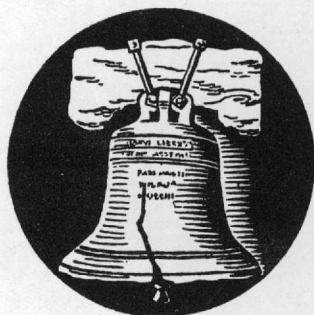


THE

BUSINESS REVIEW

FEDERAL RESERVE BANK OF PHILADELPHIA



TIMES AND TIDES ON THE DELAWARE

*A big, brand-new, streamlined steel mill
has thrown people on the Delaware in a dither.
This article, the first of a series
is about the river—
whence it comes and where it goes,
the kind of country through which it flows,
its mineral-bearing mountains, the
fertile midlands, the crowded lowlands of the
meandering, mill-ridden, maritime Delaware.
It tells about the people of the river—
how they use it, how they abused it,
and how they are restoring it
realizing that it is a common treasure.*

POSTWAR TREND IN FARM CREDIT

*Farm debt has risen since the war
but is still low in relation to income.
Banks continue to satisfy
most of farmers' production credit needs.*

CURRENT TRENDS

*Business trends in the Third District
were generally expansionary in August.
Employment, bank loans, and
department store sales advanced
but contract awards declined.*

TIMES AND TIDES ON THE DELAWARE

The Delaware River always has water. That is one reason why the country's largest steel company is building a big mill on the banks of the Delaware. News of the project electrified the valley, already heavily charged with industrial and commercial activities. The Fairless plant, going up under forced draft, is by no means the first steel mill in this area. In 1716, Thomas Rutter built a forge on a little tributary of the Delaware River at a place three miles above what is now Pottstown. Iron and steel have been made continuously in the Delaware Basin from Rutter to Fairless. Nor is the new mill likely to be the last chapter of steel on the Delaware, for already another large company has acquired a site for a steel mill on the New Jersey side of the river. Construction of the Fairless Works—an integrated mill with an annual capacity of 1,800,000 tons—was begun just last spring and it is scheduled for completion in 1952. Seldom do corn fields yield so fast to steel stacks and soaking pits.

To make that much steel takes a lot of ore, scrap, coke, limestone, refractories, power, machinery, labor, homes, schools, stores, churches, hospitals, recreation, transportation, entertainment, and all the other amenities of life. Above all, a lot of water is needed. The manufacture of 1.8 million tons of steel requires 350 million tons of water—water for the boilers, for the condensers, water to cool the furnaces, to spray the coke, to quench the steel—water at every stage of manufacture from smelting the ore to pickling the finished steel. A waterway to ship in raw materials as well as to ship out finished products is a big help. True, most of the processing water goes right back into the river in an endless recirculating process; but the water must be there to begin with.

There is plenty of water in the river because it is part of Nature's own recirculation system that operates without benefit of pumps and pipes. Winds bring clouds saturated with water gathered from the wide expanse of the seas. Clouds chilled by cool air masses spill rain to water the land for the benefit of man. The excess runoff finds its way back to the sea in a network of streams winding their way from forested highlands through agricultural midlands to industrial lowlands. The Delaware has what it takes to make steel.

DOWN THE DELAWARE

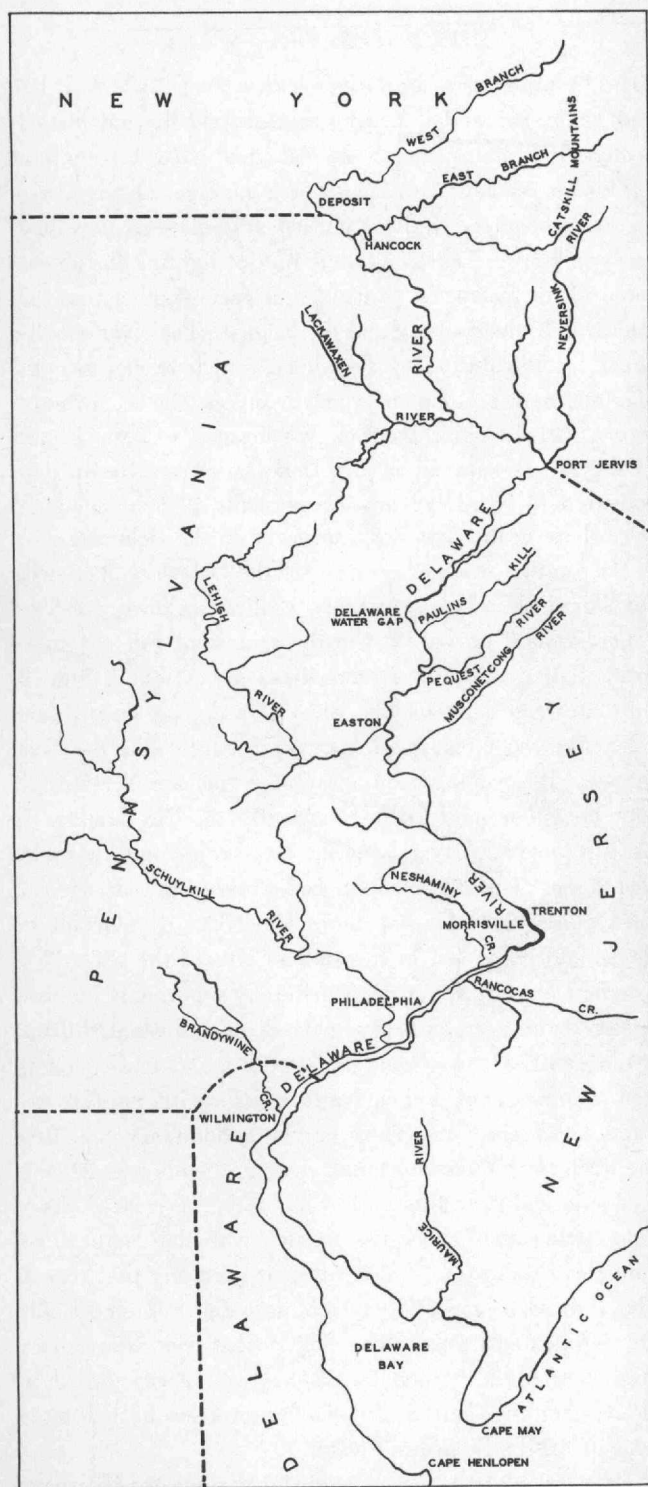
The Delaware is a short river with a long history. It has no beginning and it has no end, physically and historically. It tumbles out of the Catskills as two rivers, and before it reaches the Atlantic it is no river at all. Originally, it belonged to the American Indians—for how long, no one knows. There has been a lot of fighting for possession of the Delaware, controlled at various other times by the Dutch, the Swedes, and the English. The river was the heart of Revolutionary resistance, which brings to mind famous names along the road to independence. Brandywine, Philadelphia, Trenton, Washington's Crossing, and Valley Forge are all in the Delaware River Basin. Opposition to royal tyranny occasionally turned lukewarm elsewhere in the Colonies, but never on the Delaware.

Depending upon where you see the Delaware, it is swift or sluggish, broad or narrow, shallow or deep, fresh or salty, gamey or barren, lordly or lowly. For the most part, it is gentle and serene, inviting gracious living. It has no deep canyons like the Colorado, no magnificent falls like the Niagara, no power resources like the Tennessee. It never goes on a rampage like the Mississippi, nor does it wander off its course like the Rio Grande. It is just a gentle river winding its way through a variegated and picturesque countryside dressed in reds, greens, and golds, flowing ever more slowly as if reluctant to leave and to be lost in the endless blue of the sea.

The Delaware River flows generally south, only because south is the average between the river's constant shifting from southeast to southwest. Its irregular course alters the symmetry of Pennsylvania's otherwise almost rectangular shape. The river carves a boundary line first between New York and Pennsylvania, then between Pennsylvania and New Jersey, and finally between New Jersey and Delaware. The river is an invaluable natural resource to these four states, and for precisely that reason the Delaware once flowed right into the Supreme Court of the United States. The dispute between New Jersey and New York, joined by Pennsylvania, was settled in 1930 when the Court laid down certain rules for equitable sharing of the Delaware's waters.

The Delaware offers a delightful variety of scenery to

THE DELAWARE VALLEY



day because in ages past it encountered glaciers, mountains, and all manner of obstacles in fighting a path to the sea. Arising in the Appalachian Plateau, both branches strike out over the highland in a southwesterly direction, as if headed for Pittsburgh. About midway between Deposit, New York—where the West Branch turns abruptly to the southeast—and Hancock, New York—where it is joined by the East Branch—the Delaware starts etching a boundary line between New York and Pennsylvania. The hilly and wooded banks of this high plateau region have a rugged beauty all of their own. A long time ago the valleys were filled with glacial deposits, only partially removed by subsequent erosion. Abounding in lakes and ponds, the area is hill country much dissected by numerous streams. The river hurries through this plateau because the waters descend from an elevation of almost 2,900 feet above sea level to about 400 feet.

Leaving the plateau province at Port Jervis, the river enters the ridge and valley section of the Newer Appalachians and begins sketching the New Jersey-Pennsylvania boundary. Hemmed in, between high parallel mountain ridges with narrow valleys on either side—like a rug pushed together—the river rolls along as if impatiently seeking a break in the ridges. After numerous failures, it finally succeeds with a mighty effort at Delaware Water Gap, where the river cuts through the Kittatinny Mountain Ridge, leaving Mount Tammany—a 1,300-foot sentinel rising above the river on the Jersey side—and Mount Minsi, almost as high, on the Pennsylvania side. Most of us living in the Delaware valley are too close by to appreciate the scenic beauty wrought by the ancient struggle between river and mountain.

Emerging from the big gap, the river traverses the Great Valley—so-called because it runs all the way from the St. Lawrence down to central Alabama—but the part that swings through northern New Jersey and southeastern Pennsylvania is only 15 miles wide, like a furrow made by Paul Bunyan in a reckless mood with his hoe. The first settlers who really did till the valley found two distinct streaks running lengthwise. The one which the river crosses first is a bed of slate and shale, then a bed of limestone. Slate makes good roofing, and limestone good farming.

Below Easton the Delaware again enters a barrier of hills, called the Reading Prong, formed by a rock-ribbed mountain ridge extending down out of New England across New Jersey and into Pennsylvania as far as Read-

THE DELAWARE RIVER BASIN



ing. Part of the older, worn-down Appalachians, the Reading Prong in New Jersey is a mass of hard rock ridges separated by limestone valleys. In Pennsylvania, the limestone valleys are smaller and less continuous.

Most of the Bucks County run to Trenton is through the Triassic lowland section of the Piedmont. Though this broad and fertile belt is called a lowland, the terrain is modified generously by undulating hills and occasionally accentuated by Piedmont characteristics like Haycock Mountain on the Pennsylvania side and the Wachung Mountains in New Jersey. This section of the river is exquisitely beautiful. Its many local scenes, constantly changed by Nature's endless seasonal re-styling, have been the subject of endless portrayal on canvas by artists congregating along the river at New Hope.

In a single leap over an eight-foot falls, the river leaves its rock-bottom bed of the Piedmont to enter the softer formation of the Atlantic Coastal Plain—consisting of layers of sand and clay elevated from the ocean floor only in recent years, as the geologists' calendar goes. Here, in recent times, according to the more familiar calendar, water power from the falls started the growth of a mill town—Trenton. Philadelphia, another mill town, grew up around a similar falls where the Schuylkill River tumbles out of the Piedmont into the Coastal Plain. Similarly, other cities as far south as Columbus, Georgia, developed along the fall line sharply dividing these two physiographic provinces. In addition to natural water power, some of the cities have the added advantage of being at the head of navigation. Such, fortunately, is Trenton.

Below Trenton, the Delaware is an ever-widening arm of the sea. From the foot of the falls to the capes, the river just dallies along because the 135 miles to the sea is tidal. The river grows as it flows, both in breadth and in depth. Ocean-going vessels have no difficulty steaming up to Philadelphia, where harbor facilities are adequate on both sides of the river.

At Philadelphia the river is joined by its largest tributary—the Schuylkill—that reaches up to the southern end of the great hard-coal belt, which contributed so much to the early industrial development of Pennsylvania's largest city. Farther down stream is Delaware's largest city—Wilmington—astride the historic Brandywine and the Christina. The shore line is crowded with river-front industries, as everyone knows who has taken the boat ride from Philadelphia to Wilmington.

Not far below Wilmington the river becomes salty and its banks marshy. Industries are less frequent, settlements are scarcer but river traffic is almost always in sight. Long before outbound ships pass Cape May, on port side, or Cape Henlopen off starboard, the river has dissolved into a bay—a broad, 30-mile estuary at its greatest width.

The Delaware—named for a man who never saw it—is not a large river; nor is it small. Most rivers are amenable to measurement, but not the Delaware. Its length is variously cited as 326, 360, and 410 miles, depending upon what point is chosen as the mouth and which branch is selected as the source. Though its length is indefinite, there is no question as to its utility. Tidal to Trenton, or about one-third of the way up-stream, it is a river for men of the sea and men of inland cities of the sea. From Trenton to the Water Gap, or the middle third, it is a midland stream for men who toil on the soil. In the upper stretch it is a hill-and-highland stream, a rod-and-gun-club river for sportsmen who like to fish in fresh waters or hunt in the hills.

The Delaware, after the manner of all rivers, feeds on many waters. Up-river Pennsylvania streams spilling into the Delaware are the Lehigh and the Lackawaxen and innumerable smaller streams. Some, like the Neshaminy and Tohickon, go to the Delaware directly and others, like the Tulpehocken and Tobyhanna Creeks, feed into the larger tributaries of the Delaware. In New York, one of the major side streams is the Neversink. The principal tributaries in New Jersey are the Paulins Kill, the Peququet, the Musconetcong, and the Rancocas. The Maurice River, headquarters for New Jersey's oyster fleet, arrives almost too late to be of much help to the Delaware—it flows into the bay.

THE DELAWARE RIVER BASIN

The collective waters of the Delaware River are gathered together from a drainage area of almost 13,000 square miles. The region is as shapeless as a crippled character with flying coat tails out of a Dickens' novel. The river does most of its work for Pennsylvania within which exactly half of the basin lies. A mere 8 per cent of the basin is in Delaware, yet it covers 50 per cent of the state. Somewhat less than one-fourth of the watershed is in New Jersey, and less than one-fifth is in New York where the river has its roots.

The economic importance of the basin is out of pro-

portion to its size. Fully $5\frac{1}{2}$ million people are now living in the area, and that is about 430 to the square mile—ten times the United States average. But people do not live on the average; they live on the land, and they are thickest where the land is well watered or where land and deep water meet. So it is in the Delaware watershed.

The William Penn who climbed 547 feet to stand on top of City Hall Tower in perpetuity was a staid old Quaker. The William Penn who sailed up the Delaware on a crisp October day in 1682 in quest of religious freedom was neither staid nor old. A lover of the good and full life, he embarked upon a "Holy Experiment" founded on a good real estate deal. Before he ever left England, he was already selling blocks of 5,000 acres of Pennsylvania at \$64 a square mile, for which he paid \$1 a square mile in settlement of a debt owed his deceased father by his King who was short of cash.

In selecting the site for Philadelphia, Penn also proved that he was a good geographer. He ordered the rivers and creeks sounded to "be sure to make a choice where it is most navigable, high, dry, and healthy . . . where the most ships may best ride . . . to load and unload . . . without boating and liting. . . ." How is that for foresight? He made a minor mistake in selecting Pennsbury, up the river to the northeast, for his country estate because the Main Line later was to run due west. However, from his City Hall perch he can watch the Fairless stacks rising just beyond Pennsbury.

From that perch can be seen much of the Philadelphia metropolitan area of eight counties within which two-thirds of the people of the Delaware Basin are living. Some of them are engaged in foreign and coastwise commerce. A great many more work in the industrial establishments that produce manufactured products from raw materials assembled by waterways, railways and highways, converging in the heart of the metropolis. The workshops are almost innumerable.

As in all great industrial centers, there are the supporting and complementary activities of trade, banking, insurance, communications, utilities, and all the other services required to make an industrial metropolis tick. Kilowatts to turn the wheels in mill and factory are extracted from coal delivered to power plants along the Delaware and Schuylkill; vegetables to feed the workers come from the flat, fat garden belt beyond Camden; dairy products come from Montgomery, Chester and

Berks Counties west of Philadelphia; potatoes from Lehigh, Northampton and Carbon Counties; poultry products from the state of Delaware and the rich agricultural hinterlands of the Piedmont. The dairy belt in the upper end of the Delaware Basin above the Pocono area is better located to supply the heavily populated northern New Jersey and New York metropolitan area.

The mineral wealth of the region is most heavily concentrated in the Lehigh and Schuylkill valleys. Slate from the Pen Argyl-Bangor-Wind Gap quarries in Northampton County and from the Slatington-Slatedale deposits in Lehigh County account for almost half of the country's output. For over a half century, these two counties have also been producing a very substantial part of the country's cement, made from a rich streak of limestone or cement rock. Here are to be seen huge cement mills beside great gaping cavities in the strata of limestone rock that is the principal support of a dozen small towns extending from Martins Creek, near the Delaware River, to Egypt and Ormrod, west of the Lehigh River and beyond. A large section of the great anthracite region also lies within the Delaware Basin. As a space-heating fuel, oil is giving hard coal hard competition, but with the aid of gigantic power shovels used in strip mining the hard-coal country continues to send millions of tons to market each year. Employing enough miners to fill a large-sized collegiate football stadium, the anthracite region produces practically all of the country's hard coal.

In a region so well endowed with natural resources and so highly diversified in economic activity as the Delaware Basin, you will find, as may be expected, a great variety of people and racial types. In the melting pot there are descendants of the original English, Scotch, Welsh, Dutch, Irish, Swedes, and more recently Polish, Italian, Czechoslovakian, and Lithuanian groups. Successive waves of immigration brought heterogeneous peoples seeking not only religious freedom but also economic opportunity. Speaking many languages, representing many faiths, and skilled in many trades, they were absorbed by the Delaware Basin in its ever-expanding industrialism. The variety of people is still apparent in the valley and its tributaries. Where there is good limestone soil there are Pennsylvania Dutch tilling it; where there is coal, there are Welshmen mining it; where there is trade there are Quakers, and where there is manufacturing there are Germans. The English and the Scotch-Irish are everywhere.

"A RIVER IS A TREASURE"

Justice Oliver Wendell Holmes, in writing the decision of the Supreme Court in the litigation between New York and New Jersey, said: "A river is more than an amenity; it is a treasure. It offers a necessity of life that must be rationed among those who have power over it." The interstate dispute arose in the late twenties when New York City, in need of more water, proposed to take it from the headwaters of the Delaware. In allowing the city some Delaware water, the Court pointed up the fact that the Delaware is a treasure not only to the people living within the basin but also to those outside.

Sharing the waters with people outside the basin complicates the problem within. While the watershed is by no means economically self-contained, all the people living within it have, nevertheless, a mutual interest in the river. There is enough water for all, even those outside the basin, but the Delaware, like all rivers, does not flow at a uniform rate. Records show a daily flow past Trenton varying from a minimum of 800 million gallons to a maximum of 160 billion gallons. The flow varies from day to day, from month to month, and from one year to another. The heaviest flow occurs during the spring freshets when most of the water rushes to the sea unused. The lowest levels usually occur in the later summer and early fall.

Years ago there was no problem. The Delaware supported fewer people, and its flow was more regular. The difficulties arose with the ever-increasing use and misuse of the river.

When white men first settled along the Delaware, the river was teeming with shad and sturgeon, and the land was covered with a heavy stand of timber. The forests were a natural regulator of stream flow, for they retarded the runoff of winter's snow and spring's rains. The balance of nature was soon upset by the despoilers of the forests. Land had to be cleared for agriculture. Timber, an apparently inexhaustible supply, was cut to build houses, to build ships, and to supply masts and lumber for the English navy. Logging was the area's first big industry. Wood was used not only to build homes, but also to make furniture and as fuel to heat homes during the winter. Lumber was required to build factories and mills, to build barns, to make barrel staves. Hemlocks were stripped of their bark to extract tannic acid required to tan leather. Early forges and furnaces

fired with charcoal ate up forests wholesale. They were called "iron plantations," and they operated until the woodlands had been consumed for miles around. When anthracite displaced charcoal as a fuel for smelting iron the drain on the forests did not cease, for the miners needed heavy timbers for mine props. Then came the railroads with their demands for timber ties and lumber for rolling stock. About the same time the paper makers learned how to make paper out of wood pulp instead of rags.

The output of anthracite increased year by year; farmers tilled their lands more intensively; industrial towns sprang up throughout the region; Pottstown, Reading, and Pottsville on the Schuylkill; Allentown and Bethlehem on the Lehigh; Wilmington, Chester, Camden, and Trenton on the Delaware itself; and Philadelphia, the mightiest of them all. Factories flourished and multiplied; population grew rapidly; towns became cities; commerce flourished on the Delaware, and industrialism vibrated throughout the valley. Prosperity was counted by the ever-increasing millions in tons of coal and steel, square yards of textiles and leather, tons of cement and refined sugar, and gallons of chemicals and petroleum products.

For years some of the costs were overlooked—they were so easily dumped into the Delaware. Denuding the land of its forests accentuated the seasonal irregularity in the water level of the river. Farmers took great pride in planting straight rows of corn, which helped the rains to wash their best top soil off the slopes and clog up the river channels. Hard coal collieries skimmed the cream of their mineral crops for the market and dumped the coal dust into the Schuylkill until the river turned black and navigability was virtually destroyed. Industrial concerns on the Delaware and its branches poured their processing wastes into the streams, and municipalities emptied their untreated sewage into the river so that it became grossly polluted. At Philadelphia, where the culm-choked Schuylkill met the sewage-soaked Delaware, pollution was at its worst. Philadelphia, which drinks Delaware and Schuylkill water, had to set up elaborate treating plants to make the water potable. The shad could not take it; they refused to come up the Delaware or died in the attempt, as did an occasional seal that wandered off its maritime beat to inspect the river. The port of Philadelphia was threatened when shipmasters refused to bring their ships up the river because of the corrosive

destruction to the hulls. In periods of low water and high tide, the sea-drinking Delaware caused salinity difficulties to down-river industrial firms that used processing water from the river. So far had the river degenerated.

THE RENAISSANCE ALONG THE DELAWARE

The Delaware River today is a much cleaner river than it was a decade ago. Philadelphia is well along on its sewage disposal program. One of three new plants is already in operation, the second is to be completed soon, and construction of the third has begun. Camden, Chester, Wilmington, and other cities on the Delaware have taken similar measures and have new plants recently completed or near completion.

At the instigation of a small group of public-spirited citizens formally organized as the Interstate Commission on the Delaware River Basin—called Incodel for short—Pennsylvania embarked upon a state-wide streams clean-up program. By agreement, the state and the Federal Government undertook to clean up the Schuylkill. Pennsylvania has already dredged millions of tons of coal culm from the river and constructed de-silting dams to serve as catch basins to collect silt washing down the river from old culm banks in the anthracite region. The Federal Government is just getting started on its share. The over-all program of cleaning up the Delaware and its tributaries is well in hand and between half and two-thirds completed.

Cleaning up the river and holding to a prescribed standard of purity are directly related to the quantity of water. During periods of heavy water flow the river can absorb large amounts of municipal and industrial effluent without serious contamination, but in dry-flow seasons the amount of waste discharge that can be absorbed is materially reduced. For that reason streamflow regulation is very important. On the eve of a great industrial expansion it is all the more imperative to provide adequate water supply so that the river can at all times do its job of municipal cleansing.

In 1949 the legislatures of Pennsylvania, New Jersey, and New York directed Incodel to make a comprehensive engineering survey and to recommend a water conservation program. Engineers who made the survey propose construction of four dams above the Delaware Water Gap which would impound enough water to insure an ade-

quate flow in the entire length of the river for the benefit of residents and industries alike. The plan also includes a large amount of stored water to help meet critical shortages in New York City and northeastern New Jersey. Construction costs at prices prevailing in mid-1950 were estimated between \$500 million and \$600 million. Only 25 per cent of the cost would be charged to stream-flow regulation.

Philadelphia is in the midst of a vast public improvement program to modernize the city's physical appearance and facilities. Some in the planning stage and some already well under way in the tremendous program are: new subways, highways, plazas, bridges, storm-water flood control, improved water supply, slum clearance, and health centers. Each year new and additional improvements are scheduled by the City Planning Commission as projects are completed. The \$558 million price tag on the package shows how ambitious is the program for the ensuing six years.

Up and down the Delaware Valley great industrial and municipal facilities are in various stages of construction and modernization. Adjacent to the new Bucks County steel mill an entirely new town—Fairless—is being constructed. Scores of auxiliary industrial concerns and service establishments are locating in the area. The river channel is to be deepened to accommodate deep-draft vessels bringing in iron ores from Brazil, Chile, Venezuela, Liberia, and Labrador. A new iron ore unloading pier at the port of Philadelphia will facilitate handling the increased ore imports. The utilities have stepped up sharply their schedules for construction of greatly increased capacity to supply power, gas, water, and communication facilities. New bridges are spanning the river and old structures are being rebuilt. With completion of the new Delaware Memorial Bridge below Wilmington, the river has 31 vehicular crossings. Three new up-river bridges are to replace existing structures and an additional Philadelphia-Camden crossing is to be started soon. Accessibility to the Philadelphia metropolitan area is made much easier by the Pennsylvania Turnpike from the west and the New Jersey Turnpike from the northeast. Congestion in the heart of Philadelphia is to be eased by a suburban expressway linking these two great arteries.

The Delaware is in a period of renaissance. Other doings on the Delaware will be treated in subsequent issues.

POSTWAR TREND IN FARM CREDIT

The period since 1945, unlike that following World War I, has been characterized by high incomes and easy credit for American farmers. But prosperity has not dimmed the farmer's memory of what happened after the first war. He is still haunted by thoughts of a huge long-term debt and deflated prices for farm products. While other sectors of the economy have been stretching their credit to record proportions, farmers have kept their total borrowing more in line with income and farm values.

Farmers' indebtedness rose in 1950, continuing the postwar trend. Commercial bank and Production Credit Association short-term farm loans (excluding CCC loans) at the end of 1950 were more than double the levels of early 1946. Much of this increase has been used to finance the biggest farmer-equipment buying wave in history. Longer-term mortgage debt has also been increasing, but in relation to farm values and income, is still near the all-time low.

FARM PRODUCTION LOANS

Short-term farm debt in the postwar period has been increasing steadily. From the end of 1945 to the end of 1950, farm loans for current production and living purposes at principal lending agencies about doubled. The 19 per cent rise in 1950 was one of the largest since the war, and in part, reflects the inflation and buying boom set off by the outbreak in Korea.

NON-REAL ESTATE LOANS* OUTSTANDING UNITED STATES, 1945-1950 (Millions of dollars)

Dec. 31	Commercial Banks	Production Credit Associations	Federal Intermediate Credit Banks	Farmers Home Adminis- tration	Total
1945	1,034	195	26	415	1,670
1946	1,289	230	32	403	1,954
1947	1,593	289	38	373	2,293
1948	1,946	367	56	346	2,715
1949	2,049	387	51	351	2,838
1950	2,524	451	62	335	3,372

Source: Department of Agriculture.

*Excluding C.C.C. loans.

This increased short-term indebtedness also reflects mechanization on the farm. When the farmer used animal power, he could grow his own power plant and fuel. Now he

must purchase both. Investment in tools and machines, for example, soared from \$6 billion at the beginning of 1946 to over \$14 billion at the start of this year. Today on the farms there are about 4 million tractors, more than double the number of a decade ago; there are 400,000 mechanical corn pickers as compared to 120,000 then; and about 700,000 grain combines as compared to 225,000. Increased use of fertilizer, improved plants and livestock, and the trend from general farming to specialization, to mention a few other factors, have stimulated demand for funds.

Preliminary data indicate the expansion of credit has continued into 1951, as rapidly rising costs and "forward" buying of machinery and household items characterized the early months of the year. There are some indications, however, that the peak in credit for farm capital expenditures may have passed. The levelling off in net farm income has caused many farmers to be more cautious about going into debt for more plant and equipment. Also, some have probably completed improvements originally planned for the immediate post-war period.

Banks Supply Most of Short-Term Credit

Commercial banks supply the major part of the farmer's short-term credit needs. At the beginning of 1951, outstanding farm production loans of commercial banks amounted to \$2.5 billion as against \$500 million for the PCA's, the next largest supplier of this type of credit. Both agencies experienced about the same rate of growth in their short-term loans from the end of 1945 through 1949. But for the year ending June 30, 1951, bank loans to farmers rose 28 per cent and PCA loans 27 per cent. Production loans of the Farmers Home Administration declined by about 4 per cent in 1950 reflecting large repayments by borrowers and Congressional limitations on the volume of new loans that could be made.

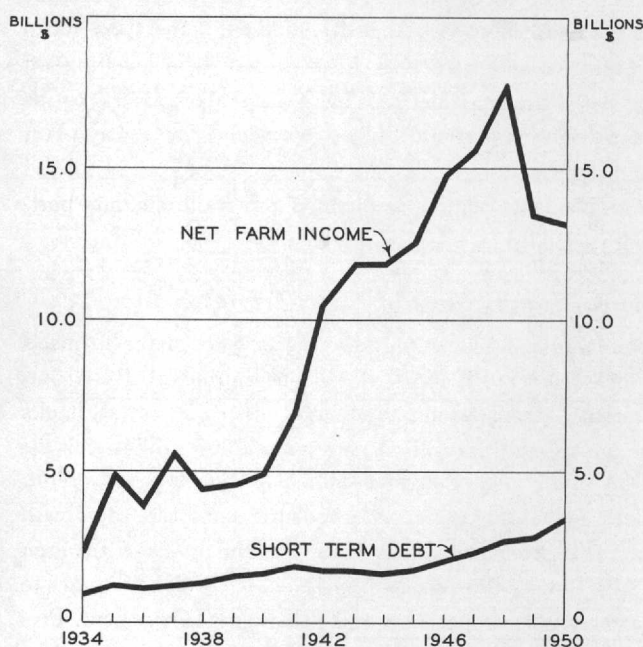
In Third Federal Reserve District states, PCA's make a larger share of production loans to farmers than nationally. For the country as a whole, PCA's accounted for only about 16 per cent of non-real estate farm loans made by commercial banks and PCA's combined, as compared with 18 per cent in Pennsylvania, 23 per cent in

New Jersey and 25 per cent in Delaware. In general PCA's are more active in the South and East than in the Mid-west and Far-west.

Production Loans in Relation to Farm Income

Although short-term debt owed by farmers is nearing record levels, generally it does not appear excessive in relation to current income. In 1950 there was \$1.00 of production loans for every \$4.00 of current farm net income. This represents a sizeable claim against future income, especially if contrasted with the war and immediate postwar years when banks and federally sponsored agencies held only \$1.00 of production loans for every \$7.00 of farm income. But it seems moderate when compared to prewar years when there was roughly \$1.00 of short-term debt for \$3.00 of net farm income.

SHORT-TERM DEBT AND INCOME 1934-1950



MORTGAGE LOANS

Total farm real estate debt outstanding increased about 8 per cent during 1950 to \$5.8 billion as repayments were somewhat less than mortgage recordings. A total of 352,355 farm mortgages was recorded with a value of \$1.7 billion. This was the largest volume since the heavy refinancing year of 1934. But the increase in farm mortgage debt seems conservative when contrasted with non-farm home mortgage debt. Since the end of the war

farmers have increased their mortgage indebtedness by 24 per cent, while non-farm mortgages on 1- to 4-family homes have gone up to \$44 billion—an increase of 129 per cent.

The average size of mortgage has been increasing, and until recently, faster than the sale price of farm real estate. During the last half of 1950, mortgages recorded averaged \$4,850 compared with an average of \$4,100 during the comparable period of 1949. Mortgage debt on farm purchases has averaged between 50 and 55 per cent of the purchase price in the postwar period.

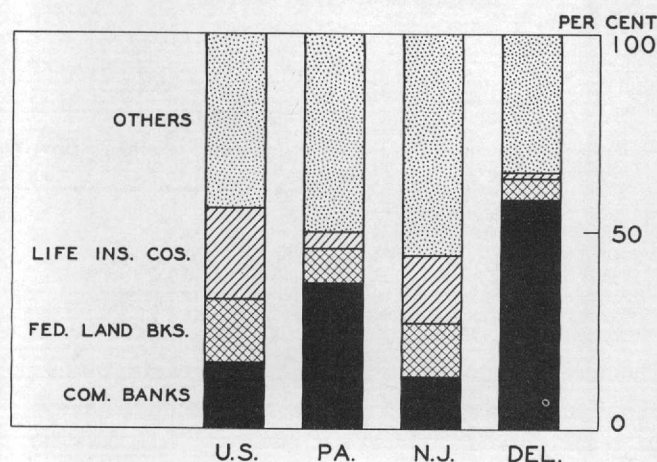
Farm mortgage debt in Third District states rose in 1950. The New Jersey increase of 16 per cent was about double that for the nation as a whole, and the 11 per cent rise in Delaware was also somewhat above average. Pennsylvania farmers, however, increased their mortgage indebtedness by only 2 per cent during 1950.

Private Institutions Reverse Earlier Trend

Individuals and commercial banks continue to initiate the largest volume of mortgage recordings, accounting for about 60 per cent of the total during 1950. Further moderate increases in the proportion of farm mortgage recordings made by insurance companies and miscellaneous lenders and a decline in the proportion made by Federal Land Banks were the more important shifts which occurred in the sources of mortgage credit.

The proportion of mortgage debt on farms in District states held by the major lender groups is given in the chart below. The percentage held by banks in Pennsylvania and Delaware is far in excess of the national average.

FARM MORTGAGE DEBT HELD BY LENDER GROUPS



age. New Jersey bank holdings are somewhat under those of the country as a whole.

Price Changes and the Debt Burden

In the period from 1945 to 1950 farm mortgage debt has risen from about \$4.7 billion to \$5.8 billion or 23 per cent. However, the real burden of this debt has not increased as prices received by farmers have also risen. For example, at the end of the war farmers had to sell 67 bushels of wheat or 79 bushels of corn to pay \$100 of debt. Price hikes since that time mean that it now takes only 51 or 69 bushels of wheat or corn respectively to pay the \$100.

After the first World War farmers' long-term debt increased more rapidly and was more burdensome. From the end of the war to 1923 farmers increased their real estate secured indebtedness from \$8 billion to \$11 billion or 38 per cent. Many entered these debt agreements believing that \$2 wheat and \$1.25 corn were here to stay. But they were mistaken. In 1919 only 46 bushels of wheat or 66 bushels of corn were needed to pay \$100 of debt but prices dropped until in 1923 it required 108 bushels of wheat or 123 bushels of corn. As prices fell farmers found it more and more difficult to pay their debts and bankruptcies increased tenfold between 1920 and 1925.

Mortgage Debt Moderate in Relation to Value and Income

Total farm mortgage debt outstanding at the end of 1950 was only 8 per cent of the value of farm real estate,

about the same as the all-time low in 1948. Since the war the proportion of debt to farm value has averaged just a little more than 8 per cent, an extremely low figure by any past standards. In the twenties, mortgage debt averaged about 20 per cent of farm value, or more than twice the present level, and in the thirties it was almost three times the postwar proportion.

Mortgage debt continued to rise in 1949 and 1950 while net farm income declined. In 1950 there was 44 cents of debt for each dollar of income as compared with the all-time low of 29 cents in 1948. By any prewar experience, however, mortgage debt is still low in relation to income. In 1939 there was \$1.47 of mortgage debt for each dollar of farm income, \$3.30 in 1934, and \$1.68 in 1929. The all-time high was \$5.00 of mortgage debt for each dollar of farm income in 1932.

FARM MORTGAGE DEBT, VALUE, AND INCOME

Selected Years	(Billions of dollars)			Farm Mortgage Debt as a percentage of	
	Mortgage Debt	Value of Farm Real Estate	Farm Income	Farm Value	Farm Income
1929	9.6	47.9	5.7	20%	168%
1934	7.6	32.9	2.3	23 "	330 "
1939	6.6	33.6	4.5	20 "	147 "
1945	4.7	52.1	12.5	9 "	38 "
1946	4.8	58.6	14.8	8 "	32 "
1947	4.9	62.8	15.6	8 "	31 "
1948	5.1	65.2	17.7	8 "	29 "
1949	5.4	63.5	13.4	9 "	40 "
1950	5.8	72.7	13.1	8 "	44 "

Source: Department of Agriculture.

Additional copies of this issue are available upon request.

CURRENT TRENDS

Commercial and financial activity in the Third Federal Reserve District continued at a high pitch in August. A slight expansionary trend was discernible although some segments of the economy failed to show improvement over the preceding month.

Pennsylvania manufacturers increased employment for the first time in four months. The rise was entirely in the durable goods industries and was attributed in part to a pick-up of activity after vacation shutdowns in July. However, overall production did not keep pace with the gain in hard goods output, as operations in soft goods plants were again curtailed. Activity in plants making nondurables is now considerably below last year. Total payrolls also failed to rise as the benefits of increased factory employment were offset by a shorter work-week.

Consumer buying continued to be conservative in light of the record level of personal income. Department store sales rose during the month but they did not top those of August 1950. Preliminary figures indicate that September sales will also be below a year ago.

The value of construction contract awards declined sharply in August following a rather substantial increase in July. A falling-off in nonresidential awards was responsible for the change. Activity in all major fields of construction was considerably below a year earlier.

Business loans of Third District weekly reporting member banks continued to rise in September, but at a slower pace than in August, and in September a year ago. Real estate and consumer loans showed no change in the month.

The nation's private money supply increased by \$1.2 billion in August to \$177 billion, up \$6 billion from a year earlier. A shift of deposits and currency to business and individuals as the Government spent tax receipts and an expansion of bank credit were major factors increasing the private money supply in August. The rise in the private money supply in July and August was larger than in the same months of any other post-war year.

SUMMARY	Third Federal Reserve District			United States		
	Per cent change			Per cent change		
	Aug. 1951 from		8 mos. 1951 from year ago	Aug. 1951 from		8 mos. 1951 from year ago
	mo. ago	year ago		mo. ago	year ago	
OUTPUT						
Manufacturing production..	0*	+ 3*	+13*	+ 3	+ 4	+14
Construction contracts.....	-13	-13	+21	- 8	-13	+17
Coal mining.....	+15	-21	- 8	+26	- 8	+ 6
EMPLOYMENT AND INCOME						
Factory employment.....	+ 1*	+ 3*	+10*	+ 1	+ 2	+10
Factory wage income.....	0*	+13*	+25*	.....	.....	.....
TRADE**						
Department store sales.....	+ 6	- 5	+ 5	+ 3	- 5	+ 4
Department store stocks....	- 3	+16	.....	- 3	+21	.....
BANKING						
(All member banks)						
Deposits.....	+ 1	+ 3	+ 4	0	+ 4	+ 6
Loans.....	+ 1	+18	+24	+ 1	+18	+24
Investments.....	0	- 8	- 9	0	- 7	- 8
U.S. Govt. securities.....	+ 1	-10	-12	+ 1	- 9	-12
Other.....	- 2	- 1	+ 5	0	+ 7	+15
PRICES						
Wholesale.....	.....	.....	.....	- 1	+ 7	+16
Consumers.....	0†	+ 8†	+10†	0	+ 7	+ 9
OTHER						
Check payments.....	+ 2	+ 5	+14	+ 1	- 2	+17
Output of electricity.....	+ 7	+ 3	+ 8	.....	.....	.....

*Pennsylvania

**Adjusted for seasonal variation. †Philadelphia.

LOCAL CONDITIONS	Factory*				Department Store				Check Payments	
	Employment		Payrolls		Sales		Stocks			
	Per cent change Aug. 1951 from		Per cent change Aug. 1951 from		Per cent change Aug. 1951 from		Per cent change Aug. 1951 from		Per cent change Aug. 1951 from	
	mo. ago	year ago	mo. ago	year ago	mo. ago	year ago	mo. ago	year ago	mo. ago	year ago
Allentown.....	+1	+10	-1	+24	.....	.....	.....	.....	- 2	+ 7
Altoona.....	+7	- 4	+1	+ 5	.....	.....	.....	.....	+ 5	+ 5
Harrisburg.....	+4	+ 7	+7	+21	.....	.....	.....	.....	- 2	+19
Johnstown.....	+1	+ 5	0	+20	.....	.....	.....	.....	+ 3	+ 1
Lancaster.....	+1	+ 1	+2	+ 8	+ 2	-7	+2	+14	+ 3	+11
Philadelphia.....	+2	+ 4	+1	+11	+10	-9	+7	+11	+ 3	+ 3
Reading.....	0	- 3	+1	- 1	- 1	-5	+8	+35	+ 1	0
Scranton.....	-4	- 7	-1	- 2	.....	.....	.....	.....	- 1	+ 5
Trenton.....	.....	.....	.....	.....	+ 8	-5	+2	+21	+13	+16
Wilkes-Barre.....	+6	- 1	+5	+ 2	+ 8	-8	+1	+13	+ 9	+14
Williamsport.....	+1	+10	+2	+24	.....	.....	.....	.....	+ 5	+ 7
Wilmington.....	+2	+ 4	+1	+10	.....	.....	.....	.....	-12	+ 7
York.....	-4	- 4	-3	+ 4	+19	+6	+7	+14	+ 1	- 5

*Not restricted to corporate limits of cities but covers areas of one or more counties.

*Pennsylvania

**Adjusted for seasonal variation. †Philadelphia.

*Not restricted to corporate limits of cities but covers areas of one or more counties.

MEASURES OF OUTPUT

	Per cent change		
	August 1951 from		8 mos. 1951 from year ago
	month ago	year ago	
MANUFACTURING (Pa.)	0	+ 3	+13
Durable goods industries.....	+ 1	+12	+22
Nondurable goods industries.....	- 1	- 8	+ 2
Foods	- 2	- 5	+ 1
Tobacco.....	- 6	- 6	+ 3
Textiles.....	- 4	-27	- 6
Apparel.....	+ 2	-10	+ 1
Lumber.....	+ 4	- 7	0
Furniture.....	+ 3	-29	-11
Paper.....	0	- 2	+ 8
Printing and publishing.....	+ 1	+ 1	+ 1
Chemicals.....	- 2	+ 3	+12
Petroleum and coal products.....	- 1	+ 1	+ 3
Rubber.....	0	+14	+23
Leather.....	- 2	-11	0
Stone, clay and glass.....	+ 3	+ 7	+14
Primary metal industries.....	0	+11	+20
Fabricated metal products.....	0	+ 8	+28
Machinery (except electrical).....	0	+18	+26
Electrical machinery.....	+ 3	+15	+21
Transportation equipment.....	+ 2	+20	+29
Instruments and related products.....	+ 2	+21	+33
Misc. manufacturing industries.....	+ 3	+ 9	+21
COAL MINING (3rd F. R. Dist.)*	+15	-21	- 8
Anthracite.....	+12	-24	-11
Bituminous.....	+32	- 7	+12
CRUDE OIL (3rd F. R. Dist.)*	0	- 7	- 1
CONSTRUCTION—CONTRACT AWARDS (3rd F. R. Dist.)†	-13	-13	+21
Residential.....	+14	-16	+11
Nonresidential.....	-38	- 8	+77
Public works and utilities.....	+18	-14	-28

*U.S. Bureau of Mines.

**American Petroleum Inst. Bradford field.

†Source: F. W. Dodge Corporation. Changes computed from 3-month moving averages, centered on 3rd month.

EMPLOYMENT AND INCOME

Pennsylvania Manufacturing Industries*	Employment		Payrolls		Average Weekly Earnings		Average Hourly Earnings	
	Aug. 1951 (Index)	Per cent change from mo. ago year ago	Aug. 1951 (Index)	Per cent change from mo. ago year ago	Aug. 1951	% chg. from year ago	Aug. 1951	% chg. from year ago
All manufacturing	138	+1 + 3	389	0 +13	\$63.27	+10	\$1.59	+11
Durable goods industries.....	168	+1 +10	457	+1 +23	69.91	+12	1.71	+11
Nondurable goods industries.....	108	0 - 6	299	-1 - 3	53.18	+ 4	1.39	+ 8
Foods.....	127	+2 - 1	312	-3 + 4	54.73	+ 4	1.35	+ 7
Tobacco.....	82	-5 - 5	217	-4 + 2	34.87	+ 7	.93	+ 9
Textiles.....	70	-2 -18	193	-3 -21	49.24	- 4	1.36	+ 8
Apparel.....	130	+3 - 6	365	+3 - 5	39.69	+ 1	1.13	+ 7
Lumber.....	157	-4 - 8	430	+5 0	47.62	+ 9	1.10	+ 7
Furniture and lumber products.....	101	+1 -29	290	+3 -26	52.98	+ 4	1.24	+ 4
Paper.....	138	+1 + 1	399	+1 + 7	62.21	+ 6	1.47	+10
Printing and publishing.....	120	+1 0	308	+1 + 6	72.83	+ 6	1.88	+ 6
Chemicals.....	142	-1 + 1	399	-3 + 6	66.86	+ 5	1.57	+ 4
Petroleum and coal products.....	159	0 + 1	434	-1 +10	82.16	+ 9	2.01	+10
Rubber.....	246	+1 +15	736	-3 +28	74.22	+11	1.80	+13
Leather.....	85	-1 - 9	227	-1 - 4	45.65	+ 5	1.20	+ 7
Stone, clay and glass.....	145	+1 + 6	402	+1 +18	63.59	+11	1.60	+10
Primary metal industries.....	144	+1 +10	393	0 +25	76.01	+13	1.90	+12
Fabricated metal products.....	178	0 + 8	481	0 +17	64.02	+ 8	1.58	+ 9
Machinery (except electrical).....	242	0 +15	678	+1 +32	71.05	+14	1.67	+12
Electrical machinery.....	257	+1 +10	622	+3 +31	67.75	+18	1.64	+14
Transportation equipment.....	169	+2 +21	463	+2 +29	77.78	+ 6	1.90	+ 7
Instruments and related products.....	186	-1 +20	531	+3 +31	65.17	+ 9	1.59	+ 8
Misc. manufacturing industries.....	148	+1 +12	386	+4 +16	53.44	+ 3	1.28	+ 6

*Production workers only.

TRADE

Third F. R. District Indexes: 1935-39 Avg.=100 Adjusted for seasonal variation	Aug. 1951 (Index)	Per cent change		
		Aug. 1951 from		8 mos. 1951 from year ago
		month ago	year ago	
SALES				
Department stores.....	304	+ 6	- 5	+5
Women's apparel stores.....	235	+ 4	- 3	+2
Furniture stores.....		+20*	-13*	+3*
STOCKS				
Department stores.....	301P	- 3	+16	.....
Women's apparel stores.....	243	- 6	+ 7	.....
Furniture stores.....		- 1*	+26*	.....
Recent Changes in Department Store Sales in Central Philadelphia				Per cent change from year ago
Week ended September 1.....				0
Week ended September 8.....				- 9
Week ended September 15.....				- 4
Week ended September 22.....				-10
Week ended September 29.....				- 6

*Not adjusted for seasonal variation. P—preliminary.

Departmental Sales and Stocks of Independent Department Stores Third F. R. District	Sales		Stocks (end of month)		
	% chg. Aug. 1951 from year ago	% chg. 8 mos. 1951 from year ago	% chg. Aug. 1951 from year ago	Ratio to sales (months' supply)	
				1951	1950
Total—All departments	- 9	+2	+11	4.1	3.4
Main store total	-11	+2	+12	4.5	3.5
Piece goods and household textiles.....	-15	+3	+31	4.3	2.8
Small wares.....	- 6	0	0	5.0	4.7
Women's and misses' accessories.....	- 5	+3	+ 2	4.5	4.2
Women's and misses' apparel.....	- 3	+6	+13	2.7	2.6
Men's and boys' wear.....	+5	+5	+21	6.3	5.8
Homefurnishings.....	-23	-1	+21	4.7	3.0
Other main store.....	- 4	+2	+23	5.2	4.1
Basement store total	0	+1	+ 5	2.7	2.6
Domestics and blankets.....	-11	+2	+32	2.8	1.9
Small wares.....	+20	-6	- 5	2.2	2.8
Women's and misses' wear.....	0	+1	+ 7	2.0	2.1
Men's and boys' wear.....	+ 6	+4	+ 7	3.4	3.3
Homefurnishings.....	+ 2	-3	+13	3.7	3.5
Shoes.....	+ 1	+6		3.9	3.5
Nonmerchandise total	- 3	+3			

CONSUMER CREDIT

Sale Credit Third F. R. District	Sales		Receiv- ables (end of month)
	% chg. Aug. 1951 from year ago	% chg. 8 mos. 1951 from year ago	% chg. August 1951 from year ago
Department stores			
Cash.....	0	+ 3	.....
Charge account.....	- 8	+ 7	+ 7
Instalment account.....	-29	-12	-13
Furniture stores			
Cash.....	- 1	+ 7	.....
Charge account.....	-11	+18	.....
Instalment account.....	0	+ 8	- 6
Loan Credit Third F. R. District	Loans made		Loan bal- ances out- standing (end of month)
	% chg. Aug. 1951 from year ago	% chg. 8 mos. 1951 from year ago	% chg. August 1951 from year ago
Consumer instalment loans			
Commercial banks.....	0	- 6	- 3
Industrial banks and loan companies.....	- 4	0	+ 2
Small loan companies.....	+21	+14	+10
Credit unions.....	+ 7	+ 4	+ 8

PRICES

Index: 1935-39 average = 100	Aug. 1951 (Index)	Per cent change from		
		month ago	year ago	
Wholesale prices—United States	221	-1	+ 7	
Farm products	251	-2	+ 7	
Foods	237	+1	+ 7	
Other	206	-1	+ 8	
Consumer prices				
United States	186	0	+ 7	
Philadelphia	185	0	+ 8	
Food	220	0	+ 7	
Clothing	202	0	+11	
Rent				
Fuel	152	+1	+ 5	
Housefurnishings	220	-1	+12	
Other	169	0	+10	
Weekly Wholesale Prices—U.S. (Index: 1935-39 average = 100)	All com- modi- ties	Farm prod- ucts	Foods	Other
Week ended Spetember 4	219	249	238	204
Week ended September 11	219	250	239	204
Week ended September 18	219	248	238	204
Week ended September 25	219	251	238	203
Week ended October 2	220	251	240	204

Source: U.S. Bureau of Labor Statistics.

BANKING

MONEY SUPPLY AND RELATED ITEMS United States (Billions \$)	Aug. 29 1951	Changes in—	
		five weeks	year
Money supply, privately owned.....	177.0	+1.2	+6.0
Demand deposits, adjusted.....	91.4	+ .7	+4.0
Time deposits.....	60.4	+ .3	+1.2
Currency outside banks.....	25.3	+ .2	+ .8
Turnover of demand deposits.....	21.7*	+1.9*	+ .5*
Commercial bank earning assets.....	127.0	+1.1	+3.5
Loans.....	55.2	+ .6	+7.8
U.S. Government securities.....	59.1	+ .5	-5.2
Other securities.....	12.7	0	+ .9
Member bank reserves held.....	18.9	- .2	+2.6
Required reserves (estimated).....	18.5	0	+2.7
Excess reserves (estimated).....	.4	- .2	- .1

Changes in reserves during 5 weeks ended August 29
reflected the following:

	Effect on reserves
Increase in Reserve Bank loans.....	+ .2
Decrease in other Federal Reserve Bank credit.....	- .3
Increase of currency in circulation.....	- .3
Net payments to the Treasury.....	- .1
Other transactions.....	+ .3
Changes in reserves.....	- .2

* Annual rate for the month and per cent changes from month and year ago
at leading cities outside N. Y. City.

OTHER BANKING DATA	Sept. 26 1951	Changes in—	
		five weeks	year
Weekly reporting banks—leading cities United States (billions \$):			
Loans—			
Commercial, industrial and agricultural.....	20.1	+ .6	+ 4.3
Security.....	1.9	+ .1	- .3
Real estate.....	5.6	0	+ .6
To banks.....	.4	0	+ .1
All other.....	5.9	0	+ .3
Total loans—gross.....	33.9	+ .7	+ 5.0
Investments.....	37.9	+ .4	- 2.3
Deposits.....	81.3	+1.2	+ 4.1
Third Federal Reserve District (millions \$):			
Loans—			
Commercial, industrial and agricultural.....	805	+ 17	+215
Security.....	43	+ 3	- 7
Real estate.....	142	0	+ 10
To banks.....	5	0	- 7
All other.....	390	- 1	+ 18
Total loans—gross.....	1,385	+ 19	+229
Investments.....	1,507	- 3	-215
Deposits.....	3,198	+ 9	+ 35
Member bank reserves and related items United States (billions \$):			
Member bank reserves held.....	19.4	+ .2	+ 2.7
Reserve Bank holdings of Governments.....	23.5	+ .4	+ 4.1
Gold stock.....	22.0	+ .2	- 1.5
Money in circulation.....	28.1	+ .2	+ 1.1
Treasury deposits at Reserve Banks.....	.8	+ .4	- .3
Federal Reserve Bank of Phila. (millions \$):			
Loans and securities.....	1,501	+ 44	+212
Federal Reserve notes.....	1,690	+ 11	+ 83
Member bank reserve deposits.....	912	+ 15	+139
Gold certificate reserves.....	1,204	- 8	- 30
Reserve ratio (%).....	44.5%	- .8%	- 4.6%

FEDERAL RESERVE BANK
OF ST. LOUIS

1951 OCT 22 PM 1 55

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ROOM 12