production. By 1946, there were about 580 establishments and almost 60,000 wages earners (90 of the additional establishments were in Illinois). About one-fourth of the seven-state area plants are located in the Eighth District proper, most of them (aside from pulp mills) in the St. Louis, Louisville, and Memphis industrial areas.

Lumber requirements for the paper and allied products industry are in terms of pulp mill requirements and, generally speaking, pulp mills need extensive holdings of timber to assure operations. Proper forest management is a "must" for pulp producers because pulp mills are expensive and are long-term ventures.

In 1939, there were but 11 pulp mills in the seven district states combined, and because of the Census disclosure rule, there is little published data on employment, payrolls or output. There were 49 paper and paperboard mills in the district states in that year, most of them lying outside the district proper in Illinois and Indiana. In the 38 mills in those two states, employment in 1939 was 5,500 persons, and production was $42 million in goods which included a value added by manufacture of $20 million. Per worker value produced thus was $7,500 and value added $3,600.

More than 200 paperboard container plants were in the district states in 1939 with about one-third in the district proper. The balance of the establishments in the industry produced items mentioned above: bags, various types of paper stock, envelopes, etc. The great bulk of these plants lay outside the district.

OTHER WOOD-USING INDUSTRIES

Wood is also used in a variety of other industries. The table on wood requirements gives some indication of lines not included in the basic or finished lumber and paper industries. It does not include, however, the chemicals industry which uses wood to produce turpentine, charcoal and many other products.

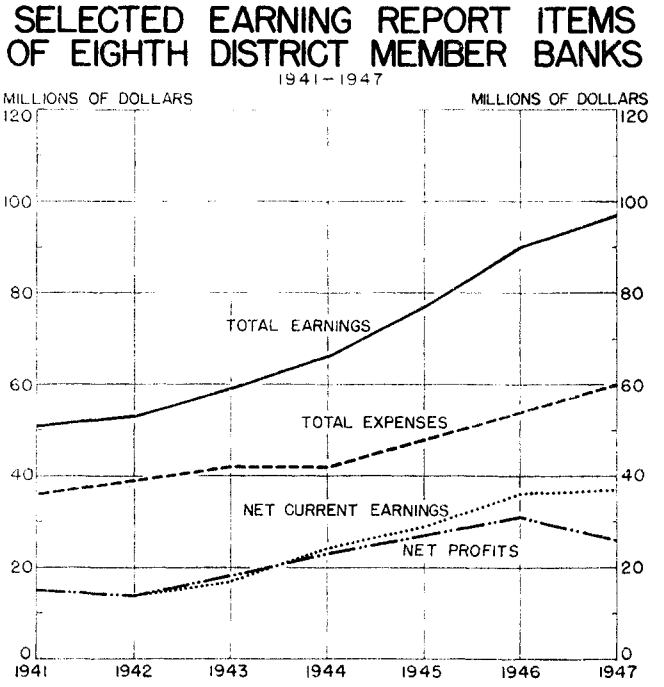
These wood distillation lines do not occupy a very prominent position within the district proper, although there are a few plants engaged in such operations. Because of the small number of establishments, Census data, even on a state basis, are not available for the industry since it would violate the Census disclosure rules. There are possibilities for industrial expansion in these lines, and some of them will be pointed out in a subsequent article.

Weldon H. Stein.

Member Bank Earnings in 1947

Total earnings of Eighth District member banks in 1947 were substantially larger than in 1946, and income tax liabilities were smaller, but increased operating expenses and net charge-offs resulted in a substantial decline in net profits after taxes. Capital accounts increased and the ratio of net profits after taxes to capital accounts declined appreciably from 1946 to 1947. The capital-deposit ratio rose, but with the rise in loans the ratio of capital to risk assets declined.[1]

The chart shows total earnings, total expenses, net current earnings and net profits for the years 1941 through 1947. It may be noted that total earnings have increased steadily but total expenses also have grown steadily. The curve of net current earnings (the difference between operating earnings and expenses) slants upward, indicating that earnings have grown faster than expenses, dollarwise, but the curve of net profits (which reflects net recoveries or charge-offs and income taxes) is much more flat and actually turns downward in 1947.



[1] The table on pages 36 and 37 shows the operating ratios of Eighth District member banks for 1947. The banks are divided into eight size classes on the basis of average deposits. Ratios for each class and for all member banks combined are averages of individual bank ratios, thus avoiding undue weighting of larger banks. The average ratio for size class and for all member banks, however, still masks substantial differences among individual banks. For that reason, the range of the middle 50 per cent of ratios is shown also. It should be noted that this is not the range of all bank ratios. In each size class the individual bank ratios were arrayed in order and the extreme upper and lower fourth eliminated, leaving the middle 50 per cent which the table presents.

AVERAGE OPERATING RATIOS OF MEMBER BANKS, 1947

EIGHTH FEDERAL RESERVE DISTRICT

Banks with Average Deposits of	Up to $500,000		$500,000 to $1,000,000		$1,000,000 to $2,000,000		$2,000,000 to $5,000,000		$5,000,000 to $10,000,000		$10,000,000 to $25,000,000		$25,000,000 to $50,000,000		$50,000,000 and Over		All District Member Banks
	Average of Group	Range within which fell middle 50% of the banks	Average of Group	Range within which fell middle 50% of the banks	Average of Group	Range within which fell middle 50% of the banks	Average of Group	Range within which fell middle 50% of the banks	Average of Group	Range within which fell middle 50% of the banks	Average of Group	Range within which fell middle 50% of the banks	Average of Group	Range within which fell middle 50% of the banks	Average of Group	Range within which fell middle 50% of the banks	Average of Group
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
SUMMARY RATIOS																	
Percentage of Total Capital Accounts:																	
Net current earnings before income taxes	6.9	2.1— 12.5	12.5	7.8— 15.5	14.9	10.7— 19.0	16.5	12.2— 20.4	17.0	13.2— 20.7	14.5	11.3— 18.0	13.7	10.8— 17.7	12.9	10.5— 14.8	15.4
Profits before income taxes	6.3	2.1— 11.4	12.1	8.6— 15.7	14.4	10.0— 18.5	15.1	11.3— 18.8	15.5	11.4— 19.6	13.4	10.3— 15.9	12.7	10.6— 15.2	12.3	10.3— 14.6	14.4
Net Profits	5.5	1.5— 10.2	10.2	7.0— 13.4	11.8	8.6— 15.1	11.9	8.8— 15.7	11.2	7.7— 14.2	9.4	7.0— 12.8	9.2	6.9— 10.7	8.7	7.0— 10.4	11.2
Cash dividends declared	2.3	..— 0.4	2.3	1.6— 3.1	2.9	2.0— 3.6	3.0	2.1— 3.7	3.1	2.3— 3.9	2.9	2.4— 3.6	3.3	2.5— 3.9	3.3	2.5— 4.2	2.9
Percentage of Total Assets:																	
Total earnings	2.6	2.0— 3.3	2.2	1.8— 2.5	2.2	1.8— 2.4	2.2	1.9— 2.5	2.2	1.9— 2.4	2.1	1.8— 2.2	2.0	1.9— 2.2	1.8	1.7— 2.1	2.2
Net current earnings before income taxes	0.8	0.2— 1.3	0.9	0.6— 1.1	0.9	0.6— 1.2	0.9	0.7— 1.0	0.9	0.7— 1.0	0.7	0.5— 0.8	0.7	0.5— 0.9	0.7	0.6— 0.9	0.9
Net profits	0.6	0.1— 1.0	0.7	0.5— 0.9	0.7	0.5— 1.0	0.6	0.5— 0.8	0.6	0.4— 0.7	0.5	0.3— 0.6	0.5	0.4— 0.7	0.5	0.4— 0.6	0.6
SOURCES AND DISPOSITION OF EARNINGS																	
Percentage of Total Earnings:																	
Interest on U. S. Government securities	25.1	12.1— 39.0	38.7	30.6— 47.3	41.3	29.4— 52.4	39.8	30.0— 49.1	35.8	26.7— 45.0	38.2	28.8— 46.2	33.8	24.2— 44.2	29.3	19.8— 36.2	38.6
Interest and dividends on other securities	10.4	1.4— 15.5	3.6	0.6— 4.3	5.1	1.0— 8.0	6.4	1.9— 8.9	8.0	2.7— 11.7	6.8	3.2— 10.0	7.8	0.8— 12.8	6.4	2.2— 11.0	6.3
Earnings on loans	59.3	43.1— 84.5	47.0	37.0— 57.0	42.9	29.6— 53.7	41.6	30.7— 53.3	41.3	30.8— 51.8	38.6	26.8— 52.7	42.3	29.1— 52.7	49.0	41.0 56.4	42.5
All other earnings	5.2	1.6— 8.9	10.7	6.2— 14.9	10.7	5.4— 15.3	12.2	7.0— 16.7	14.9	9.7— 19.2	16.4	10.4— 20.3	16.1	10.1— 20.5	15.3	9.5— 23.8	12.6
Total earnings	100.0	XXX	100.0	XXX	100.0	XXX	100.0	XXX	100.0	XXX	100.0	XXX	100.0	XXX	100.0	XXX	100.0
Service charges on deposit accounts (included in item 11) (1)	3.1	1.9— 4.0	6.5	1.8— 7.7	5.1	2.3— 7.0	5.7	2.0— 8.7	5.7	2.7— 7.3	6.2	3.6— 8.2	4.7	3.3— 5.9	3.0	1.4— 3.8	5.5
Salaries and wages	38.5	26.3— 56.8	30.4	25.7— 34.4	27.9	23.4— 30.6	28.2	24.3— 31.9	28.4	24.5— 31.6	30.6	26.2— 34.3	30.5	26.4— 36.1	30.4	27.0— 33.6	28.7
Interest on time and savings deposits	8.2	....— 18.8	6.2	....— 10.2	6.8	0.8— 11.1	8.2	0.9— 11.8	8.8	3.7— 13.1	12.3	6.1— 18.6	7.9	3.3— 11.7	6.1	2.9— 7.3	8.1
All other expenses (2)	29.1	21.5— 36.8	25.7	20.2— 30.2	24.4	19.4— 26.6	23.7	20.4— 26.9	22.6	18.4— 26.6	23.6	20.4— 27.6	26.2	22.1— 32.0	25.6	22.8— 28.0	24.0
Total expenses (2)	75.8	60.7— 92.7	62.3	53.8— 68.6	59.1	51.8— 65.1	60.1	53.6— 65.7	59.8	52.6— 67.0	66.5	61.2— 73.3	64.6	54.3— 72.4	62.1	56.3— 68.7	60.8
Net current earnings before income taxes	24.2	7.3— 39.3	37.7	31.4— 46.2	40.9	34.9— 48.2	39.9	34.3— 46.4	40.2	33.0— 47.4	33.5	26.7— 38.8	35.4	27.6— 45.7	37.9	31.3— 43.7	39.2
Net recoveries (+), charge-offs (—)	—1.6	— 3.5—	—0.6	— 3.5—+3.0	—1.3	— 3.5—+1.3	—2.4	— 6.6—+1.9	—3.0	— 7.2—+0.7	—2.2	— 6.2—+1.2	—2.2	— 8.3—+2.6	—1.3	— 4.4—+3.0	—2.1
Income taxes	3.0	0.8— 4.3	5.8	4.4— 7.4	7.0	5.1— 9.4	7.7	5.2— 9.8	10.2	6.2— 13.6	9.2	7.1— 11.0	9.2	5.8— 11.5	10.7	7.7— 14.4	8.0
Net profits	19.6	5.0— 33.9	31.3	23.2— 40.0	32.6	26.6— 40.4	29.8	23.5— 36.7	27.0	19.8— 34.0	22.1	17.9— 27.0	24.0	17.4— 29.2	25.9	21.9— 29.9	29.1
RATES OF EARNINGS ON SECURITIES AND LOANS																	
Percentage of U. S. Government Securities:																	
Interest on U. S. Government securities	1.8	1.6— 2.2	1.7	1.4— 1.9	1.6	1.4— 1.9	1.6	1.4— 1.8	1.6	1.4— 1.8	1.5	1.3— 1.6	1.5	1.4— 1.6	1.4	1.2— 1.5	1.6
Percentage of Other Securities:																	
Interest and dividends on other securities	3.3	1.7— 5.2	3.1	2.0— 4.3	2.9	1.7— 3.5	2.5	1.7— 3.0	2.1	1.5— 2.5	2.2	1.4— 2.5	2.7	1.3— 3.2	2.6	1.9— 3.3	2.6
Percentage of Total Securities:																	
Net recoveries on securities (+), charge-offs (—) (3)	.....	.—+0.1	.	. .—		..— ...	. .	— 0.1— ...	...	— 0.1— . .	...	...— . .		— 0.1—+0.1	...	— 0.1—+0.2	....
Percentage of Total Loans:																	
Earnings on loans	6.0	5.4— 6.5	6.0	5.5— 6.3	5.8	5.0— 6.4	5.5	4.9— 6.1	5.1	4.6— 5.5	4.4	3.9— 4.9	4.0	3.5— 4.3	3.2	2.7— 3.3	5.4
Net recoveries on loans (+), charge-offs (—)	—0.2	— 0.3— ...	+0.1	—0.1—+0.2	—0.1	— 0.1—	—0.1	— 0.1— ...	. .	— 0.1—+0.1	—0.1	— 0.1— ...	—0.1	— 0.3— ...	—0.1	— 0.2 ...—	—0.1
DISTRIBUTION OF ASSETS																	
Percentage of Total Assets:																	
U. S. Government securities	31.4	9.7— 51.8	48.8	43.0—56.5	51.4	43.5— 60.4	51.1	44.8— 59.0	47.7	38.5— 55.3	51.5	44.9— 58.9	44.0	32.2— 53.0	38.1	31.4— 41.2	49.6
Other securities	5.4	2.5— 9.0	3.5	0.5— 3.1	5.0	0.8— 7.7	6.2	1.8— 9.0	9.2	2.7— 13.2	7.2	3.3— 10.5	7.1	0.6— 11.6	5.0	1.8— 8.0	6.3
Loans	27.8	15.3— 44.9	17.9	13.1— 21.4	17.1	9.9— 21.6	17.2	11.1— 21.9	18.8	12.7— 22.6	19.3	9.9— 24.0	22.5	12.5— 28.2	29.5	26.9— 35.4	18.3
Cash assets	34.8	24.9— 41.9	29.2	23.3— 33.4	26.1	21.2— 29.7	24.9	21.1— 28.3	23.6	20.1— 25.9	21.1	15.9— 24.4	25.4	21.8— 30.3	26.7	25.6— 29.0	25.2
Real estate assets	0.6	0.2— 0.9	0.5	0.1— 0.6	0.4	0.1— 0.6	0.5	0.2— 0.7	0.6	0.3— 0.8	0.8	0.5— 1.1	0.8	0.5— 1.1	0.4	0.2— 0.6	0.5
All other assets	...	....— 0.1	0.1	....—.....	.	...— 0.1	0.1	...— ...	0.1	...— 0.2	0.1	...— 0.3	0.2	0.1— 0.3	0.3	0.2— 0.4	0.1
CAPITAL AND DEPOSIT RATIOS—In Percentage																	
Capital accounts to total assets	11.2	10.1— 12.2	7.1	5.9— 7.9	6.3	5.2— 7.5	5.6	4.5— 6.4	5.6	4.6— 5.9	5.0	4.2— 5.3	5.4	4.7— 5.7	5.5	4.7— 6.4	5.9
Capital accounts to total assets less Government and cash assets	39.9	22.9— 52.9	38.8	26.6— 48.0	33.6	22.3— 39.2	28.2	18.4— 33.3	22.6	14.6— 25.2	22.2	13.7— 30.6	20.1	13.5— 27.1	16.2	14.2— 18.7	28.4
Capital accounts to total deposits	12.7	11.2— 13.9	7.7	6.3— 8.6	6.8	5.4— 7.8	6.0	4.7— 6.8	6.0	4.8— 6.3	5.3	4.3— 5.6	5.7	4.9— 6.1	5.9	5.0— 6.9	6.3
Time to total deposits	19.7	2.6— 36.5	15.0	2.4— 26.8	16.5	2.7— 25.0	20.4	4.8— 29.7	24.1	10.0— 31.1	37.8	26.2— 55.9	21.1	12.8— 28.0	16.3	8.3— 19.0	20.9
Interest to time deposits (1)	1.3	0.6— 1.9	1.0	0.8— 1.5	0.9	0.7— 1.0	0.9	0.8— 1.0	0.9	0.8— 1.0	0.8	0.6— 0.9	0.8	0.6— 0 9	0.7	0.6— 0.9	0.9
Number of Banks	6		38		113		189		79		37		14		15		491

(1) Banks reporting zero amounts were excluded in computing this average and range.

(2) Includes charge-offs for recurring depreciation on banking house, furniture, and fixtures.

(3) Includes profits or losses from sales of securities.

NOTE: Balance sheet figures used as a basis for ratios are averages of amounts reported for December 31, 1946, June 30 and October 6, 1947.

Changes in Earning Assets—Banks derive their current earnings mainly from their security holdings and the loans they make to their customers. Other sources of current earnings include service charges and fees in connection with loans, service charges on deposit accounts, income from trust departments, real estate divisions, etc., and a variety of miscellaneous charges, commissions and fees.

Over the past seven years Eighth District member banks have registered great changes both in absolute volume of security holdings and loans and in the relative proportions held. In 1947, earning assets (loans and investments) amounted to 74.2 per cent of total assets; in 1941 the ratio was 61.7 per cent.

In 1947, Eighth District member bank combined loans and investments increased. The rise in total loans and investments was common to all years, 1941 to 1947, with the exception of 1946, but the pattern of change differed from that of previous years. Total investments expanded in each year through 1945 and then declined in 1946 and 1947. Total loans declined from 1941 to 1942, rose again in 1943 and 1944 (but failed to reach the 1941 level) and then expanded sharply in the following three years. In 1946 the growth in loans failed to offset the decrease in security holdings; in 1947 loan expansion exceeded contraction in investments.

The rise in investments from 1941 through 1945 stemmed from the heavy wartime expenditures of Government, much of which had to be met by borrowing from the banks. Government security holdings of all Eighth District member banks totaled $424 million at the end of 1941 and $2.7 billion at the end of 1945, a more than five-fold increase. Relative to total assets, holdings of Government securities averaged 21.9 per cent during 1942 and 52.8 per cent during 1945.

The Treasury redemption program, begun in March, 1946, brought about a substantial reduction in bank holdings of Government securities. By the close of the year, district bank portfolios were $500 million less than a year earlier, and in 1947 they dropped another $200 million.

While Government securities were becoming the major source of income during the war years, loans were declining in relative importance, although dollar volume declined in only one year, 1942. As a proportion of total assets, loans declined steadily from 1941 through 1945. In 1941 outstanding loans averaged 34.8 per cent of total assets, but by 1945 had dropped to 12.1 per cent. In 1946 loan volume averaged 13.8 per cent of total assets, and in 1947 was 18.3 per cent.

As noted, Eighth District member bank loans and investments shifted substantially in relative importance in 1947, and this shift was common to banks of various sizes (in terms of average deposits). Generally speaking, the relative shift was more pronounced in the smaller banks than in the larger ones.

While Government security holdings at district banks declined from 1946 to 1947, both absolutely and relative to total assets, holdings of other securities increased. In dollar terms the gain was about $28 million from December, 1946 to December, 1947. Relative to total assets, the increase in average holdings in each year was from 5.1 per cent to 6.3 per cent. The gain was general, with all size-groups showing roughly similar changes in per cent of total assets in other securities, except for the very large banks (over $50 million deposits) where the proportion of total assets in other securities was the same in both years.

Cash assets as a proportion of total assets, declined slightly from 1946 to 1947 for Eighth District member banks as a whole, indicating a generally more full loan and investment position. At the larger banks, however, cash assets relative to total assets increased, with the rise more pronounced as the size of bank increased.

Sources of Earnings—The bulk of bank earnings comes from loans and investments, but the share of earnings from each of these sources is not the same as the asset distribution because of varying rates of return. Government securities generally yield a lower rate of return than do other securities, and those in turn a lower rate than do loans. Varying maturities yield different returns. Loans at small banks, being generally smaller than those at large banks, carry higher interest rates.

In 1947, Eighth District banks received 42.5 per cent of their current earnings from loans, 38.6 per cent from Government securities, 6.3 per cent from

other securities and 12.6 per cent from other sources. Loans were the major source of income in 1947 at all size classes of banks. In 1946 loans ran second to Government securities as an income source.

In 1941 banks depended mainly on loans for income and obtained 60.3 per cent of total earnings from that source. Income from Government and other securities was secondary in importance and furnished banks with only 24.1 per cent of total earnings. During the war years the tremendous volume of war financing increased income from Government securities until in 1945 member banks obtained over half of their total income from Government and other securities. After 1942, income from loans when measured against total earnings declined in each year and by 1945 supplied only 32.3 per cent of earnings. The change in the character of earning assets in 1947 resulted in loans exceeding Government securities as the major source of income for the first time since 1943. Banks earned an average of 5.4 per cent on loans as compared with 1.6 per cent on Government securities. Very small banks had the highest rate of return on loans (6.0 per cent) but the rate declined as banks became larger in size and the very large banks earned only 3.2 per cent.

Other current earnings continued in 1947 the decline in relative importance evident since 1943, dropping from 18.0 per cent of total current earnings in that year to 12.6 per cent in 1947. The decrease reflects mostly the fact that other earnings are fairly constant from year to year and thus decline in relative importance as total earnings rise.

Disposition of Earnings—Salaries and wages constitute the largest single expense item for banks, and used up 28.7 per cent of total earnings in 1947. This percentage was slightly larger than in the previous year but aside from 1946 was the lowest since 1941, indicating that while the dollar amount paid in salaries and wages has increased in the last seven years, it has not increased as much as total earnings. In 1947 salaries and wages increased at a slightly faster rate than earnings at all groups of banks except those with deposits between $500,000 and $1 million. The percentage of earnings used to pay salaries and wages ranged from a low of 27.9 per cent to a high of 38.5 per cent among the various size classes, and the range within the size classes was even more pronounced.

All other operating expenses accounted for 32.1 per cent of current earnings in 1947, slightly less than a year earlier. Such expenses also have shown a definite downward trend relative to earnings since 1941, even though they have grown substantially in terms of dollars.

After operating expenses were paid, banks had about the same percentage of earnings left as in 1946. The average for all banks was 39.2 per cent and among size groups ranged from 24.2 per cent to 40.9 per cent. Net profits, however, declined sharply from 34.0 per cent of total earnings in 1946 to 29.1 per cent in 1947.

The failure of net profits to compare more favorably with those reported in 1946 was due to net charge-offs instead of recoveries. In every year between 1943 and 1946, Eighth District member banks showed recoveries and profits from sales of securities exceeding charge-offs. With the depression years' carry-over of charged off items reduced to a practical minimum and with profits from sales on Governments largely eliminated in 1947, items charged off in that year exceeded recoveries and profits from sales.

While 1947 net profits after income taxes and charge-offs were down from the 1946 peak, return on capital was still substantial and amounted to 11.2 per cent of total capital accounts. In 1941 the return was 8.0 per cent, and in 1942 it was but 6.5 per cent.

Member banks during the last seven years have enjoyed good profits and have retained a large part of these profits to increase their capital structures. Member banks distributed to their stockholders slightly over one-fourth of net profits earned in 1947.

Deposits expanded rapidly during the war years, and notwithstanding the banks' retention of the greater portion of their net profits the ratio of capital accounts to deposits steadily declined from 14.1 per cent in 1941 to 6.0 per cent in 1946. The ratio increased in 1947 to 6.3 per cent.

E. Francis DeVos.