

This PDF is a selection from an out-of-print volume from the National Bureau of Economic Research

Volume Title: Mortgage Lending Experience in Agriculture

Volume Author/Editor: Lawrence A. Jones and David Durand

Volume Publisher: Princeton University Press/NBER

Volume ISBN: 0-870-14149-X

Volume URL: <http://www.nber.org/books/jone54-1>

Publication Date: 1954

Chapter Title: Location of Areas of Farm Mortgage Distress

Chapter Author: Lawrence A. Jones, David Durand

Chapter URL: <http://www.nber.org/chapters/c2943>

Chapter pages in book: (p. 23 - 58)

*PART I*

THE ECONOMIC GEOGRAPHY OF  
FARM MORTGAGE DISTRESS



LOCATION OF AREAS OF FARM  
MORTGAGE DISTRESS

THE main purpose of Part I is to describe geographical variations in farm mortgage distress between 1920 and 1940 and to relate the observed variations to general economic conditions in different farming areas and to those characteristics of agriculture, such as type of farming, soil, topography, climate, and location relative to markets, that affect farm earnings. Chapter 1 takes up the problem of locating and mapping areas where distress was either unusually heavy or notably less severe than elsewhere. Later chapters will deal specifically with the mortgage experience in major agricultural areas, relating it to general economic conditions and the physical factors affecting productivity.

*Indicators of Farm Mortgage Distress*

In the broadest sense farm mortgage distress means much more than foreclosure or forced sale. Sometimes mortgage distress is evidenced by nothing more than mortgage delinquency, without actual loss of the farm pledged as security. There may even be distress without delinquency, appearing in the form of lowered family living standards or badly run-down land and buildings. Farmers have often had to "mine" their soil in order to pay their mortgages. In our analysis, however, the chief emphasis will be on those forms of distress evidenced by loss of farm through bankruptcy, foreclosure, or assignment to creditors in lieu of foreclosure, though other economic manifestations of distress will be mentioned.

The several indicators to be used in locating agricultural areas relatively subject to or free from debt difficulties are: (1) records of distress transfers of farms, available for all states and also for a 485-county sample taken throughout the country and compiled by the Bureau of Agricultural Economics under a Works Progress Administration project; (2) farm mortgage foreclosures and losses reported by the federal land banks, the Federal Farm Mortgage Corporation, and several of the major insurance companies; (3) the number of commercial bank

failures and the rate of decline in bank deposits; and (4) trends in farm real estate values.

These data are diverse, which is a disadvantage in the sense that there seems to be no feasible method of combining them into an index of farm mortgage distress by counties, or even by groups of counties. But the diversity is also an advantage because it provides broad evidence concerning farm economic conditions. The loan experience of individual institutional lenders is not necessarily representative of all lenders, nor is it necessarily an accurate measure of the extent of farm mortgage distress in an area. With several types of data, however, it is possible to develop a reasonably good picture of farm mortgage experience in various parts of the United States during the interwar period.

#### *Distress Transfers of Farms*

The record of distress transfers is probably the most comprehensive single source of information concerning farm mortgage difficulty. In the first place, these transfers include assignments to creditors in lieu of foreclosure as well as actual foreclosures and bankruptcies. In the second place, the record covers all types of lenders, including individuals. Thus it contributes greatly to the picture of debt distress in areas where the loans of banks, insurance companies, and federal land banks were relatively few.

The United States Department of Agriculture has compiled, by states, annual distress transfer rates (distress transfers per thousand farms) for 1925 and subsequent years.<sup>1</sup> The data, to be sure, have two obvious shortcomings: they do not cover the early twenties, when considerable distress occurred in some parts of the country; and the statewide units in which they are available are often too large to show important geographical variations. Despite their weaknesses, the statewide distress transfer rates provide worthwhile information concerning trends in, and the location of, farm mortgage distress during most of the

<sup>1</sup> These materials are published, usually every other year, in *The Farm Real Estate Situation*. The issues used for Figures 6 and 7, identified by USDA publication number and the years for which distress transfers are reported, are: Circular No. 150 (1925-29), No. 309 (1929-32), No. 354 (1934), No. 548 (1934-38), and No. 662 (1937-41).

The reporting years used by the Department of Agriculture end on March 15. Thus the year referred to as 1925 is the twelve-month period ending March 15, 1926, and the period referred to as 1925-39 extends from March 16, 1925 through March 15, 1940.

interwar period. For example, the annual averages for 1925-39 give a broad, general picture of geographical variations (Figure 6).

A further use of the statewide distress transfer rates is possible because they can be adjusted somewhat for variations in the ratio of mortgaged farms to total farms that occurred from state to state. Figure 7 shows estimated annual average distress transfers, 1925-34, per thousand mortgaged farms.<sup>2</sup> The adjusted distress transfer rates imply somewhat worse experience in certain sections of the country than do the unadjusted rates. This tendency is particularly noticeable in the Southeast, where the ratio of mortgaged farms to total farms is low—largely because of the census practice of counting cropper units as whole farms. Since cropper units would not ordinarily be considered as whole farms, the adjusted transfer rates undoubtedly give a more accurate picture of mortgage conditions in the Southeast than do the unadjusted rates. For other parts of the country, the superiority of either set of distress transfer rates over the other depends on point of view. If, for example, the emphasis is upon the proportion of farmers who had financial difficulties in a given state, the unadjusted rates are probably superior. If, however, the emphasis is upon the amount of difficulty experienced by lenders, the adjusted rates are probably better.

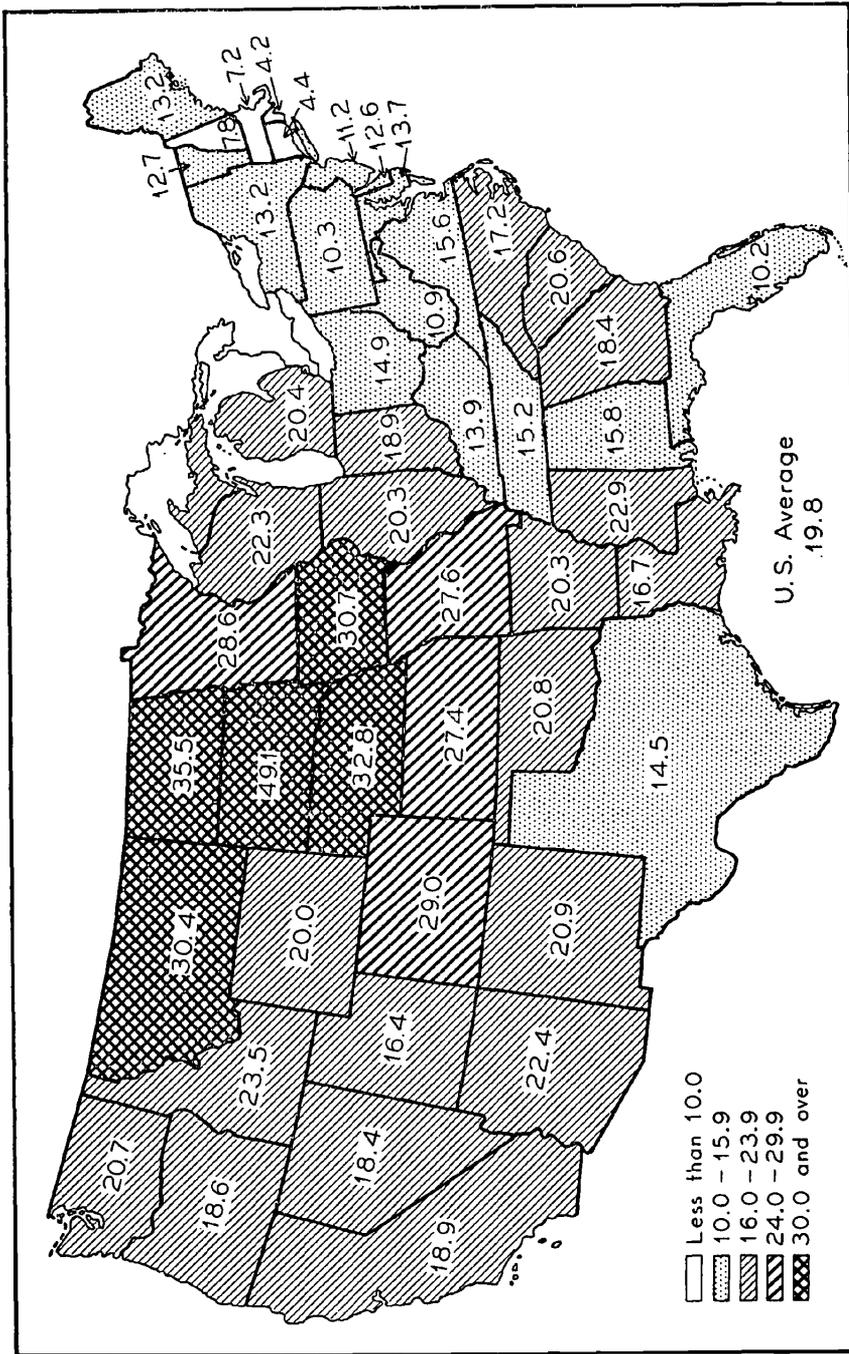
Distress transfers were also tabulated under a Works Progress Administration project from official records in 485 selected counties.<sup>3</sup> The period covered is 1935 and earlier years, and in some counties records go back to 1900. In later chapters these data will be used to show the trend of distress after 1900 in selected areas. For the present purpose of locating trouble spots, the number of distress transfers during 1920-35 expressed as a percentage of the estimated number of *mortgaged* farms in 1930 is the measure used, because of its greater accuracy for the Southeast and thus for regional comparisons.<sup>4</sup> Variations in dis-

<sup>2</sup> The estimates were obtained by dividing the annual average number of distress transfers per thousand farms in 1925-34 by the estimated ratio of mortgaged farms to total farms in 1930. The ratios of mortgaged farms to total farms for each state, which are available only at five-year intervals beginning with 1930, are contained in *Farm-Mortgage Debt in the United States: 1945*, a cooperative report by the Bureau of the Census and the Bureau of Agricultural Economics, Table 2, page 6.

<sup>3</sup> See *Transfers of Farm Real Estate* (Bureau of Agricultural Economics, mimeo., August 1939).

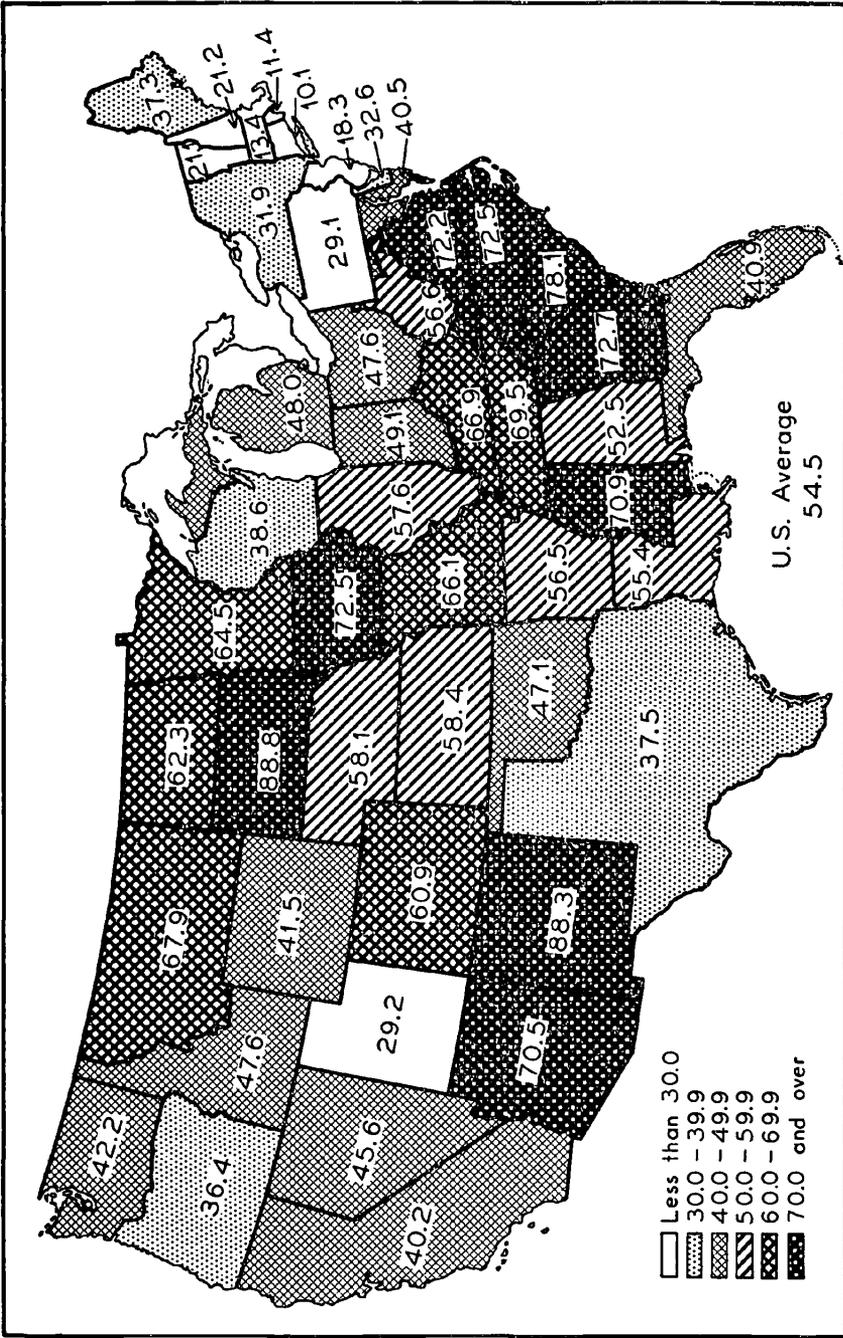
<sup>4</sup> Information on the total number of mortgaged farms by counties was not directly available and had to be estimated. The 1930 Census of Agriculture gives

Figure 6. Average Annual Distress Transfers per Thousand Farms, 1925-39



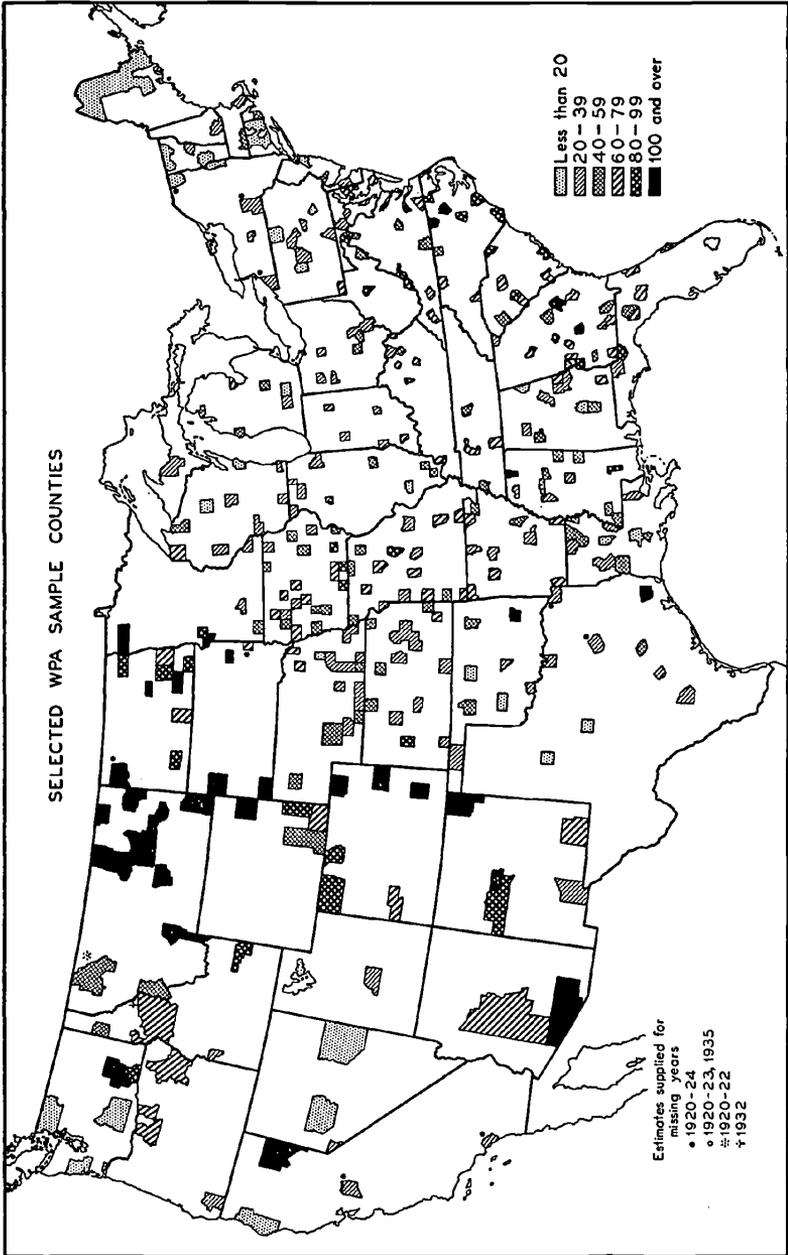
Distress transfers include foreclosures, and assignments to avoid foreclosure. Data are from *The Farm Real Estate Situation*, cited in footnote 1 of this chapter. Based on census figures, cropper units being counted as separate farms; see page 27.

Figure 7. Average Annual Distress Transfers, 1925-34, per Thousand Mortgaged Farms in 1930



Distress transfers (i.e., foreclosures, and assignments to avoid foreclosure) annually per thousand farms, from census data, are given in *The Farm Real Estate Situation*, cited in footnote 1. Ratios of mortgaged farms to all farms were taken from *Mortgage Debt in the United States: 1945*; see footnote 2.

Figure 8. Distress Transfers, 1920-35, per Hundred Mortgaged Farms in 1930



Data on distress transfers (i.e., foreclosures, and assignments to avoid foreclosure) are from *Transfers of Farm Real Estate (BAE, 1935)* and are described in the accompanying text. For comment on 1930 as base year, and other details, see footnote 4.

tress among the WPA sample counties are shown on that basis in Figure 8. The map covers all counties for which distress transfers were listed for every year from 1920 to 1935, inclusive, and a few additional counties for which missing years could easily be estimated.

*Experience with Federal Land Bank Loans*

Frequently it will be convenient to refer to the twelve federal land banks merely as "land banks." The abbreviated term will be applied only to them and will not include the so-called joint stock land banks, which were established along with the federal land banks under authority of the Federal Farm Loan Act of 1916 but were later liquidated by the Emergency Farm Mortgage Act of 1933.

The federal land banks started operations in 1917 with initial capital entirely subscribed by the United States government. Since they started in a period when credit from other sources was comparatively easy to obtain, the volume of their loans grew slowly, by the end of 1920 amounting only to \$356 million, or 3½ percent of the total farm mortgage debt. With the tightening of credit from other sources after 1920, the volume of land bank loans grew more rapidly; by the beginning of 1927

---

county data on the number of owner-operated farms mortgaged. Also available were statewide estimates, made by the Bureau of Agricultural Economics, of the percent of tenant- or manager-operated farms mortgaged as well as the percent of owner-operated farms mortgaged. From the combined information the percent (X) of tenant- or manager-operated farms mortgaged in each county was estimated by means of the proportion

$$\frac{X}{\% \text{ owner-operated farms mortgaged in county}} = \frac{\% \text{ tenant- or manager-operated farms mortgaged in state}}{\% \text{ owner-operated farms mortgaged in state}}$$

Adding, for each county, the number of tenant- or manager-operated farms mortgaged (X percent of all farms) to the number of owner-operated farms mortgaged gave the estimate for the total number of farms mortgaged in the county.

While regional comparability is improved (through more accurate representation of the Southeast) by expressing distress transfers as a percentage of mortgaged farms rather than of all farms, some noncomparability may nevertheless be involved in using 1930 as the base year. In areas such as the western Great Plains, where a substantial proportion of the 1920-35 foreclosures occurred before 1930 and thereby reduced the number of mortgaged farms in that year, the rate of foreclosures would tend to be overstated in comparison with areas where the majority of foreclosures occurred after 1930.

it aggregated slightly more than a billion dollars.<sup>5</sup> Meanwhile most of the capital originally subscribed by the government had been paid back by farmer-borrowers who became stockholders in the system, which is cooperative in character.<sup>6</sup>

In the early thirties, when economic conditions became critical, the lending operations of the land banks were very substantially curtailed by a shortage of loan funds that arose because certain classes of distressed assets, including acquired real estate, were not eligible as security for land bank bonds. Since the volume of real estate acquisitions was rapidly increasing (the land banks acquired an average of roughly 9,000 farms a year from 1932 to the end of the decade), it constituted a large and continuing drain on resources available for lending. To meet this situation the government subscribed additional capital, which permitted the banks not only to grant extensions of time to deserving borrowers but also to undertake extensive farm debt refinancing operations. In addition the land banks became agents for direct governmental mortgage loans of an emergency type known as Land Bank Commissioner loans. By 1937 land bank and Commissioner loans amounted to \$2,889 million and constituted 39 percent of the total farm mortgage debt.<sup>7</sup>

As farm incomes increased during World War II, mortgage loan delinquencies and distress transfers of farm real estate declined sharply. Farmers began to repay their loans at a greatly increased rate and the financial position of the land banks rapidly improved. In the fiscal year ending June 30, 1947 the last government capital was repaid and the banks became wholly farmer-owned cooperative credit institutions.

Since the land banks loaned widely throughout the United States, the geographical variations in their loan experience are an important indicator of areas of farm mortgage distress. A useful measure of where borrowers had difficulty is the "mortality rate" of loans: that is, the percentage ratio of the volume of real estate acquisitions and charge-offs within a certain group

<sup>5</sup> Donald C. Horton, Harald C. Larsen, and Norman J. Wall, *Farm-Mortgage Credit Facilities in the United States* (U.S. Department of Agriculture, Misc. Pub. No. 478, 1942), Table 2, p. 12.

<sup>6</sup> In contrast to the federal land banks, the joint stock land banks had capital originally provided by private subscription. Thus two types of land bank were established under the Federal Farm Loan Act, one proprietary and the other cooperative.

<sup>7</sup> Horton, Larsen, and Wall, *op.cit.*, Table 2, p. 12.

of loans to the total original amount of the loans. The Farm Credit Administration has compiled information by county on the amount of acquisitions (whether by foreclosure or by voluntary deed), together with charge-offs, to 1939 or later for all land bank loans made between 1917 and 1933.<sup>8</sup> Mortality rates, calculated for groups of adjoining counties which in general have similar physical, climatic, and type-of-farming characteristics, are shown in Figure 9.

As a measure of where lenders had difficulty, loss rates serve better than mortality rates. County to county variations in loss rates on land bank loans made before 1933 may be observed in Figure 10. The areas of high mortality rates have also been, on the whole, areas of high loss rates, but the correspondence is not perfect. Losses are not necessarily proportional to the volume of acquisitions (in which both foreclosed farms and farms acquired by voluntary deed are included). Some acquisitions eventually result in large losses, but others may result in no loss at all or in gains. Actual loss experience is influenced by such factors as practice in making and foreclosing loans, the amount spent in acquiring, maintaining, and disposing of properties, and the time of acquisition and sale in relation to trends in the farm real estate market. The countrywide loss rate through June 1946 on land bank loans made from 1917 to 1933 was 7.1 percent (Table 5). Among states the range was from no loss in Rhode Island to 26.1 percent in Wisconsin.

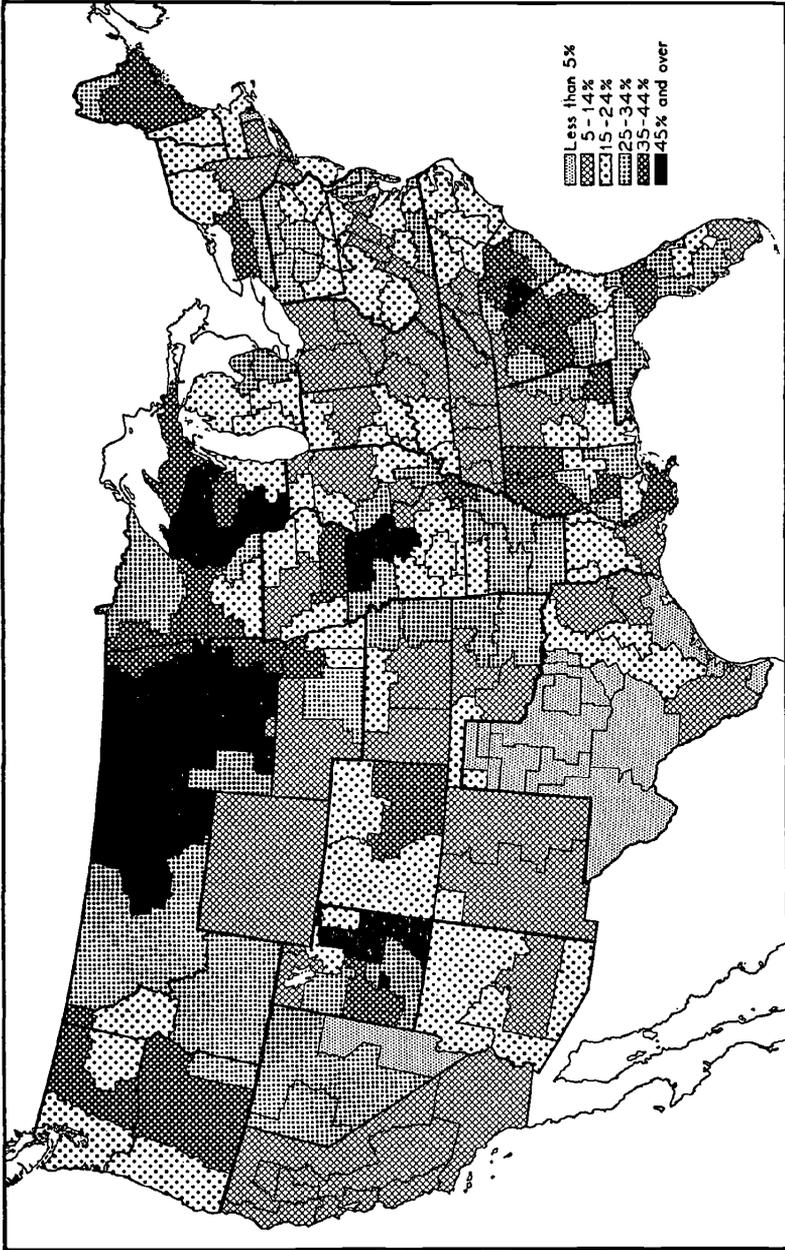
#### *Experience with Land Bank Commissioner Loans*

Land Bank Commissioner loans, because they first became available in 1933, when the usual credit sources were drastically curtailed, afford a unique chance to assess variations in experience on loans made in the worst part of the depression. Commissioner loans, which were direct financing by the federal government through the agency of the land banks,<sup>9</sup> could be made on first or second farm mortgage security, whereas regular land bank loans were restricted to first mortgages. Except for a con-

<sup>8</sup> In reporting acquisitions and charge-offs, two banks had cut-off dates in 1939, two in 1941, one in 1942, one in 1943, and the remaining six in 1946. Foreclosures after 1939 on loans made before 1933 were relatively few and would not affect the mortality rates significantly.

<sup>9</sup> The Federal Farm Mortgage Corporation, wholly owned by the government, was created in 1934 to provide funds for making Land Bank Commissioner loans by the sale of government-guaranteed bonds. Commissioner loans previously made were taken over by the corporation. Since July 1, 1947 no new Commissioner loans have been made.

Figure 9. Mortality Rates, 1917 to 1939-46, for Federal Land Bank Loans Made in 1917-33



Data supplied by Farm Credit Administration. Mortality rates are real estate acquired and loan balances charged off up to dates ranging between 1939 and 1946 for the twelve banks expressed as a percentage of amount loaned up to May 1933, for groups of counties with similar characteristics; see footnote 8 and text preceding it.

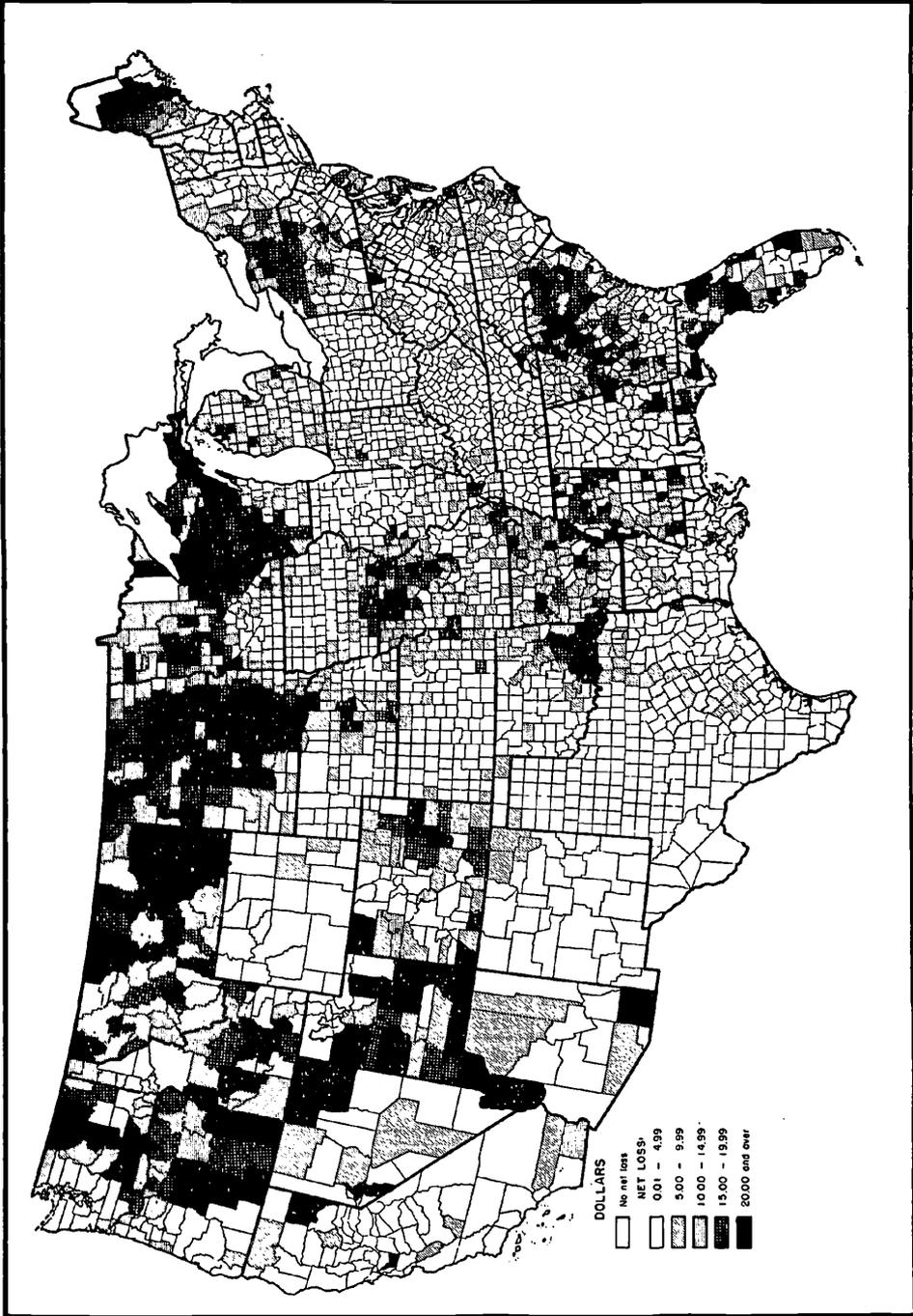


Figure 10. Net Loss, 1917-45, per \$100 of Federal Land Bank Loans Made in 1917-33

Map supplied by Farm Credit Administration. Losses on all loans made up to May 1933 are registered through June 30, 1945 for all districts except Springfield (period ends three months later) and Omaha (period runs from January 1, 1935 through June 30, 1945, covering about 75 percent of all losses).

TABLE 5

Loss Rates through June 1946 on Federal Land  
Bank Loans Made in 1917-33

<i>Region and state</i>	<i>Loss rate<sup>a</sup></i>	<i>Region and state</i>	<i>Loss rate<sup>a</sup></i>
<i>The Northeast</i>		<i>Corn Belt states</i>	
Maine .....	9.8%	Ohio .....	1.0%
New Hampshire .....	1.6	Indiana .....	4.0
Vermont .....	4.8	Illinois .....	2.0
Massachusetts .....	1.3	Iowa .....	4.6 <sup>c</sup>
Rhode Island .....	<sup>b</sup>	Missouri .....	10.1
Connecticut .....	.5	<i>Lake states</i>	
New York .....	10.2	Michigan .....	9.6
New Jersey .....	4.0	Wisconsin .....	26.1
Pennsylvania .....	9.1	Minnesota .....	11.0
<i>Appalachian states</i>		<i>Great Plains and Mountain states</i>	
Delaware .....	3.7	North Dakota .....	25.3
Maryland .....	2.4	South Dakota .....	18.2 <sup>c</sup>
Virginia .....	3.7	Nebraska .....	6.2 <sup>c</sup>
West Virginia .....	3.5	Kansas .....	2.6
North Carolina .....	3.7	Montana .....	23.5
Kentucky .....	2.2	Idaho .....	8.6
Tennessee .....	1.4	Wyoming .....	1.0 <sup>c</sup>
<i>Cotton Belt states</i>		Colorado .....	9.7
South Carolina .....	17.5	New Mexico .....	2.5
Georgia .....	10.9	Arizona .....	.4
Alabama .....	3.6	Utah .....	8.7
Mississippi .....	10.3	Nevada .....	14.4
Arkansas .....	11.8	<i>Pacific Coast states</i>	
Louisiana .....	1.6	Washington .....	10.7
Oklahoma .....	4.9	Oregon .....	8.8
Texas .....	1.9	California .....	2.5
Florida .....	16.2	United States .....	7.1%

From special tabulations of the Farm Credit Administration.

<sup>a</sup> Losses through June 30, 1946 on all federal land bank loans made from 1917 through May 1933, as a percentage of the amount loaned.

<sup>b</sup> In Rhode Island there was a gain of 0.3 percent.

<sup>c</sup> Losses are for the period January 1, 1935 through June 30, 1946.

siderable number of good "prudent investment" loans made on part-time farms in certain areas, the Commissioner first mortgages were largely concentrated in situations considered too risky for federal land bank loans. The Commissioner second mortgages, which were usually junior to land bank first mortgages, were made on better land meeting the higher requirements of the land banks. For both first and second mortgages,

the total amount loaned, together with the prior lien in the case of a second mortgage, could be as much as 75 percent of the appraised normal value of the property (while regular land bank loans were limited to about 50 percent). There was a limit, first put at \$5,000 and later at \$7,500, on individual loans.

Since Commissioner loans were made on a second mortgage basis and on comparatively risky first mortgage security, they tended to bulk large in areas of distress and areas where other sources of loans were limited. Although many of the Land Bank Commissioner loans soon ran into repayment difficulties, it was the government's policy to make every effort to avoid actual foreclosures, and from 1933 through 1935 there were very few. In 1936 the investment in farm real estate acquired by the Commissioner increased somewhat and was equal to 1.3 percent of the amount of loans outstanding at the beginning of the year.<sup>10</sup> By 1939 the acquisition rate had increased to 4.5 percent. In 1940 acquisitions declined but still amounted to 2.8 percent of loans outstanding at the beginning of the year.

Loss rates on first mortgage Land Bank Commissioner loans made from 1933 through 1935 are given by state in Table 6. The loans reported on, made when the refinancing program was most active, represent about three-fourths of the \$419 million total of Commissioner first mortgage loans made from 1933 through mid-1946. Figure 11 shows county variations in loss rates on a special group of the loans covered by Table 6: those whose amounts exceeded 65 percent of the appraised normal agricultural value of the farm. The pattern of distress is similar to that for the regular land bank loans, except for two notable differences: (1) heavier Commissioner losses in the dust bowl areas of western Kansas and adjoining states, and (2) smaller Commissioner losses in areas of the Far West lying between the two great mountain ranges, particularly in Idaho, Nevada, Arizona, and the eastern half of Washington and Oregon.

*Experience with Loans by  
Life Insurance Companies*

Insurance companies have long been lenders in the farm mortgage field and before the twenties were second in importance only to commercial banks. After 1910, loans of insurance companies increased at about the same rate as the farm mortgage

<sup>10</sup> Horton, Larsen, and Wall, *op.cit.*, Table 42, p. 121.

TABLE 6

Loss Rates through June 1946 on Land Bank Commissioner First Mortgage Loans Made in 1933-35

<i>Region and state</i>	<i>Loss rate<sup>a</sup></i>	<i>Region and state</i>	<i>Loss rate<sup>a</sup></i>
<i>The Northeast</i>		<i>Corn Belt states</i>	
Maine .....	19.4%	Ohio .....	.6%
New Hampshire .....	1.2	Indiana .....	.3
Vermont .....	.2	Illinois .....	.7
Massachusetts .....	2.4	Iowa .....	3.3
Rhode Island .....	0.0	Missouri .....	3.6
Connecticut .....	.6	<i>Lake states</i>	
New York .....	3.0	Michigan .....	2.2
New Jersey .....	2.0	Wisconsin .....	13.1
Pennsylvania .....	3.1	Minnesota .....	9.9
<i>Appalachian states</i>		<i>Great Plains and Mountain states</i>	
Delaware .....	3.6	North Dakota .....	17.6
Maryland .....	3.3	South Dakota .....	22.4
Virginia .....	1.3	Nebraska .....	8.7
West Virginia .....	1.0	Kansas .....	8.4
North Carolina .....	.5	Montana .....	4.4
Kentucky .....	.9	Idaho .....	1.1
Tennessee .....	.4	Wyoming .....	1.7
<i>Cotton Belt states</i>		Colorado .....	10.0
South Carolina .....	4.0	New Mexico .....	1.5
Georgia .....	1.8	Arizona .....	<sup>b</sup>
Alabama .....	.6	Utah .....	3.6
Mississippi .....	1.7	Nevada .....	5.4
Arkansas .....	1.6	<i>Pacific Coast states</i>	
Louisiana .....	.6	Washington .....	1.8
Oklahoma .....	2.9	Oregon .....	1.0
Texas .....	1.3	California .....	1.0
Florida .....	4.7	United States .....	4.7%

From special tabulations of the Farm Credit Administration.

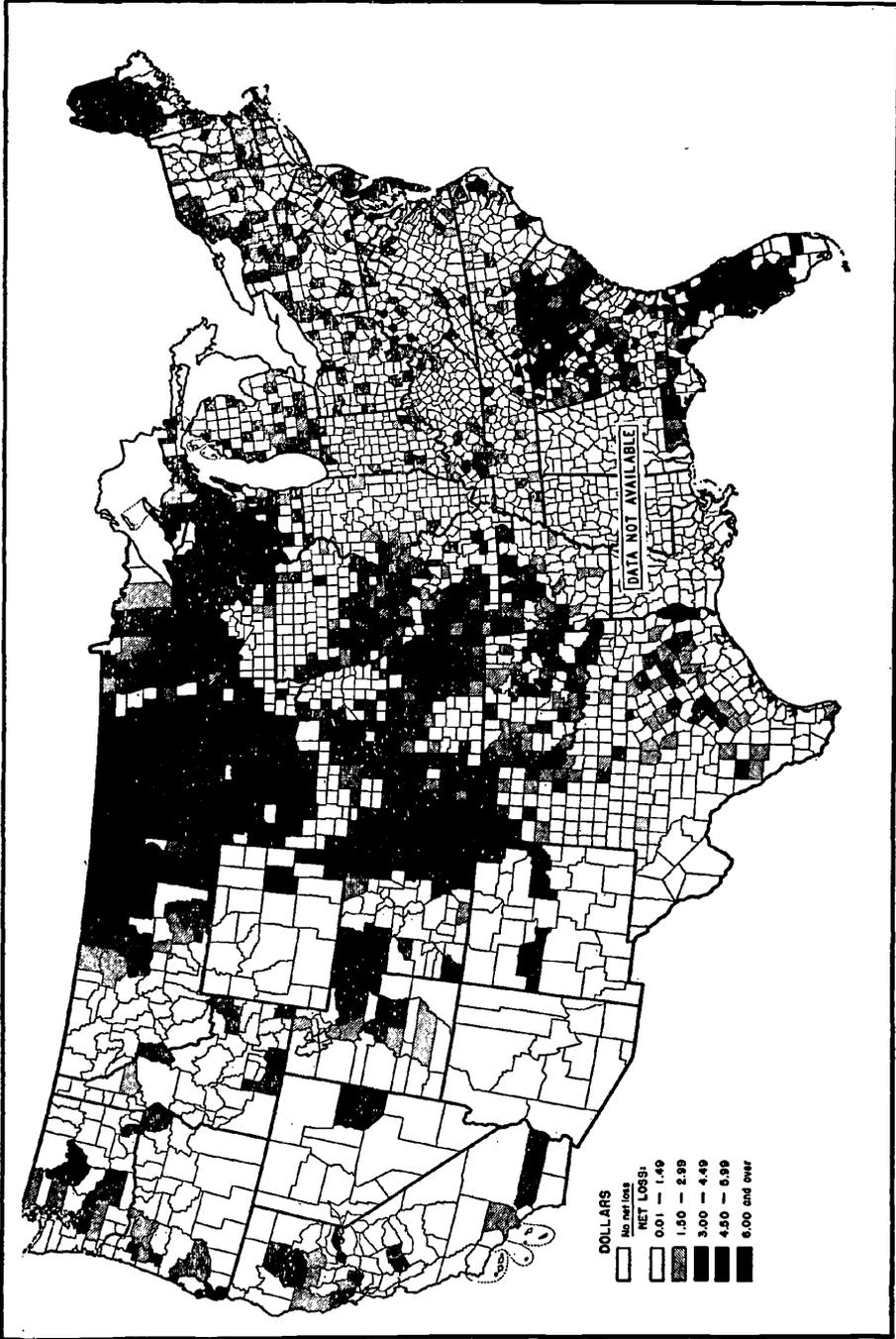
<sup>a</sup> Losses through June 30, 1946 on all Land Bank Commissioner first mortgage loans closed from May 1933 through December 1935, as a percentage of the total amount of the loans.

<sup>b</sup> Less than 0.05 percent gain.

loans made by commercial banks, and by the end of 1920 they totaled \$1,206 million, or 12 percent of the total farm mortgage debt.<sup>11</sup> Insurance companies undoubtedly had losses in the agricultural depression of 1921, although little information about them is available. On the whole, however, their activities in the farm lending business at that time were much more suc-

<sup>11</sup> *Ibid.*, Table 2, p. 12.

Figure 11. Net Loss, to Mid-1945, per \$100 of Land Bank Commissioner Loans Made in 1933-35



Map supplied by Farm Credit Administration. Loans based on prudent investment values are excluded; the data cover only first mortgage loans whose amount exceeded 65 percent of the appraised normal agricultural value of the farm. Losses are registered through June 30, 1945 (for the Springfield district, through September 30).

cessful than those of commercial banks. After 1920, loans of insurance companies continued to expand and by the end of the decade their outstandings had about doubled. In the thirties, when the depression became especially severe, insurance companies foreclosed a large volume of their loans, and many of the remaining loans were refinanced by the land banks and the Land Bank Commissioner. Between 1929 and the end of 1937 insurance company farm mortgage holdings were reduced from \$2,139 million to \$895 million, mainly as a result of foreclosures and refinancing.

Because of the importance of insurance companies as lenders their foreclosure experience is significant in the over-all picture of farm mortgage distress. But the farm real estate loans of these companies were not so widespread geographically as the loans of commercial banks or of the federal land banks. The insurance companies tended to concentrate their business in the Middle West, where a substantial volume of above-average-sized loans could be made. At the beginning of 1930 the farm mortgage loans held by insurance companies amounted to 22 percent of the total farm mortgage debt of the United States, but the proportion varied widely in different parts of the country, from practically no loans in the northeastern states to over 35 percent of all mortgage loans in several of the mid-western states (Table 7).

Unpublished data showing farm mortgage lending experience by counties as of the end of 1929 have been provided by fourteen major insurance companies and as of the end of 1932 by fifteen companies. The farm mortgage loans held by these companies amounted to about 60 percent of the total of such loans held by all life insurance companies on the dates of report.

Areas where borrowers had difficulty can be located from the insurance company data by means of a "distressed asset ratio," which is the percentage ratio of pending plus completed foreclosures to total farm investment as of a given date. County to county variations in the distressed asset ratios of reporting companies are shown in Figure 12 for the end of 1929 and in Figure 13 for the end of 1932.<sup>12</sup> The 1929 map is significant because

<sup>12</sup> In the construction of the maps drawn from life insurance company data some cognizance had to be taken of counties where the number of loans was small. As a rule, counties with only one loan were eliminated entirely. Counties with, say, two to ten loans were also eliminated unless they could be consolidated with contiguous counties having about the same number. Thus in peripheral areas, where loan volume was often small, the maps show experience by groups

TABLE 7

Share of Total Farm Mortgage Debt Held by  
Life Insurance Companies, 1930

<i>Region and state</i>	<i>Share of total farm mort- gage debt</i>	<i>Region and state</i>	<i>Share of total farm mort- gage debt</i>
<i>The Northeast</i>		<i>Corn Belt states</i>	
Maine .....	a	Ohio .....	21.7%
New Hampshire .....	0.0%	Indiana .....	36.7
Vermont .....	a	Illinois .....	29.6
Massachusetts .....	a	Iowa .....	41.9
Rhode Island .....	0.0	Missouri .....	32.9
Connecticut .....	a	<i>Lake states</i>	
New York .....	.1	Michigan .....	3.7
New Jersey .....	.4	Wisconsin .....	4.6
Pennsylvania .....	a	Minnesota .....	29.2
<i>Appalachian states</i>		<i>Great Plains and Mountain states</i>	
Delaware .....	.5	North Dakota .....	14.2
Maryland <sup>b</sup> .....	1.4	South Dakota .....	39.2
Virginia .....	7.8	Nebraska .....	28.7
West Virginia .....	1.8	Kansas .....	36.5
North Carolina .....	10.9	Montana .....	8.6
Kentucky .....	22.7	Idaho .....	12.2
Tennessee .....	33.0	Wyoming .....	1.1
<i>Cotton Belt states</i>		Colorado .....	5.0
South Carolina .....	10.1	New Mexico .....	10.6
Georgia .....	25.5	Arizona .....	5.2
Alabama .....	9.1	Utah .....	3.5
Mississippi .....	21.1	Nevada .....	3.1
Arkansas .....	16.4	<i>Pacific Coast states</i>	
Louisiana .....	14.1	Washington .....	15.2
Oklahoma .....	26.2	Oregon .....	10.4
Texas .....	24.0	California .....	3.7
Florida .....	4.4	United States .....	22.0%

From *Distribution by Lender Groups of Farm-Mortgage and Real Estate Holdings, January 1, 1930-45*, by Harald C. Larsen (Bureau of Agricultural Economics, mimeo., August 1945), Tables 17 and 22, pages 60 and 68. Based on data as of January 1.

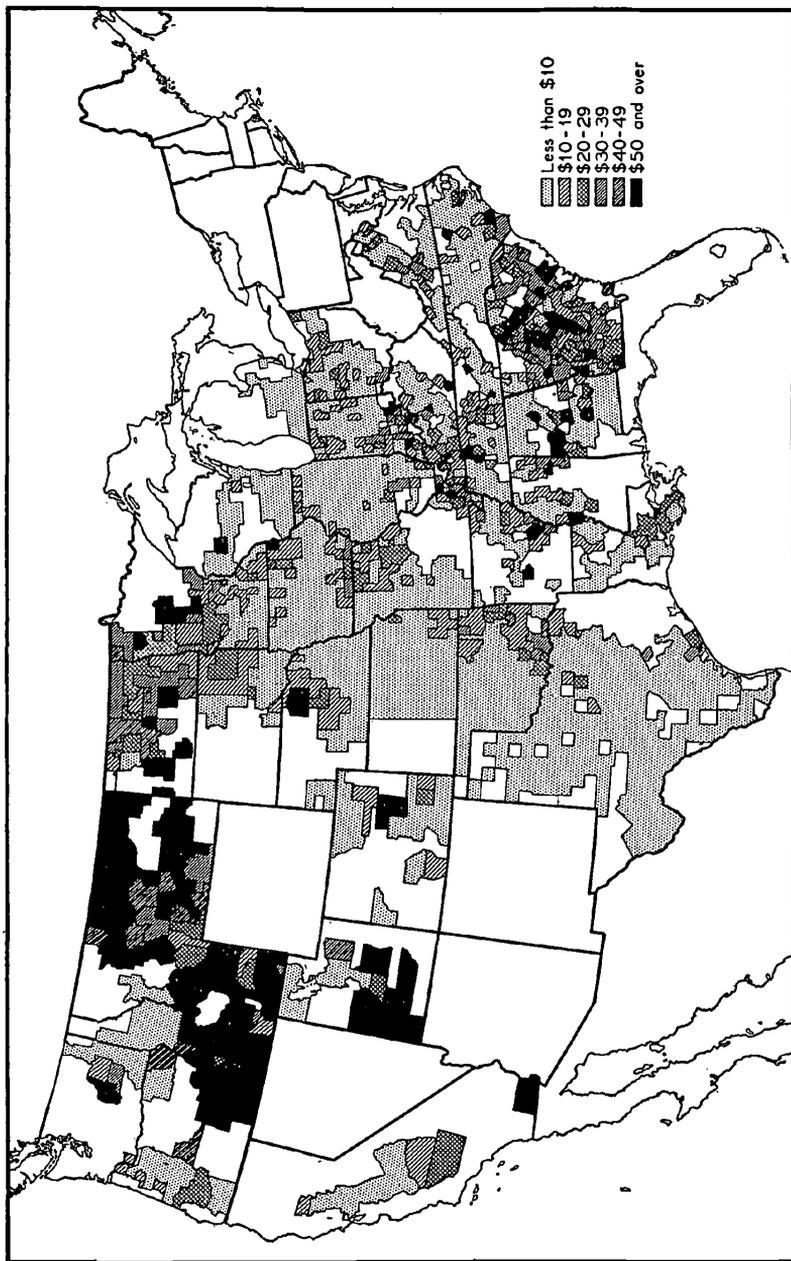
<sup>a</sup> Less than 0.05 percent.

<sup>b</sup> Includes District of Columbia.

it shows areas where distress developed early in the interwar period. Among them are a section of the eastern Cotton Belt and a strip of territory running west from northwestern Minnesota

of counties rather than individual counties. Counties with few loans were never consolidated with counties having numerous loans.

Figure 12. Distressed Assets per \$100 of Farm Investment by 14 Life Insurance Companies, 1929



From unpublished data supplied by major life insurance companies. For areas shown in white, few or no loans were reported. See accompanying text and footnote 12.  
 Distressed assets, given as of December 31, 1929, include investment in farm loans under foreclosure, in farms acquired by deed or foreclosure, and in previously acquired farms sold with title retained. Total farm investment includes the foregoing as well as investment in farm loans not under foreclosure.

through North Dakota, Montana, Idaho, and eastern Oregon. By the end of 1932, when economic conditions were approaching their worst, the volume of pending and completed farm mortgage foreclosures had increased substantially. At that time one-fourth of the total farm investment of the reporting companies was in acquired farms and in loans under foreclosure.

On the extent to which foreclosures resulted in loss to the lender, the material provided by life insurance companies concerns recovery experience with acquired farms sold by thirteen firms from 1929 to 1937 inclusive. For the United States as a whole, receipts from sales amounted to 90.4 percent of total costs to date of sale, indicating a loss rate of 9.6 percent on the reporting companies' investment in acquired farms. Their experience, however, varied considerably from that average in individual states and counties. Discussion of the variations in loss rates will be deferred until Chapters 3 and 4, which deal with some of the areas where the insurance companies were especially active lenders.

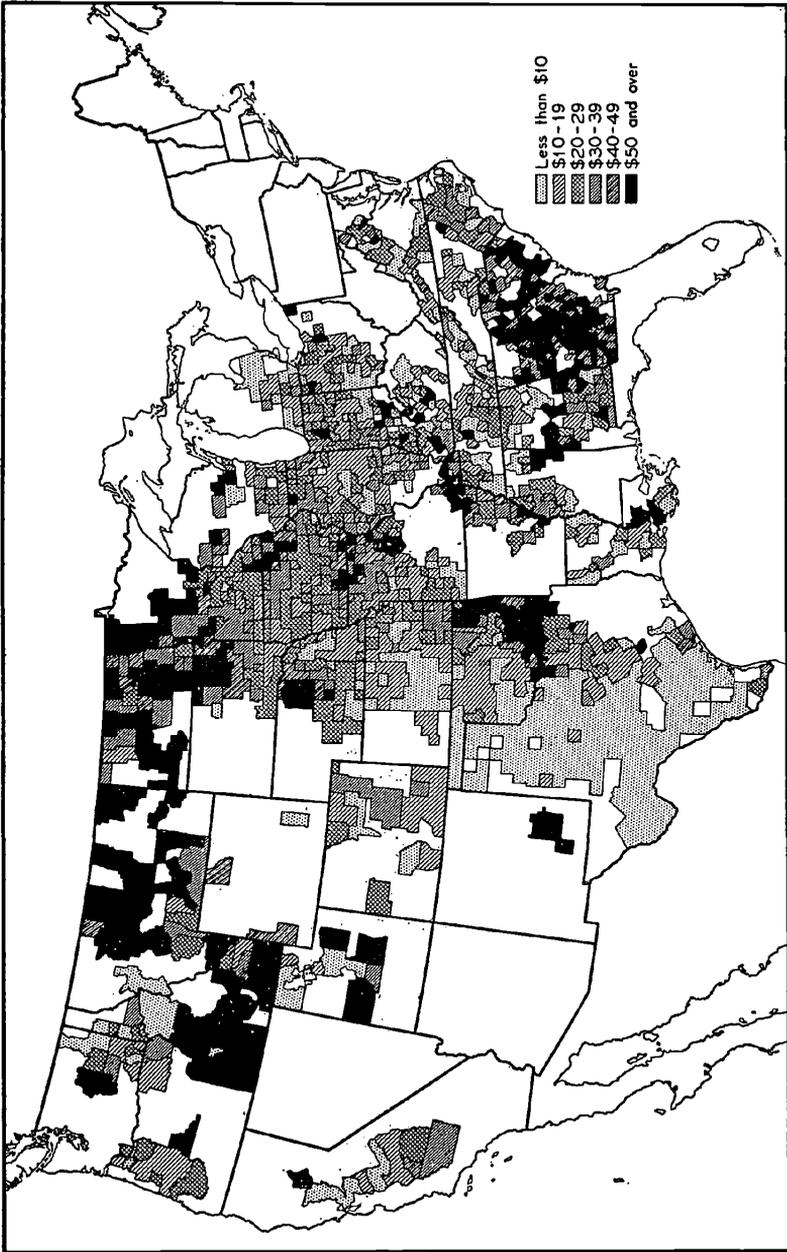
#### *Commercial Bank Data*

Before the liquidation that began in the early twenties, commercial banks were the largest holders of farm mortgage loans among the institutional lenders. At the end of 1920 their loans amounted to nearly \$1.5 billion, or about 14 percent of the total farm mortgage debt.<sup>13</sup> But during the twenties, while the insurance companies were almost doubling their portfolios, the commercial banks lost ground as mortgage lenders. By 1931, bank holdings of farm mortgages had declined to less than \$1.0 billion and by the end of 1934 to about \$0.5 billion (Figure 4).

Direct evidence of area variations in foreclosures and loss rates for commercial banks is not available, but considerable indirect evidence is provided by data on deposit changes and bank failures. By their very nature, the operations of commercial banks are certain to reflect the prosperity of the communities in which they do business. Declining incomes and tightened money conditions will quickly manifest themselves by deposit withdrawals. If withdrawals continue, and if investment losses are severe, bank failures are apt to result. The relationship between bank suspensions and distress farm transfers is indicated

<sup>13</sup> Horton et al., *op.cit.*, Table 2, p. 12.

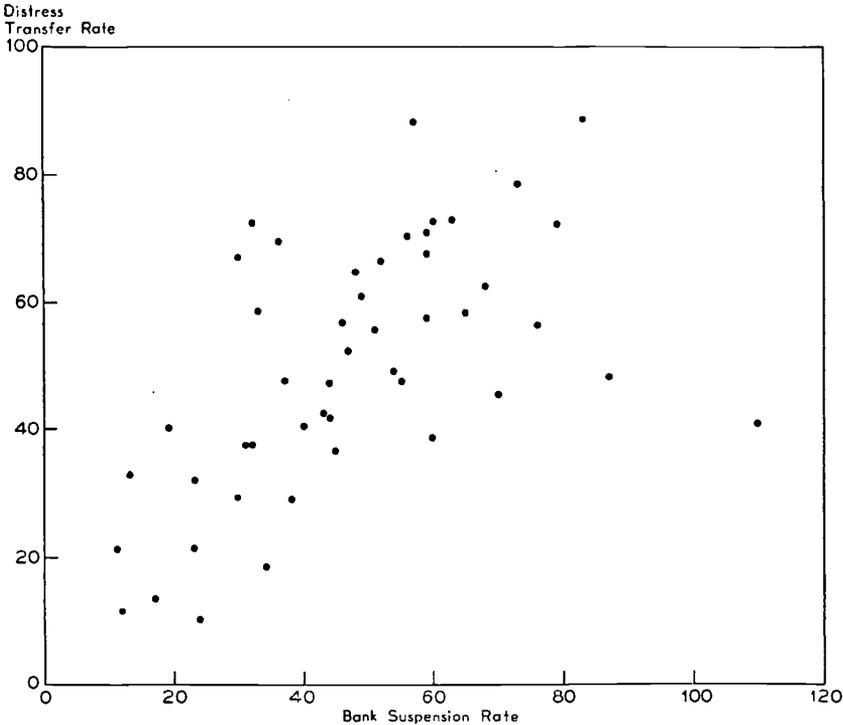
Figure 13. Distressed Assets per \$100 of Farm Investment by 15 Life Insurance Companies, 1932



From unpublished data supplied by major life insurance companies. For areas shown in white, few or no loans were reported. See footnote 12 and text preceding it.  
 Distressed assets, given as of December 31, 1932, include investment in farm loans under foreclosure, in farms acquired by deed or foreclosure, and in previously acquired farms sold with title retained. Total farm investment includes the foregoing as well as investment in farm loans not under foreclosure.

in Figure 14. States with a high rate of bank suspensions usually had a high rate of distress transfers. Likewise there was, in the main, a significant and direct relationship between distress transfers and the shrinkage of bank deposits, as Figure 15 shows. To a small extent, of course, the two scatter diagrams reflect the same thing, for the shrinkage of bank deposits represents

Figure 14. Relation between Commercial Bank Suspensions, 1921-33, and Distress Transfers of Farms, 1925-34

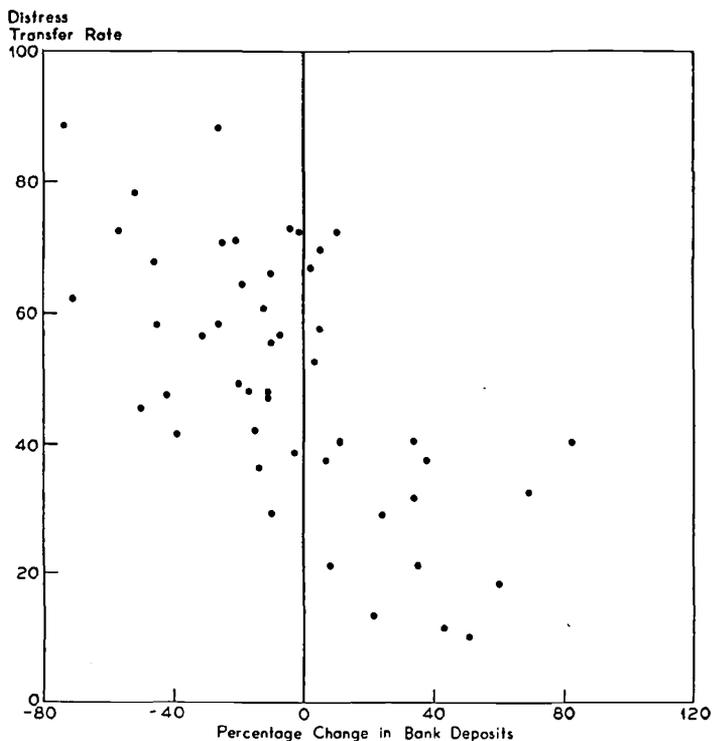


Distress transfer rate gives average annual foreclosures and assignments per thousand mortgaged farms for each state; see Figure 7. Bank suspension rate is the number of commercial bank suspensions in 1921-33, from **Banking and Monetary Statistics** (FRS, 1943, pp. 284 f.), given as a percentage of banks active in 1920 (from the annual report of the Comptroller of the Currency for 1920: Table 105, pp. 857 ff., adjusted to exclude mutual savings banks, Table 74, p. 816).

bank suspensions as well as deposit withdrawals from active banks.

On a countrywide basis, farm mortgage debt held by commercial banks during the interwar period was not large compared to their other earning assets. At the end of 1920, when the banks were the most important of the institutional lenders

Figure 15. Relation between Change in Commercial Bank Deposits, 1919-34, and Distress Transfers of Farms, 1925-34



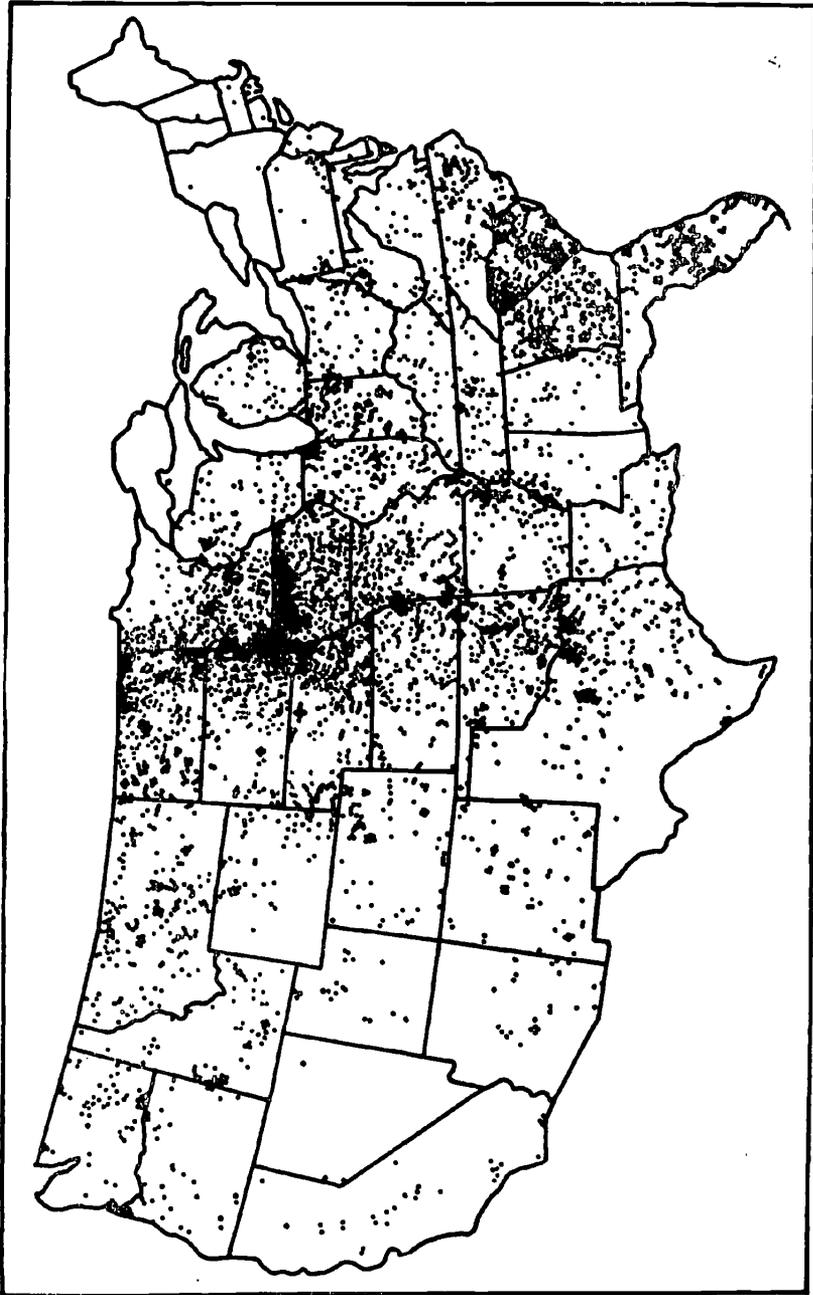
Distress transfer rate gives average annual foreclosures and assignments per thousand mortgaged farms for each state; see Figure 7. Percentage changes in commercial bank deposits were calculated from data for 1919 and 1934, June call dates, in *Banking and Monetary Statistics* (FRS, 1943, pp. 24 ff.).

concerned, farm mortgage loans amounted to only 5 percent of their total loans and discounts. In states where agriculture is the principal industry, however, farm mortgage loans constituted a more important segment of bank earning assets: for example, in North Dakota 14.2 percent, in Minnesota 16.4 percent, in Iowa 23.8 percent, and in Mississippi 26.4 percent.<sup>14</sup>

Bank suspensions during the twenties were mainly in agricultural areas (Figure 16). Concentration was heavy in a strip running north to south from North Dakota and Minnesota to eastern Texas. Georgia and South Carolina also had numerous bank failures. After 1929, the volume of suspensions increased

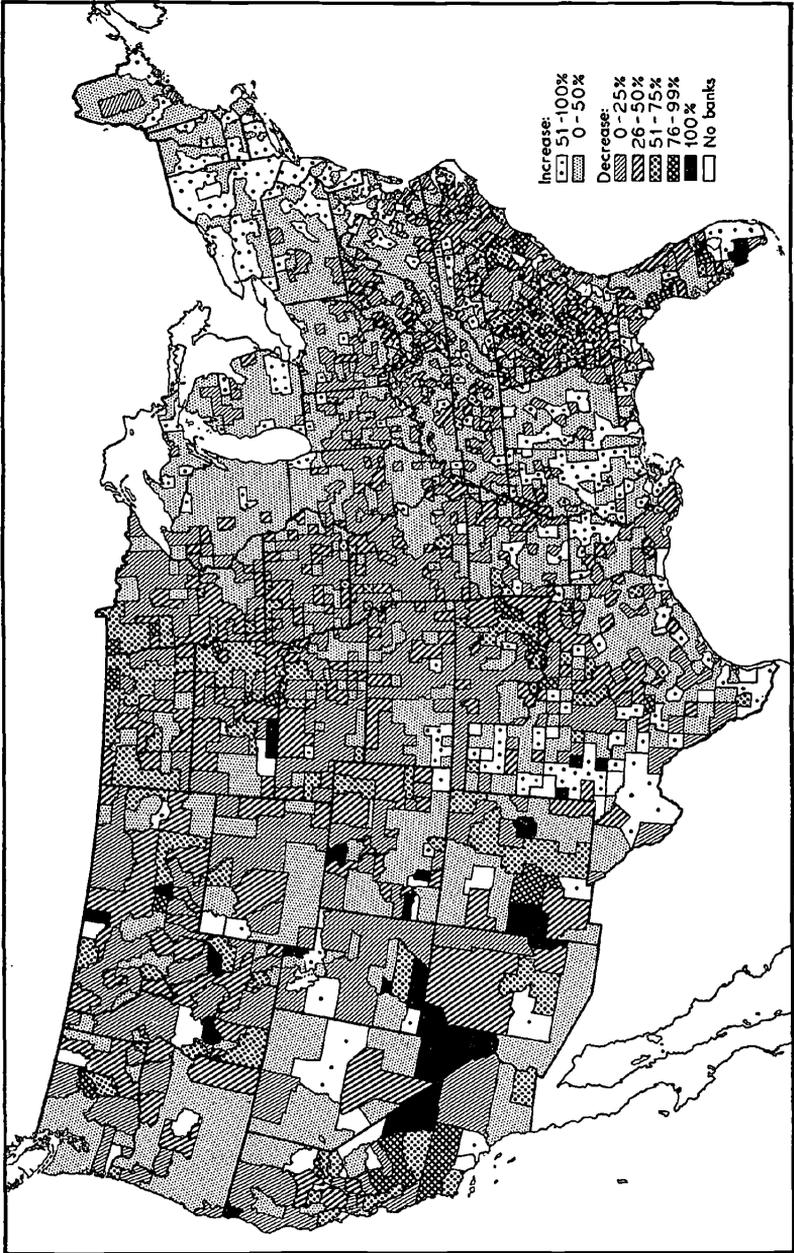
<sup>14</sup> V. N. Valgren and Elmer E. Engelbert, *Farm Mortgage Loans by Banks, Insurance Companies, and Other Agencies* (U.S. Department of Agriculture, Bulletin 1047, December 1921), Table 3, p. 8.

Figure 16. Bank Suspensions, 1921-29



After a map supplied by the Board of Governors of the Federal Reserve System.

Figure 17. Percentage Change in Total Deposits of Commercial Banks, 1920-29



Based on a special tabulation supplied by the Federal Deposit Insurance Corporation.

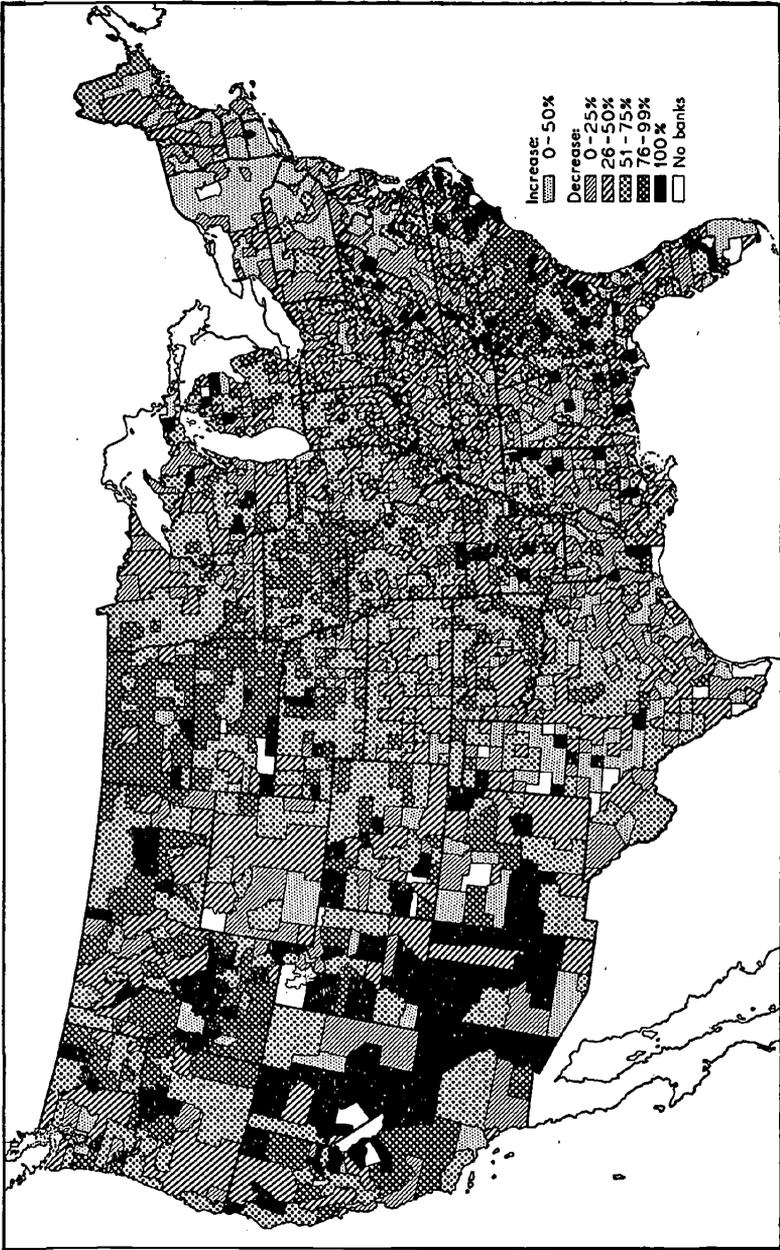
rapidly and spread to many industrial areas. By the end of 1933, when the wave of failures had about subsided, the cumulative number of bank suspensions for 1921-33 inclusive amounted to 50 percent of the state and national commercial banks active on June 30, 1920.<sup>15</sup> In the industrial Northeast, where bank failures were relatively few, the percentage of suspensions ranged from 11 percent in New Hampshire to 34 percent in New Jersey. In the Far West, California had a relatively low ratio of 19 percent. States with exceptionally heavy suspension rates included the following: Florida, 110 percent (evidently some of the suspended banks were organized after 1920); Michigan, 87; South Dakota, 83; Iowa, 79; Arkansas, 76; and South Carolina, 73.

The pattern of deposit changes further highlights some of agriculture's trouble spots. Deposit changes during the twenties are shown in Figure 17. During the early thirties the decline in deposits continued and spread (Figures 17 and 18). By the end of 1933 deposits in most of the northern Great Plains, Iowa, and Minnesota were less than half those of 1920. Similar shrinkages occurred in Arkansas, Georgia, eastern Oklahoma, South Carolina, and scattered counties throughout the Mountain region. Areas of relatively good economic conditions, indicated by an increase in deposits between 1920 and the end of 1933, show up in the northeastern states and western Texas. In areas such as the Far West where branch banking is important, the maps reveal mainly the experience of independent banks, since deposits of branch banks are reported for the county in which the head office is located. Possibly, experience in these areas may have been more favorable than the maps indicate. In thinly populated counties of the Mountain region the decline of deposits to zero usually meant that there was only one bank in the county, and it failed.

In analyzing the maps showing changes in deposits it is well to realize that during the farm boom of 1919 and 1920, when farmers borrowed heavily and agricultural prices were exceptionally high, there was a heavy flow of investment funds into agricultural communities. Thus the decline of deposits in some areas was a natural readjustment to more normal conditions. Nevertheless, considerable hardships and distress resulted.

<sup>15</sup> From the source noted on Figure 14.

Figure 18. Percentage Change in Total Deposits of Commercial Banks, 1920-33



Based on a special tabulation supplied by the Federal Deposit Insurance Corporation.

*Trends in Land Values*

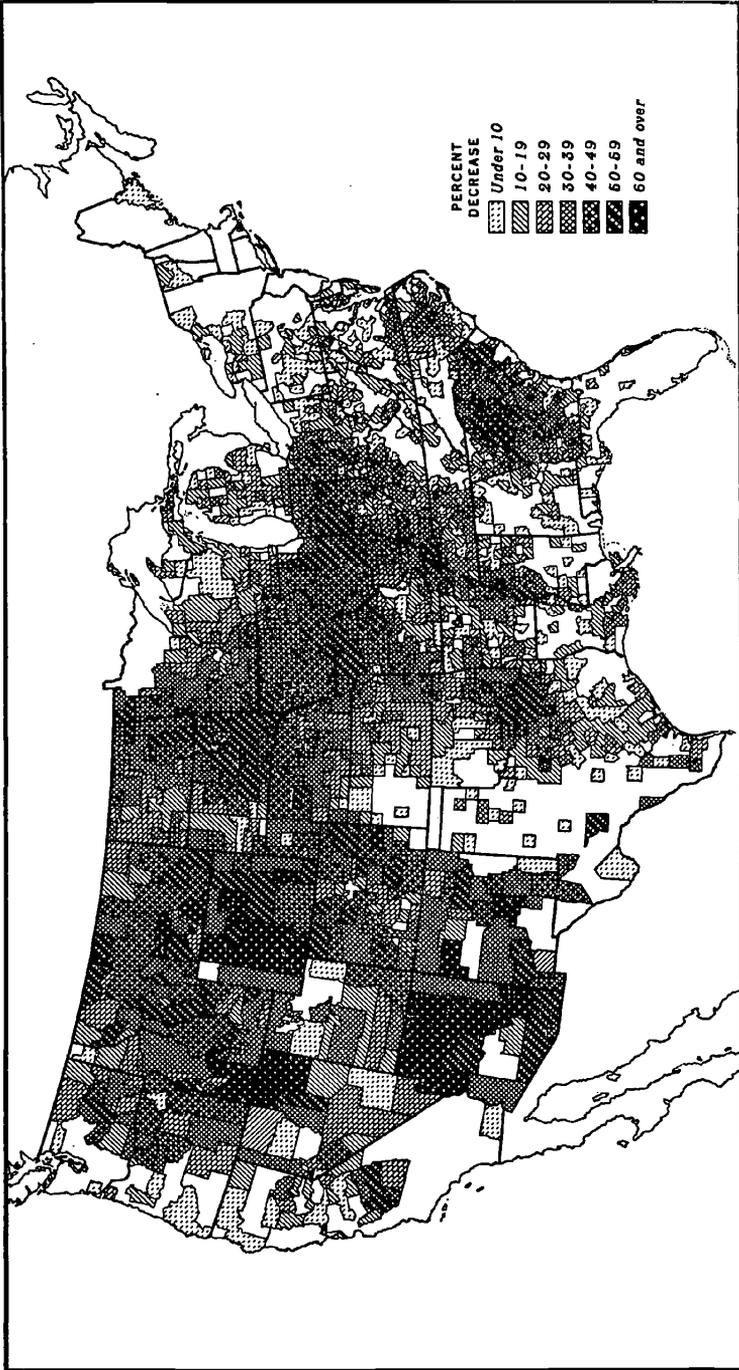
Indirect evidence of farm mortgage distress in the interwar period is afforded by the Census of Agriculture estimates of increases and decreases in land values by counties, the decreases being particularly significant (Figures 19, 20, and 21). Land values are the net result of numerous economic forces, including the mortgage situation; and in turn land values exert a reciprocal effect upon the mortgage situation. When land prices increase, mortgage debt eventually follows suit, thus setting the stage for possible future trouble. If farm incomes later decline substantially, some decrease in land values and some debt distress will develop almost automatically. The decrease in land values reduces loan security and operator equities; and any attempt by lenders to protect their investments through foreclosure or forced sale will merely aggravate the situation by driving prices down further. In short, declines in land values are both a cause and an effect of farm mortgage distress, and it is unlikely that either will develop to any great extent without the other. Exceptions may occur in areas having a small amount of mortgage debt. Even in a severe agricultural depression such areas might experience considerable declines in land values without noticeable mortgage distress. In general, however, farm mortgage distress during the interwar period was most acute in the areas in which land values declined the most (Figure 22).

From 1920 to 1930, decreases in farm real estate values were greatest in the Southeast, the Corn Belt, the eastern Great Plains, southeastern Oklahoma and northeastern Texas, and scattered areas throughout the Mountain region (Figure 19). Increases occurred in the Northeast, Florida, the western portions of Texas, Oklahoma, and Kansas, and parts of California and the western half of Washington and Oregon.

In the years between 1930 and 1935, which cover the worst phase of the depression, only a few counties in the United States escaped the deflation of farm property values (Figure 20). The extent of the decline is indicated by the fact that nine-tenths of the counties experienced decreases of 20 percent or more, and values dropped 30 percent or more in over two-thirds of all counties. Declines of 40 percent or more occurred mainly in the western Corn Belt, South Dakota, Nebraska, and eastern Oklahoma.

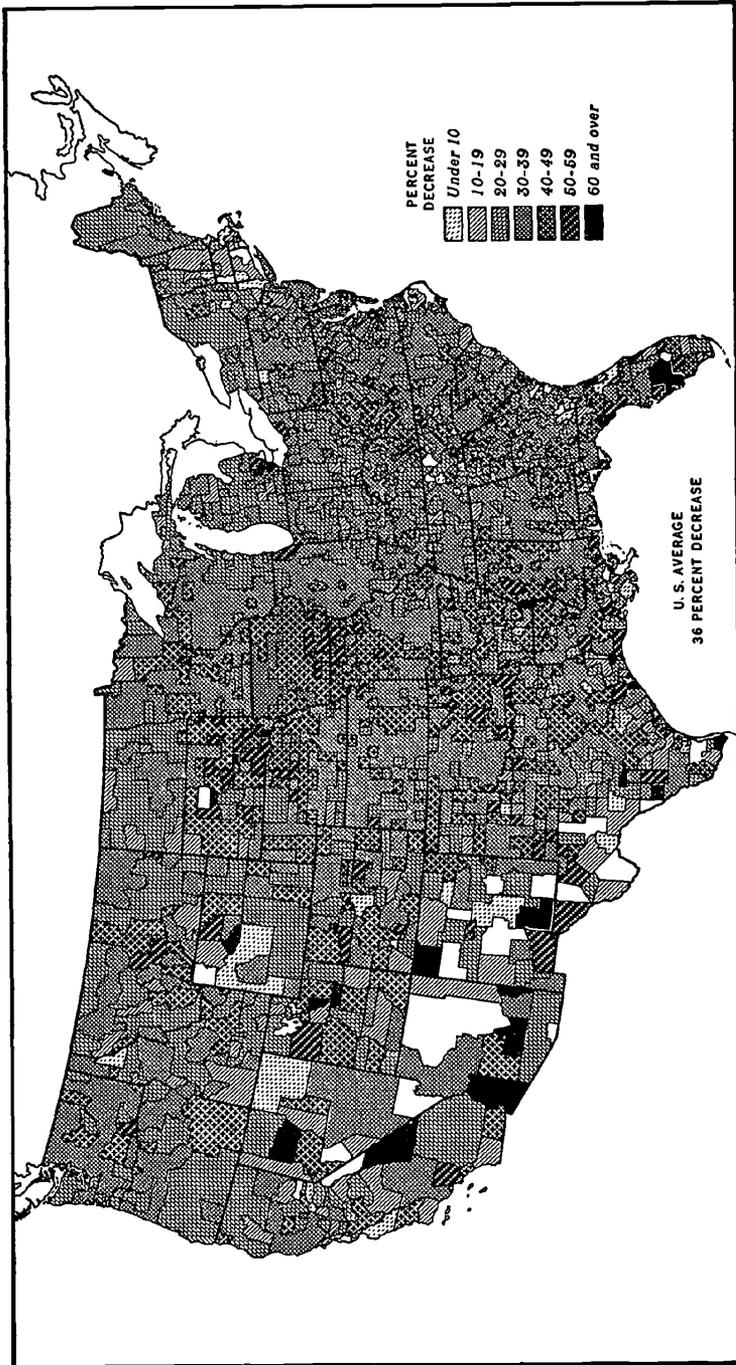
By 1935 many agricultural areas had begun to recover economically. Reflecting this improvement, land value increases

Figure 19. Decrease in Value of Farm Real Estate per Acre, 1920-30



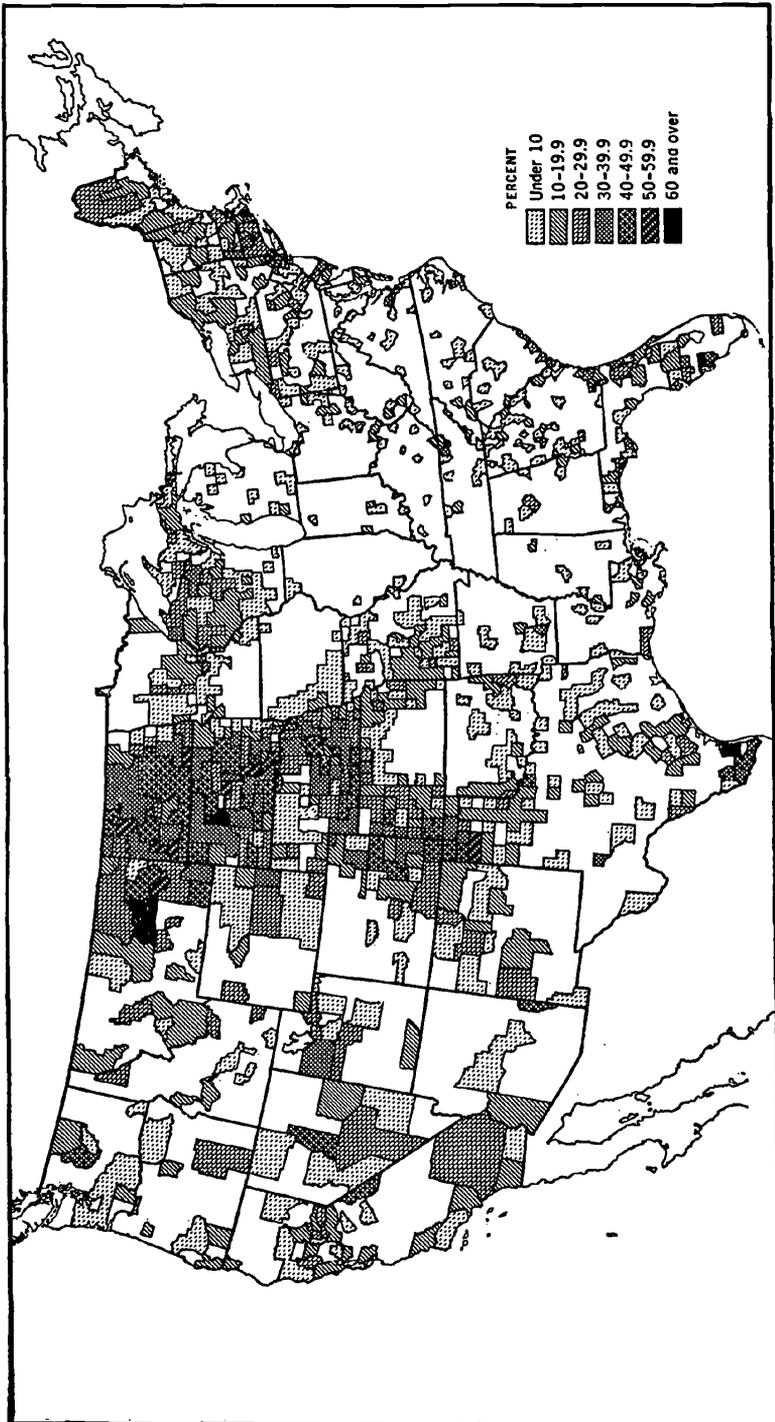
Map supplied by U.S. Department of Agriculture, Bureau of Agricultural Economics. Based on census data for value of farm land and buildings as of January 1, 1920 and April 1, 1930. Values increased in areas shown in white.

Figure 20. Decrease in Value of Farm Real Estate per Acre, 1930-35



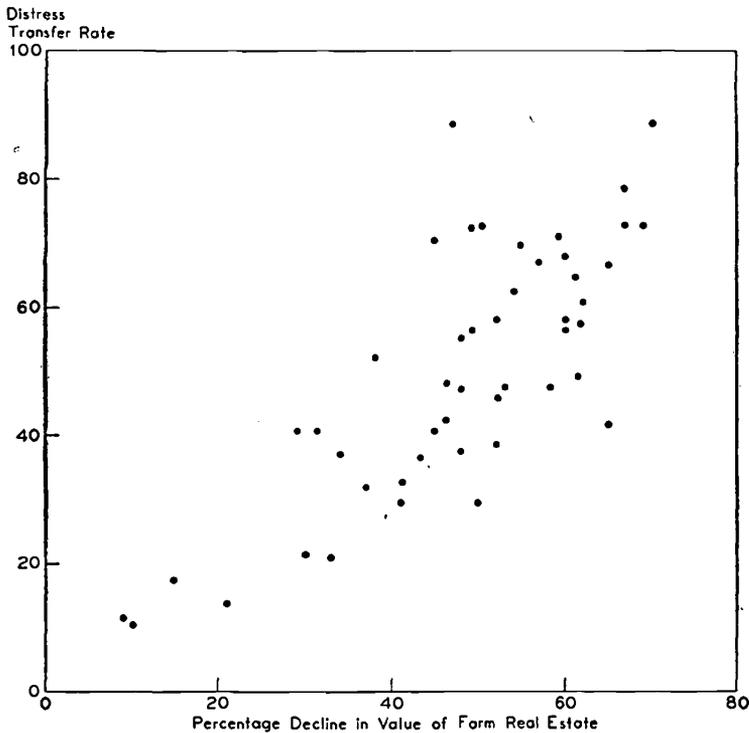
Adapted from map supplied by U.S. Department of Agriculture, Bureau of Agricultural Economics; based on census data for value of farm land and buildings as of April 1, 1930 and January 1, 1935. Values increased in areas shown in white.

Figure 21. Decrease in Value of Farm Real Estate per Acre, 1935-40



Map supplied by U.S. Department of Agriculture, Bureau of Agricultural Economics.  
Based on census data for value of farm land and buildings as of January 1, 1935 and April 1, 1940. Values increased in areas shown in white.

Figure 22. Relation between Decline in Farm Real Estate Values, 1920-35, and Distress Transfers of Farms, 1925-34



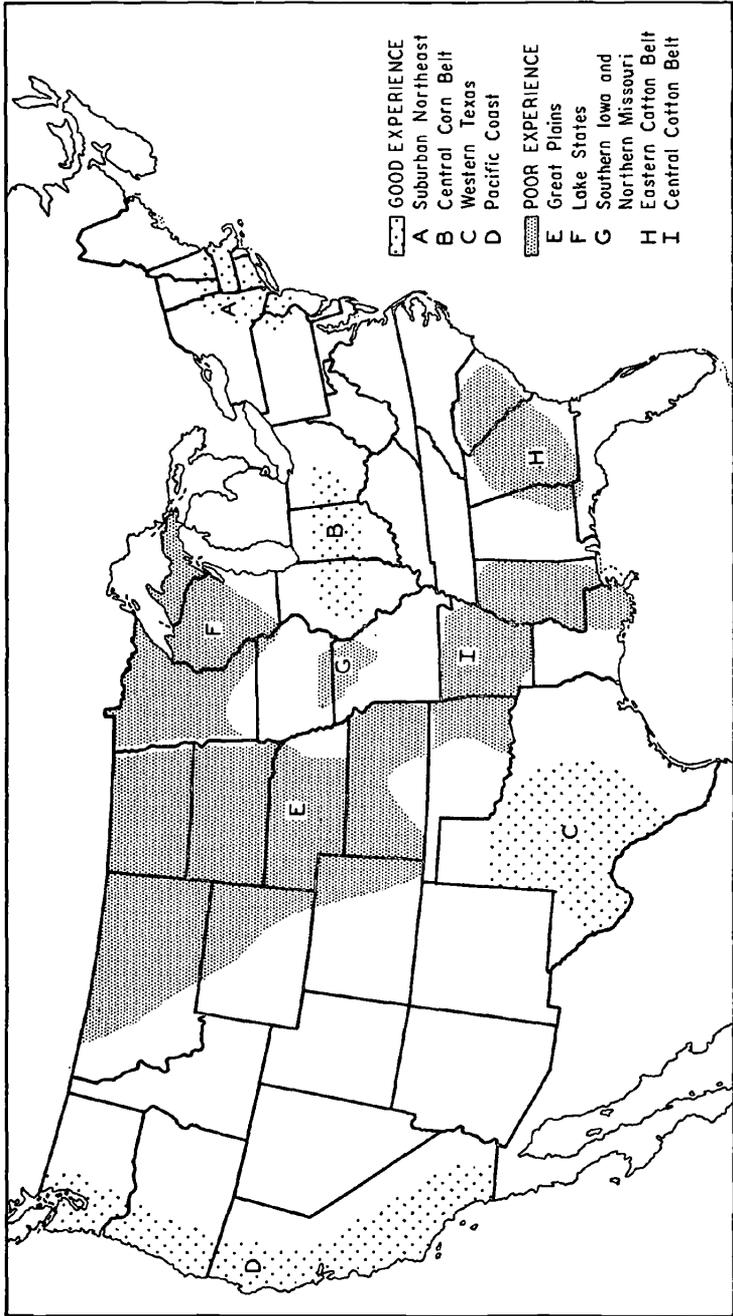
Distress transfer rate gives average annual foreclosures and assignments per thousand mortgaged farms for each state; see Figure 7. Declines in value of farm land and buildings were calculated from the index of the Bureau of Agricultural Economics in *Agricultural Finance Review*, November 1952 (p. 123).

were general between 1935 and 1940 in the Corn Belt, the South, and the Mountain region, and along the west coast (Figure 21). Exceptions were the northeastern and Great Plains states. There the financial condition of farmers remained generally unfavorable through the late thirties.

#### *Location of High and Low Distress Areas*

A review of the foregoing maps showing variations in general economic conditions, in over-all foreclosure experience, and in foreclosure and loss experience reported by specific lenders indicates considerable similarity in distress patterns. There are, it appears, four, or possibly five, important farming areas where mortgage distress was very much worse than average, and there are four areas where experience was very much better than

Figure 23. Major Areas of Good and Poor Farm Mortgage Loan Experience, 1920-40



average (Figure 23). Of course variations occurred within these broad areas, and in scattered counties (not indicated) mortgage experience differed considerably from that of the area as a whole. A brief description of the high and low distress areas follows, summarizing the evidence in each case.

*Great Plains:* The northern and central plains area containing the Dakotas, most of Montana, Nebraska, Kansas, and the eastern parts of Wyoming and Colorado is the most conspicuous of all the trouble spots because of its geographical extent. All the direct evidence heretofore considered—distress transfers, insurance company foreclosures, and foreclosures and losses on land bank and Commissioner loans—points to bad mortgage experience in the Great Plains during the period under review. In addition there is substantial indirect evidence in the form of bank suspensions, decreases in bank deposits, and decreases in land values.

*Lake States:* In the region bordering the western Great Lakes, the area of poor experience covers most of Minnesota and Wisconsin, and the northern part of Michigan that is contiguous with Wisconsin. Distress transfers, insurance company and land bank foreclosures, and especially land bank and Commissioner losses combine to show considerable mortgage difficulty there, as in the Great Plains. Decreases in land values, however, were not so evident; northern Minnesota even showed substantial increases from 1920 to 1930 and from 1935 to 1940.

*Southern Iowa and Northern Missouri:* The rather small distress area in the Corn Belt is important because its farming is relatively intensive and there is a considerable concentration of wealth. While the maps of distress transfers and of land bank and insurance company foreclosures all indicate trouble, probably the most dramatic evidence is the loss experience both of the life insurance companies (Figure 34, Chapter 3), which will be discussed later, and of the land banks. There was also a great deal of trouble, with serious losses, in northeastern Iowa.

*Eastern Cotton Belt:* The distress area in the eastern cotton lands occupies most of Georgia and South Carolina with a little of Alabama. Although the distress transfer maps do not clearly delineate the area, its very poor mortgage experience shows up plainly on the land bank and insurance company maps. Moreover, there were many bank failures, substantial declines in bank deposits, and noticeable declines in real estate values.

*Central Cotton Belt:* The comparatively distressed part of

the central Cotton Belt, including Mississippi, Arkansas, eastern Louisiana, and the eastern half of Oklahoma, is less of a trouble area than any of those previously discussed, though experience there was by no means good. The most definite evidence pointing to trouble in the central Cotton Belt was the experience with land bank loans.

*Suburban Northeast:* Southern New England and sections of New York and New Jersey within a hundred-mile radius of New York city make up an area of very good experience. Distress transfer rates were low, and the land bank experience was good. Insurance companies made very few loans in the Northeast.

*Central Corn Belt:* Central Illinois and parts of central Indiana and western Ohio had surprisingly good experience in comparison with the rest of the Corn Belt. This is shown most effectively on the loss rate maps for land banks and (as will appear later) for life insurance companies (page 86). The maps of land bank and insurance company foreclosure rates also indicate better than average experience in the central Corn Belt.

*Western Texas:* Here the ranching and small grain areas of the southern Great Plains are joined with the western end of the Cotton Belt. But unlike the northerly sections of the Great Plains and the easterly sections of the Cotton Belt, western Texas had excellent farm mortgage experience, which is conspicuous on all the land bank and life insurance company maps. The area is also noteworthy as one of the few sections of the country that had substantial increases in land values during the twenties. Of further interest is the small number of bank failures in western Texas.

*Pacific Coast:* Farm mortgage experience from southern California to northwestern Washington was generally good. This is confirmed by the distress transfer maps, insurance company foreclosure rates, and land bank foreclosure and loss rates. Increases in land values were general throughout the twenties.