

Monthly Review

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Seasonally Adjusted

The Eighth District's Climate

ACCORDING to a classification of the world's climates, the Eighth District is located in the relatively favorable middle latitude climate of short winters and long summers, having a generally advantageous rainfall pattern.

Temperature averages throughout the district are uniformly hot in summer, but vary 24 degrees in winter. Reflecting these factors and others, the district can be divided into colder and warmer climatic zones, although many of the weather features are irregular. The climates of certain district cities illustrate the differences between the two zones.

Seasonal changes vitally affect agriculture and business in the district.

Despite recent dramatic weather changes throughout the world, the district's basic climate will probably remain much the same.

Federal Reserve Bank of St. Louis



Eighth District Member Bank

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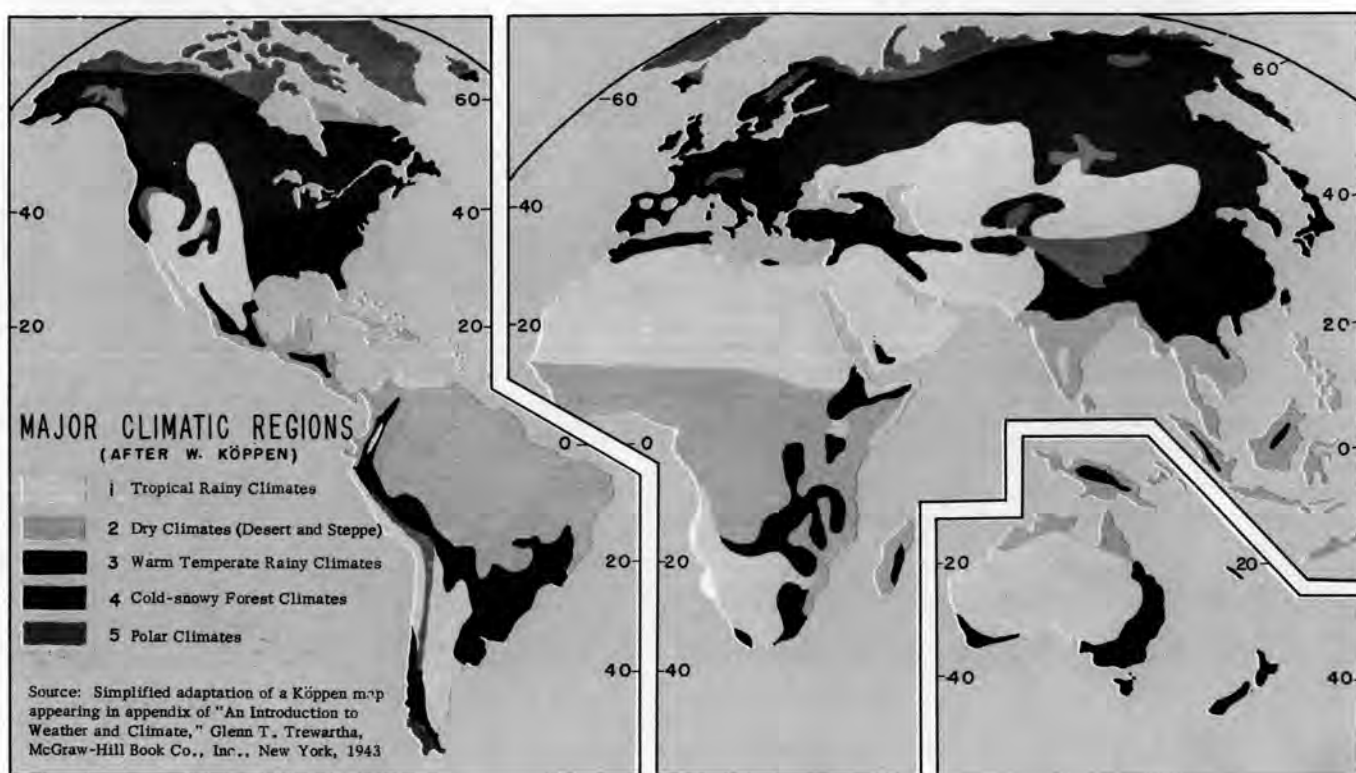


FIG. 1

PROBABLY no natural feature of the Eighth Federal Reserve District bestows more benefits, yet receives more harsh comment than its climate.

Climate is a basic resource. It was the changes in the temperature and water content of the air aeons ago that broke and crumbled rocks into fine material in which plants began to grow. Further weathering fused these plant and animal remains to form soils. And upon these soils, with the help of present climatic factors, district agriculture, which still provides the largest share of district income, depends. Furthermore, the district's commerce and industry vary in keeping with the seasonal changes in climate.

Yet, having seen pastures burned out two years in succession and watched spring squalls uneasily, it is not surprising that district residents often fail to appreciate the long-run view of climate in their concern with day-to-day weather. Furthermore, the appraisal of climate is in many respects a peculiarly subjective process. To one individual the continual rains of the Northwest are depressing drizzles, to another they are refreshing showers. To some the warmth of California and Florida winters is bliss itself, but others are "dreaming of a white Christmas."

According to a classification of the world's climates, . . .

The classification of climate is a difficult task, for climate represents an abstract idea. Weather at a given moment is not climate. Rather, climate is the generalization of weather occurrences over a long period of time. But, by studying temperatures and precipitation, prevailing winds, storms and other weather phenomena and the resultant vegetation and soils, meaningful classifications can be made. Probably the most widely used classification of the climates of the world is that developed by Dr. Wladimir Köppen over a period of nearly 50 years study.

First of all, Köppen forms his classification upon the basis of five major plant groups of the world: (1) tropical plants, requiring continuous high temperatures and abundant moisture; (2) desert vegetation able to exist with practically no rainfall; (3) plants requiring considerable heat, but able to stand short winters and a dry season; (4) plants which thrive despite short summers and long winters if the mean annual temperature is above freezing, and (5) plants of the polar region where average temperature is below freezing. Examples of plants characteristic of these groups, are: (1) palms, (2) cactus, (3) oak, (4) spruce, and (5) lichen. These

five broad groups are then further subdivided according to temperature and precipitation (rainfall or snowfall) differences. The map (figure 1) shows in simplified form, the five major climatic regions of the earth according to Köppen.¹

Upon locating and analyzing the Eighth District in this climatic scheme, a concept of the district's climate with regard to the rest of the world is gained. Then, its position within its immediate group can be analyzed, and finally, the variation within the district itself noted.

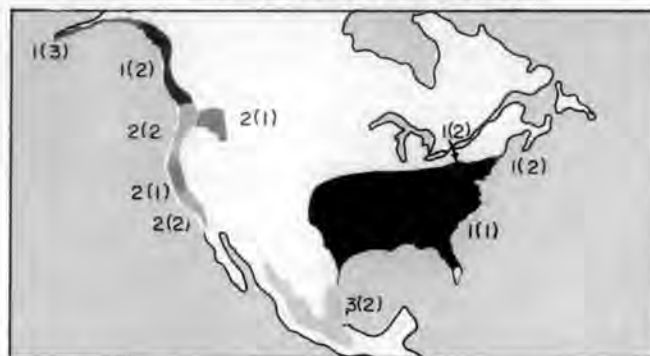
. . . the Eighth District is located in the relatively favorable middle latitude climate of short winters and long summers, . . .

The Eighth District is located in the third of Köppen's groups—the middle latitude region with short winters and long summers, sharing certain broad climatic characteristics with areas in every continent. The map suggests that the district has a relatively favorable climate from a world-wide viewpoint. Large areas of the earth are practically uninhabitable arctic wastes. A third of the earth's surface has desert conditions. Another third lies within the tropics which, although very productive, also are enervating.

. . . having a generally advantageous rainfall pattern.

The next step is to see where the district is located within the broad limits of the middle lati-

WARM TEMPERATE RAINY CLIMATES NORTH AMERICA & MEXICO



MAJOR SUBTYPES	TEMPERATURE GROUPS
1. no distinct dry season	(1) hot summers
2. dry summers and wet winters	(2) cool summers
3. dry winters	(3) cool short summers

FIG. 2

¹ The general outline of Köppen's system for the five major climate groups can be more precisely described as follows: (1) Tropical rainy climates—coldest month 64.4°F. (Köppen's classifications are based on the centigrade scale, hence the fractional figures in Fahrenheit terms), below which certain sensitive tropical plants do not thrive; (2) Dry climates—an excess of evaporation over precipitation, includes both desert and steppes; (3) Temperate rainy climates—average temperature of coldest month below 64.4°F. but above 26.6°F. (32° is often used for North America). Minimum temperature of coldest month roughly coincides with equatorward limit of frozen ground and snow cover lasting a month or more; (4) Cold-snowy forest climates—average temperature of coldest month below 26.6°F. and 50°F. for the warmest month, the latter approximating the poleward limits of forest; (5) Polar climates—average temperature of warmest month below 50°F.

tude rainy climate. The three major subtypes of this climate are: (1) those with no distinct dry season; (2) those with a distinctively dry summer and wet winter—often called the "Mediterranean climate," and (3) those where winter is the dry season.

Group two, Mediterranean (dry summer), climates are found only in relatively small regions: the borderlands of the Mediterranean Sea, central and coastal southern California, central Chile, the southern tip of South Africa, and parts of southern Australia.

Group three climates, with winter particularly dry compared with summer, are characteristic of the mountainous areas in the tropics of Asia, South America and Africa, where increased altitude results in a cooler climate than at sea level in these latitudes.

The Eighth District falls within the first group above (map, figure 2). This general subtype includes most of the eastern United States and the northwest coast of North America, most of western Europe, a large area of eastern China, the pampas of Argentina and much of southeastern Australia.

The usual abundance of rainfall and absence of a pronounced dry season in the district is a great advantage. How critical dry summers can become has been made only too vivid by the effects of the drouths here during the past few years. However, the time of year during which maximum precipitation occurs may be equally as important as the total amount of precipitation.

The district features two types of rainfall patterns, termed "regimes" by climatologists (see figure 6, page 30), with, of course, many individual variations. One, known as the "Ohio" type, has peak rainfall in the late spring and early summer of the year. The other, called the "Tennessee," has a single maximum in late winter or early spring and a well-marked dry spell in mid-autumn. The "Ohio" type, located in the northern part of the district and the Ohio river valley area, has much drier winters than the "Tennessee" type.

Both of these rainfall regimes are helpful to the development of major district crops. They bring rain to crops in the spring, when most needed. And the Tennessee type provides a dry spell for the maturing and harvesting of cotton in the fall.

On the negative side in considering the district's rainfall is its variability and erosive force in winter. The latter is particularly severe in the southern part of the district where the rainfall is heaviest, reaching 52 inches annually in district Mississippi

AVERAGE ANNUAL PRECIPITATION
(IN INCHES)

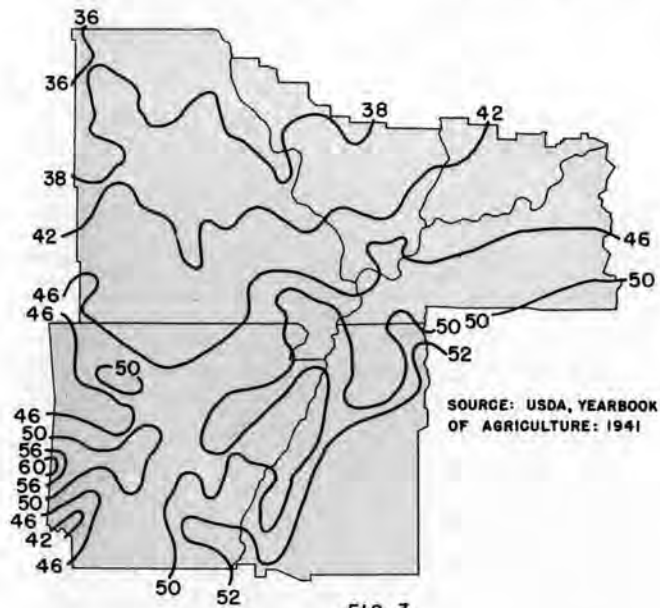


FIG. 3

and even 60 inches in Arkansas (figure 3). Furthermore, this area generally has little snow cover in winter. The drop to less than 23 inches of rainfall this year from a normal of about 39 inches in the state of Missouri well illustrates the problem of variability on a large scale.

Temperature averages throughout the district are uniformly hot in summer, . . .

Abundant precipitation, however, would be of little benefit to the district without suitable temperatures. Köppen distinguishes three temperature groups in the middle latitude rainy climates: (1) those with hot summers—average temperature of the warmest month over 71.6° ; (2) those with cool summers—average temperature of the warmest month under 71.6° , and (3) those with cool short summers—less than four months over 50° . Both the New England and northwest coast of the United States are in the second, cool summer group as is most of northwestern Europe and southeastern Australia. The third group is typical of marine (seacoast or island) location in high latitudes, such as the northern coast of Norway, where relatively warm ocean currents temper what would otherwise be a much colder climate.

As is only too well known by residents, the district falls clearly within group one—the hot summer type (figure 2). It shares this classification with almost all of the United States south and east of it and many of the other areas noted previously in the more general classification.

JANUARY AND JULY AVERAGE TEMPERATURES

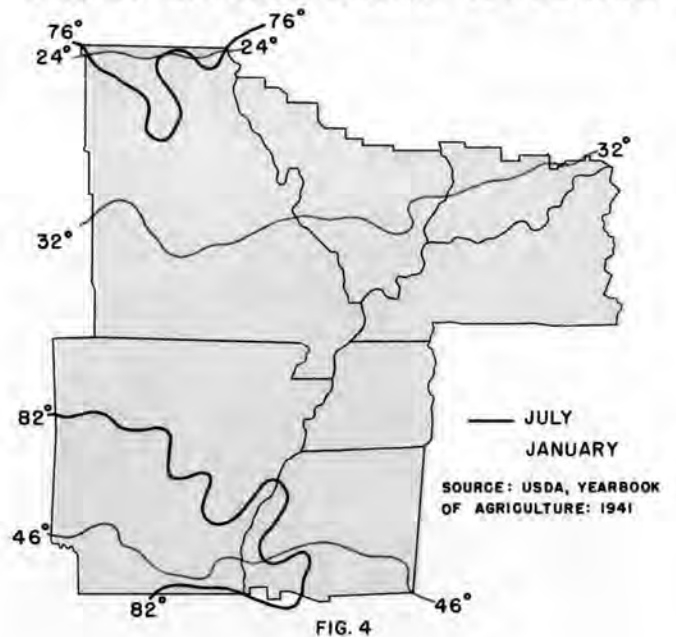


FIG. 4

. . . but vary 24 degrees in winter.

From common knowledge of the climate of the eastern United States, it is obvious that the classification of the district in group one still obscures important differences. As the map (figure 4) shows, while there is little difference in the temperature of the hottest month from one part of the district to another, there is a 24 degree variation in the January temperature in northern Missouri compared with district Mississippi or southern Arkansas. And the growing season varies from 170 days in the north to 230 days in the south.

Reflecting these factors and others, the district can be divided into colder and warmer climatic zones, . . .

By examining soil, temperature and vegetation characteristics, we can arrive at some idea of where a broad transition zone can be drawn between the colder and warmer climates of the district. A number of critical lines are shown on the map, figure 5.

In soils, a line can be drawn marking the northward extent of the yellow and red soils, formed under warm humid conditions. For temperature, the line showing an average monthly temperature of 32° can be used. Among cultivated crops a significant line appears to be that showing the northward limit of cotton. On the basis of these three indicators, a shaded transition zone is shown on the map, dividing the climate of the district into cooler and warmer sections.

DISTRICT CLIMATIC ZONES



FIG. 5

Of course, any such division is approximate. It cannot take into account such anomalies as the cotton crop recently grown in St. Louis county, nor the fact that southern magnolia trees are apparently flourishing on the campus of Southern Illinois University. Nor does the use of cultivated crops as indicators of climate take fully into account the effect of soils or of plant breeding, improved methods of cultivation, and so on. Then, too, there are many local variations in climate, such as the difference between that of a sunny cornfield compared to that of a wooded north-facing hillside, that are truly significant.

... although many of the features are irregular.

The district is so crisscrossed by a pattern of northwesterly and southwesterly winds that cold air frequently penetrates far south of its usual pattern and warm air far to the north. As a result the weather at any particular time may be just the reverse of the normal climatic pattern. Much of this irregularity is accounted for by the nature of the district's storms. The very word "storm" often conjures up the vision of some sort of disaster. Actually, most storms of the district instead of being disastrous are beneficial. They are the source of rain and snow. Their movements bring the warm, humid air masses from the Gulf and bracing, dry air masses from the northern reaches of the continent. These major storms are technically known as cyclones—not to be confused with the word as frequently used in the Middlewest to refer mistakenly to tornadoes.

A cyclonic storm consists of two very contrasting masses of air. It may cover as much as one-third of the United States. Such storms crossing the district are formed by the conjunction of a colder, drier and heavier mass of air (high pressure) from the north and a milder, more humid air mass (low pressure) from the south. They move from west to east at a rate of about 20 miles an hour in summer and 30 in winter but may become practically stationary at times. The area of contact between the two unlike air masses within the storms are known as "fronts." If they are warm fronts (warm air slowly rising over cold) the long gentle rains so pleasing to the farmer and gardener may result. But if they are cold fronts (cold air thrusting itself under warm air) violent churning of the air results along the contact surface, often with thunderstorms or even tornadoes. Following a cold front, the air is apt to be dry and the skies clear. More humid conditions follow a warm front. As these storms succeed one another in rapid, but erratic and oftentimes unpredictable fashion, the district experiences its sudden changes in weather.

In summer, the arctic air masses are relatively weak, causing these cyclonic storms to migrate northward with much less influence on the district. Then the district's major rainfall is received from convectional storms identified by the huge masses of clouds known as thunderheads. These rain-bearing cloud masses are formed by the action of the sun's rays in drawing water vapor into the air where it is raised until it finally reaches a condensation point in the cooler upper atmosphere.

Unfortunately, storms in the district have their destructive as well as their favorable side. The tornado is the most violent of all storms, albeit generally infrequent in occurrence and small in area. Much of the tornado belt of the United States lies within district boundaries. A series of tornadoes that hit Arkansas in the spring of 1952 did an estimated \$25 million damage and took 129 lives in that state alone. The sudden squall winds which accompany severe thunderstorms in the district are second to tornadoes in their velocities. Hail sometimes adds to the destructiveness of such squalls. West Indian hurricanes strike the south Atlantic and Gulf Coasts and their influence is often felt in driving rains and strong winds over district states, but by that time they have lost their violence. In winter, blizzards and hazardous ice storms are not uncommon features of district weather.

The climates of certain district cities illustrate the differences between the two zones.

Microclimates of small areas in the district can be shown and compared to the general climate by means of climatic charts for certain district cities.

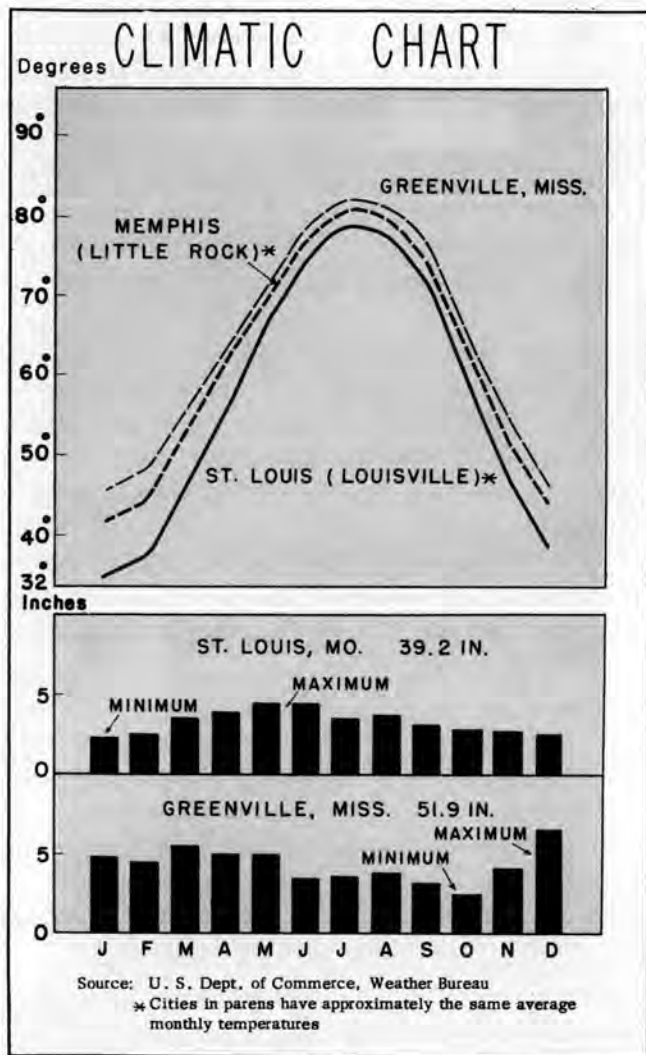


FIG. 6

Seasonal changes vitally affect agriculture and business in the district.

Another important feature of the district climate is seasonal change. All of the district has pronounced seasonal changes, although the springs are apt to be shorter in the north and the falls drier in the south, with generally less severe winters. Summers are uniformly hot, as noted earlier. Seasonal changes and the highly variable weather that accompanies the frequent cyclonic storms affect agriculture and business. These effects are not the sole cause of the intra-yearly variations in district economic activity. Customs and institutional factors as well as other regular influences play a part in determining the changes which are grouped under the general title of "seasonal" movements.

But climatic factors account to a considerable degree for the kinds of crops grown in the district, for the dominance of certain crops in various areas, and for periodic movements in all district economic activity. Typical seasonal adjustment factors, reflecting both agriculture and business in the district, are illustrated by the chart, figure 7.

The pronounced seasonal variation of business loans by banks in Memphis is perhaps larger than that of any other major city in the nation. Outstanding loans to commerce and industry there normally skyrocket 75 per cent from the low point in summer to the peak in December. This unique performance is primarily because of the financing of the processing and distribution of cotton. In St. Louis, business loans by banks fluctuate less, largely due to a more diversified type of bank lending. In Louisville, the sudden rise of business loans in the



FIG. 7

late fall reflects the financing of the burley tobacco market. In contrast to the U-shaped curve at city banks just noted, most rural banks in the district have a seasonal loan pattern that is the inverse. Loans rise in the spring and decline in the fall. This pattern reflects the large volume of loans to

farmers for the purchase of seed, fertilizer, and supplies in the planting season and the repayment after harvest.

Department store sales and stocks as shown by the chart, also have pronounced seasonal movements. Sales rise sharply early in the year as we purchase lighter clothing for the coming spring and summer season. Who can resist a bargain in the spring? And in summer, in anticipation of the first tinge of autumn air, sales begin rising to reach a peak just before Christmas. Of course, the Easter and Christmas holiday account for much of this behavior. But the shift from woolens to cottons and man-made fibers and back again would not be necessary without the changing climatic factors. Stocks, of course, tend to vary in relation to the sales.

Many other seasonal patterns such as those for coal output (a drop in summer), lumber production (a plateau throughout the warmer months except for holidays), or food and beverages (a rise in summer, peaking in early fall) are generally well known. Their relationship to climatic conditions is fairly obvious.

Despite recent dramatic weather changes throughout the world, the district's basic climate will probably remain much the same.

During the past two years and in some areas three years, district residents have experienced a prolonged drouth, which has still not been completely broken. This dry spell and other apparent changes in our weather have led to a concern that the climate itself is changing. Is the district doomed to be a desert or a tropics? Or can "more of the same" be expected?

When climatic change is considered, the perspective must be lengthened into thousands and even millions of years. A British authority, Dr. C. E. P. Brooks, states that great continental glaciations appear to have occurred at regular intervals of about 250 million years.² Between these were long periods of stability and genial climate. The last climatic episode on a grand scale began perhaps a million years ago.

However, Dr. Brooks also points out that there appear to be climatic oscillations of three lesser orders: (1) those of thousands or tens of thousands of years; (2) those of a few hundred years; (3) those up to a hundred years or so. Among those of the first order is the change to a colder climate that gave rise to the great continental ice sheets

² Brooks, C. E. P., *Climate Through the Ages*, McGraw-Hill Book Co., New York, 1949.

which covered at least some northern sections of the district twenty or thirty thousand years ago. Another was a change to a warmer climate some 2,000 years ago that probably enabled the Vikings to sail to Greenland without encountering ice floes. Then, around 600 B. C. a dramatic change in climate brought storms and rain to northwest Europe, while the Mediterranean, with a more favorable climate, rose as the center of culture. Since the first half of the Eighteenth Century when instrumental observations became available, Europe first underwent a period of high summer temperatures and severe winters, and then a period of milder winters and cooler, rainier summers. The latter change was so abrupt that in England it was commonly attributed to the fact that the calendar was altered at this time—1752. Then, from 1794 to 1810, there was another change to severe winters for 16 years.

During the last century the climate of both hemispheres has grown warmer, especially since 1900. Glaciers have been in retreat. The cod fish have migrated far to the north. And the edge of the main area of Arctic ice has receded poleward by some hundreds of miles. But, since 1940 the winters of Europe have again become severe. The one just past was the worst in seven years although in the Eighth District the weather has been exceptionally warm.

Dr. Brooks, in a recent article, implies that any forecast as to whether our climate is becoming warmer or colder is little better than a guess. He adds, however, that if there is any truth to the theory that fuel consumption in the modern industrial age has contributed to the rise in temperature, a further warming of climate "would appear to be slightly the more probable."³

Harry F. Wahlgren, meteorologist in charge of the St. Louis office of the Weather Bureau, supports the view of Dr. Brooks that short-term cycles in climate are difficult, if not impossible, to predict. He recently said, "I defy anyone to find a cycle in the weather records of St. Louis—and these are some of the oldest in the Midwest, going back 118 years."

Since the district is subject to erratic weather changes, the question arises as to how much, if at all, man can change the weather to his liking and needs. Sensational claims have been made in recent

³ "What's Happening to the Weather?"—*Harper's Magazine*, January, 1953.

years by rain makers, operating largely in western states. And hundreds of millions of acres are under contract for their services. Currently, the citizens of several south Missouri cities are watching with interest the attempts of professional rain makers to bring them relief from the drouth. But the effectiveness of such methods is a matter of debate among meteorologists.

Some experts believe that cloud seeding may trigger large-scale atmospheric effects. The American Meteorological Society, however, released the following statement this past June:

“Present knowledge of atmospheric processes offers no basis for the belief that the weather or climate of a large portion of the nation can be modified by cloud seeding. The results of experiments which have been conducted to explore such large scale effects are considered to be inconclusive. Not all of the results are explainable in the light of present knowledge and further experimentation is desirable.”

Research on weather continues. Congress has set up a weather modification commission to study the effects of the use of measures to control the weather. The College of Agriculture of the University of Missouri has a project outlined for a long-term study of rain making. Many other official and unofficial bodies are continuing their research into weather forces and their modification.

On balance, it appears most likely that, even without success in weather modification, district residents will continue to experience a relatively favorable climate for many generations to come. The present drouth appears to be an erratic occurrence and there is no conclusive proof that we have suddenly shifted to a drier or hotter climate. Nevertheless, it is reassuring to know that scientific investigations into weather forces are being vigorously pushed.

HARRY B. KIRCHER

Eighth District

MEMBER BANK EARNINGS AND EXPENSES

Net profits of district member banks in 1953 were in record dollar volume but less favorable percentage wise than in 1952.

THE YEAR 1953 was a profitable one for most Eighth District member banks. Net profits, both before and after taxes, were the highest on record. However, as a percentage of capital accounts, of total resources and of total earnings, net profits were less favorable than in the previous year.¹

From the record dollar amount of profits, stockholders received the largest amount of cash dividends ever paid, and banks retained a larger amount of earnings to strengthen their capital positions than ever before. But the ratio of dividends paid to total capital was moderately lower than in recent years, and the proportion of earnings retained was less than the average of the other postwar years.

¹ Ratios used in this article are from the annual study of operating ratios made by this Bank. Asset and liability items used in computing the ratios are averages of items reported in the December 31, 1952, June 30, 1953, and September 30, 1953, reports of condition. Earnings and expense items cover the calendar year 1953. Ratios are arithmetic averages of individual ratios of 490 member banks. Ratios computed in this way may differ in some instances from ratios computed from aggregate dollar amounts. Copies of the operating ratio report may be obtained from the Research Department of the Federal Reserve Bank of St. Louis.

These apparent inconsistencies reflect: 1) a more rapid growth in both capital accounts and assets than in profits; 2) a rise in expenses at a more rapid rate, but less in dollar amount, than earnings, and 3) a larger share of earnings going as taxes.

Earnings and Expenses Eighth District Member Banks

(In Millions of Dollars)

	1951	1952	1953 ^P
Interest and Discounts on Loans.....	79.9	89.6	97.6
Interest on U. S. Gov't. Securities.....	30.7	35.4	39.6
Interest on Other Securities.....	7.7	8.9	9.3
Other Current Operating Earnings.....	18.8	19.5	20.8
Total Current Operating Earnings..	137.1	153.4	167.3
Salaries and Wages.....	41.5	45.4	48.8
Interest on Time Deposits.....	8.4	9.8	11.9
All Other Expenses.....	31.2	34.9	39.0
Total Current Operating Expenses..	81.1	90.1	99.7
Net Current Operating Earnings....	56.0	63.3	67.6
Net Losses and Charge-offs.....	9.4	9.9	8.0
Net Profits Before Taxes.....	46.6	53.4	59.6
Taxes on Net Income.....	17.9	22.7	25.0
Net Profits After Taxes.....	28.7	30.7	34.6
Cash Dividends on Common Stock....	12.6	12.9	13.6

^P Preliminary.

Earnings rose . . .

Total current earnings of district banks amounted to \$167 million in 1953, up 9 per cent from 1952, the previous peak. The growth was the result of both more earning assets and higher average rates of return on these assets. The expansion in earning assets reflected an increase in total bank resources combined with smaller average cash holdings, in part the result of the reduction in reserve requirements last July. Holdings of both loans and securities rose. The average rate of return on Government securities was 2.06 per cent, as compared with 1.92 per cent in 1952. This increase more than offset moderate declines in the average earnings on loans and other securities.

. . . but expenses rose more rapidly.

The cost of doing business rose 11 per cent during 1953, compared with the 9 per cent increase in earnings. However, net current operating earnings continued to rise from their 1952 peak, as the dollar rise in expenses (\$10 million) was less than the dollar jump in earnings (\$14 million).

The sharpest increase in expenses was in interest payments on time deposits. The increase was the result of a substantial growth in time deposits plus the fact that a large number of banks paid a higher rate of interest on these accounts. Average interest payments on time deposits rose from 1.02 per cent in 1952 to 1.13 per cent in 1953.

Net profits (before taxes) amounted to \$60 million.

Reflecting the greater increase in dollar earnings than dollar expenses, net current operating earnings reached an all-time high of about \$68 million. After adjustment for net losses and charge-offs, which were less than a year ago, net profits (before income taxes) totaled \$60 million or 11 per cent more than the record of a year earlier.

Income taxes absorbed \$25 million . . .

Income taxes, including excess profits taxes, took a substantial share (\$25 million) of the net profits, \$2.3 million more than in 1952. Compared with total earnings, taxes on net income amounted to 10.9 per cent in 1953, 10.3 per cent in 1952, and 8.7 per cent in 1951. The greater proportion of earnings going for taxes in 1953 than in 1952 reflected, among other things, an increase in excess profits tax payments.

**Selected Operating Ratios
Eighth District Member Banks
(In Per Cent)**

	1951	1952	1953
Net Profits (after taxes) to			
Capital Accounts	9.5	9.6	9.0
Cash Dividends to Capital Accounts.....	3.1	3.0	2.9
Net Profits (after taxes) to			
Total Assets	0.68	0.69	0.66
Expenses to Total Earnings.....	61.2	60.5	61.2
Net Losses and Charge-offs to			
Total Earnings	5.0	4.5	4.8
Income Taxes to Total Earnings.....	8.7	10.3	10.9
Net Profits to Total Earnings.....	25.1	24.7	23.1
Interest on Government Securities.....	1.79	1.92	2.06
Interest and Dividends on			
Other Securities	2.49	2.60	2.57
Earnings on Loans	5.64	5.82	5.81
Capital Accounts to Total Assets.....	7.3	7.3	7.5
Capital Accounts to Total Assets			
less Governments and Cash Assets.....	22.6	22.9	23.4
Capital Accounts to Total Deposits.....	8.0	8.0	8.2
Time Deposits to Total Deposits.....	22.7	22.6	22.7
Interest to Time Deposits.....	0.98	1.02	1.13

. . . and stockholders received \$14 million, . . .

Stockholders received the largest amount of cash dividends in history, nearly \$14 million, about \$1 million more than during 1952. The greater amount of dividends in 1953 continued the steady growth trend in these payments in the postwar period. However, reflecting the even sharper growth in bank capital accounts, the ratio of cash dividends to capital accounts declined. In 1953 that ratio amounted to 2.9 per cent, in 1952 it was 3.0 per cent, while in 1951 it was 3.1 per cent.

. . . leaving \$21 million to strengthen bank capital structures.

Besides paying a larger dollar amount of dividends, Eighth District member banks enlarged their capital structures from earnings. In 1953 banks retained \$21 million of profits to add to their capital accounts, in the previous year they retained less than \$18 million. Largely through retention of profits, member banks added to their capital structures at a more rapid rate than total assets, risk assets, or deposits increased.

NORMAN N. BOWSER

Survey OF CURRENT CONDITIONS

Resource utilization declined further in February . . .

DURING FEBRUARY, utilization of the resources of the Eighth District declined further. The labor force was used less intensively as unemployment continued to grow and manufacturing plants were operated at lower levels than in January. Reduced business activity required fewer funds from banks. As a result of the newly imposed acreage restrictions on cotton, wheat, and tobacco, the land resources of the district will be shifted to uses probably requiring less labor and working capital and perhaps yielding lower net returns. Reflecting shrinkage in personal incomes and lessened use of credit, consumer spending dropped more than seasonally in January and remained below year-ago levels in the first half of February. However, construction activity declined only about the usual amount from December. In the agricultural sector, moisture conditions improved and prices of farm products remained steady.

. . . as unemployment rose . . .

Rising unemployment partially measured the reduced use of the labor resources of the district. Claims for unemployment insurance in the seven district states continued to increase during January and the first week of February. Normally claims decline after reaching a peak in mid-January. In the first two weeks of February, claims for unemployment filed were 130 per cent above a year earlier. The number of initial claims for unemployment compensation—*notices filed by persons newly out of work*—declined in the five weeks following the peak week of January 10 at about one-half the rate in the same period of 1953.

The ratio of insured unemployment to covered employment in four district states was higher than the national average for the week ended January 30.

. . . and industrial output declined.

Plant capacity in district and nation was also used less intensively as industrial output declined

further during January and early February. The Federal Reserve seasonally adjusted index of industrial production declined nearly 2 per cent from December to January and is estimated to have receded further in February. Steel output changed little, but automobile production in the first three weeks of February was somewhat below the January rate. Industrial output in February was about 10 per cent below the peak reached in May and again in July last year. This was almost equal to the total decline in the 1948-1949 recession.

Steel ingot production in the St. Louis area dropped to 36 per cent of capacity in the first three weeks of February after falling to 67 per cent in the five weeks ending in January. Other plants were closed reflecting large inventories or lack of orders. Two zinc smelters were scheduled to close at the end of February. A railroad car manufacturing plant in Mt. Vernon, Illinois, and a radio tube plant in Owensboro, Kentucky, closed temporarily. About 1,300 were laid off at the St. Louis Ordnance Plant and employment in production of ordnance at the Indiana Arsenal in the Louisville area was scheduled to be reduced to 4,200 from a peak of 8,000.

During January, over-all use of industrial electric power in selected industries of six district areas was about the same as a year earlier. Normally, some gain would be expected. A drop might have occurred except for strength in the paper and allied products and fabricated metals industries. Non-electrical machinery, electrical machinery, rubber, and shoe manufacturers all used considerably fewer kilowatts than in January, 1953.

Despite increased demand owing to cold weather, coal production in the district dropped 4 per cent from December to January. Crude oil output remained about the same.

Lumber production remained seasonally low, with Southern pine output 10 per cent below that of January, 1953.

Bank lending, too, was reduced, . . .

Declining business activity combined with seasonal factors brought reduced demands for funds at the district's weekly reporting member banks in the five weeks ended February 17. Most types of businesses, chiefly processors and distributors of agricultural products, sales finance companies and trade concerns, reduced their outstanding indebtedness. "Other," largely consumer, loans were down substantially, declining \$16 million compared with an average of \$2 million during the comparable five weeks of the other postwar years. Real estate loans declined moderately. On balance, these banks sold securities, both Government and other.

Debits to demand deposit accounts (except interbank and United States Government) were 10 per cent lower during January than in December at the 22 reporting centers in the district, the same percentage decline as reported at the 338 non-financial centers of the nation. In the district the decline was much greater than seasonal and was shared by all but one of the reporting centers.

Early in February the Reserve Banks lowered their discount rates from 2 per cent to $1\frac{3}{4}$ per cent to ease the cost to member banks of obtaining reserves.

. . . and farm land may be used less intensively.

As a result of the recently imposed acreage restrictions on cotton, wheat, and tobacco, the land resources of the district will be shifted to other uses. While the alternative uses of the land excluded from producing these crops cannot be ascertained at this date, possible uses, such as soybeans, oats, hay or pasturage, would require less labor and working capital and would probably yield lower net returns.

Approximately 2,300,000 acres will be diverted from cotton, winter wheat, and tobacco in district states during the coming growing season. Tobacco acreage will be reduced by about 9 per cent—approximately 37,000 acres. Cotton acreage will be about 16 per cent below last season, a cut of 988,000 acres. Acreage adjustments vary from a 28 per cent decrease in Tennessee to a nominal acreage increase in Illinois and Kentucky, states with relatively low cotton acreage. Winter wheat acreage has been cut 20 per cent from 1953 seedings, or approximately 1,289,000 acres, in district states.

Consumer spending dropped more than seasonally.

Retail sales in the nation declined slightly more than seasonally from December to January, and were 3 per cent below the very high levels of a year earlier. Automobile sales were 12 per cent

less than a year earlier.

In the district, adjusted department store sales declined from December to January and were 7 per cent off from the record second-quarter 1953 level. There were indications that price promotions on existing inventory had run their course by mid-January. Traditional "white goods" sales results were a little below expectations in some stores.

Through the three weeks ended February 20, preliminary data indicated that district department store sales were about 2 per cent below those a year ago. Store traffic was light although home-furnishings and housewares promotions in the period were termed satisfactory.

Furniture store sales in the district during January were substantially lower than in December and were 11 per cent lower than in January, 1953.

Inventories, reductions of which have been blamed for much of the recent drop in manufacturing output, were lower than a year earlier at most retail lines in the district at the close of January.

However, construction activity declined only about the usual amount from December.

District construction activity in January as indicated by employment was less than a year earlier but continued at about the December level after allowance for seasonal factors. Most of the reduction has been at the AEC project near Paducah, Kentucky, but construction employment was also substantially less in Arkansas and Louisville where major defense plant projects were completed during 1953.

Moisture conditions improved and prices of farm products remained steady.

Near normal precipitation fell in the major portion of the district during the nine-week period ending February 15; however, a large part of Missouri still suffers from lack of moisture. The immediate problem in much of the drouth area is water for livestock consumption, home use, and city requirements. Despite the drouth, fall-sown wheat has wintered fairly well. During the dormant season moisture requirements are relatively small, thus the moisture shortage in some areas during this winter has merely slowed growth or replacement of top growth where the crop has been grazed.

Following an agricultural price upturn in December and January, mid-February average prices received by United States farmers leveled off showing little change from the month previous. Major district livestock and livestock product prices eased downward two to ten per cent while crop prices were generally steady to 5 per cent higher as free supplies of wheat, cotton, and soybeans tightened.

The DISTRICT RECORD

Industry VARIOUS INDICATORS OF INDUSTRIAL ACTIVITY

	Jan., 1954	Dec., 1953	Jan., 1953
Industrial Use of Electric Power (thousands of KWH per working day, selected industrial firms in 6 district cities).....	12,622	-0-	+ 1
Steel Ingot Rate, St. Louis area (Operating rate, per cent of capacity).....	67	-16	-31
Coal Production Index—8th Dist. (Seasonally adjusted, 1935-1939=100).....	137p	-5	+ 3
Crude Oil Production—8th Dist. (Daily average in thousands of bbls.).....	310.2	-1	+ 2
Freight Interchanges at RRs—St. Louis. (Thousands of cars—25 railroads—Terminal R.R. Assn.).....	105.7	+ 5	- 3
Livestock Slaughter—St. Louis area. (Thousands of head—weekly average—first 4 weeks).....	102.0	- 4	-14
Lumber Production—S. Pine. (Average weekly production—thousands of bd. ft.)..	173.6	+ 2	-10
Lumber Production—S. Hardwoods. (Operating rate, per cent of capacity).....	88	-0-	-0-

* Percentage change figures for the steel ingot rate, Southern hardwood rate, and the coal production index, show the relative per cent change in production, not the drop in actual percentage and index points.
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Banking

BANK DEBITS¹

	Jan., 1954	Percent Change from	
	(In millions)	Dec., 1953	Jan., 1953 ²
Six Largest Centers:			
East St. Louis-National Stock Yards, Ill.....	\$ 125.6	-9%	-6%
Evansville, Ind.....	155.9	-9	7
Little Rock, Ark.....	160.4	-2	+ 1
Louisville, Ky.....	702.2	-12	-1
Memphis, Tenn.....	690.2	-7	-4
St. Louis, Mo.....	1,992.3	-12	+ 1
Total—Six Largest Centers.....	\$3,826.6	-11%	-1%
Other Reporting Centers:			
Alton, Ill.....	\$ 35.9	-5%	+11%
Cape Girardeau, Mo.....	14.3	-8	-10
El Dorado, Ark.....	27.7	-14	-8
Fort Smith, Ark.....	46.8	-1	-7
Greenville, Miss.....	28.2	-8	-6
Hannibal, Mo.....	9.4	-3	-5
Helena, Ark.....	8.8	-15	-15
Jackson, Tenn.....	21.6	-8	-1
Jefferson City, Mo.....	68.6	+32	-39
Owensboro, Ky.....	41.6	-6	-15
Paducah, Ky.....	35.5	-11	-21
Pine Bluff, Ark.....	37.9	-19	-4
Quincy, Ill.....	33.3	-11	-6
Sedalia, Mo.....	12.1	-11	+5
Springfield, Mo.....	68.8	-4	+1
Texarkana, Ark.....	19.9	-2	+7
Total—Other Centers.....	\$ 510.4	-4%	-12%
Total—22 Centers.....	\$4,337.0	-10%	-2%
Total—Seasonally Adjusted (1947-49=100)	136.5%	-8%	-2%

¹ Debits to demand deposit accounts of individuals, partnerships and corporations and states and political subdivisions.
² Estimated.

Agriculture

CASH FARM INCOME

	Percentage Change	
	Jan. thru Dec., '53	compared with like period 1952 1951
(In thousand of dollars)		
Arkansas.....	\$ 44,482	-8% -5%
Illinois.....	177,540	+4 -4
Indiana.....	98,855	+9 -1
Kentucky.....	133,320	-12 -4
Mississippi.....	60,084	+18 +20
Missouri.....	87,636	-0- -6
Tennessee.....	54,052	-15 -6
7 States.....	\$655,969	-1% -2%
8th Dist.....	\$313,568	-11% -9%

Construction

INDEX OF CONSTRUCTION CONTRACTS

	Awarded 8th F. R. Dist. Unadjusted		
	Dec., '53	Nov., '53	Dec., '52
Total.....	143.5p	196.9	145.6
Residential.....	134.7p	169.7	161.7
All Other.....	147.5p	209.4	138.2
Seasonally adjusted			
Total.....	186.0p	229.6	188.2
Residential.....	168.4p	199.6	202.1
All Other.....	194.1p	243.5	181.8

* Based on three-month moving average of value of awards, as reported by F. W. Dodge Corporation.
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ASSETS AND LIABILITIES OF EIGHTH DISTRICT MEMBER BANKS

	(In Millions of Dollars)			
	Weekly Reporting Banks		All Member Banks	
	Feb. 17, 1954	Change from Jan. 13, 1954	Jan. 27, 1954	Change from Dec. 30, 1953
Assets				
Loans (Net) ¹	\$1,383	\$-19	\$2,148	\$-45
Business and Agricultural.....	741	-12		
Security.....	33	+3		
Real Estate.....	255	+1		
Banks.....	31	+7		
Other (largely consumer).....	341	-16		
U. S. Government Securities.....	1,029	-44	2,051	+11
Other Securities.....	189	-9	417	-4
Cash Assets.....	909	-38	1,465	-111
Other Assets.....	36	-0-	58	-0-
Total Assets.....	\$3,546	\$-110	\$6,139	\$-149
Liabilities and Capital				
Demand Deposits of Banks.....	\$ 725	\$-81	\$ 797	\$-39
Other Demand Deposits.....	2,007	-48	3,750	-119
Time Deposits.....	519	+8	1,106	+6
Borrowings and Other Liabilities.....	59	+8	69	+2
Total Capital Accounts.....	236	+3	417	+1
Total Liabilities and Capital.....	\$3,546	\$-110	\$6,139	\$-149

¹ Loan breakdowns reported gross for weekly reporting banks, not available for all member banks.

Trade

RETAIL FURNITURE STORES

	Net Sales		Inventories	
	Jan., 1954 compared with Dec., '53	Jan., '53	Jan., 1954 compared with Dec., '53	Jan., '53
8th Dist. Total.....	-47%	-8%	-0%	-3%
St. Louis.....	-47	-1	-1	+1
Louisville Area ²	-47	-9	+4	+5
Louisville.....	-48	-11	+4	+5
Memphis.....	-38	-20	*	*
Little Rock.....	-60	-22	*	*
Springfield.....	-42	-10	-2	-6

* Not shown separately due to insufficient coverage, but included in Eighth District totals.

¹ In addition to following cities, includes stores in Blytheville, Fort Smith and Pine Bluff, Arkansas; Hopkinsville, Owensboro, Kentucky; Greenwood, Mississippi; and Evansville, Indiana.

² Includes Louisville, Kentucky; and New Albany, Indiana.

PERCENTAGE DISTRIBUTION OF SALES

	Jan., '54	Dec., '53	Jan., '53
Cash Sales	15%	17%	19%
Credit Sales	85	83	81
Total Sales	100%	100%	100%

¹ In order to permit publication of figures for this city (or area), a special sample has been constructed which is not confined exclusively to department stores. Figures for any such nondepartment stores, however, are not used in computing the district percentage changes or in computing department store indexes.

DEPARTMENT STORES

	Net Sales		Stocks on Hand Jan. 31, '54 comp. with Jan. 31, '53	Stock Turnover Jan. 1 to Jan. 31, 1954	Percentage of Accts. and Notes Receivable, Outstanding Jan. 1, 1954, collected during Jan. Excl. Instalment Accounts	
	Jan., 1954 compared with Dec., '53	12 mos. to same period '52			Instal.	Instalment Accounts
8th F. R. District Total.....	-56%	-5%	n.a.	n.a.	17%	47%
Fort Smith Area, Ark. ¹	-65	-9	+3%	23%	n.a.	42
Little Rock Area, Ark.....	-60	-2	n.a.	n.a.	25	12
Paducah, Ky.....	-62	-35	n.a.	n.a.	n.a.	n.a.
Quincy, Ill.....	-58	+3	n.a.	n.a.	25	17
Evansville Area, Ind.....	-26	-13	n.a.	n.a.	n.a.	n.a.
Louisville Area, Ky., Ind.....	-65	-6	-9	27	26	18
St. Louis Area, Mo., Ill.....	-51	-2	n.a.	n.a.	n.a.	19
Springfield Area, Mo.....	-63	-14	-4	21	22	n.a.
Memphis Area, Tenn.....	-59	-6	-3	29	30	16
All Other Cities ²	-68	-19	n.a.	n.a.	18	8

INDEXES OF SALES AND STOCKS—8TH DISTRICT

	Jan., 1954	Dec., 1953	Nov., 1953	Jan., 1953
Sales (daily average), unadjusted ⁴	83	185	136	83
Sales (daily average), seasonally adjusted ⁴	108	113	114	108
Stocks, unadjusted ⁵	99	104	132	105
Stocks, seasonally adjusted ⁵	117	118	121	125

⁴ Daily average 1947-49=100.

⁵ End of Month average 1947-49=100.

Trading days: January, 1954—25; December, 1953—26; January, 1953—26.

² Fayetteville, Pine Bluff, Arkansas; Harrisburg, Mt. Vernon, Illinois; Vincennes, Indiana; Danville, Hopkinsville, Mayfield, Owensboro, Kentucky; Chillicothe, Missouri; Greenville, Mississippi; and Jackson, Tenn. Outstanding orders or reporting stores at the end of January, 1954, were 17 per cent smaller than on the corresponding date a year ago.