MONTHLY REVIEW

Agricultural and Business Conditions

TENTH FEDERAL RESERVE DISTRICT

OPERATING CAPITAL REQUIREMENTS
OF AGRICULTURE

Farmers currently are using a record amount of goods and services for producing agricultural products and are paying record prices for them. Consequently, farmers' needs for operating capital are larger than they ever have been previously. Most of this operating capital is being provided by the farmers themselves from funds obtained through their farming operations. However, the rapidly expanding need for operating capital has made it necessary for farmers to borrow increasing amounts of money with which to conduct their business. In recent years, a major proportion of the borrowed funds has been obtained through non-real-estate loans. On January 1, 1949, 1950, and 1951, non-real-estate farm debt exceeded real-estate farm debt. Prior to 1949, real-estate debt always had been substantially larger than non-real-estate debt. The increasing importance of non-real-estate farm debt indicates that commercial banks are becoming relatively more important as a source of funds for financing agriculture, since they make a much larger proportion of the non-real-estate loans than they do of the real-estate loans.

The large increase in operating capital requirements for agriculture has created problems for both farmers and the firms that finance farm operations. The use of large amounts of operating capital, a significant proportion of which is obtained through non-real-estate loans, in some respects makes commercial farming a more hazardous occupation than it was previously. Unfavorable conditions in agriculture could create large losses and cause individual farmers to suffer from a shortage of liquid funds within a limited period of time. The importance of operating capital to modern-day agriculture has been responsible for a growing interest in agricultural production expenses and in the changing importance of non-real-estate farm debt.

Agricultural Production Expenses Operating capital in agriculture is needed to finance production expenses and non-real-estate investment items. The total amount of production expenses incurred by farmers is determined by the quantity of goods and services they use and by the prices they must pay for these goods and services. If the quantity of goods and services used were constant, an index of total production expenses would vary with the fluctuations in the index of prices paid by farmers. On the other hand, if the quantity of goods and services used were to increase while prices paid by farmers were relatively constant, an index of total production expenses would increase in accordance with the quantity used. If both the quantity used and prices paid should increase, the index of total production expenses would increase more rapidly than the index of prices paid by farmers for goods and services.

In the accompanying chart, it should be noted that these two indexes fluctuated together from 1910 until the mid-1930's. However, since the mid-1930's, the index of total production expenses has increased more than twice as rapidly as the index of prices paid by farmers. Total production expenses for all farmers in the United States were about four and one half times as large in 1951 as they were during the mid-1930's and more than two and one half times as large as they were at the time of the 1920 peak following World War I. About one half of the increase in total production expenses since the mid-1930's has been accounted for by the higher prices that farmers were required to pay for the goods and services they purchased. The remaining one half represents a larger quantity of goods and services purchased. In this respect, the increase in total production expenses from the mid-1930's to 1951 was in contrast with that which took place from 1915 to 1920, when practically

all of the increase was accounted for by the higher prices that farmers were required to pay for the goods and services they purchased.

The increasing quantity of goods and services purchased by farmers since the mid-1930's can be accounted for by the fact that farmers have adopted many of the technological improvements that have been perfected for agriculture. Many of these improvements were perfected prior to the mid-1930's, but they were not used by farmers to any appreciable extent during the 1930's because of the generally unfavorable profit ratios and unemployed resources that existed in agriculture. The prosperous conditions that existed on the nation's farms during the 1940's, along with a relative shortage of many resources, provided an incentive for farmers to adopt progressive methods and also encouraged research workers and technicians to develop better and more efficient methods for producing agricultural products.

A fully employed economy since the early 1940's has provided an opportunity for underemployed people in agriculture to use their labor more effectively in the nonagricultural sectors of the economy. Farm employment decreased from approximately 11.7 million during the mid-1930's to about 10 million during 1951. In this same period, farm wage rates increased by approximately 300 per cent. The declining supply of farm labor, rapidly increasing wage rates, and generally prosperous conditions in agriculture have encouraged farmers to use more power machinery, electrical energy, and other labor saving devices. During the past twenty years, farmers in the United States have increased the number of motor trucks used by approximately 140 per cent and the number of tractors used by almost 300 per cent. The number of farms using electricity has increased by about 400 per cent since 1930. These figures are an indication of the degree to which agriculture has mechanized during the past twenty years.

This trend toward mechanization of American farms has been an important factor influencing the quantity of goods and services farmers purchase. With modern-day equipment it is necessary for farmers to purchase fuel, oil, and electrical energy for cash, while under the old system of farming a major part of the energy needed to provide power was produced on the farm. In addition to purchasing the necessary energy for cash, farmers today must purchase much more elaborate and expensive equipment. This causes production expenses such as machinery

PRODUCTION EXPENSES AND PRICES PAID BY FARMERS

1935-39=100
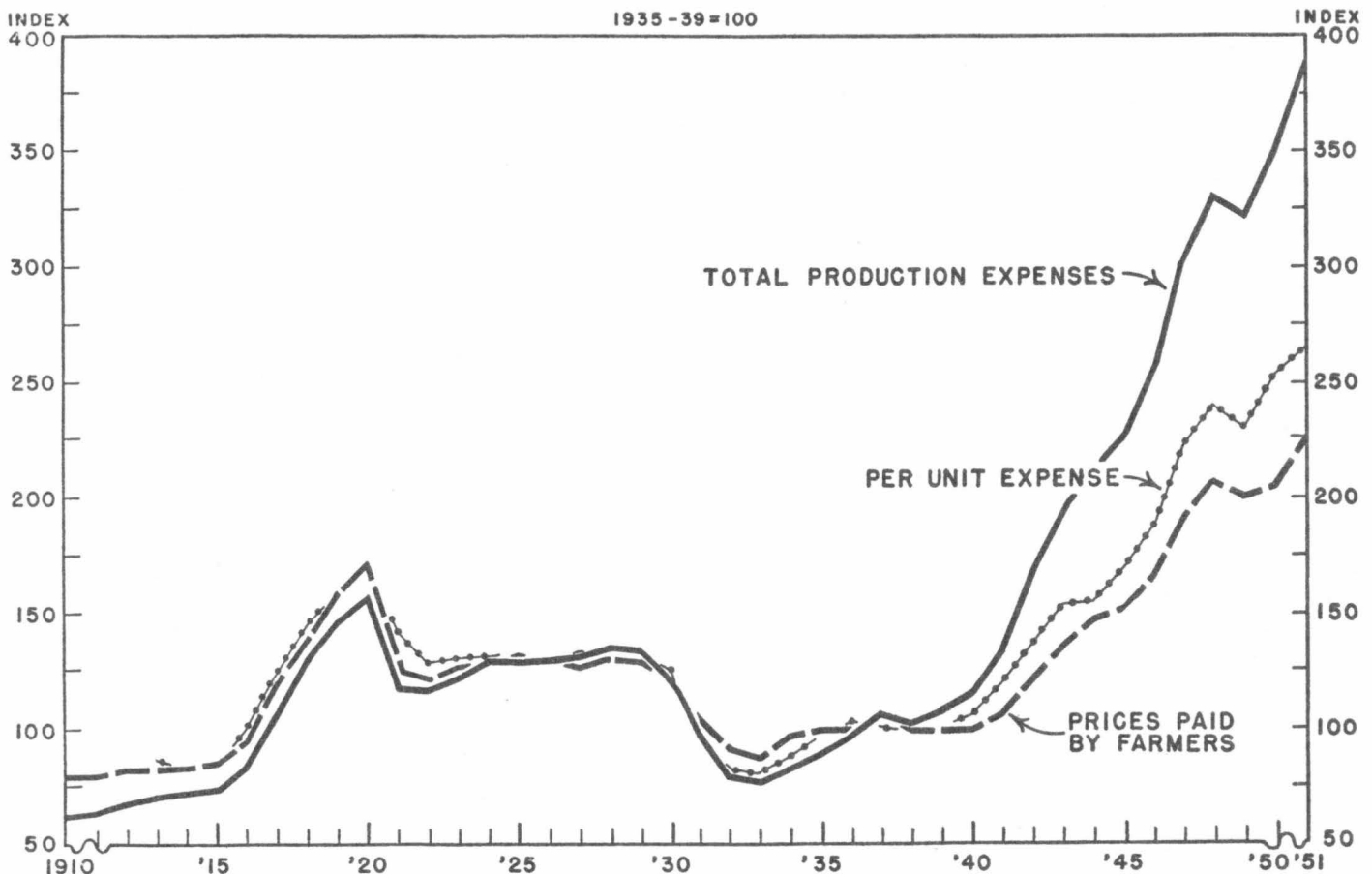
depreciation, repairs, taxes, insurance, and obsolescence to be much more important than previously. Power equipment and electrical energy have enabled farmers to produce agricultural products much more efficiently in terms of labor requirements, but their use has caused production expenses that must be paid for with cash to become significantly more important.

Other items that farmers have been purchasing in increasing quantities during recent years include fertilizer, insecticides, chemicals for weed and disease control, hybrid seed, certified seed, commercial feeds, biological supplies, and various types of professional services. Proper utilization of all these goods and services is necessary for efficient agricultural production. However, their use causes cash production expenses in agriculture to increase, and these additional expenses must be financed.

Insofar as the incurring of additional production expenses results in increased agricultural output, expenditures for these goods can be considered as an expansion in the size of the agricultural industry. A knowledge of production expenses on a per unit basis is useful in determining to what extent the increased production expenses of recent years represent an expansion in the size of the agricultural industry. In an effort to develop an index of production expense per unit of output, the index of total production expenses was adjusted for variation in physical output by dividing the index of total production expenses by the Bureau of Agricultural Economics' index of physical agricultural production.

This index of per unit production expense is also shown in the accompanying chart. Total production expenses and per unit production expense followed the same general trend rather closely from 1913 to the mid-1930's. Since the mid-1930's, total production expenses have increased at a much more rapid rate than has per unit production expense, although production expenses on a per unit basis have increased more rapidly than has the index of prices paid by farmers. This seems to indicate that production expenses have increased because of increases in the quantity of purchased goods and services per unit of output, as well as because of increases in prices and expansion in size of the agricultural industry, since the adoption of many of the technological innovations of recent years has made it necessary for farmers to purchase goods and services which previously were contributed directly by the farm itself or through labor provided by the farmer or members of his family, thus substituting a cash production expense for a noncash production expense.

Another significant factor is that since the mid-1930's the number of farms has declined approximately 20 per cent while total farm production expenses increased by approximately 350 per cent. Thus, the requirements for operating capital on a per farm basis have increased substantially more than the 350 per cent increase in total production expenses.

Non-Real-Estate Farm Debt In view of the preceding discussion, it is apparent that the increased need for operating capital by farmers during recent years can be attributed to (1) the acceptance of technological innovations, which usually make it profitable for farmers to expand the volume of their output or substitute a cash production expense for a noncash production expense, and (2) the increasing prices that farmers have been required to pay for the goods and services they buy. This need for increasing amounts of operating capital on farms during recent years has caused a shift in the relative importance of total short-term debt in agriculture as compared with total farm-mortgage debt. Prior to 1949, total farm-mortgage debt always had been substantially more important than non-real-estate farm debt. However, by January 1, 1949, non-real-estate farm debt had become more important than farm-mortgage debt, and it has remained more important since that time. On July 1, 1951, the total non-real-estate debt owed by farmers exclusive of Commodity Credit Corporation loans was estimated by the United States Department of Agriculture to be 7.4 billion dollars, as compared with a total farm-mortgage debt of 6.2 billion dollars.

The current significance of non-real-estate farm credit makes it important to consider whether the trend toward the use of more credit of this type is caused by basic factors which tend to be permanent in nature or whether it is caused by factors that might be subject to rapid change. Insofar as the trend toward the use of this type of credit is caused by basic factors that tend to be permanent in nature, commercial banks will be relied upon to finance a larger proportion of total farm loans.

In a study on trends in non-real-estate farm debt, made by the United States Department of Agriculture and published in the November, 1951, issue of the *Agricultural Finance Review*, an analysis was made of the changing trends in non-real-estate farm debt and farm-mortgage debt. This study points out that non-real-estate farm debt during the period from 1910 to 1920 rose rapidly under the stimulus of wartime conditions. However, following the break in agricultural prices in 1920 and again during the early 1930's, this type of farm debt was reduced rather rapidly. The rapid adjustment of non-real-estate debt was possible because this type of debt is short-term in nature and because farm expenditures were reduced to the lower levels of income very quickly. Im-

proving conditions in agriculture following 1935 caused non-real-estate debt again to increase, and it has continued to increase up to the present time. Currently, non-real-estate farm debt is at a record high level.

On the basis of this historical analysis, it might appear as though the current large non-real-estate farm debt is caused by the high level of economic activity that now prevails. If this is the explanation, non-real-estate farm debt would be expected to decline rather rapidly if economic activity should become unfavorable. However, the preceding discussion on agricultural production expenses indicates that a substantial part of this increasing debt during recent years is a result of changing methods of production in agriculture. In these circumstances, non-real-estate farm debt probably could not be reduced as easily now, in case of a prolonged period of unfavorable agricultural prices, as it could during such previous periods. The use of power machinery, commercial fertilizer, insecticides, chemicals, improved seeds, improved livestock, and many other goods and services has become firmly established in present-day farming. The use of these types of goods and services increases the cash outlays required for operating a farm, even though it may reduce per unit costs of production.

Farmers cannot significantly reduce the use of these goods and services without substantially diminishing their volume of output. Once a farmer has shifted from the use of animal power to that of mechanical power, it is extremely difficult for him to shift back to the use of animal power if an unfavorable period should occur. Even if the shift could be made, it would be at the expense of maintaining agricultural production. If conditions in agriculture became so unfavorable that a depression prevailed and farmers attempted to reduce their cash costs by purchasing reduced quantities of fertilizer, chemicals, fuel, electrical power, and other types of goods and services that they now use, total agricultural production also would decline.

If such a phenomenon should occur, the traditional stability of total agricultural production through periods of extreme depression probably would not be maintained. In case of a severe depression in the future, agricultural production probably would be more unstable than it has been during past periods of extreme depression, since commercial farming as practiced today is highly specialized and farmers are dependent on other people to provide them with many goods and services which can only be obtained by an outlay of cash. If operating capital is difficult to obtain, or if farmers choose not to buy as many goods and services, the use of many practices that are necessary for obtaining a high volume of production would be discontinued. On the other hand, a large demand for non-real-estate farm loans probably would continue to exist even though conditions in agriculture should become quite unfavorable.

There are, however, several more volatile factors that are influencing the current high level of non-real-estate farm debt. The high prices that prevail for goods and services used in farm production are an important element in the present demand for production loans. The index of prices paid by farmers was 288 in March of this year. This was approximately 2 per cent higher than it was in July of 1951, when non-real-estate farm debt was at a record high, and about 89 per cent higher than the 1940-44 average. A decrease in prices paid by farmers, or an unfavorable situation with respect to prices received for farm products, would tend to cause non-real-estate farm debt to decline.

A significant part of the non-real-estate farm debt during recent years has resulted from financing livestock enterprises. Livestock prices have been high and it has been necessary for some types of livestock producers to borrow large amounts of funds to conduct their operations. Abundant feed production and a high demand for livestock products have encouraged farmers to expand production of most types of livestock. A reduction in livestock inventories would tend to cause non-real-estate farm debt to decline.

Still another factor that has had an influence on the quantity of non-real-estate farm credit used during recent years has been the favorable incomes that have existed in agriculture. Many farmers during the past few years have used non-real-estate credit for major improvements and for purchasing farms. With favorable incomes it has been unnecessary for them to use the additional time and undergo the additional expense of obtaining long-term farm-real-estate loans. If farm income should become less favorable, non-real-estate loans for major improvements or farm purchases would become less important.

After considering both the so-called permanent and the more changeable factors that influence the importance of non-real-estate farm debt, it is apparent that prolonged periods of unfavorable agricultural conditions in the future would again tend to cause non-real-estate farm debt to decline both absolutely and in relation to farm-mortgage debt. However, the downward adjustment of this type of debt in all probability would not occur as rapidly as it did in previous periods of unfavorable agricultural conditions, such as those that prevailed during the early 1920's and again during the early 1930's.

In its study on trends in non-real-estate farm debt, the Department of Agriculture also made an analysis

of regional trends in the use of non-real-estate farm loans. The study points out that use of this type of loan varies from region to region, depending on differences in growth or contraction of the farming industry, technological advancement, shifts in type of farming, severity of distress, extent of wartime prosperity, the amount of debt farmers believe they can repay, and the amount of credit lenders are willing to extend.

An analysis of the non-real-estate debt owed to the principal lending institutions reveals that this type of debt in the Great Lakes states, Corn Belt states, and Great Plains states was substantially lower on July 1, 1951, than on July 1, 1920. However, in the Pacific, Northeastern, and Rocky Mountain regions, non-real-estate farm loans were significantly higher than during 1920. In general, non-real-estate farm debt in most areas declined from 1920 to 1935 and increased from 1935 to 1951. However, the rates of change varied significantly. The Corn Belt states experienced the severest liquidation of non-real-estate farm debt between 1920 and 1935, while the Rocky Mountain and Pacific states experienced the least amount of liquidation of this type of debt. Credit expansion during the period from 1935 to 1951 was smallest in the Great Plains region.

The study made by the Department of Agriculture states that the area where non-real-estate farm debt is now most important in relation to farm-mortgage debt is in the Great Plains region. This is caused primarily by the fact that the amount of farm-mortgage debt outstanding in the Great Plains is quite small at the present time. Reasons for the extensive use of non-real-estate credit in relation to real-estate credit in this region are listed as widespread mortgage foreclosures during the depression, large-scale repayments, much lower land values in relation to many other areas in the United States, and the hesitancy to incur long-term loans. The fact that non-real-estate loans are used extensively in the Great Plains region would indicate that commercial banks in the Tenth District are relatively more important as a source of agricultural credit than are commercial banks in other areas, since much of the District lies in the Great Plains region.

Summary A fivefold increase in agricultural production expenses during the past two decades has resulted in a large increase in operating capital requirements of farmers. Much of the increased capital needed has been provided by farmers themselves from funds obtained through farming operations. However, the fact that non-real-estate farm debt currently is at an all-time record high indicates that it has been necessary for farmers to borrow additional funds in order to finance this rapid expansion in operating capital requirements. Furthermore, the present relationship between non-real-estate and real-estate farm debt indicates that the rapid expansion in operating capital requirements has had an influence on the types of farm loans that farmers use. Farmers have been placing more emphasis on non-real-estate loans and less emphasis on real-estate loans. Part of this increased importance of non-real-estate farm loans is caused by basic factors that tend to be permanent in nature. To the extent that the permanent factors are responsible for the increased importance of this type of loan, a period of unfavorable conditions in agriculture would probably not be accompanied by a rapid decline in non-real-estate farm loans. However, insofar as the factors causing a high level of non-real-estate farm loans are subject to change, a period of unfavorable agricultural conditions could cause this type of debt to decline. When all factors are considered, it appears as though a period of unfavorable agricultural conditions would be accompanied by a decline in non-real-estate farm loans, both absolutely and in relation to farm-mortgage loans. However, this type of loan would not decline in importance as rapidly as during previous periods of agricultural depression. Agricultural production, on the other hand, probably would decline more severely than during past periods of agricultural depression, if farmers should be unable to obtain adequate operating capital or unwilling to purchase as large a quantity of goods and services, since cash costs in agriculture are much more important now than they were previously.

BUSINESS CONDITIONS

MEMBER BANK CREDIT

In spite of the record volume of Treasury tax receipts during the month of March, there was a decline in demand deposits of only 32 million dollars at all District member banks. From February 27 to March 26, city banks in the District experienced a decline of 31 million dollars in interbank demand deposits and an increase of 6 million in other demand deposits; demand deposit losses at country banks were limited to 7 million dollars. This result is in contrast with the contraction of 149 million dollars which

SELECTED ITEMS OF CONDITION OF TENTH DISTRICT MEMBER BANKS
(In millions of dollars)

	ALL MEMBER BANKS			RESERVE CITY BANKS			COUNTRY BANKS		
	Mar. 26 1952	Feb. 27 1952	Mar. 28 1951	Mar. 26 1952	Feb. 27 1952	Mar. 28 1951	Mar. 26 1952	Feb. 27 1952	Mar. 28 1951
Loans and investments	5,052	5,075	4,679	2,839	2,866	2,584	2,213	2,209	2,095
Loans and discounts	2,049	2,042	1,986	1,189	1,189	1,182	860	853	804
U. S. Government obligations	2,492	2,531	2,219	1,366	1,400	1,144	1,126	1,131	1,075
Other securities	511	502	474	284	277	258	227	225	216
Reserve with F. R. Bank	877	891	872	523	545	545	354	346	327
Balances with banks in U. S.	707	689	556	311	283	239	396	406	317
Cash items in process of collection	290	335	285	266	314	264	24	21	21
Gross demand deposits	5,766	5,798	5,381	3,318	3,343	3,074	2,448	2,455	2,307
Deposits of banks	951	983	809	880	911	745	71	72	64
Other demand deposits	4,815	4,815	4,572	2,438	2,432	2,329	2,377	2,383	2,243
Time deposits	809	798	688	423	417	370	386	381	318
Total deposits	6,575	6,596	6,069	3,741	3,760	3,444	2,834	2,836	2,625
Borrowings	18	71	20	14	65	15	4	6	5

occurred among District member banks in the corresponding period of 1951. Although the failure of quarterly tax payments to be reflected in immediate loss of deposits at commercial banks is due to the procedure of crediting large checks to the Treasury Tax

BANK DEBITS

	Mar. 1952	3 Mos. 1952	Change from '51 Mar.	Change from '51 3 Mos.
	(Thousand dollars)		(Per cent)	
COLORADO				
Colo. Springs	55,559	168,025	−4	−1
Denver	754,516	2,199,086	−1	+2
Gr. Junction	18,132	51,909	−4	−4
Greeley	27,960	85,997	−7	−4
Pueblo	50,091	148,684	−7	−5
KANSAS				
Atchison	9,904	32,948	−17	−7
Emporia	11,618	37,391	−14	−10
Hutchinson	42,820	139,924	−5	+7
Independence	8,624	26,415	+5	+9
Kansas City	89,594	268,643	−3	+3
Lawrence	13,583	41,117	0	+9
Manhattan	11,716	37,896	+1	+9
Parsons	11,156	33,880	+25	+27
Pittsburg	13,542	40,817	−5	−1
Salina	33,775	118,592	−12	0
Topeka	107,960	314,937	−3	−2
Wichita	358,405	1,081,053	+8	+16
MISSOURI				
Independence	12,732	42,159	−1	+12
Joplin	33,190	98,842	+3	+7
Kansas City	1,277,677	3,845,747	−5	0
St. Joseph	104,120	349,159	−12	−3
NEBRASKA				
Fremont	20,439	62,817	+4	−1
Grand Island	31,550	95,320	+2	+10
Hastings	14,915	46,413	−10	−6
Lincoln	96,819	285,568	−4	−1
Omaha	641,810	1,902,440	−6	−5
NEW MEXICO				
Albuquerque	139,034	408,013	−1	+5
Santa Fe	35,977	96,852	−2	−3
OKLAHOMA				
Bartlesville	189,168	581,483	+6	+17
Enid	37,657	113,726	+1	+3
Guthrie	5,101	16,165	−7	+1
Lawton	20,833	61,944	+8	+15
Muskogee	29,651	90,352	+3	+6
Norman	9,000	26,590	−1	0
Okla. City	416,687	1,269,412	−4	+4
Okmulgee	7,668	22,900	−6	−1
Ponca City	21,875	65,937	+3	+3
Tulsa	709,956	2,068,118	+19	+16
WYOMING				
Casper	48,557	139,186	+31	+30
Cheyenne	42,170	127,549	+11	+11
District, 40 cities	5,565,541	16,644,006	0	+4
U. S., 342 cities	139,974,000	406,517,000	−3	+3

and Loan Accounts at commercial banks, as well as to some delay in processing the large volume of checks, the smaller decline of demand deposits at member banks during March, 1952, appears attributable to heavier Government spending in the District. This larger volume of expenditures is reflected in a reduction of 53.7 million dollars in the Treasury deposit with the Federal Reserve Bank of Kansas City during the period from February 27 to March 26, 1952, in comparison with a net accumulation of 24.3 million dollars in this account during the corresponding period of 1951.

The decline of deposits at District reserve city banks, together with repayment of 51 million dollars of borrowing was accommodated through a contraction of 34 million in holdings of Government securities, chiefly Treasury bills, and by a reduction of reserves with the Federal Reserve Bank and of cash items in process of collection amounting to 22 million and 48 million, respectively. Government security portfolios at District country member banks declined by 5 million dollars, while no net change was recorded in the total of reserves with the Federal Reserve Bank, balances with commercial banks, and cash items in process of collection.

The moderate decline in total loan volume at all District member banks which occurred during January and February was replaced during the four weeks ending March 26 by an expansion of 7 million dollars. This increase occurred entirely at country member banks and represented a continuation of the average monthly rise in loan volume at these banks during January and February. Loan volume at District reserve city banks, which had declined by 39 million dollars in the first two months of the year, showed only a nominal increase during March. Loans at all District country member banks stood at 860 million dollars on March 26, an increase of 56 million dollars over the level for the corresponding date in 1951. This change represents an increase approximately equal to that recorded for this group of banks between March 29, 1950, and March 28, 1951. Loan

volume at District reserve city banks stood at 1,189 million dollars on March 26, an increase of only 7 million during the preceding twelve months, as compared with an increase of 242 million dollars in the period from March 29, 1950, to March 28, 1951.

DEPARTMENT STORE TRADE

The dollar volume of sales at reporting department stores in this District in March was 11 per cent under that of a year earlier. Part of this decrease was due to one less shopping day this year, as sales on a daily average basis were only 8 per cent under last year. A larger part of the decrease, however, reflected the fact that Easter this year was on April 13, considerably later than it was last year, when Easter fell on March 25. It has been estimated that this variation in the Easter date alone would account for a decrease in sales of about 6 per cent from last year for the month of March as a whole and for a corresponding increase of 6 per cent for the month of April as a whole. In the first three weeks of April, which included the major concentration of Easter buying this year, dollar volume of sales was 11 per cent higher than that of a year earlier. Sales increased slightly less than is usual from February to March, after allowance for Easter and other seasonal influences, and the seasonally adjusted index of daily average sales declined from 106 per cent of the 1947-49 average in February to 105 per cent in March.

Department store inventories also increased slightly less than is usual during March, and the seasonally adjusted index of stocks declined from 122 per cent of the 1947-49 average at the end of February to 121 per cent at the end of March. The retail value of stocks of merchandise on hand March 31 was 9 per cent below the level of a year ago, and the volume of outstanding orders was about one fourth lower.

DEPARTMENT STORE SALES AND STOCKS

	SALES Mar. 1952 comp. to Mar. 1951	SALES 3 Mos. 1952 comp. to 3 Mos. 1951	STOCKS Mar. 31, 1952 comp. to Mar. 31, 1951
	(Per cent increase or decrease)		
Denver	—14	—15	—10
Pueblo	—19	—19	—25
Hutchinson	—14	—16	—3
Topeka	—15	—7	0
Wichita	—15	—11	—4
Joplin	—12	—11	—8
Kansas City	—15	—9	—6
St. Joseph	—17	—16	*
Omaha	—4	—4	—17
Oklahoma City	—6	—9	—15
Tulsa	+4	—2	*
Other cities	—14	—12	—8
District	—11	—10	—9

*Not shown separately but included in District total.

CERTIFICATES OF NECESSITY

The issuance of Certificates of Necessity by the Defense Production Administration, which encourages essential industrial expansion by authorizing rapid tax amortization of new facilities, provides an indicator of the degree of participation by various regions in the industrial expansion accompanying the defense program. Some important limitations, however, are involved in using the data for this purpose. The mere issuance of a certificate does not guarantee that construction will actually be undertaken, and frequently the location of the proposed facility has not been decided at the time of authorization. Moreover, many certificates are issued to corporations which cover expansions at several locations, and certificates issued to railroad and pipeline companies are listed at the company's home office while the geographical spread on this type of improvement is apt to be very wide. The Tenth District share of the 8,021 certificates issued from January 25, 1951, to March 7, 1952, was 3.4 per cent. However, the District received only 2.9 per cent of the total amount of 16 billion dollars certified, indicating that the average size of facility receiving special tax treatment is smaller in the District than in the nation as a whole. This compares rather closely with the Tenth District's proportion of all industrial expansion in the United States since 1945. The District share was 3.2 per cent of the national expansion from July, 1945, through June, 1951, according to information supplied by Engineering News Record. The District also received 3.0 per cent of the expenditures for new plants and equipment in the nation in 1947 as reported in the Census of Manufactures. However, in 1947 it had only 2.3 per cent of the nation's employees in manufacturing, and manufacturing firms in the District accounted for only 2.6 per cent of the value added by manufacture.

Certificates of Necessity issued through February 25, 1952, in the United States are heavily concentrated in several industries, with 27 per cent of the total amount issued to the primary metal industries. Line-haul operating railroads received 14 per cent for the next highest amount. The chemicals, petroleum, and transportation equipment industries also received a large portion of the amount certified. The Tenth District pattern is only moderately different from that of the United States. As of March 7, 1952, more than 100 million dollars, which constituted 24 per cent of the District total, was for petroleum expansion. Approximately 85 million dollars, or 19 per cent, went to line-haul operating railroads. The bulk of the remainder in the District

was allocated as follows: pipeline transportation, 14.5 per cent; aircraft and parts, 7.6 per cent; chemicals, 5.9 per cent; rubber, 4.5 per cent; and primary and fabricated steel products, 8.3 per cent. It is relevant to note the lack of certificates for firms in the food and kindred products industry throughout the nation. While approximately one third of the manufacturing employment and one fourth of the expenditures for new plants and equipment in the District in 1947 were in the food industry, only 1.5 per cent of the defense expansion certified in the District has been in this industry.

Kansas is leading the other states in the District in the amount of certificates received, followed by Nebraska, Colorado, and Oklahoma in that order. Omaha, with 73 million dollars in certificates, leads the other cities in the District, but 67 million of this amount went to a line-haul operating railroad and most of the funds will not go for expansion within the city. Kansas City has been awarded certificates totaling 59 million dollars, which provide for an expansion of 22 million dollars in petroleum products, 21.5 million dollars in aircraft, 8 million dollars in machinery, and 5.5 million dollars for line-haul operating railroads. Another important expansion is occurring in Pueblo in the steel industry. Approximately 34 million dollars in certificates have been issued to firms there. Certificates issued to the other principal cities in the District were: Wichita, 16 million dollars; Denver, 14.6 million dollars; Topeka, 13.9 million dollars; Tulsa, 10.6 million dollars; Oklahoma City, 4.7 million dollars; and Lincoln, 1 million dollars.

DEFENSE CONTRACTS

Military Prime Contracts, by State is the only release which gives a breakdown of all military contracts by state. However, this report gives no indication of the amount of work done by branch plants or through subcontracting, and small contracts making up 8 per cent of the total are not allocated to the states. The seven Tenth District states received over 1.4 billion dollars in military prime contracts from July, 1950, through December, 1951. This accounted for 3.3 per cent of the United States total for the period. The total for the seven states for the last six months is only 2.7 per cent of the national total. Military construction contracts in the District from July, 1950, to June, 1951, equaled 7 per cent of the United States total; for the last six months of 1951 the share was 5 per cent. The relatively high proportion spent for military construction in the District indicates the increasing importance of military bases in the economy of the region.

Area and commodity breakdowns of defense contracts are available in the *Public Contracts Bulletin*. These data do not include information on classified contracts, and the dollar amount was not shown for contracts in excess of $250,000 from August 1, 1951, to February 6, 1952. The transportation equipment industry, chiefly the aircraft industry, received 35 per cent of the contracts listed for the Tenth District during the last six months. Firms in the following industries also received significant proportions of the contracts awarded: machinery industries, 15 per cent; metal industries, 12 per cent; food industry, 9 per cent; and the petroleum industry, 9 per cent.

Kansas leads the other District states in the value of defense contracts received in the last six months, followed by Colorado, Oklahoma, and Nebraska. Firms in the Kansas City area lead the other cities in the District in the number of defense contracts awarded; they have received 36 per cent of the total number and 21 per cent of the dollar amount. However, the contracts received by Wichita firms have a higher dollar value, amounting to 36 per cent of the District total. Contracts in Wichita are concentrated in the aircraft industry. On the other hand, the contracts received by Kansas City firms are distributed quite widely, with firms in the food, machinery, metals, chemicals, and paper industries all receiving substantial amounts. A large volume of contracts was also received by Tulsa firms for petroleum, metal, and machinery items; by Denver firms for machinery and aircraft products; and by Omaha firms for machinery products. The remaining defense contracts were widely scattered.