

MINNESOTA'S BANKING STRUCTURE REAPPRAISED

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### Background and Purpose

It is well known that two multibank holding companies, First Bank System and Northwest Bancorporation, have substantial banking subsidiaries located in the major metropolitan areas of the state as well as in many important nonmetropolitan communities. In addition, there is a considerable size differential between these two companies and any other commercial banking organization in the state.

These structural characteristics have led the Board of Governors of the Federal Reserve System to classify Minnesota's banking industry as "concentrated."<sup>1/</sup> A study comparing Minnesota with a sample of states with similar amounts of banking activity concluded that Minnesota had an "exceptional" banking structure.<sup>2/</sup> The high degree of concentration of banking resources in the two holding companies was cited as a factor underlying the Governor's veto of a bill passed by the 1976 Minnesota Legislature which would have permitted commercial banks to install remote electronic facilities.<sup>3/</sup>

The view that Minnesota has a concentrated or exceptional banking structure in comparison to some group of other states has been

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<sup>1/</sup> See: 1968 Federal Reserve Bulletin 222; 1969 Federal Reserve Bulletin 62; and 1973 Federal Reserve Bulletin 194.

<sup>2/</sup> Paul F. Jessup, Minnesota's Exceptional Banking Structure: Research and Policy Perspectives, Research Report, Federal Reserve Bank of Minneapolis, Minneapolis, Minnesota, March 1975.

<sup>3/</sup> Steven Dornfeld, "Governor Vetoes Banking Measure," Minneapolis Tribune, April 21, 1976, p. 4A.

criticized because the measures used to reach those conclusions have focused solely on the banking component of the financial services industry. Of course, the reason for analyzing commercial banking structure without including other types of financial intermediaries stems from laws which separate types of institutions for tax, regulatory, and social purposes, and from judicial interpretations that commercial banking is a distinct line of commerce.<sup>4/</sup>

Although it has become customary in regulatory and academic analyses to examine commercial banking structure apart from other types of intermediaries, many of the services provided by commercial banks are virtually identical to those provided by intermediaries such as thrift institutions or finance companies. Therefore, it has been suggested that these other intermediaries should be included in an examination of the structural characteristics of banking.

The objective of this paper is to reevaluate the conclusions that Minnesota has a concentrated or exceptional banking structure in comparison to other states. In particular, nonbank financial intermediaries are included in the analysis on a service-by-service basis in order to determine if the conclusions remain valid.

The analysis first examines the level of concentration within commercial banking for several different financial services.<sup>5/</sup> Then

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<sup>4/</sup>Federal laws which treat commercial banks as separate from other financial intermediaries include the Bank Merger Act and the Bank Holding Company Act. The Savings and Loan Holding Company Act treats savings and loan associations separately from commercial banks. The controlling court determination that commercial banking is a distinct line of commerce is found in U.S. v. Philadelphia National Bank, 374 U.S. 321 (1963).

<sup>5/</sup>The financial services analyzed are: (1) total deposits, (2) total deposits of individuals, partnerships, and corporations (IPC deposits) in accounts less than \$100,000, (3) total time and savings deposits (T&S deposits) in accounts less than \$100,000, (4) total mortgage loans, and (5) total commercial loans.

data for nonbank depository institutions are introduced to ascertain their effect on the concentration numbers. Throughout the analysis, concentration in Minnesota is compared to concentration in states grouped according to branch banking status (statewide branching, limited branching, and unit banking) and in the group of states used in the Jessup study.

#### Summary of Findings

The examination of the commercial banking industry alone showed that the group of states permitting statewide branching had significantly higher levels of concentration than the groups of states that permitted either limited branching or unit banking. No significant differences in the concentration measures were found between the limited branching group and the unit banking group except for the case of commercial loans.

Minnesota, although technically classified as a unit banking state, showed measures of concentration in commercial banking which approximate the averages for the group of statewide branching states. Thus, the Minnesota measures were higher than the average for the unit banking states.

When nonbank financial intermediaries were included in the analysis, the levels of concentration for each group of states, as well as for Minnesota, were reduced. The concentration levels of the statewide group remained significantly higher than that of the other two groups in service areas dominated by commercial banks.

Concentration in Minnesota as measured in the more broadly defined financial industry remained high relative to the group of unit

banking states and again approximated the averages for the group of statewide branching states.

The concentration measures for the states included in the Jessup study are quite similar to the average for the limited branching group.<sup>6/</sup> As a result, the states in the Jessup sample showed measurably less concentration than Minnesota.

#### Policy Implications

This study showed that, for the financial services analyzed, Minnesota's levels of concentration are very similar to the average levels exhibited by the group of statewide branching states. This suggests that Minnesota, with its two large multibank holding company systems, is experiencing de facto statewide branching at the present time.

This implies that a liberalization in Minnesota's bank branching statutes would not be expected to result in a significant increase in concentration. Any significant increases in concentration in Minnesota would place Minnesota at variance with the norm presently exhibited by the group of statewide branching states and in that sense is not highly probable.

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<sup>6/</sup>The Jessup sample was found to have a concentration profile similar to that of the limited branching state sample for all five services investigated, both when considering commercial banks alone and when including nonbank financial institutions. This result is not surprising in view of the pattern of concentration across samples and the makeup of the Jessup sample. Of the three samples constructed according to state branching laws, the statewide branching sample showed the highest concentration and the unit banking sample showed the lowest, with the concentration of the limited branching sample falling somewhere in between, or "averaging" the other two. In a somewhat different sense, the Jessup sample averaged the concentration of all three categories by including states with all three types of legislatively established banking structures.

Other factors outside the scope of this study would be expected to exert an influence on bank expansion, of course. Federal regulatory barriers and a presently conservative market attitude would tend to constrain expansion by either of the large multibank holding companies. At the same time, de novo branches or perhaps limited service electronic facilities would not be expected to impose severe regulatory or capital constraints, so some expansion along this order might take place.

These factors suggest additional research which should be considered before a complete assessment can be made of the likely effects of a liberalization in Minnesota's branch banking laws. The present study does imply that the predictions that liberalization would result in significantly higher levels of concentration are not particularly solid.

#### Framework for Analysis

In order to make judgments with regard to concentration, two items were necessary: a measure of concentration (one- to five-firm concentration ratios) and some standard of comparison (the Jessup sample and selected samples of states reflecting different state laws on branching structure).

Measures of Concentration The concentration ratios used in this study were the cumulative relative share of a financial service held by the five largest firms within a sample state. The ratios, which reflected concentration levels as of June 1975, were computed for commercial banks as well as commercial banks plus nonbank financial intermed-

iaries. The commercial banking concentration ratios,  $C_j$ , were computed as follows:

$$C_j = \frac{\sum_{i=1}^j B_i}{\sum_{i=1}^{N_b} B_i}, \quad \begin{array}{l} i=1, \dots, N_b \\ j=1, \dots, 5. \end{array}$$

For each financial service,  $B_i$  is the amount provided by the  $i^{\text{th}}$  bank, where the banks are ranked in descending order.  $N_b$  is the total number of commercial banks within a particular state.

The financial institutions' concentration ratios, (for commercial banks plus nonbank financial intermediaries) were computed as follows:

$$C_j = \frac{\sum_{i=1}^j I_i}{\sum_{i=1}^N I_i}, \quad \begin{array}{l} i=1, \dots, N, \\ j=1, \dots, 5 \end{array}$$

$$\text{where } \sum_{i=1}^N I_i = \sum_{i=1}^{N_b} B_i + \sum_{i=1}^{N_s} S_i + \sum_{i=1}^{N_m} M_i + \sum_{i=1}^{N_c} C_i.$$

For each financial service,  $I_i$  is the amount held by each financial institution ( $I_i$ ) which may be either a commercial bank ( $B_i$ ), a savings and loan ( $S_i$ ), a mutual savings bank ( $M_i$ ), or credit union ( $C_i$ ). The financial institutions are ranked in descending order.  $N$  is the total number of financial institutions, as defined, within a particular state ( $N=N_b+N_s+N_m+N_c$ ). (Appendix A gives data sources and defines the concentration ratios.)

Two opposite effects on concentration ratios occur when the more traditional analysis of the commercial banking industry is altered by introducing nonbank financial institutions. The first, termed the "denominator" effect, refers to how concentration changes as the total number of intermediaries considered increases. To see this effect, data indicating commercial banks' share relative to nonbank financial intermediaries' share was analyzed. The second, termed the "numerator" effect, refers to how the composition of the top five firms changes when other nonbank financial intermediaries are included. Information contrasting bank and nonbank financial intermediaries' shares of the total amount of a financial service held by the top five firms was analyzed to reveal this effect.

The denominator effect decreases the concentration ratios and the numerator effect has an offsetting impact, provided that at least one nonbank financial intermediary is larger than one of the five biggest commercial banking organizations. In combination, the direction of the resulting change in concentration depends on the share banks have of the total service area relative to nonbank institutions and on the size of the largest nonbank institutions in comparison to the largest banking organizations.

At this point it is worth noting that for at least two reasons, the study does not constitute an exhaustive analysis of market concentration in financial activities. First, the geographic units of the study were restricted to states. It is recognized that depending on the particular financial service in question, the relevant local market may be either larger or smaller than a state and will not necessarily conform to state boundaries in either case. In partial defense of this



weakness, it should be pointed out that state concentration ratios provide at least an approximation of the concentration to be found in local markets within a given state. Second, the list of financial agents is still not all-inclusive, even though, by considering certain nonbank financial institutions as additional providers of service, this study greatly expands market definitions for financial services beyond those traditionally used in bank regulatory analysis. Examples of financial service providers not included in this study are the commercial paper market, insurance companies, and mortgage banks.

Standards for Comparison The type of bank branching structure (statewide branching, limited branching, and unit banking) which is determined by state law is one of the more pervasive factors which could influence banking concentration. Consequently, the standards of comparisons for this study were three groups of states reflecting the three types of banking structure. These groups were termed the statewide branching, limited branching, and unit banking samples.

For statistical testing purposes, it was assumed that the present 50 states represent a random sample from a normal population. This random sample can be partitioned according to state branching laws. It would have been preferable to include all 50 states in the analysis, but budget constraints permitted data to be gathered only for a smaller group of 18 states.

This scheme permitted comparisons to be made between the three different branching environments. The group of states included in the Jessup study, referred to as the "Jessup sample," was also incorporated. (Appendix B lists the states used in this analysis.)

### The Analysis

In conducting the analysis, each of the five areas of financial service (total deposits, IPC deposits less than \$100,000, T&S deposits less than \$100,000, mortgage loans, and commercial loans) was examined separately in the following way.

Step 1: The statewide branching, limited branching, and unit banking sample one- to five-firm commercial banking concentration ratios were tested for any statistically significant differences among the means. The testing included computing F-statistics to determine whether or not variance across the samples differed significantly. Once this was done and it was concluded that sample variances were equal, t-statistics were computed to determine whether or not mean concentration ratios were significantly greater in one sample than in another. (Appendix C contains the results of this inquiry.) Then Minnesota's one- to five-firm commercial banking ratios were compared to the sample averages.

As a result of Step 1, judgments were made about whether commercial banking concentration in Minnesota was like that found in statewide branching, limited branching, or unit banking states, and whether or not these three samples were statistically different.

Step 2: Nonbank financial intermediaries were introduced into the analysis. The denominator and numerator effects (described on page 7) on each of the samples were examined individually to determine their influence on the level of concentration.

Step 3: In the final step the one- to five-firm financial institution concentration ratios were analyzed. The analysis followed the same pattern as in Step 1 allowing judgments to be made about how Minnesota compared to the sample states.

## Findings

This section describes the findings of the analysis as conducted on each of the five financial services. The five charts included in this section (along with Appendix C) illustrate those findings.

Step 1: The tests in this step of the analysis turned up fairly similar results in all five of the financial services. The concentration levels in the commercial banking industry were significantly higher in the statewide branching sample than in the limited branching or unit banking samples and not significantly different between the limited branching and the unit banking samples. In all five cases the Jessup sample was quite similar to the limited branching sample.

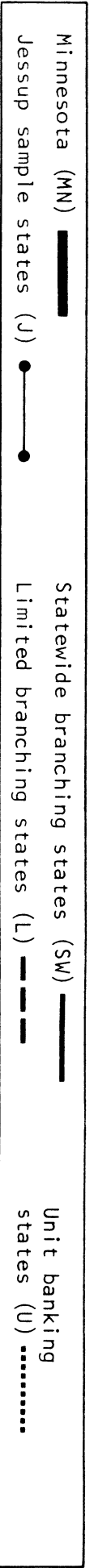
Commercial banking concentration ratios in Minnesota approximated those of the statewide branching sample, particularly at the one- and two-firm levels. The data indicates that since there is very little difference between the two-firm and five-firm ratios, Minnesota's high level of concentration can be attributed to the state's two larger multibank holding companies which have no close rivals in size.

Step 2: Moving from analyzing commercial banks to analyzing all financial intermediaries, the next step involved looking first at how expanding the number of intermediaries affected concentration and then seeing how the composition of the five largest firms was altered. Examining the five services, commercial banks' share of the total amount of each service (the denominator effect) came out about the same among the samples. And as banks' total share of the service declined, there was a larger downward shift in the concentration level. As banks' relative share of service declined, generally fewer commercial banking organizations were included in the top five firms (the numerator effect).

However, the numerator effect was more pronounced in the unit banking samples than in the other samples. It was also more noticeable in Minnesota; this may be because of the other large financial institutions in the state.

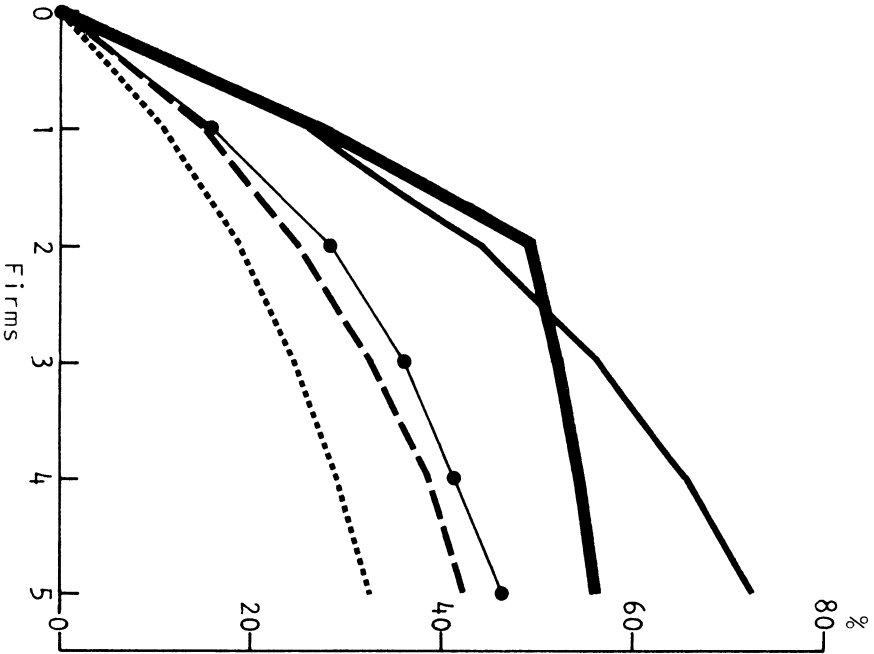
Step 3: The final step of the analysis showed that concentration ratios between samples were more similar in some services than in others. The financial institution concentration ratios indicated that significant differences in concentration persisted between the statewide branching sample and the limited branching or unit banking samples where banks' share of the total amount of the service was high (in the total deposits, IPC deposits, and commercial loan service areas). However, these differences diminished as banks' share declined (in T&S deposits and mortgage loans). When considering a concentration in terms of all financial institutions, Minnesota again appeared characteristic of the higher concentration profiles found for the statewide branching sample.

# A. TOTAL DEPOSITS COMPARISONS\*



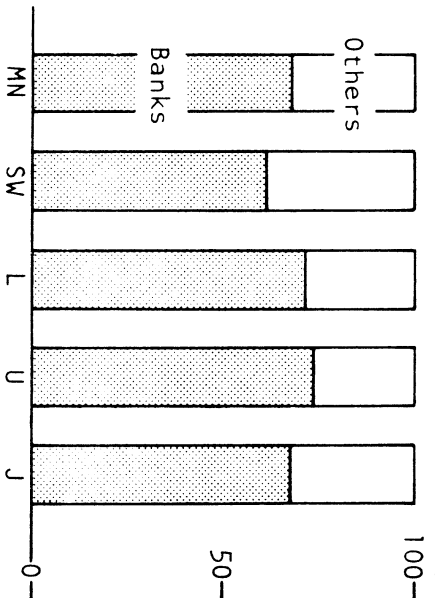
## 1. CONCENTRATION OF TOTAL DEPOSITS

At Top 5 Commercial Banking Firms



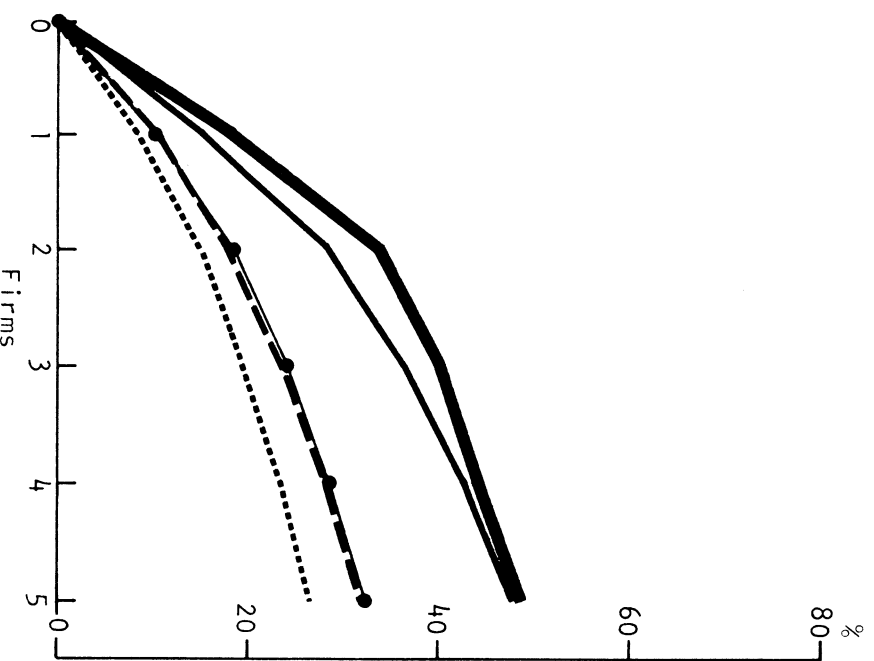
## 2. DISTRIBUTION OF TOTAL DEPOSITS

a. Among All Financial Firms

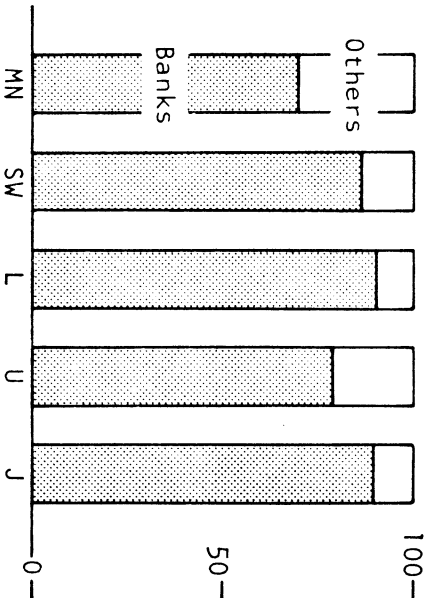


## 3. CONCENTRATION OF TOTAL DEPOSITS

At Top 5 Financial Firms



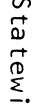
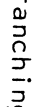
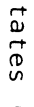


b. Among Top 5 Financial Firms

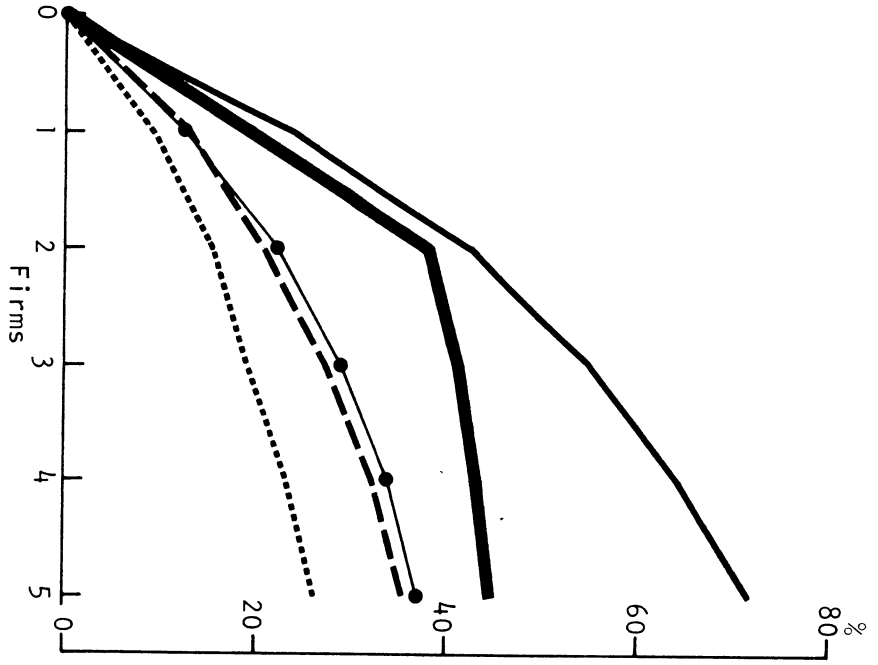


\*As of June 1975.  
 For definitions and sources, see appendixes.

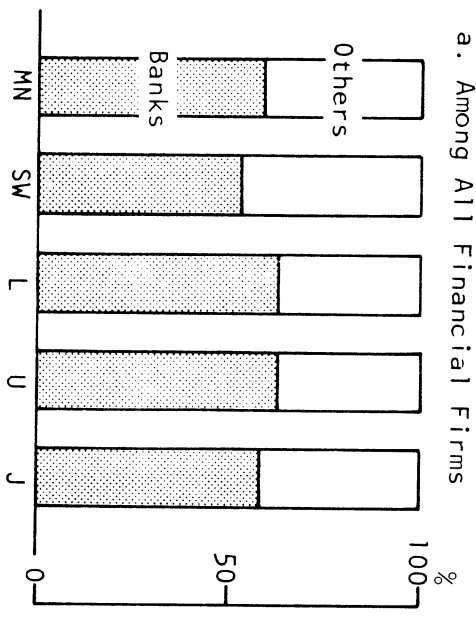
## B. IPC DEPOSITS COMPARISONS\*

Minnesota (MN)  Jessup sample states (J)  Statewide branching states (SW)  Limited branching states (L)  Unit banking states (U) 

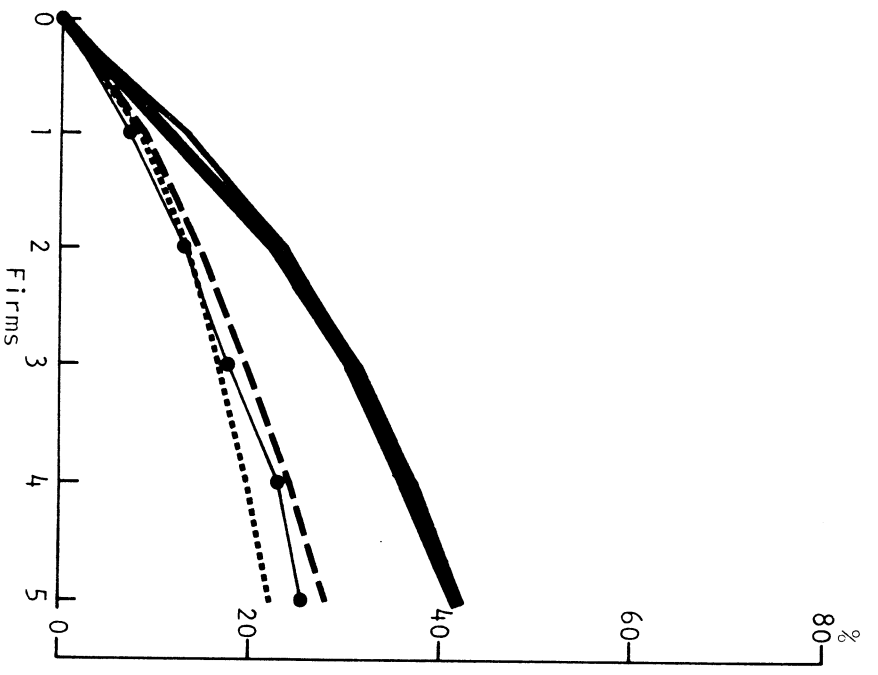
1. CONCENTRATION OF IPC DEPOSITS LESS THAN \$100,000



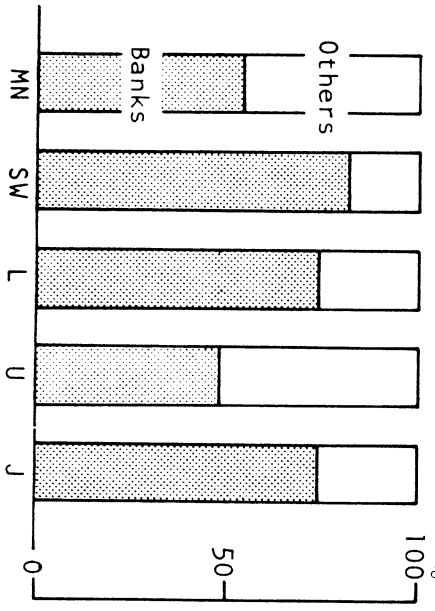
2. DISTRIBUTION OF IPC DEPOSITS LESS THAN \$100,000



3. CONCENTRATION OF IPC DEPOSITS LESS THAN \$100,000

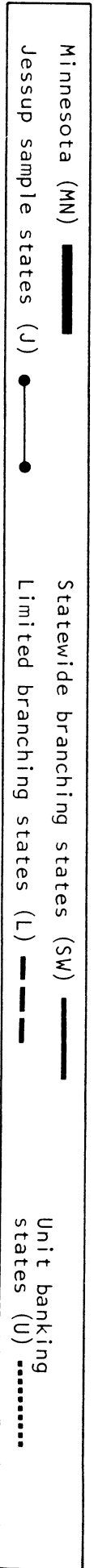


b. Among Top 5 Financial Firms

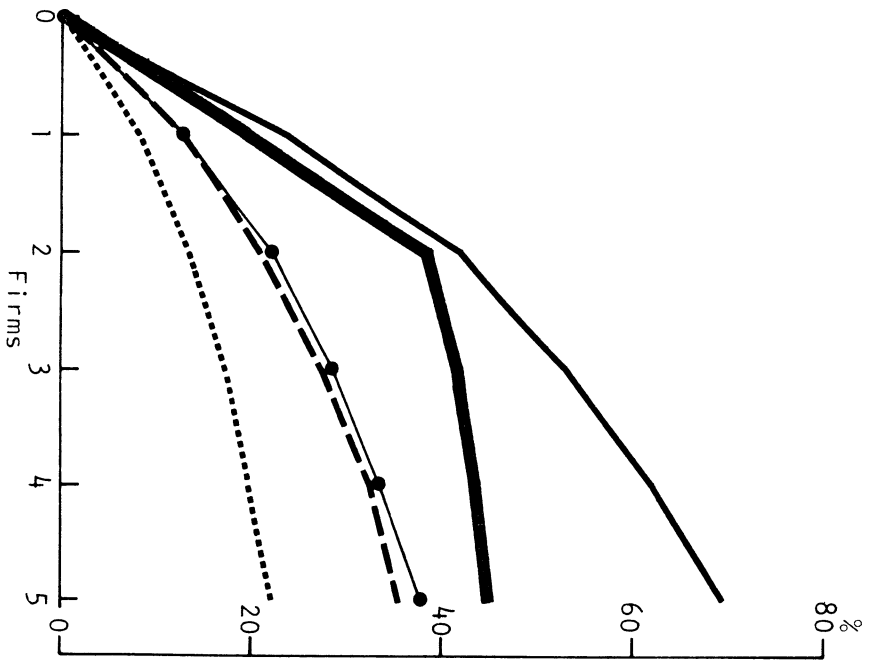


\* As of June 1975. IPC=individuals, partnerships, and corporations. For definitions and sources, see appendixes.

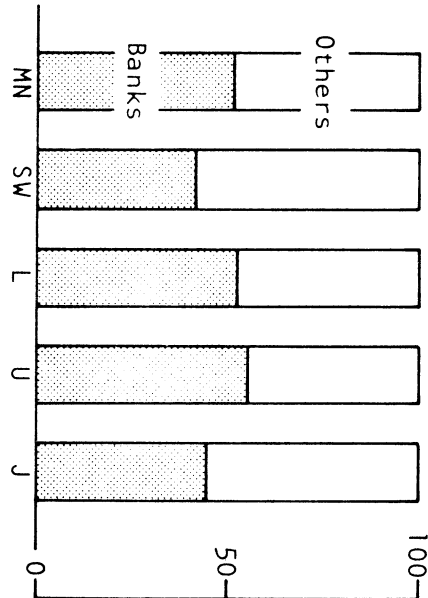
### C. TIME & SAVINGS DEPOSITS COMPARISONS\*



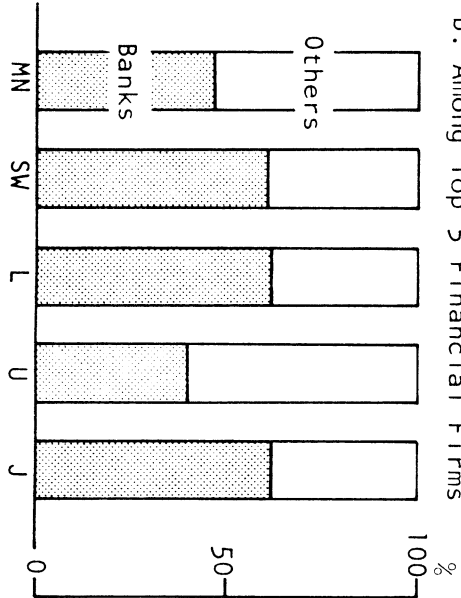
1. CONCENTRATION OF TIME & SAVINGS DEPOSITS LESS THAN \$100,000



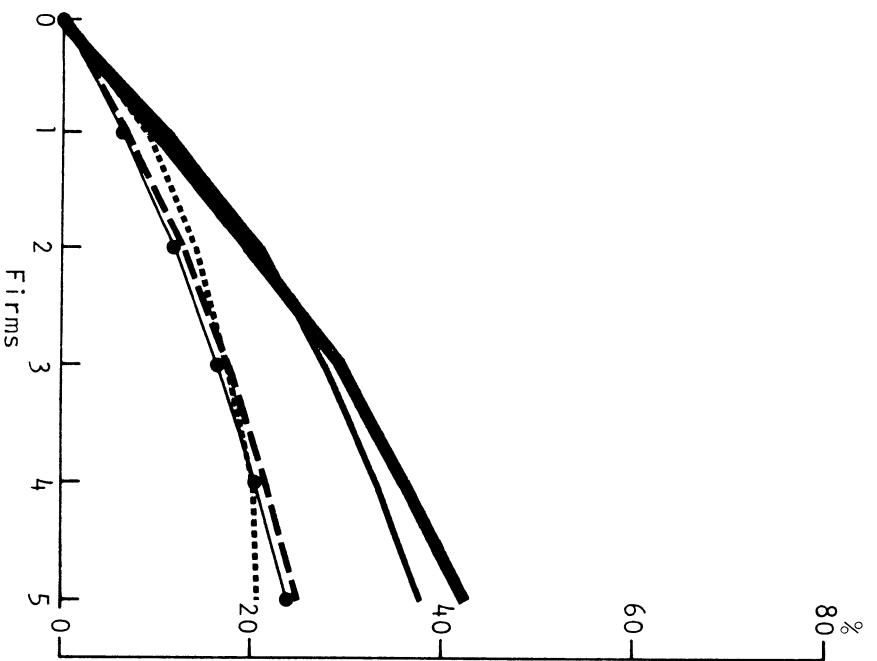
2. DISTRIBUTION OF TIME & SAVINGS DEPOSITS LESS THAN \$100,000



b. Among Top 5 Financial Firms

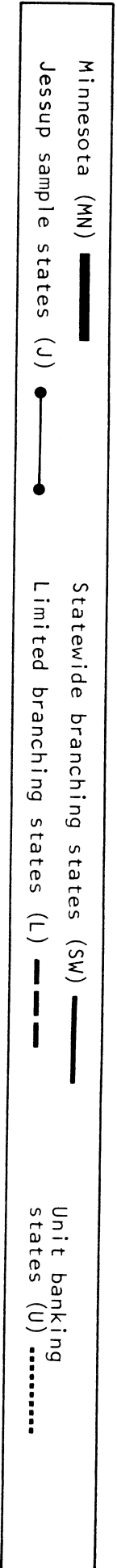


3. CONCENTRATION OF TIME & SAVINGS DEPOSITS LESS THAN \$100,000



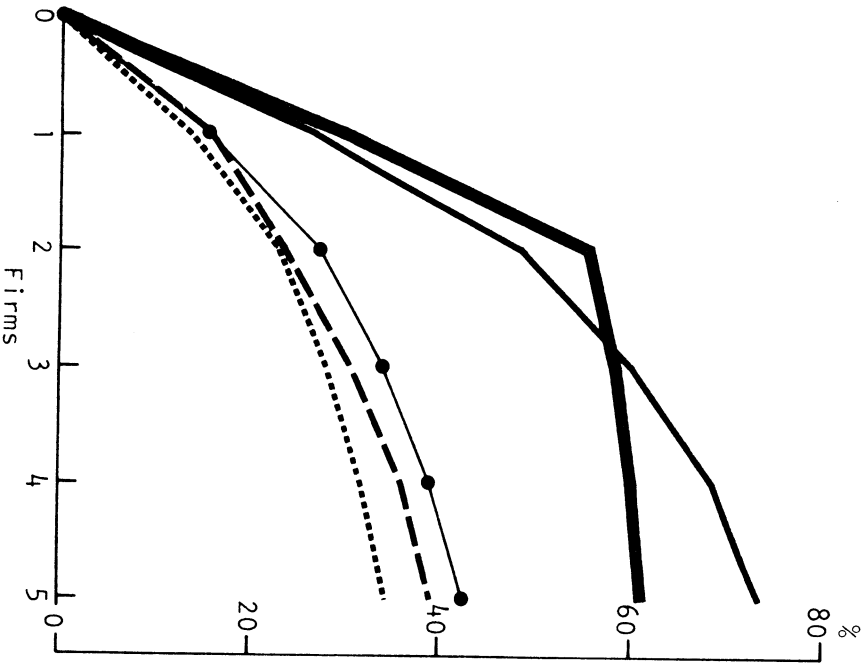
\* As of June 1975.  
 For definitions and sources, see appendixes.

## D. MORTGAGE LOANS COMPARISONS\*



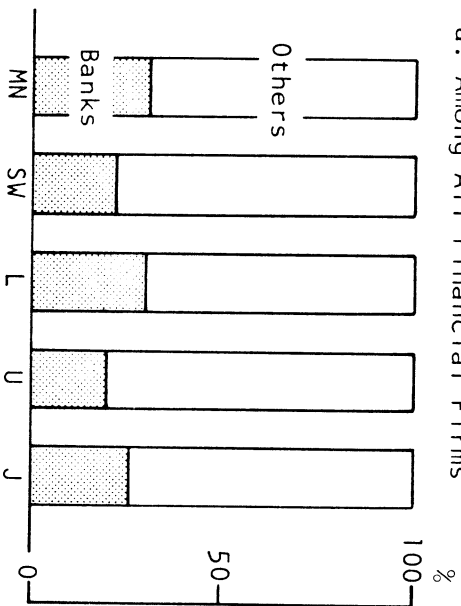
### 1. CONCENTRATION OF MORTGAGE LOANS

At Top 5 Commercial Banking Firms



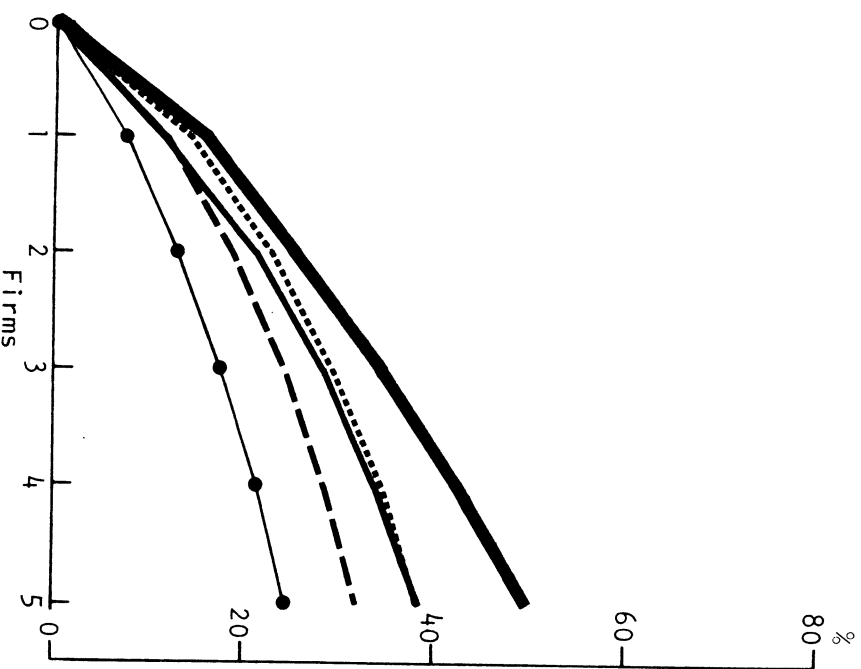
### 2. DISTRIBUTION OF MORTGAGE LOANS

a. Among All Financial Firms

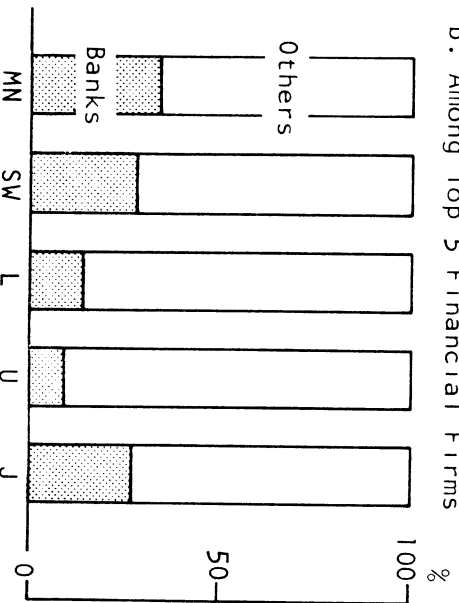


### 3. CONCENTRATION OF MORTGAGE LOANS

At Top 5 Financial Firms



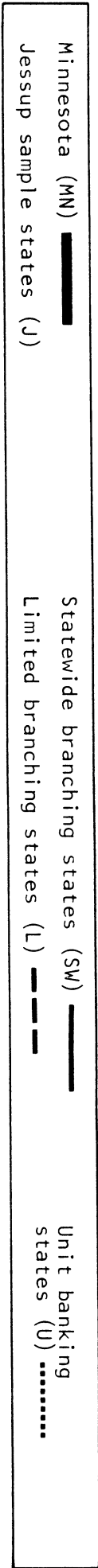
b. Among Top 5 Financial Firms



\* As of June 1975.  
For definitions and sources, see appendixes.

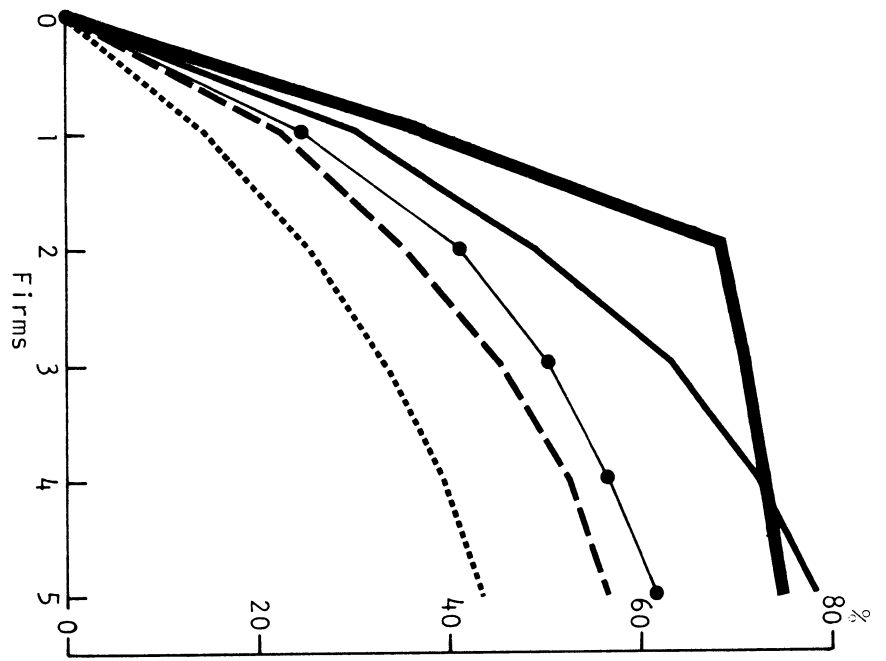


## E. COMMERCIAL LOANS COMPARISONS\*

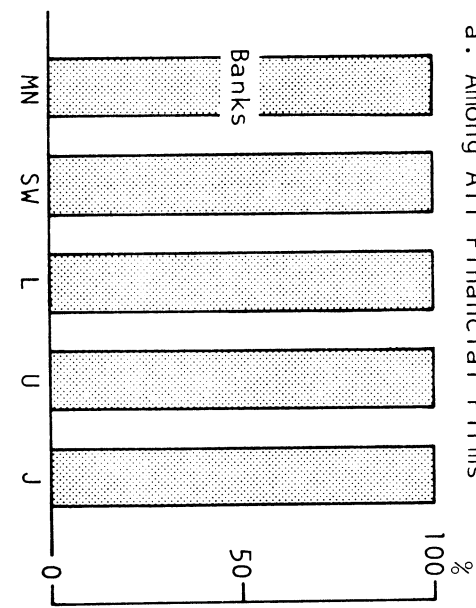


1. CONCENTRATION OF COMMERCIAL LOANS
2. DISTRIBUTION OF COMMERCIAL LOANS
3. CONCENTRATION OF COMMERCIAL LOANS

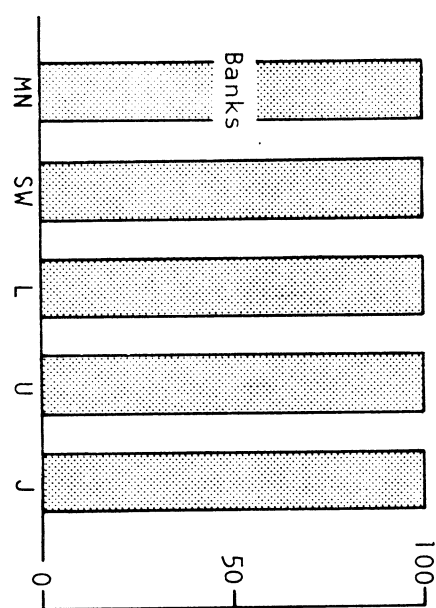
At Top 5 Commercial Banking Firms



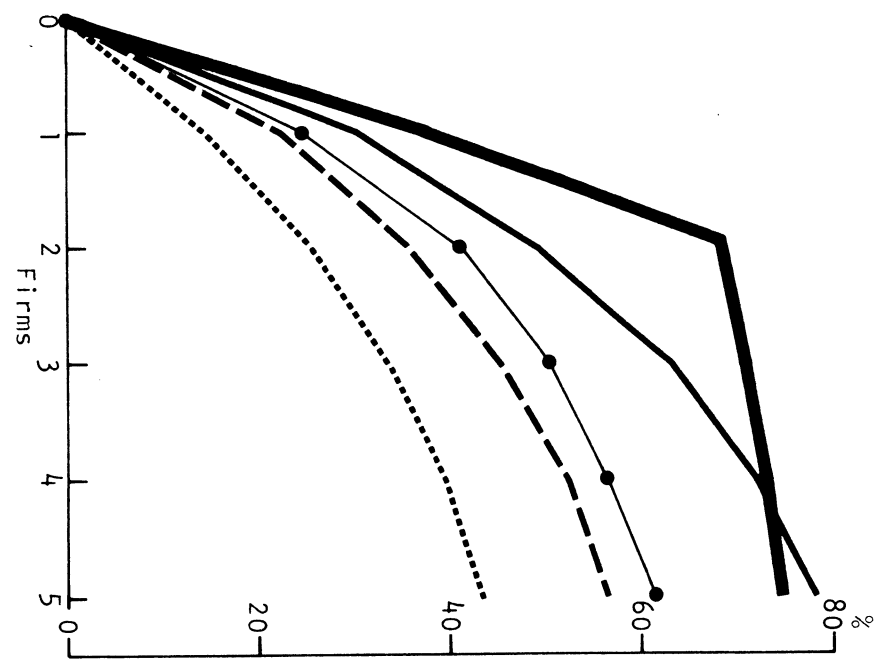
a. Among All Financial Firms



b. Among Top 5 Financial Firms



At Top 5 Financial Firms



\*As of June 1975.  
For definitions and sources, see appendixes.

## Appendix A

Following are data sources used to compute the concentration ratios used in this study.<sup>1/</sup>

### Commercial Banking Concentration Ratios:

1. Total Deposits--Line 22, "Total Deposits," from the FRB Minneapolis, Report of Condition.
2. Total IPC Deposits less than \$100,000--Summary of Deposits.
3. Total Time and Savings Deposits less than \$100,000--Summary of Deposits.
4. Total One- to Four-Housing Unit Mortgage Loans--Mortgages on One- to Four-Family Residential Properties (Other than Farm). Combined data for VA, FHA-HUD, and conventional mortgages as reported on the Report of Condition (Lines A1(b)(1), A1(b)(2), and A1(b)(3)).
5. Commercial Loans--Line A5, "Commercial and Industrial Loans," from the Report of Condition.

### Financial Institution Concentration Ratios:

1. Total Deposits
  - (a) Commercial Banks--same as for Commercial Banking Concentration Ratios.
  - (b) Savings & Loans--"Savings Accounts" from Statement of Condition-Operation.

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<sup>1/</sup> Commercial bank and mutual savings bank data were obtained from the Board's selective retrieval programs, using selected items from June 1975 Report of Condition and Summary of Deposits.

Savings and Loan data were obtained from computer tapes listing financial data from the June 1975 Statement of Condition-Operation.

Credit Union National Association, Inc. (CUNA), Annual Reports 1974 and 1975.

- (c) Mutual Savings Banks--Line 17, "Total Deposits," from the Report of Condition.
  - (d) Credit Unions<sup>2/</sup>--Savings (shares & deposits).
2. Total IPC Deposits less than \$100,000
- (a) Commercial Banks--same as for Commercial Banking Concentration Ratios.
  - (b) Savings & Loans<sup>3/</sup>--same as for Total Deposits of Financial Institution Concentration Ratios.
  - (c) Mutual Savings Banks--combined Time & Savings and Demand IPC Accounts as reported in Summary of Deposits.
  - (d) Credit Unions--same as for Total Deposits of Financial Institution Concentration Ratios.
3. Total Time and Savings IPC Deposits less than \$100,000
- (a) Commercial Banks--same as for Commercial Banking Concentration Ratios.
  - (b) Savings & Loans<sup>3/</sup>--same as for Total Deposits of Financial Institution Concentration Ratios.
  - (c) Mutual Savings Banks--as reported in Summary of Deposits.
  - (d) Credit Unions--same as for Total Deposits of Financial Institution Concentration Ratios.
4. Total One- to Four-Housing Unit Mortgage Loans
- (a) Commercial Banks--same as for Commercial Banking Concentration Ratios.

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<sup>2/</sup>Credit Union data were only available for December 31 of each year, so to approximate a June 30, 1975, figure, the December 31, 1974, and December 31, 1975, figures were added and divided by two.

<sup>3/</sup>S&Ls are permitted to issue certificates of deposit of \$100,000 or more, and these are included in this study's data. However, as of March 1975 at all FSLIC-insured S&Ls, these large certificates accounted for 2.14 percent of total savings, and this share was not considered large enough to influence this study's findings. See Richard C. Pickering, "Changes in S&Ls Savings Account Structure," FHLBB Journal, July 1975, p. 27.

(b) Savings and Loans--combined data for VA, FHA-HUD, and Conventional Mortgage Loans from Statement of Condition-Operation.

(c) Mutual Savings Banks--combined data for VA, FHA-HUD, and Conventional Mortgage Loans as reported on the Report of Condition (Lines D1(c)(1), D1(c)(2), and D1(c)(3)).

5. Commercial Loans

(a) Commercial Banks--same as for Commercial Banking Concentration Ratios.

(b) Mutual Savings Banks--Line D5, "Commercial and Industrial Loans," from Report of Condition of Mutual Savings Banks.

Appendix B

The four groups used in this study are defined as follows:

<u>Statewide<sup>1/</sup></u> <u>Branching</u>	<u>Limited<sup>1/</sup></u> <u>Branching</u>	<u>Unit<sup>1/</sup></u> <u>Banking</u>	<u>Jessup<sup>2/</sup></u>
Idaho	Georgia	Kansas	Georgia
Maine	Kentucky	Missouri	Indiana
North Carolina	Michigan	Montana	Massachusetts
South Carolina	New Mexico	Nebraska	Minnesota
Utah	Tennessee	Oklahoma	Missouri
Washington	Wisconsin	Texas	North Carolina
			Tennessee
			Virginia
			Wisconsin

<sup>1/</sup>A classification of states according to types of banking structure is found in A Profile of State-Chartered Banking, December 1975, Conference of State Bank Supervisors, 1015 18th Street, N.W., Washington, D.C., 20036. States were placed into one of the following three categories: (1) statewide branch banking prevalent, (2) limited branch banking prevalent, or (3) unit banking prevalent. Six states were selected from each group to be included in the analysis.

<sup>2/</sup>Paul F. Jessup, Minnesota's Exceptional Banking Structure: Research and Policy Perspectives Research Report, Federal Reserve Bank of Minneapolis. Minneapolis, Minnesota, March 1975.

Appendix C

T-statistics

	FIRMS	COMMERCIAL BANKING			FINANCIAL INSTITUTIONS		
		S-U	S-L	L-U	S-U	S-L	L-U
<u>Total Deposits</u>	1	** 3.16	** 2.78	1.04	* 1.95	1.70	0.67
	2	** 3.80	** 3.47	1.08	* 2.13	* 1.93	0.68
	3	** 3.97	** 3.87	1.09	* 2.49	* 2.08	0.86
	4	** 5.39	** 4.29	1.34	* 2.75	* 2.22	0.90
	5	** 6.03	** 5.16	1.32	** 3.05	* 2.37	0.92
<u>Total IPC Deposits &lt; \$100,000</u>	1	** 3.09	* 2.72	0.84	1.38	1.45	0.19
	2	** 3.56	** 3.26	0.87	1.69	1.64	0.37
	3	** 4.29	** 3.88	1.14	* 2.18	* 1.91	0.66
	4	** 5.16	** 4.46	1.14	* 2.59	* 2.11	0.94
	5	** 5.75	** 5.31	1.09	** 2.85	* 2.20	1.11
<u>Total Time and Savings Deposits &lt; \$100,000</u>	1	** 3.06	* 2.51	1.03	0.70	1.58	-0.88
	2	** 3.50	** 2.98	1.15	1.15	1.49	-0.31
	3	** 4.32	** 3.53	1.39	1.53	1.64	0.04
	4	** 5.07	** 3.99	1.51	1.79	1.74	0.27
	5	** 5.73	** 4.83	1.51	* 2.00	1.05	0.43
<u>Mortgage Loans</u>	1	* 2.18	* 2.36	0.40	-0.89	-0.08	-0.80
	2	* 2.63	** 3.18	0.08	-0.25	0.42	-0.81
	3	** 3.42	** 3.90	0.30	-0.12	0.52	-0.81
	4	** 3.99	** 4.12	0.50	-0.06	0.63	-0.87
	5	** 4.38	** 4.50	0.53	0.04	0.74	-0.87
<u>Commercial Loans</u>	1	** 4.10	* 2.25	* 1.89	** 4.08	* 2.23	* 1.89
	2	** 4.16	** 3.45	* 1.84	** 4.13	** 3.40	* 1.84
	3	** 4.77	** 3.58	* 1.97	** 4.73	** 3.53	* 1.97
	4	** 5.36	** 3.91	* 2.02	** 5.31	** 3.85	* 2.02
	5	** 5.79	** 5.11	* 2.01	** 5.74	** 5.05	* 2.01

S = statewide branching

L = limited branching

U = unit banking

\*significant at 95% confidence level

\*\*significant at 99% confidence level

(one-tailed tests)