retail trade | 111 | 0 | 0 | 156 | +3 | +2 |
| Wholesale trade | 104 | +1 | -4 | 148 | +1 | +2 |
| Hotels | 103 | +2 | +2 | 172 | +1 | +12 |
| Laundries | 105 | +2 | -4 | 181 | -1 | +4 |
| Dyeing and cleaning | 104 | -3 | 0 | 189 | -1 | +2 |

Manufacturing

| Indexes: 1923-5 = 100 | Employment* | | | Payrolls* | | |
|----------------------------------|-----------------|----------------------|-----------|-----------------|----------------------|-----------|
| | June 1944 index | Per cent change from | | June 1944 index | Per cent change from | |
| | | May 1944 | June 1943 | | May 1944 | June 1943 |
| TOTAL | 119 | 0 | -3 | 204 | 0 | +4 |
| Iron, steel and products | 128 | 0 | -3 | 283 | +1 | +5 |
| Nonferrous metal products | 200 | +1 | +1 | 435 | +3 | +10 |
| Transportation equipment | 169 | -1 | -4 | 299 | -6 | +3 |
| Textiles and clothing | 80 | +1 | -7 | 121 | +1 | -1 |
| Textiles | 74 | +1 | -6 | 112 | +1 | -1 |
| Clothing | 108 | +1 | -8 | 165 | 0 | 0 |
| Food products | 122 | +2 | +7 | 190 | +2 | +13 |
| Stone, clay and glass | 87 | +1 | -2 | 130 | -1 | +6 |
| Lumber products | 53 | +4 | +1 | 86 | +6 | +12 |
| Chemicals and products | 116 | 0 | -5 | 208 | 0 | 0 |
| Leather and products | 74 | +1 | -11 | 117 | +3 | -1 |
| Paper and printing | 101 | +1 | -1 | 149 | 0 | +5 |
| Printing | 94 | +1 | +1 | 131 | 0 | +7 |
| Others: | | | | | | |
| Cigars and tobacco | 55 | +2 | -13 | 79 | +6 | -6 |
| Rubber tires, goods | 146 | +2 | +9 | 296 | -2 | +17 |
| Musical instruments | 91 | +7 | +33 | 153 | +1 | +32 |

* Figures from 2854 plants.

Hours and Wages

| Factory workers Averages June 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 | 45.5 | +1 | \$1.054 | +6 | \$47.76 | +7 |
| Iron, steel and prods. | 47.3 | +3 | 1.119 | +4 | 52.91 | +7 |
| Nonfer. metal prods. | 45.8 | +1 | 1.008 | -10 | 46.18 | +11 |
| Transportation equip. | 46.8 | -2 | 1.222 | +7 | 57.17 | +5 |
| Textiles and clothing | 39.7 | -1 | 1.723 | +7 | 30.27 | +7 |
| Textiles | 40.9 | 0 | 1.780 | +6 | 31.89 | +6 |
| Clothing | 37.1 | -2 | 1.718 | +9 | 26.93 | +4 |
| Food products | 44.6 | 0 | 1.813 | +5 | 36.52 | +4 |
| Stone, clay and glass | 41.0 | +3 | 1.911 | +5 | 37.40 | +8 |
| Lumber products | 44.6 | +2 | 1.763 | +8 | 33.83 | +10 |
| Chemicals and prods. | 45.9 | +3 | 1.049 | +4 | 48.07 | +11 |
| Leather and prods. | 42.8 | +7 | 1.739 | +4 | 31.70 | +7 |
| Paper and printing | 43.7 | +3 | 1.894 | +4 | 39.49 | +6 |
| Printing | 40.8 | +1 | 1.041 | +4 | 42.77 | +5 |
| Others: | | | | | | |
| Cigars and tobacco | 42.8 | +3 | 1.614 | +5 | 26.29 | +9 |
| Rubber tires, goods | 43.6 | -1 | 1.032 | +8 | 45.02 | +7 |
| Musical instruments | 46.6 | -3 | 1.943 | +3 | 43.97 | -1 |

* Figures from 2705 plants.

† Figures from 2854 plants.

Distribution and Prices

| Wholesale trade Unadjusted for seasonal variation | Per cent change | | |
|---|-------------------|-------------|--------------------------------|
| | June 1944 from | | 1944 from 6 mos. 1943 |
| | Month ago | Year ago | |
| Sales | | | |
| Total of all lines | -2 | -3 | +5 |
| Boots and shoes | -11 | -22 | -2 |
| Drugs | -9 | -5 | -2 |
| Dry goods | -7 | -12 | +3 |
| Electrical supplies | -6 | -6 | -5 |
| Groceries | +5 | +4 | +10 |
| Hardware | +20 | +3 | +7 |
| Jewelry | -14 | -17 | +6 |
| Paper | -18 | +6 | +19 |
| Inventories | | | |
| Total of all lines | 3 | +3 | |
| Dry goods | 0 | +13 | |
| Electrical supplies | 0 | +2 | |
| Groceries | 7 | -7 | |
| Hardware | 1 | +8 | |
| Jewelry | -4 | -19 | |
| Paper | 0 | -16 | |

Source: U. S. Department of Commerce.

| Prices | June 1944 | Per cent change from | | |
|---|--------------|----------------------|-------------|--------------|
| | | Month ago | Year ago | Aug. 1939 |
| Basic commodities (Aug. 1939=100) | 182 | +1 | +4 | +82 |
| Wholesale (1926=100) | 104 | 0 | 0 | +39 |
| Farm | 125 | +2 | -1 | +105 |
| Food | 107 | +1 | -3 | +58 |
| Other | 99 | 0 | +2 | +23 |
| Living costs (1935-1939=100) | | | | |
| United States | 125 | 0 | 0 | +27 |
| Philadelphia | 125 | +1 | +1 | +27 |
| Food | 135 | +1 | -3 | +45 |
| Clothing | 139 | +1 | +9 | +40 |
| Rent | 107 | 0 | 0 | +4 |
| Fuels | 109 | 0 | +3 | +13 |
| Housefurnishings | 138 | +3 | +11 | +37 |
| Other | 120 | +1 | +4 | +19 |

Source: U. S. Bureau of Labor Statistics.

| Indexes: 1935-1939 = 100 | Adjusted for seasonal variation | | | | | | Not adjusted | | |
|-------------------------------|---------------------------------|-------------|--------------|-----------------------------------|-------------|-----------------------------------|--------------|-------------|--------------|
| | June 1944 | May 1944 | June 1943 | Per cent change | | | June 1944 | May 1944 | June 1943 |
| | | | | June 1944 from Month ago | Year ago | 1944 from 6 mos. 1943 | | | |
| RETAIL TRADE | | | | | | | | | |
| Sales | | | | | | | | | |
| Department stores—District | 160p | 168 | 151r | -5 | +6 | +8 | 144p | 161 | 136r |
| Philadelphia | 156 | 166 | 151r | -6 | +3 | +6 | 136 | 155 | 133r |
| Women's apparel | 152 | 169 | 139 | -10 | +9 | +10 | 131 | 161 | 120 |
| Men's apparel | 131 | 160 | 139 | -18 | -6 | -1 | 146 | 148 | 156 |
| Shoe | 138 | 127 | 185 | +9 | -25 | -7 | 148 | 157 | 200 |
| Furniture | | | | -15* | +1* | | | | |
| Inventories | | | | | | | | | |
| Department stores—District | 153 | 150 | 142r | +2 | +8 | | 143 | 150 | 132 |
| Philadelphia | 150 | 149 | 142 | 0 | +6 | | 139 | 149 | 132 |
| Women's apparel | 204 | 183 | 191 | +11 | +7 | | 166 | 177 | 157 |
| Shoe | 78 | 69 | 92 | +14 | -15 | | 75 | 76 | 89 |
| Furniture | | | | -3* | -14* | | | | |
| FREIGHT-CAR LOADINGS | | | | | | | | | |
| Total | 149 | 151 | 130 | -1 | +14 | +8 | 153 | 152 | 134 |
| Merchandise and miscellaneous | 135 | 133 | 132 | +1 | +2 | +4 | 137 | 137 | 135 |
| Merchandise—l.c.l. | 90 | 89 | 88 | +1 | +2 | +6 | 90 | 89 | 88 |
| Coal | 185 | 185 | 112 | 0 | +65 | +19 | 167 | 165 | 101 |
| Ore | 205 | 237 | 201 | -12 | +4 | +9 | 307 | 301 | 296 |
| Coke | 235 | 255 | 179 | -8 | +32 | +11 | 219 | 216 | 166 |
| Forest products | 124 | 136 | 120 | -9 | +3 | +10 | 141 | 131 | 137 |
| Grain and products | 150 | 147 | 135 | +2 | +11 | +11 | 130 | 137 | 118 |
| Livestock | 149 | 140 | 133 | +7 | +12 | +27 | 136 | 127 | 121 |
| MISCELLANEOUS | | | | | | | | | |
| Life insurance sales | 120 | 114 | 100 | +5 | +20 | +18 | 122 | 113 | 102 |
| Business liquidations | | | | | | | | | |
| Number | | | | -82* | -87* | -74* | 3 | 16 | 22 |
| Amount of liabilities | | | | -59* | -67* | -90* | 4 | 10 | 13 |
| Check payments | 199 | 162 | 156 | +23 | +27 | +10 | 215 | 162 | 169 |

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

BANKING STATISTICS

MEMBER BANK RESERVES AND RELATED FACTORS

| Reporting member banks (Millions \$) | July 19, 1944 | Changes in— | |
|--|---------------------|---------------|---------------|
| | | Four weeks | One year |
| Assets | | | |
| Commercial loans | \$ 242 | +\$ 2 | + 11 |
| Loans to brokers, etc. | 41 | + 7 | + 10 |
| Other loans to carry secur. | 16 | + 3 | + 5 |
| Loans on real estate | 36 | | + 8 |
| Loans to banks | 2 | - 4 | + 2 |
| Other loans | 103 | + 1 | - 6 |
| Total loans | \$ 440 | +\$ 9 | +\$ 14 |
| Government securities | \$1764 | +\$193 | +\$374 |
| Obligations fully guar. teed | 54 | - 3 | - 23 |
| Other securities | 170 | | - 32 |
| Total investments | \$1988 | +\$190 | +\$319 |
| Total loans & investments | \$2428 | +\$199 | +\$333 |
| Reserve with F. R. Bank | 369 | - 52 | - 34 |
| Cash in vault | 29 | - 1 | + 2 |
| Balances with other banks | 75 | - 5 | - 5 |
| Other assets—net | 55 | + 2 | - 7 |
| Liabilities | | | |
| Demand deposits, adjusted | \$1554 | -\$226 | -\$121 |
| Time deposits | 181 | + 2 | + 20 |
| U. S. Government deposits | 626 | + 376 | + 393 |
| Interbank deposits | 348 | - 9 | - 14 |
| Borrowings | 2 | + 1 | + 2 |
| Other liabilities | 15 | - 2 | + 2 |
| Capital account | 230 | + 1 | + 7 |

| Third Federal Reserve District (Millions of dollars) | Changes in weeks ended— | | | | Changes in four weeks |
|---|-------------------------|-------------|-------------|--------------|-----------------------------|
| | June 28 | July 5 | July 12 | July 19 | |
| Sources of funds: | | | | | |
| Reserve Bank credit extended in district | -16.7 | -9.2 | +5.7 | +19.2 | -1.0 |
| Commercial transfers (chiefly interdistrict) | +31.9 | +0.5 | +5.1 | -16.0 | +21.5 |
| Treasury operations | -60.8 | +16.9 | -13.3 | -16.9 | -74.1 |
| Total | -45.6 | +8.2 | -2.5 | -13.7 | -53.6 |
| Uses of funds: | | | | | |
| Currency demand | +2.9 | +12.3 | -2.5 | -3.4 | +9.3 |
| Member bank reserve deposits | -52.5 | +0.9 | -0.5 | -11.3 | -63.4 |
| "Other deposits" at Reserve Bank | +4.0 | -4.9 | +0.6 | +0.9 | +0.6 |
| Other Federal Reserve accounts | -0.0 | -0.1 | -0.1 | +0.1 | -0.1 |
| Total | -45.6 | +8.2 | -2.5 | -13.7 | -53.6 |

| Member bank reserves (Daily averages; dollar figures in millions) | Held | Re- quired | Ex- cess | Ratio of excess to re- quired | Federal Reserve Bank of Phila. (Dollar figures in millions) | July 19, 1944 | Changes in | |
|---|-------|---------------|-------------|---|--|---------------------|----------------|----------------|
| | | | | | | | Four weeks | One year |
| Phila. banks | | | | | | | | |
| 1943: June 1-15 | \$380 | \$366 | \$ 14 | 4% | | | | |
| 1944: June 1-15 | 403 | 394 | 8 | 2 | | | | |
| June 16-30 | 394 | 379 | 15 | 4 | | | | |
| July 1-15 | 364 | 344 | 20 | 6 | | | | |
| Country banks | | | | | | | | |
| 1943: June 1-15 | 263 | 193 | 70 | 36 | | | | |
| 1944: June 1-15 | 283 | 228 | 55 | 24 | | | | |
| June 16-30 | 288 | 224 | 64 | 29 | | | | |
| July 1-15 | 283 | 217 | 66 | 31 | | | | |
| Discounts and advances | | | | | | \$ 2.5 | +\$ 0.6 | +\$ 2.5 |
| Industrial loans | | | | | | 4.5 | - 0.3 | - 0.5 |
| U. S. securities | | | | | | 1053.4 | + 35.0 | + 586.4 |
| Total | | | | | | \$1060.5 | +\$35.3 | + 588.4 |
| Note circulation | | | | | | 1265.1 | + 12.0 | + 272.8 |
| Member bk. deposits | | | | | | 631.2 | - 63.4 | - 10.1 |
| U. S. general account | | | | | | 25.2 | + 22.0 | + 9.5 |
| Foreign deposits | | | | | | 131.4 | - 9.4 | + 36.3 |
| Other deposits | | | | | | 9.2 | + 0.6 | + 6.1 |
| Total reserves | | | | | | 1008.6 | - 65.9 | - 281.5 |
| Reserve ratio | | | | | | 49.0% | - 2.2% | - 24.9% |