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AN INVESTIGATION INTO THE EFFECTS OF
BANKING STRUCTURE ON ASPECTS OF BANK
BEHAVIOR.

The Ohio State University, Ph.D., 1964
Economics, finance

University Microfilms, Inc., Ann Arbor, Michigan

AN INVESTIGATION INTO THE EFFECTS

OF BANKING STRUCTURE

ON ASPECTS OF BANK BEHAVIOR

DISSERTATION

Presented in Partial Fulfillment of the Requirements
for the Degree Doctor of Philosophy in the
Graduate School of The Ohio State
University

By

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The Ohio State University
1964

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ACKNOWLEDGMENT

I would like to express my deep appreciation to Professor Frances Quantius for her assistance in formulating, and polishing this dissertation and also to Professors Paul G. Craig and Alva M. Tuttle for their recommendations and assistance. I would also like to acknowledge the kind aid and constructive criticism of my colleague, Mr. John R. Shea. Lastly, I wish to acknowledge the help of my wife, Phyllis, whose diligent haranguing over grammatical blemishes has made this dissertation readable.

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CHAPTER I

INTRODUCTION

NATURE OF THE PROBLEM

The depression years of the 1930's, the subsequent growth of our economy during the war years and the prosperity of the 1950's have given impetus to both increased supervision and consolidation in banking. The decrease in the number of banks has given rise to cries of monopoly power by some, while at the same time the development of branch banking has been hailed by others as a positive check against further bank failures and as a means of increasing the diversity of services to the consumer of bank products. Many states, maintaining that concentration and inefficiency go hand in hand, have limited their banking structures to individual unit banking or limited branch banking, while other states, relying on easier entry to maintain competition and the quality of service, have allowed complete freedom of branching within the state's boundaries.

The position of the banking institution in the production process of our economy is indeed crucial. Through this institution the desires of both savers and investors may be satisfied. Also, through banking institutions funds may be allocated to create further production and growth in our economy. The efficiency of this

allocation process is a matter of great interest both to the banking firm and to the public, and various criteria have been used to measure and assess it. Typically, economists have used certain characteristics of a normative competitive market structure as criteria in assessing market efficiency. These include the number of firms in the market, the share of the market held by any one firm, the degree of product differentiation between firms and the ease with which firms may enter or leave the market. Others, including the Supreme Court of the United States, have relied on simple "share of market" deposit ratios to determine the degree of competition in a particular market and thus have assumed that a larger deposit share results in less efficiency and more monopoly power.¹ Some econo-

¹The reader is advised to turn to the section on controversy over structure in Chapter II for a more complete explanation of this action.

mists, specializing in the study of the banking industry, use other criteria of efficiency such as lending ability, cost performance, earnings tests, and they stress the role of alternative bank and non-bank sources of competition.

One problem in using general, theoretical competitive characteristics as measures of efficiency is that they are based on an industry in which a homogeneous product is produced and sold in a supposedly definable market. The results of the production process of a bank consist

of many rather than one easily definable product. Also, the market in which the bank operates is entered by non-bank financial institutions and even by non-financial corporations that provide products similar to those provided by banks. Further, markets and the market power of any firm will differ over time and space as substitute products appear and disappear. Theoretical competitive criteria are derived from static relationships and because of this do not provide a perfect or even an adequate measure of market performance.

Another characteristic of banking that makes it unique is its quasi-public nature which arises because of its position in the production process. Both producers and consumers rely on the banking industry to provide help to smooth the flow of funds between future incomes and present consumption, and also to be "trustees" for their cash balances. Because of this position of trust and because, for the most part, the nation's money supply is provided through the banking system, banks are closely supervised by both state and federal agencies to insure their financial soundness. These regulatory and supervisory functions add further complexities to the market structure of commercial banking.

This quasi-public nature and the regulatory activities of public agencies make it even more difficult to apply strictly competitive criteria to banking in order to

assess its efficiency. For example, large numbers of small firms operating in a market and selling homogeneous products may be a sign of competition, but whether or not it is healthy competition is something else. As was discovered in the early 1930's, mere numbers and smallness are not substitutes for efficiency nor for safety in operation. Neither are large firms operating in a market with few sellers necessarily a sign of restricted output nor of higher prices. Indeed, largeness may be a healthy and necessary factor in banking. Some have even said that any monopoly power acquired by large banks can be observed and its use thwarted.

The use of simple deposit ratios as the sole means of measuring the market share of a banking firm and thus the degree of competition and efficiency is a gross oversimplification of a tremendously complex concept: scope of market. As mentioned previously, the Supreme Court of the United States, in a 1963 decision on the Justice Department's anti-merger case, *U. S. v. The Philadelphia National Bank et al*, used the deposit share measure of concentration as a sign of reduced competition. In a recent question and answer period at the Ohio State University in Columbus, Governor Mitchell of the Board of Governors, The Federal Reserve System, remarked that he thought the Justice Department was a little over-zealous in its interpretation of monopoly power and that more

attention should be focused on an examination of output performance, especially in the area of business loans, and in the area of deposit competition, particularly demand deposits.² The use of deposit ratios as a measure of

²George W. Mitchell, Address at The Ohio State University, February 20, 1964.

market share and thus competition and efficiency has little in its favor to say for itself except simplicity in computation.

Many economists specializing in the study of bank competition hold that efficiency does not automatically emerge from increased numbers of banks nor from reduced deposits shares. They maintain that there are many different criteria of efficiency in banking and that size, structure, numbers and regulations all have their impact on efficiency both from the point of view of the firm and the public welfare. Their studies seek answers to questions such as: Are there cost advantages accruing to banks both as the size of the bank increases and for different banking structures? Are there output or performance advantages associated with scale and structure? Does the return to the owner vary with size of the bank and the type of structure? Is it possible for banks of different sizes and structures to exist within the same economic

environment? What is the character of non-bank financial institution and non-financial corporation competition both for banking products and banking raw materials? Economists feel that answers to the above and other questions can lead to a more rational position on the effect of structure on competition and efficiency.

PURPOSE OF DISSERTATION

From the discussion preceding this section one can conclude that the market in which scarce funds are allocated is indeed complex and always changing and that the answer to the efficiency question is not simple but multidimensional in nature. Much controversy has centered on the question: What is the proper type of banking structure needed to provide optimum bank services to consumers, to maintain adequate returns to the bank's owners so that a healthy banking system is preserved, and to allow for necessary entry and diversity to facilitate competition? To find answers to this intriguing question, one must know what differences in expense performance, output behavior, and earnings record exist among banks of different structures and sizes. The purpose of this dissertation is to uncover these behavioral differences in order that one may more knowledgeably weight the merits and demerits of the different banking structures when formulating regulatory policies on banking structures. Knowledge of these behavior factors will not automatically lead to correct policy

decisions but as the Commission on Money and Credit states:

. . . an effective structure will enable competent men to perform more effectively.

We do not live in a perfect world, and neither the Commission nor anyone else can prescribe mechanisms, structures, and policy guides which will guarantee the ideal attainment of national objectives. We can and should strive for a significant improvement in performance . . .³

³Money and Credit, The Report of the Commission on Money and Credit (Englewood Cliffs, N.J.: Prentice-Hall, Inc.: 1961), p.7.

It is hoped that this study will present evidence that will lead to such an improvement in performance. This dissertation is limited to a discussion of bank and non-bank competition and an examination of statewide branch banking, limited branch banking and unit banking.

SCOPE AND METHOD

The basic idea as well as some of the techniques of this dissertation are based on two recent studies of banking markets. David A. Alhadeff in his Monopoly and Competition in Banking, examined existing banking markets, concentrating on the California experience with state-wide branch banking.⁴ Irving Schweiger and John S. McGee in

⁴David A. Alhadeff, Monopoly and Competition In Banking (Berkley, California: University of California Press: 1954).

their study, Chicago Banking, dealt with banking in Illinois as compared with national branch bank data.⁵

⁵Irving Schweiger and John S. McGee, "Chicago Banking," The Journal of Business, Volume XXXIV (July, 1961).

This study will differ from both Alhadeff's and Schweiger and McGee's in at least two important aspects. First, and most important, limited branch banking will be compared with state-wide branch banking and unit banking. According to the September, 1963 issue of the Federal Reserve Bulletin, there were seventeen state-wide branch banking states (including the District of Columbia), sixteen limited branch banking states and eighteen unit banking states.⁶ Because of the large number of limited

⁶Federal Reserve Bulletin (Board of Governors, Federal Reserve System) September, 1963, p. 1195.

branch banking states, it is felt that this type of structure should be analyzed separately and compared with the remaining two structures. Limited branch banking represents a multiple office structure of banking as does state-wide branch banking, but it is different from state-wide branch banking because limitations on branching produce, on the average, a smaller bank which operates in a more local market. Thus, any study attempting to combine

limited with state-wide branch banking is incomplete in this respect.

Second, instead of dealing with only one state and either comparing this data with that in that same state or with national data, this study will compare three states, each of which has a different banking structure. These states are Ohio, representing limited branch banking, California, representing state-wide branch banking, and Illinois, representing unit banking. These three states were chosen not only because of their different structures but because according to the 1962 Survey of Manufacturers, they are comparable in total employment, payrolls, the number of production workers, man hours worked, wages, value added by manufacturing, and capital expenditures.

The major hypothesis to be tested in this study is that state legal restrictions on bank structure (state-wide branch bank, limited branch bank and unit banking laws) affect loans, earnings and expenses in the banking industry.

This will be accomplished by examining in as much detail as is feasible the following sub-hypotheses:

- I. That State Legal Restrictions on Structure Affect Lending Behavior.

- A. That state-wide branch banks are superior to limited branch banks and unit banks in their lending behavior.
 - B. That limited branch banks are superior to unit banks in their lending behavior.
- II. That State Legal Restrictions on Structure Affect Earnings Behavior
- A. That state-wide branch banks are superior to limited branch banks and unit banks in their earnings behavior.
 - B. That limited branch banks are superior to unit banks in their earnings behavior.
- III. That State Legal Restrictions on Structure Affect Cost Behavior.
- A. That state-wide branch banks are superior to limited branch banks and unit banks in their cost behavior.
 - B. That limited branch banks are superior to unit banks in their cost behavior.

A further, more general task will be to examine differences among banks of different structures as the size of banks increases, and to compare different structural performance standards within a given state and with national bank data. The purpose of this study is to test the above hypotheses and to arrive at conclusions as to a possible optimum regulatory policy on banking structure.

Besides looking at the performance records of banks operating under different structural restrictions, economists specializing in the study of banking have studied the amount and character of competitive pressures emanating from non-bank financial institutions and non-financial corporations. It is not enough to say that one type of

structure outperforms another on the basis of loans, costs and earnings. One type of structure may outperform another in earnings merely because of its vast size in relation to the market and the use of the monopoly power that accrues to it because of a lack of competition. This point is much harder to analyze because prices charged by banks (interest rates) are not easily available in the proper form and without detailed market studies, and, in many cases, loan prices do not reflect the true nature of monopoly power. Non-price power with regard to the availability of credit, compensating balance discrimination, and strict credit standards are all part of the arsenal of a monopoly bank. In many cases, it is the size of the borrower that is important rather than the size of the bank.

The **effects** of size and structures on competition can be deduced from a description of the nature of competition in the sale of bank products. This will be within the scope of this dissertation. Of course, answers to the three major sub-hypotheses are not divorced from the question of competition. If it is found that small unit banks can compete in terms of earnings with larger branch banks, this will nullify some of the argument from those who maintain that large branch banks, because of their size and power, will leave no room for the smaller unit bank competitors.

Any conclusions regarding a possible optimum

branch banking regulatory policy must be made not only on the basis of measures of efficiency using output, expenses and earnings criteria, but on a description of the quality of bank and non-bank competition as well.

CHAPTER SEQUENCE

In order that one may become more familiar with the roots of the present controversion over banking structures, a brief historical analysis of the types of structures and the banking philosophies that have evolved in the United States is presented in Chapter II. Chapter III gives both the assorted advantages and disadvantages of different types of structures and a brief description of the present controversies over banking structures. Much of the argument that exists is based more on emotional and self interest motives than on empirically verified hypothesis. And, most of the controversies focus on the relative competitiveness of one structure in comparison with another. Because competition and the efficiencies that are supposed to naturally evolve from it are at the center of most debates over banking structures, Chapter IV analyzes the nature of competition in banking and the effects of different structures on competition.

Chapter V introduces the conceptual basis for the study of different measures of superiority of banking structures. The rationale for the selection of state

banking systems which are to be analyzed is presented along with a brief description of the banking structures of the three states and the changes that have taken place in these systems in the last decade. Chapters VI and VII first construct measures of superiority of bank behavior and then examine and analyze the lending, expense, and earnings superiorities of the different structures. Chapter VIII presents the conclusions of the study and notes theoretical modifications that may be made regarding the types of markets in which banks compete. Chapter VIII ends with a discussion of recommendations, based on the results of this study, deemed pertinent for a more economically efficient branch banking law.

CHAPTER II

A BRIEF HISTORY OF BANKING STRUCTURE

The character of the present controversy over banking structure has been the same since the beginnings of our Republic. The basic structure and philosophy that exist today are the outgrowth of past conflicts surrounding the role that government should play in the banking industry, and the type of banking structure needed to thwart the use of monopoly power and to result in maximum efficiency.

One writer has stated that four main factors are responsible for shaping our present banking structure. These are first, political expediency, second, the lack of public information, third, a misguided assumption that only unit banking is consistent with a democratic, free enterprise system, and fourth, historical accident.⁷

⁷Ward Ralph Lamb, Group Banking (Rutgers University Press: 1962), p. 12.

EARLY AMERICAN BANKING TO THE NATIONAL

BANKING ACT OF 1863

One of the first questions dealing with banking in the United States was the proper role of government in the

banking industry. Carson and Cootner point out that several banks existed in the United States prior to the adoption of our Constitution. In Massachusetts a company was formed to issue notes and to lend, but public authority intervened and Parliament declared the company to be illegal by extending the provisions of an act prohibiting the establishment of joint stock companies without legislative approval. "Thus, a major principle of bank regulation was established in America: the business of banking required government sanction."⁸

⁸Deane Carson and Paul H. Cootner, "The Structure of Competition in Commercial Banking in the United States," Private Financial Institutions (Englewood Cliffs, New Jersey: Prentice-Hall, Inc.: 1963), p. 56.

In 1791 ideas and arguments on the role of government in banking culminated with the forming of the First Bank of the United States. Jefferson, in opposing this bank, did so on the grounds that it was an unconstitutional delegation of power to private individuals and that it represented a clear monopoly privilege that could be used to parcel out credit in its own interests.⁹ Hamilton, on

⁹"Competition in Banking: A New Old Problem," Business Review (Federal Reserve Bank of Philadelphia: January, 1963), p. 4.

the other hand, said this type of a banking institution

would best serve the needs of the private economy as well as those of the federal government.¹⁰

¹⁰Carson and Cootner, op. cit., p. 57.

The First Bank of the United States, whatever the arguments for and against it, established eight branches, controlled from its head office in Philadelphia. During the period of the First Bank's existence, 1791-1811, several states also established their own banks with extensive branch systems.¹¹

¹¹Lamb, op. cit., p. 18.

The First Bank of the United States fell into disfavor and ceased to exist in 1811 when its charter was not renewed by Congress. One writer in explaining why the bank was discontinued states that it was the rapid increase in the number of state banks during the period 1791 to 1811 which gave credence to the idea that there was no need for a national bank. In any event, the failure of the First Bank was not because of its branch form of organization "except as the branches had, through their competition and through their effort to maintain sound banking, incurred the hostility of state banks."¹²

¹²Ibid., p. 14.

One could have assumed that with all of the above arguments and interests against a national bank there would be virtually no chance for the formation of a second national bank. Yet, in 1861, the Second Bank of the United States was chartered by Congress. Reasons given for its creation ranged from the tremendous increase in the numbers of small state banks after 1811 (with a corresponding reduction of any sound banking standards that had existed), to ruinous banking practices used in the competition for government deposits by state banks.¹³

¹³Carson and Cootner, op. cit., pp. 57-58.

The Second Bank of the United States eventually had as many as twenty-five branches. It has been given credit for achieving success in providing a stable note issue and in facilitating the mobility of credit.¹⁴ Others point out

¹⁴Lamb, op. cit., p. 16.

that the second bank really operated successfully only in approximately the middle ten years of its existence. From the outset the bank was hampered by scandals arising out of stock manipulations and towards the end of its life, the bank's activities were reduced in anticipation of its demise which came after President Jackson refused to

consider a charter renewal.¹⁵

¹⁵ Carson and Cootner, loc. cit.

Carson and Cootner list three major reasons for Jackson's lack of action on the Bank's charter. First, in the 1830's there was a real conflict between large concentrations of power and the small business and agrarian borrowers. Second, in the area of banking structure, it was felt that the unit bank with its local ownership was the best possible type of banking structure. And, third, the Second Bank had a reputation for hard money policies which were opposed by inflationist groups.¹⁶

¹⁶ Ibid., p. 58-59.

Lamb states that our system of banking could have evolved into a system of large, multiple office banks such as now exists in Europe if the Second Bank had been allowed to continue.¹⁷

¹⁷ Lamb, op. cit., p. 17.

In any event, during the period of the two national banks, a rather impressive number of states established state banks, most of which employed the branch form of organization. In 1806, the Vermont State Bank was formed

which eventually had four branches before it failed in 1812. In 1792 the Union Bank of Boston was established with the authority to open branches, but later the state of Massachusetts proclaimed branches to be illegal. In Connecticut in the 1830's several banks established branches but the commissioner ruled that there was no authorization for branches in the state.¹⁸

¹⁸John M. Chapman and Ray B. Westerfield, Branch Banking (New York: Harper and Brothers: 1942), pp. 36-46.

This experience with branching was extensive and illustrates that branch banking was a popular type of structure used both by state banks and private banks chartered under state laws in this early period of banking. Data as to the actual numbers of banks and branches are lacking for this time period.

The period of time from 1836, when the second national bank ceased to exist to the National Banking Act of 1863, was filled with great changes in both the number and character of banks. Jackson's anti-monopoly views, along with all the forces of anti-bank, anti-corporation, and anti-hard money rang forth throughout the country after the panic of 1837. Many states, beginning with New York in 1837, passed "free banking" laws which were considered by some to be a compromise between the ideas

supporting legislative chartering of banks and the anti-monopoly views prevailing at that time.

The "Free Banking" Act in the state of New York provided that any five or more citizens could apply for and obtain a charter for a bank. Between 1838 and 1860, at least sixteen states passed similar laws. This technique of chartering took the privilege of bank chartering away from the legislature and its favoritism, while at the same time it caused a vast increase in small unit banks, that led to chaotic credit conditions and many bank failures. The number of banks increased from 901 in 1840 to 1,562 in 1860, but this increase hides the great activity in bank chartering because of the large numbers of failures that occurred in this period.¹⁹

¹⁹Lamb, op. cit., pp. 21-24.

Data on this era are difficult to obtain but Tables 1 and 2 give some idea of the structure of banking and changes in the numbers of banks and branches in this period. The data in these tables were gathered by John M. Chapman and he states, "These tables (Tables 1 and 2 in this dissertation) are not consistent among themselves and are at best not inclusive, for there were no supervising and reporting agencies in many states, especially

especially in the earlier years."²⁰ Table 1 illustrates

²⁰Chapman and Westerfield, op. cit., pp. 47-48, Statement in parentheses is mine. It should be noted that these figures do not agree with those given by Lamb in the previous paragraph.

that, throughout the period from 1848 to 1860, there was a general increase in both the numbers of banks operating branches and the numbers of branches themselves. Table 2 illustrates the number of banks in operation, the number of branches and the proportion that branches were of the total number of banks in each year. It is interesting to note that of the total banks the proportion of branches remained rather steady at about 20 to 24 per cent until the 1850's. From then until the beginning of the Civil War, the proportion dropped to 12 per cent. Chapman and Westerfield claim that it was the growth of free banking laws which were passed by most states by 1852 that led to the smaller proportion of the total banking population in the form of branches.²¹

²¹Ibid.

One problem with the data in Tables 1 and 2 is that they do not completely illustrate the tremendous activity in bank chartering that took place during this period. These tables do not include the numbers of bank

failures that took place, but some idea can be gained by noting the decrease in the number of banks that took place between 1840 and 1843. The number of banks fell from 722 to 577, a drop of 20 per cent, while the number of branches dropped from 179 to 114, a drop of 36 per cent. Carson and Cootner attribute the causes of this decline to five factors. First, state banks had issued an excessive amount of bank notes. Second, banks had participated in an expansion of illiquid real estate loans. Third, many groups had attempted to establish wildcat banks to avoid note redemption. Fourth a tremendous number of different kinds of bank notes had circulated at various rates of discount. And, fifth, it had been the practice of banks to have only a fraction of subscribed capital paid in.²²

²²Carson and Cootner, op. cit., pp. 59-60.

There seemed to be little hostility towards branch banking in the period from 1836 to 1861. Whenever a state formed its own bank it almost always set up a branch system under which to operate. Western states, in the forefront of economic development, used the branch form of organization extensively. The cry was first against bank monopolies or monopolies in general and then a reaction to the free banking that characterized the period up to 1861.

TABLE 1
NUMBER OF BANKS OPERATING BRANCHES AND THE NUMBER
OF BRANCHES, CLASSIFIED ACCORDING BY STATE
FOR YEARS 1848, 1856, and 1860

State	1848		1856		1860	
	Number of Banks Operating Branches	Number of Branches	Number of Banks Operating Branches	Number of Branches	Number of Banks Operating	Number of Branches
Alabama	1	5	-	-	-	-
Delaware	1	3	1	3	1	3
Georgia	3	7	6	30	2	5
Indiana	1	13	1	20	1	20
Iowa	-	-	-	-	1	13
Louisiana	-	-	1	1	2	3
Kentucky	3	13	6	26	7	31
Maryland	1	2	1	1	1	1
Missouri	1	5	1	5	9	33
New York	2	2	-	-	-	-
North Carolina	2	14	3	17	3	19
Ohio	1	29	1	36	1	36
Pennsylvania	1	1	-	-	-	-
South Carolina	1	2	1	2	1	2
Tennessee	3	17	3	15	3	17
Virginia	6	30	7	39	7	39
Total	27	142	32	195	39	222

Source: Chapman and Westerfield, op. cit., p. 47.

TABLE 2
TOTAL NUMBER OF BANKS AND BRANCHES IN
OPERATION IN THE UNITED STATES
1834 TO 1861 INCLUSIVE

Year	Total Number of Banks in Operation	Total Number of Branches	Per Cent of Branches To Total	Year	Total Number of Branches in Operation	Total Number of Branches	Per Cent of Branches To Total
1834	406	100	24.5	1848	622	129	20.8
1835	558	146	25.2	1849	654	128	19.6
1836	567	146	24.8	1850	685	139	20.3
1837	634	154	23.3	1851	731	148	20.3
1838	663	166	25.1	1852	--	--	--
1839	662	178	26.9	1853	--	--	--
1840	722	179	24.9	1854	1059	149	14.0
1841	619	165	26.7	1855	1163	144	12.4
1842	563	129	23.9	1856	1255	143	11.4
1843	577	114	19.8	1857	1283	133	10.4
1844	578	118	20.4	1858	1284	138	10.7
1845	580	127	21.9	1859	1329	147	11.1
1846	587	120	20.4	1860	1392	170	12.2
1847	591	124	20.9	1861	1427	174	12.2

Source: Ibid., p. 48.

As Chapman and Westerfield point out, "It is significant . . . to note that free banking was not adopted as a protest against branch banking . . . there was no branch bank question, per se, anywhere, and the experiment with free banking and bond-secured notes was made . . . as a compromise between the advocates of banks and credit carrying and the advocates of equal rights, no banks, no corporations, no monopolies, hard money, and other immemorial tenants of the Democrats."²³

²³Chapman and Westerfield, op. cit., p. 55.

This period can be termed one of evolution in the structure of banking in the United States. It started out with cries against the Second Bank of the United States and that bank's monopoly powers, and then, with passage of the free banking act in New York, the structure of banking was altered from one of fewness, concentration and government control to one of extreme ease of entry with little or no supervision and regulation. The panics of 1837 and 1840-43 and the abuses made by many banks in their note issuance and credit standards then led to the passage of the National Banking Acts of 1863 and 1864, which compromised the position between central banking and free banking. This legislation adopted the good points of state banking laws and combined them into an act that set up the

chartering of banks by the federal government, while allowing states to continue chartering state banks. Thus, the federal government was back in the banking picture but not yet in the banking business.

THE BEGINNING OF THE DUAL BANKING SYSTEM TO

THE FEDERAL RESERVE ACT OF 1913

There were at least two important reasons for the establishment of a national banking system. First, there was the problem of the chaos resulting from the vast numbers of different kinds of notes that had circulated as money. This problem was solved in two steps. Step one consisted of a provision that national banks could issue notes if the banks purchased at least \$30,000 of United States Government bonds or one-third of the value of its capital stock. The bank could issue notes up to 90 per cent of its bond holdings. Step two consisted of an annual 10 per cent tax imposed on state bank notes that still remained in circulation.

The second important reason for the establishment of a national banking system was a desire to develop a market for United States Government bonds issued to finance the Civil War.

In terms of structure the National Banking Act did not raise any questions regarding the branching form of

operation and, "did not expressly forbid the establishment of branches by national banks."²⁴ But, after the Acts

²⁴Ibid., p. 59.

of 1863 and 1864, branch banking declined in popularity because of several factors. The branch banking systems that did exist were concentrated geographically and did not spread to other areas. Many states seemed to be indifferent to this method of banking. This indifference plus the fact that branching was geographically concentrated, kept the number of branches low. The tax on state bank notes and the desire to obtain note issuance powers tended to force state banks into the national banking system. When state banks entered the national system, they broke up their branch systems and let each branch join as an individual bank. Also, the collapse of the South after the Civil War destroyed a large number of branch banking systems.²⁵

²⁵Ibid., p. 61.

Table 3 illustrates the decline in popularity of branch banking. In 1834 branches represented 24.5 per cent of the total banking population. This share gradually declined until it was only .9 per cent in 1900.

After the turn of the century, branch banking became slightly more popular but still represented only 2.2 per cent of the banking population in 1910.

TABLE 3
TOTAL NUMBER OF BANKS AND BRANCHES
IN OPERATION SELECTED YEARS,
1834 to 1910

Year	Total Banks	Total Branches	Percent Branches to Total Banks
1834	406	100	24.5
1860	1,392	170	12.2
1900	12,427	119	0.9
1910	24,514	548	2.2

Source: Carson and Cootner, op. cit., p. 65.

Lamb gives two reasons why branch banking continued to be of little importance in the latter part of the nineteenth century. Because of frequent panics and recurrent bank failures there was a desire to change the banking structure, but public officials and bankers presented only broad and vague measures that were not liked by many. Also, the free banking concept, maintained by the national banking acts, favored small unit banks, as did the individualistic traditions of the times.²⁶

²⁶Lamb, op. cit., p. 30.

None of the above reasons for the decline in importance of branch banking include any direct criticisms of branch banking. The branch banking question did not arise until general criticism of the national banking system developed. For various reasons the states in the South and West did not have adequate banking facilities to provide credit for reconstructions and growth, and pressure was placed on Congress both to continue and to expand the national form of banking and to abolish it and the tax on state bank notes. Both of these desires stemmed from a need for a more elastic money supply. One proposal that was made was to allow national banks to have the power to branch both at home and abroad.²⁷ From 1891 to 1893 much argument was given in favor of a national

²⁷Chapman and Westerfield, op. cit., pp. 63-64.

branch banking system similar to the system in use in England and Canada today.

In terms of numbers, at first the national banking system was extremely successful but after 1879, the rate of increase in the number of state banks far surpassed that of the national banks. And, in 1909, the number of state banks was 11,292 as compared with 6,893 national banks. It should be pointed out that in the same year, national banks had just over 50 per cent of

the total resources of all commercial banks. Table 4 illustrates the relative strengths in numbers of these two systems for selected years between 1879 and 1909.

TABLE 4
NUMBER OF BANKS BY CHARTERING AUTHORITY

Year	National	State
1879	2,048	813
1889	3,239	2,097
1899	3,583	4,253
1909	6,893	11,292

Source: Barnett, State Banks and Trust Companies, (Washington, D.C.: Government Printing Office), p. 201 as cited by Carson and Cootner, op. cit., p. 64.

Charts I and II also illustrate the relative strengths of national banking versus state banking, both in numbers and in deposits, from 1896 to 1962. From 1896 to 1913 the numbers of national banks rose but not as fast as did the numbers of state banks. In 1913 the number of state banks reached almost 19,000 while at the same time there were only approximately 8,000 national banks. The story is quite different, however, if one looks at the relative shares of deposits held by these two systems. Even though the share held by national banks

CHART I
BANKS, OFFICES, STATE BANKS, NATIONAL BANKS, BRANCHES,
BANKS OPERATING BRANCHES 1896-1962
UNITED STATES

Source: Banking and Monetary Statistics, Federal Reserve System; All Bank Statistics, United States 1896-1955, Federal Reserve System; Federal Reserve Bulletins 1956-1964; Annual Reports Federal Deposit Insurance Corporation, 1933-1963.

CHART II
PERCENTAGE OF TOTAL COMMERCIAL BANKS DEPOSITS HELD BY
NATIONAL BANKS 1896 - 1962

Source: All Bank Statistics, Federal Reserve System; Federal Reserve Bulletins, 1956-1962

declined between 1896 and 1913, it remained somewhat close to 50 per cent of all deposits. Thus, even though in numbers state banking grew more popular, the share of deposits held by state banks remained the same. This chart also gives one insight into the relative size of many state banks. State laws were very lenient in regard to minimum capital requirements so that a large number of state banks were small in terms of capital structure and deposit ownership.

There were other structural changes during this period. The passage of the National Banking Act led to the development of correspondent banking relationships. "Country national banks were required to hold 60 per cent of their legally required reserves with a correspondent in a reserve city. Reserve city banks, moreover, were required to hold one-half of their reserves with a New York City correspondent."²⁸ The result was a whole network of correspondent relationships.

²⁸Carson and Cootner, op. cit., p. 63.

Another development during this period was the rise of private banking as a form of banking and of trust companies. "In 1879 there were only 37 trust companies but by 1914 these had multiplied to 1,564. Private banking grew rapidly until 1909, when some 4,407 such

institutions were operating. Thereafter their numerical and resource importance fell rapidly."²⁹

²⁹Ibid., p. 64.

Chain banking was another new type of structure that originated in this period and developed in the early 1890's in the South and Northwest in an attempt to make up for the scarcity of funds in these areas. But, as a popular movement, the development of chain banking has never been too important due to problems of management and the continuance of ownership ties. This type of banking gave way to the development of holding companies in the 1920's.

1913 TO THE PRESENT

The panic of 1907 was the straw that finally broke the camel's back and illustrated, once and for all, the deficiencies of the inelastic system of banking that existed at that time. Out of this development came our present Federal Reserve System. One writer, in describing the general trend that led to the development of the Federal Reserve System, said that:

Inasmuch as the government was unwilling to withdraw the prohibition of branch banking and thus allow private initiative to develop a system of centralized banking, the alternative was for the government to pursue a more positive policy and itself create a

central bank or banks, owned and operated by itself or merely regulated by it.³⁰

³⁰Chapman and Westerfield, op. cit., p. 82.

The year 1909 saw some liberalization in state branch banking laws with California authorizing state-wide branch banking. But, for national banks, branch banking limitations remained. In 1910 there were twelve states that permitted some form of branch banking, while nine states prohibited branching. Twenty-seven states had no provisions for or against branch banking. In 1917 the Federal Reserve System allowed state banks that were joining the System to keep their branches. In 1922 the Comptroller of the Currency issued a statement allowing national banks the right to establish additional offices in home office cities where state banking laws so allowed. This act led to much argument and to the inactment of the McFadden-Pepper Act in 1927, which allowed national banks the right to establish branches in the city of the parent bank provided the state law permitted state banks to operate branches. This was the last legislative change in the national banking structure until the Banking Act of 1933 which allowed member banks the right to branch outside head office cities if state laws so allowed. Some authors conclude that because of the

restrictions on branching that remained in some states, banking consolidation was accomplished throughout this period by mergers and through holding companies.³¹

³¹Lamb, op. cit., p. 36.

Charts I and II illustrate the changes that took place in the structure of banking in this period. The share of total deposits held by national banks continued to decline until the latter 1920's. Then it rose to almost 60 per cent and remained at that level until the mid-1950's when it dropped to about 55 per cent. One interesting observation that can be made is that during the period of greatest bank failures and when the number of banks declined from 30,000 to a little over 15,000, the share of deposits held by national banks increased sharply. This was due to the fact that the decline in the number of banks occurred almost entirely in smaller state banks, their number having declined from a little over 22,000 in 1920, to about 10,000 in 1934. National banks, numbering some 8,000 in 1920, fell by about 2,300 to almost 5,800 in 1934.

BRANCH BANKING

From the early 1900's to the 1960's, the banking

industry experienced at first a tremendous growth in the number of banks, primarily small state unit banks, until the total number of banks reached its peak at about 30,000 in 1920. Then the size of the banking population declined by nearly half in thirteen years. During the time of this fluctuation the number of banks operating branches and the number of branches continued to increase, only faltering in this steady advance with the panic that ensued after 1929. The increase in the number of branches after the 1930's is well documented and Chart I illustrates this rise in branching and in total offices which took place as the number of national and state banks declined.

It is interesting to trace the geographical shift that took place in branching during this period. Table 1 Appendix A shows these changes both as the share of branches increased or declined by geographic region and as the location of branches within a geographic region changed. For the United States as a whole, the number of branches (seen in Table 3) was approximately 119 in 1900. Of these 119 branches, 21 per cent were located in head office cities while 79 per cent were located outside of head office cities. As the total number of branches grew from 119 in 1900 to somewhere close to 11,000 in 1960, the distribution of branches between head office cities and outside of head office cities declined until

the mid-1920's when it was 31 per cent. Then the share of branches outside of head office cities increased rapidly and in 1959 reached 64 per cent of the total branches. Thus, after the widespread bank failures of the latter 20's and early 30's, the tendency, nationally, was for branches to be created more and more outside of head office cities.

In New England, changes in the proportions of branches in and outside of head office cities paralleled the national picture. (Map I, Appendix A shows the states included in the different geographic regions.) In 1900, New England had chartered 10.3 per cent of the total banks operating branches and 12.6 per cent of the total branches in the United States. Its share of banks with branches increased slightly to 13.4 per cent in 1933, but later declined continuously until it was 7.7 per cent in 1959. This area's share of total branches fluctuated around 6 to 7.5 per cent until the early 1950's when it increased to 8.1 per cent in 1959.

The Middle Atlantic region began this century with 20.2 per cent of the banks operating branches, and also 20.2 per cent of the branches in the United States. These branches were distributed evenly between head office cities and outside of head office cities. This area's share of banks with branches fluctuated between 18 and 27

per cent until the 1930's, when it declined to 19 per cent and then gradually rose to 21.4 per cent in 1959. Its share of branches was as high as 29 per cent in 1933, but fell to 25.1 per cent in 1937 and remained at this level up to 1959. Branches in this region were concentrated in head office cities until the 1930's. From 1930 to 1959, the proportion of branches in head office cities fell from 98.2 per cent to 37.5 per cent.

The proportion of total banks operating branches located in the East North Central states has increased while the proportion of total branches in this area has fallen. This is not unusual when one considers the fact that three of the states in this region are states in which limited branch banking is prevalent, while the other two are unit banking states. The status of states as to the type of branch banking that was prevalent in 1960 is shown in Map II Appendix A. The fact that this area's share of branches has fallen after the 1930's illustrates the rapid increase in branches in states that allowed state-wide branching. Thus, in areas allowing only limited branching, the number of banks operating branches has risen, but the number of branches operated has not increased as fast as in state-wide branch banking states; therefore the region's share of branches has fallen. Because of limited branch banking laws, a greater proportion

of branches in this area remained in head office cities than in the more liberal states, such as those in the Pacific area. Still, the distribution of banks between head office cities and outside of head office cities followed the national pattern, the share of branches outside of the head office cities having increased in this period.

The West North Central region is really quite peculiar in the sense that all of the states in this region are listed as states where unit banking is prevalent as of 1960. Yet, in 1941, this area had 16.6 per cent of the nation's banks operating branches (more than in the South Atlantic area which includes at least one state-wide branch banking state). Approximately 70 per cent of these banks are located in Iowa with the remaining 30 per cent located, for the most part, in North and South Dakota. The same distribution holds for this area's branch population. This area's unit banking status can be seen by noting that its share of the nation's branches remained quite small, falling to 2.9 per cent in 1959. Almost the entire number of branches is located outside of head office cities. There are at least three possible reasons for the large share of banks operating branches in this predominantly unit banking area. First, some of the banks operating branches had them prior to any

legislation against branches, second, many states which prohibit branch banking do allow some branching on military establishments, and third, North and South Dakota and Iowa do allow some limited branching.

As of 1960, the South Atlantic region has been made up of four states where statewide branch banking is prevalent and two states where limited branch banking is prevalent. The large share of branches in this region at the turn of the century reflects the fact that Virginia and the Carolinas were states in which the branch system was used extensively during the early part of American history. In 1900 this area had 31 per cent of all banks operating branches and 24 per cent of the branches in the United States. Its share of banks with branches had declined rather steadily and in 1959 was 15.8 per cent. This decline was paralleled by the area's share of branches, which fell from 24 per cent in 1900 to 13.2 per cent in 1959. In contrast to other areas, the branching population in this area began outside of the head office cities and then grew faster in these cities, declining slightly in 1937 and 1941, but continuing this head office city concentration up to and including 1959, when some 41.5 per cent of its branches were located in head office cities. This tendency is the opposite of that which took place in the United States as a whole from 1900

to 1962.

The East South Central region encompasses states in which unit banking was prevalent in 1960. This area's share of banks operating branches, after 1920, has increased slightly over time, with the exception of the depression years, from 6.0 per cent in 1920 to 9.9 per cent in 1959. Correspondingly, after an initial decline from 18.5 per cent in 1900 to 3.4 per cent in 1933, its share of branches has risen to 5.5 per cent in 1959. Like its neighbor region to the East, the East South Central region has tended to concentrate its share of branches in head office cities, running contrary to the trend in branch bank placement in the United States as a whole.

Texas, Oklahoma, Arkansas, and Louisiana make up the West South Central area. These states, with the exception of Louisiana, a limited branch banking state, are all states where unit banking is prevalent. Even so, this region's share of banks operating branches has remained rather steady, rising somewhat to 6.2 per cent in 1959. Two-thirds of these banks are located in Louisiana while Arkansas claims the other third. Its share of branches has also remained rather steady, rising slightly in the post World War II period to 2.6 per cent in 1959. This region also has exhibited a tendency, since the 1930's, toward concentrating what branches it has in head office

cities, this proportion having risen to 50.2 per cent in 1959.

There is a tendency, in state-wide branch banking states, for the share of banks operating branches to decline and for the share of branches to increase. This has held true for both the Mountain area, which includes three unit banking states, one limited branch banking state, and three state-wide branch banking states, and the Pacific area.

The Mountain region's share of banks operating branches fluctuated over the past half century, but during the 1950's it declined to 2.9 per cent from a high of 3.2 per cent. At the same time, its share of branches has increased to 4.2 per cent.

The pacific region is made up entirely of state-wide branch banking states. Its share of banks operating branches has declined, except for 1952, to 4.4 per cent in 1959, while its share of branches has remained consistently over 20 per cent of the nation's total. Through the same period, this region's distribution of branches between head office cities and outside of head office cities has moved with the national pattern, the proportion of branches outside the head office city having increased to 80.3 per cent in 1959.

Table 1, Appendix A, gives an interesting picture

of where the nation's branches and banks operating branches have been located over a period of time in which the branch method of banking became firmly entrenched in the United States, and also over a period of time in which the number of branches rose from some 119 in 1900 to over 11,000 in 1959.

GROUP AND CHAIN BANKING

Chain banking developed sometime around the 1880's and 1890's in the United States and was located primarily in the South and Northcentral regions of our country. Statistics on both chain and group banking are almost nonexistent between the time of their origins in the United States and the 1930's. In fact, the different government agencies did not separate these two forms of banking until the 1930's. Chain banking was most popular in the period between 1900 and 1920, declining in importance after legal restrictions were removed from the merging and consolidation of national banks in 1918.

The Consolidation Act of 1918 permitted consolidation directly without the liquidation of either bank. Prior to this act a national bank could not consolidate with another national or state bank until one or both had gone into voluntary liquidation. As Lamb points out, this act still made no provision for the merging of state and

national banks. The McFadden-Pepper Act in 1927 simplified mergers by providing that national banks could consolidate directly with state banks on the same terms as two national banks. During the 1920's, mergers and consolidations continued at a fast pace.³²

Lamb, op. cit., pp. 35-37.

Since the 1930's, statistics have been gathered on both chain and group banking rather sporadically. Table 2 Appendix A gives data collected from various sources on group and chain banking for the years when data was available. This table also breaks down chain and group banking by geographic area. Information on chain banking after 1945 is non-existent according to a recent study on the structure of banking made by the Federal Reserve System.³³

³³ Recent Developments in the Structure of Banking
Special Staff Report of Federal Reserve System to the Select Committee on Small Business, United States Senate (Washington, D. C.: United States Government Printing Office: 1962), P. 10.

In January of 1963, Representative Patman, Chairman of the Select Committee on Small Business, House of Representatives, came out with a mammoth study on chain banking. But, his study re-defined chain banking to make it much broader. Patman defined chain banking to include "any

community of interest among banks arising directly or indirectly from ownership ties."³⁴ This definition is differ-

³⁴Wright Patman, Chain Banking, Report to the Select Committee on Small Business, House of Representatives (Washington, D. C.: United States Government Printing Office: 1963), p. 6.

ent from the one used by the Federal Reserve System in collecting the data shown in Table 2 Appendix A. Patman's study is quite large, and because of its size and its incompatibility in terms of the definitions used for chain banking, the results of the study are not included in this section.

Table 2, Appendix A, shows that group banking had declined in importance up to the post World War II era when it increased somewhat, as measured by the total number of groups, banks in groups, and the proportion of total banks in the United States. In terms of total deposits, group banking has declined to 8.0 per cent in 1960. Geographically, group banking remained strongest, as measured by the proportion of the area's deposits belonging to group banks, in the Mountain and West North Central areas. Both areas are predominantly unit banking regions. In all other regions its importance has declined. In the Pacific area, group banking was quite important until after 1945, when the proportion of deposits

held by group banks declined from 37.7 per cent to 8.8 per cent by 1960. This decline probably reflects the popularity of state-wide branch banking in this area after World War II.

Table 2, Appendix A, while giving an excellent picture of the geographical shifts in both chain and group banking, does not illustrate the importance of group banking in some individual states. Table 3, Appendix A, shows this importance. In four states group banking systems owned 50 per cent of the deposits and in other states the share of deposits owned by group systems was over 33 per cent. This table also illustrates the importance of group banking in the Mountain and West North Central region states in 1960.

Chain banking, as shown in Table 2, Appendix A, is defined to be a type of multiple office banking structure in which three or more independently incorporated banks are controlled by the same individual or individuals through interlocking directorships and officer-ships. This method of operation has remained of small importance in the United States as a per cent of total deposits since the 1930's, increasing slightly in 1945 to 3.4 per cent. Again, this type of banking was most important after the 1930's, in areas where unit banking predominated, namely the Mountain and West North Central

regions.

SUMMARY

The years from 1913 to the present have seen a tremendous change in the structure of our banking system. Chart I illustrates this change in terms of the number of banks and branches. What this chart does not show completely is the change in the number of banks, by cause of change, through the important period from 1920 to the present. Table 5 presents this information. Here can be seen the tremendous number of banks that closed or were absorbed by other banks during the 1920's and early 1930's.

Here, also, can be seen the rise of merger and consolidation activity that took place in the post World War II period. One reason given for this increased merger activity is that banks merged to obtain new branches rather than establishing "de novo" branches. Table 6 illustrates changes in the population of branch banks by method of change and shows that in the years from 1952 to 1961, a larger proportion of the gross increase in branches took the form of de novo branching. But, if one examines the two years of greatest consolidation activity (as shown in Table 5), 1954 and 1955, the share of branches created by mergers, conversions, or

purchases of assets was some 10 per cent greater than in other years. Therefore, the desire to create more outlets to serve consumers through branching in the post World War II period seems to have been satisfied partly through mergers and consolidations.

In any event, the history of banking in the United States is filled with innovation and the present structure represents a basic compromise between two political and economic philosophies. On the one hand is the laissez faire point of view that tends toward unit banking and an abhorrence of concentration in any form (although concentration of one form or another has usually taken place in unit banking markets). On the other hand lies a philosophy based on a federalist belief in centralization of control and the efficiencies of economies of scale (yet to be satisfactorily verified). The result of this compromise has been the development of a banking system unique in the world today.

TABLE 5
MAJOR STRUCTURAL CHANGES AFFECTING NUMBER
OF COMMERCIAL BANKS, 1924 - 1961

Year	Increases		Decreases		
	New Banks	Reopenings of Suspended or Unlicensed Banks	Suspensions	Consolidations and Absorptions	Voluntary Liquidations
1921	472	93	461	305	48
1922	409	118	343	394	35
1923	458	68	623	329	51
1924	383	108	738	373	80
1925	403	81	579	363	59
1926	345	160	924	462	75
1927	296	127	636	567	57
1928	252	53	479	534	71
1929	235	69	628	636	57
1930	153	155	1292	769	68
1931	105	275	2213	798	99
1932	93	279	1416	433	101
1933	323	697	3891	322	89
1934	511	752	44	231	104
1935	101	87	34	160	91
1936	62	16	43	176	56
1937	62	6	58	186	56
1938	39	2	52	100	68
1939	30	-	41	119	37
1940	32	2	22	96	49
1941	53	-	8	59	40
1942	22	1	9	89	69

TABLE 5 (Continued)

Year	Increases		Decreases		
	New Banks	Reopenings of Suspended or Unlicensed Banks	Suspensions	Consolidations and Absorptions	Voluntary Liquidations
1943	49	0	4	86	61
1944	69	-	1	72	35
1945	118	-	-	79	18
1946	144	-	-	93	16
1947	111	-	1	84	11
1948	80	-	-	75	12
1949	72	-	4	77	12
1950	68	-	1	91	12
1951	62	-	3	82	11
1952	73	-	3	100	13
1953	64	-	4	116	10
1954	73	-	3	207	77
1955	117	-	4	232	5
1956	123	-	3	189	7
1957	89	-	3	162	3
1958	97 ¹	-	8	154	5
1959	145 ¹	-	3	168	3
1960	135	-	2	134	4
1961	63	-	2	68	1

¹Includes data for Alaska and Hawaii for first time.

Source: Table III, Bank Mergers and Concentration of Banking Facilities, Staff Report to Subcommittee No. 5 of Committee on the Judiciary, House of Representatives (United States Government Printing Office: 1952), p. 15, and Table I, Recent Developments in the Structure of Banking, Staff Report from the Federal Reserve Board, Federal Reserve System to Select Committee on Small Business, United States Senate, (United States Government Printing Office: 1962), p. 17.

TABLE 6

MAJOR STRUCTURAL CHANGES AFFECTING
NUMBER OF BRANCHES, 1952 - 1961

Year	Changes in branches by type						Per cent of total change caused by de novo and converted banks				
	1.	+	2.	=	3.	+(-)	4.	=	5.		
	Estab- lished de novo		Banks converted into branches		Total change caused by de novo and converted bks.		Dis- continued		Net gain or loss		
										1. + 3.	2. + 3.
1952	+237		+ 81		+318		-22		+296	74.5	25.5
1953	+304		+ 93		+397		-20		+377	76.6	23.4
1954	+371		+176		+547		-28		+519	67.8	32.2
1955	+462		+205		+667		-44		+623	69.3	30.7
1956	+560		+166		+726		-38		+688	77.1	22.9
1957	+532		+138		+675		-31		+644	79.6	20.4
1958	+567		+129		+696		-31		+665	81.5	18.5
1959 ¹	+617		+148		+765		-59		+706	80.7	19.3
1960	+810		+109		+919		-52		+867	88.1	11.9
1961	+359		+ 65		+424		-25		+399	84.7	15.3

¹ Did not include Alaska and Hawaii in 1959.

Source: Table I, Report Developments in the Structure of Banking, Staff Report from Federal Reserve Board, Federal Reserve System, to Select Committee on Small Business, United States Senate, (United States Government Printing Office: 1962), p. 17.

CHAPTER III

PRESENT CONTROVERSY OVER BANKING STRUCTURE

At present the banking industry in the United States represents a combination of several different types of banking structures, each of which has its own advantages and disadvantages. The fact that in many cases different methods of organization exist and operate side by side, illustrates the different weights given to similar goals by banking executives. Thus, to gain insight into the present controversies over banking structure one must understand why any one of the many types of structures might be desirable to bank entrepreneurs.

BANKING STRUCTURES

Branch banking

With modern communication techniques, the geographic limits to branching are virtually non-existent. But, branching in the United States is limited by the regulations of fifty-one different agencies.

The policies to be carried out under this form of multiple office banking are developed by a single board

of directors, although in some cases in which the number of branches is extensive, there may be local advisory boards to help in the formulation of policy. Thus, the procedures used by the local branch manager are formulated by the central office and usually have a high degree of standardization. The capital and surplus base of the total organization is available to all branches in making loans, and the credit and investing policies are usually developed by the central office. Any deposits and other liabilities acquired by a branch become liabilities of the total system. Funds may be transferred from an area of over-abundance to one of scarcity. Branch banks, because of their larger average size and greater flexibility, are able to remain open to the public for a variety of time periods.

The post-war movement of families to the suburbs has necessitated the expansion of banking facilities (especially retail banking) in these areas and the branch banking method has been heralded as an effective means of meeting this need. ³⁵ The relatively large

³⁵Robert Sheehan, "What's Rocking Those Rocks, The Banks," Fortune (October, 1963), p. 108 - 113.

amounts of fixed costs involved in operating a small bank can be spread over the entire branch bank system.

There are several other attributes of branch banking claimed by branch proponents. Branching allows the widest possible range of diversified services available in banking, permits specialization where necessary, provides a large resource base on which to operate, and tends to create superior managers and less nepotism. Also the branch form of operation allows for some specialized managers. The high mobility of funds through the system means lower costs to the borrower, and there tends to be a smaller chance that banks operating branches might fail. A branch manager is deeply interested in his local performance since it is for this performance that he is rewarded. Branch banks entering unit banking territory also tend to lower prices and to reduce local monopoly.³⁶

³⁶Lamb, op. cit., p. 45 and Leland J. Pritchard, Money and Banking, (Boston: Houghton Mifflin Company: 1958), p. 246.

Opponents of this form of banking base their view on several factors. They hold that branch banking tends to become monopolistic. Also, the head office of the branch banking system could tend to neglect the financial needs of local areas. Financial bigness promotes bigness in other areas and this is not good. Branch banks will drain away local funds, thus denying

their use locally. The management under branch banking is not flexible and there is little likelihood of inter-branch competition.³⁷

³⁷Ibid.

The United States is the only important country in which the branch banking form of operation is not the most important form of banking. Most other countries have few large private or public banks with extensive branch systems. But for several reasons, the United States has never had a banking system that resembled the European system except in the period of our two United States Banks.

Some have advocated that national banks be allowed the right to branch within "trading areas" irrespective of state laws on branching (with the idea that state banking laws would follow). The report, Money and Credit, in 1961 came out in favor of regional branching, defining a trade area to be "a geographical area that embraces the national flow of trade from an outlying geographic territory to and from a metropolitan center. It may be state-wide, less than state-wide, or more than state-wide."³⁸ The report also recommended that

³⁸Money and Credit, Report of the Commission on Money and Credit (New Jersey: Prentice-Hall, Incorporated: 1961), p. 166

chartering authorities, in granting branch privileges, should take several factors into consideration. Chartering authorities should avoid undue concentration in the local banking market and should also give new entrants a chance to compete even if their business must partially bid away that of existing competition. In granting branch privileges, chartering authorities should place considerable reliance on the applicant's integrity and management competence, and should rely heavily on the authorities' judgment of the earnings prospects of the new branch. The Report also found that state authorities have been biased in granting branch privileges. Because of this the Report recommended that state authorities should treat the applicants for new branches the same as new unit bank applicants and that the authorities should not be biased against branch applications made by non-local banks.³⁹

³⁹Ibid.

The Report did not define any measure of concentration that might be used in judging local market

concentration but gave reasons for its approval of trade-area branching. Banks should be allowed to follow movements of the population without restrictions, and competition among branches of large institutions with unit banks would produce more adequate facilities than competition among a few small unit banks. Also, local authorities do have a protective nature for existing banks. The report had a desire to break up concentrations of power enjoyed by a few small banks within small communities. Finally, there was some evidence that suggested small unit banks could compete with large branch banks.⁴⁰

⁴⁰Ibid., p. 165.

More recently, the Heller Committee in its Report of the Committee on Financial Institutions reviewed the question of regional branching which was raised by the Commission on Money and Credit. The Committee's conclusions were vague and very general. Committee members thought more studies were needed in the area of branching and desired to have statutory standards for branching explicitly include the effect on competition. The Committee did believe that in some states the laws on branching may have impeded the effective provision of banking services and competition. But their

final recommendation was merely to have Federal and State authorities review their present restrictions on branching.⁴¹

⁴¹Walter Heller et al., Report of the Committee on Financial Institutions (Washington, D.C.: United States Government Printing Office: April, 1963), p. 51.

Limited branch banking exists in a large number of our states today but little has been said about its merits or demerits. In almost all respects this type of structure is exactly the same as state-wide branching except that the area in which offices can be located is usually much smaller. Thus, the size of limited branch banks tends to be smaller. Usually, states limit branching to the city, county, or county and contiguous counties, but at least one limited branch banking state has divided the state into districts in which a bank may branch if the bank itself is located in that district. One can assume that this method of banking would have many of the advantages associated with the state-wide branch type of structure, but not those advantages of scale associated with large branch banks. The attributes of limited branch banking form of banking have yet to be explored.

Unit banking

The unit banking structure is usually characterized

as one office or one building method of banking, although some states which prohibit branch banking do allow unit banks to have teller windows outside the main office. (In some cases the law requires that they be attached to the main building.) In any event, the fact that this type of structure is single office banking means that the average size of unit banks is much smaller than the average branch or limited branch bank (although some very large unit banks do exist, especially in areas of very high population concentration such as in Chicago).

The advantages of unit banking are said to be many. Unit banks are generally smaller than branch banks which means little concentration of economic power. Single office, independent banking is likely to have a more flexible management and decisions can be made locally on local problems. Because of this, the unit bank will be more responsive to local needs and problems. Also, the management of unit banks is more enterprising in promoting local projects. Competition is keener between unit banks than between the same number of affiliated branch banks. The small unit banker can utilize his correspondent relationships to extend loans larger than the limitations imposed on him by loan-capital restrictions. There exists less red tape and delay in unit banking than in branch banking, and if a unit bank fails, losses to the community will generally be smaller due to the

bank's smaller size.⁴²

⁴²Lamb, op. cit., p. 41 and Pritchard, op. cit., p. 246.

Unit banking does have its disadvantages, Unit banking usually means a smaller net worth and thus a higher incidence of failure. The correspondent banking networks that unit banks rely on to participate in large loans do not provide adequate services to medium size borrowers in local areas because funds will go into a common credit pool and will more than likely go to large borrowers than to small ones. Because of this, there is greater likelihood of a shortage of funds in local areas. Since unit banking is one office banking, it does not provide partial service in areas that could not support a complete unit bank. Other adverse criticisms of unit banking are that this method does not enjoy economies of scale to the extent that branch banking does, represents even more of a monopoly power in small towns than do branch banks, and cannot supply the specialized services that communities need. Also, unit bank management often relies on nepotism for new members.⁴³

⁴³Ibid., p. 247 and Alhadeff, "Market Structure of Commercial Banking," Quarterly Journal of Economics (February, 1951), p. 80.

Chain banking

Chain banking represents a much more loosely controlled structure than either branch or group banking. Therefore, it has few of the advantages of these methods of banking and also has several disadvantages. Chain banks usually specialize in only one form of credit and are thus vulnerable to the many woes of a non-diversified bank. Also, the continuity of control of this method of organization is difficult to maintain because when the owner of the controlling shares of stock dies his heirs usually dispose of the control over the bank. As Lamb points out, the "chain organization has few, if any, advantages that can't be better obtained through group or branch banking."⁴⁴

⁴⁴Lamb, op. cit., p. 58.

Group banking

Group banking replaced chain banking in importance after certain legal restrictions, previously mentioned, were lifted from mergers and consolidations in the 1910's and 1920's. The term "holding company" has been applied to this form of organization because usually a separate corporation is established, having no banking powers, to

control the various separately incorporated constituent banks. Unlike branch banking, each affiliated bank has its own management which usually prescribes standard operating procedures, although loan and investment policies may be made by the central management of the holding company. There are two methods by which a holding company may gain control of a prospective constituent bank. The shares of the holding company can be exchanged for shares of the acquired bank on some basis so that there might be a favorable inducement to shareholders to relinquish their bank stock. Or the stock of the holding company can be sold to investors for cash and the proceeds then used to purchase blocks of bank stock.⁴⁵

⁴⁵Ibid., p. 90.

Group banking did not receive much legislative attention until the 1930's when the Banking Act of 1933 was enacted. This Act specified that no holding company could vote the stock of a Federal Reserve member bank without the approval of the Board of Governors. In 1956 the Bank Holding Company Act was passed. This Act explicitly defined a holding company to be "any company (1) which owns or controls 25% or more of the voting shares of two or more banks, or otherwise controls the

election of a majority of their directors, or (2) for the benefit of whose shareholders, 25% or more of the voting shares of each of two or more banks or a bank holding company is held by trustees, or (3) any successor to any such company."⁴⁶ This Act also ruled that bank

⁴⁶Ibid., p. 60 and 195.

holding companies should divest themselves of non-bank assets.

Mergers and consolidations

Mergers and consolidations were important during the 1920's and 1930's but they declined in popularity during the 1940's. After 1951 the merger and consolidation movement gained new impetus and in 1955 reached its peak when 232 consolidations and absorptions were carried out. Mergers have remained a strong force in the banking industry and they represent one of the areas in which much controversy is centered today.

A merger or a consolidation may change an already existing structure. For example a large unit bank located in an area that allows branching may merge with a smaller bank which then operates as a branch. Mergers and consolidations represent a method by which a bank may grow by acquiring deposits and capital and by

gaining additional office space and staff.

There are many other reasons for merging. The absorbing bank may desire to widen its capital base or it may desire to obtain branches without the necessity of building a branch office. In some cases, lower operating costs are experienced with increased scale and banks may want to take advantage of this lower cost. Another reason is that the absorbing bank may wish to follow the movement of population to the suburbs. Small banks with management problems may desire to merge with larger ones to take advantage of the large bank's specialized management. Since many bank stocks sell below par, merging banks may offer attractive returns to existing stockholders of the prospective merged bank. Some banks, previously specializing in one area may desire to diversify via merger, especially in the area of "retail banking." In many cases, in establishing a branch by merging, a bank can circumvent any stringent requirements for satisfying the "need" criteria set by state authorities for the establishment of de novo branches.⁴⁷

⁴⁷ Ibid., p. 60 - 64 and Robert Marshall, The Current Bank Merger Movement, Ph.D. dissertation, The Ohio State University (1957), p. 264

Mergers received only limited legislative control prior to 1960 when the Bank Merger Act was passed. This

law, which amended the Federal Deposit Insurance Corporation Act, provides that no insured bank shall merge with any other insured bank without prior approval from the proper federal agency. If the resulting bank is a national bank, approval must be obtained from the Comptroller of the Currency. If the resulting bank is a state member bank, approval must be obtained from the Federal Reserve System, and if the resulting bank is a state non-member bank, approval must be obtained from the F.D.I.C. A further provision is that before any decision can be reached, a written statement must be received from the two other banking agencies and from the Justice Department on the competitive factors involved. These statements are purely advisory and do not have to be followed.

In judging the merits or demerits of a merger, seven characteristics must be examined. These include the financial history and condition of both banks involved, the adequacy of the banks' capital structure, the banks' future earning prospects, the character of the banks' management, the needs of the community, whether or not the banks' corporate powers are consistent with the Merger Act, and the effects on competition in the area.

Banks have been relatively immune to anti-trust action with regard to mergers. In a sense the Clayton

Anti-trust Act did deal with bank mergers by prohibiting mergers by stock acquisition where the effect was to substantially lessen competition or to create a monopoly. But, since the Federal Reserve did not allow national banks to purchase corporate stock (with some exceptions) and since many states had rules against state bank ownership of corporate stock, most bank mergers were carried out through asset acquisition. Thus, it was thought that the Clayton Act did not affect bank mergers. In 1950, Section 7 was amended to include asset acquisitions, but it applied only to corporations subject to the jurisdiction of the Federal Trade Commission. Since banks were not subject to F. T. C. jurisdiction, it was still felt that the Clayton Act did not affect bank mergers.

In June of 1963, the Supreme Court of the United States ruled on the validity of a merger between the Philadelphia National Bank and the Girard Trust Corn Exchange Bank. This merger was appealed to the Court by the Justice Department. Justice Brennan, writing for the majority, said that Section 7 did include both stock and asset acquisitions and that the Court felt Congress, in passing the amendment in 1950, intended that banks should be subject to the law, since the law did not explicitly exempt banks. Thus the Justice Department now seemed to have a firm foothold in passing on mergers

through the Clayton Act. The court also said that the merger, if carried out, would have reduced the number of banks in Philadelphia from 17 to 16 and the number in the four county area from 43 to 42. The Court emphasized that the new bank would increase its per cent of assets in Philadelphia from 25 to 39 per cent and in the four county area from 23 to 36 per cent. These increases in concentration were held by the Court to be a measure of undue concentration of the relevant market which would lessen competition substantially. Therefore, the Philadelphia merger was declared invalid.⁴⁸

⁴⁸"Thunderbolt for Bank Mergers," Business Week (June 22, 1963), p. 80-82, and Edward S. Herman, "The Philadelphia Bank Merger Decision and Its Critics," The National Bank Review (March, 1964), p. 399.

CONTROVERSY OVER STRUCTURE

The present debate among bankers and among state and federal banking authorities over banking structure is hardly atypical. Chapter I points out the tremendously powerful unit bank philosophy that developed in the United States during the 1800's. This belief in independence and smallness has been shaken only by major fluctuations in our economic system in the past. Despite the fact that neither our banking system nor our

economy have recently experienced a major fluctuation there exists debate over unit bank philosophies today. This is perhaps the only unique characteristic of the present controversy over banking structure. The same pressures and arguments emerge even from the same federal position: the Comptroller of the Currency. In 1929, J.W. Pole, Comptroller of the Currency said:

. . . I have reached the conclusion that an extension of branch banking privileges should be granted to national banks.

That it should not be nation-wide will be generally admitted. It has been suggested that branch banking be limited to the confines of each Federal reserve district. This may not be feasible to the same extent in all Federal reserve districts. Restricting it to State boundaries, which are political, rather than economic, presents difficulties, as does the suggestion that a radius of 50 or 100 miles from the parent bank be fixed, but there is an economic area to which the extension of branch banking can be applied, varying in size to meet the diversified conditions that exist in this vast country.⁴⁹

⁴⁹J.W. Pole, "The Need of a New Banking Policy" Branch, Chain and Group Banking, Hearings before the Committee on Banking and Currency, House of Representatives, 71st Congress 2nd Session (Washington, D. C.: United States Government Printing Office: 1930), p. 1025.

In 1963, James J. Saxon, Comptroller of the Currency, said:

. . .the standards which should govern the branching powers of national banks are not, in my judgment, the varied standards which are appropriate to the local needs of the fifty individual states.⁵⁰

⁵⁰"Rift on Control of Banking." Business Week
(February 23, 1963), p. 48.

And, Saxon has let it be known that he thinks national banks should be allowed to branch regionally whether or not state laws permit branching.

But, the battle implied in the above statements between state and federal authorities over branching powers is not the foundation for the present and past controversies over banking structure. Basically, there are two interests involved: private and public. These two interests are not mutually exclusive nor are those who work in either area necessarily motivated by a public or private spirit. The foundation for the public and private interests has to do with "rights." These rights are the basic motives behind private and public interests which have led to the chain of controversies within the banking community.

Private rights are not "civil rights" but sometimes hide behind "states rights." These private rights are the rights of an individual or individuals to create, maintain or further amass power - in this case the power over banking markets. Power is relative to the degree of control one is able to maintain within a particular area in which one's interests lie. Concentration

or size, measured in terms of assets or deposits, does not measure market power unless, at the same time, size is highly correlated with the relevant market power. Market power, then, is inversely related to the degree of ease with which a buyer can seek alternative sellers and, conversely, is directly correlated with the degree a seller can control or limit the number of sellers of substitute products within that particular relevant market. Present and past controversies over banking structure emanating from private interests are basically power oriented.

Public rights, on the other hand, have been developed in recognition of the fact that private market power, if left unrestrained, may lead to a threat of monopoly power or the disruption of the development of our economy. Here then, the public sector attempts to satisfy a public interest motive by wielding public power over banking markets.

Any attempt to answer questions regarding what should be the limits to public or private power over markets depends on how one defines the "public interest" or the "private interest" and how one should protect them to mutual satisfaction. If these concepts could be defined adequately so that all those interested in banking were satisfied, there would be no controversy

between these two groups over banking structures (or, for that matter, no controversy over banking in any area).

To make matters even more complicated, it should be evident that within each interest there exist separate lines of power. On the public side, the Federal Government has four agencies protecting the whole public interest while at the same time, under certain circumstances, it is liable for only a part of the behavior of our banks. The other part is the responsibility of fifty different state agencies. To say that the whole public sector gets along and has defined the above concepts to its mutual satisfaction would be far from the truth. But there are areas of agreement on certain goals (safety, convenience, need, management competency, competition) even though there may be some disputes about the means of attaining them.

The private side is also confusing because the relevant market and the power over the market depends on the definitions of the market given by different bank entrepreneurs, each of whom may operate under the supervision of a state agency, or federal agencies, or both, and each of whom may operate through completely different structural techniques. Since the relevant market in which banks compete may be different (local, state, national, international, or any combination thereof),

the methods by which a bank entrepreneur may want to seek market power will be highly complex. Also, these methods may coincide or clash with the desires of the public sector or others in the private sector (for similar or contrasting reasons, i.e. safety in branching structure and market power in branching structure).

The above discussion is meant to provide background and insight into the real meanings involved in the controversies over banking structure. There are primarily three methods by which a bank or prospective bank may alter its structure. The arguments are, what are the effects of changes in these structures on the private and public interest, and who shall have authority in judging whether or not these changes should be made? The three methods presently being debated are: chartering, branching (limited or unlimited) and merging (which includes consolidations and purchases of assets).

Presently, a bank desiring national bank status gets its charter from the Comptroller of the Currency and must meet federal requirements. National banks must also go to the Comptroller to get permission to branch. But the branching laws applicable to national banks as to geographical limits are the state laws where the national bank is located.

A bank desiring state bank status must get its charter from the state banking commission and must fulfill

state requirements before it can be allowed to begin business. The limitations on the branching of state banks are prescribed by state law.

The number of agencies and different interests involved in the question of banking structure are numerous and much confusion and conflict have arisen simply because of the many different public agencies involved. For the most part, the criteria on which charters, branches, and mergers are approved are identical for each agency, but unfortunately, they are also highly subjective, and judgments on the same criteria have led to numerous diverse opinions.⁵¹

⁵¹The factors considered for mergers by Federal agencies are given in the Bank Merger Act of 1960 and were stated in an earlier section on bank mergers. State criteria for mergers are more diverse but generally follow the same pattern. Factors considered by the Comptroller for branching and chartering include, more or less, the same factors considered in mergers. These include: 1. character of management 2. adequacy of existing bank facilities 3. prospects for growth of area 4. methods of banking practices used 5. local sources of income and wealth 6. extent of profitable business that could be created by the bank 7. adequacy of capital of new bank 8. banking history of the community 9. effects on competition. Factors considered by state agencies for chartering and branching, where allowed, are also similar to merger factors. These include: 1. profitability expectations 2. public convenience 3. the quality of management 4. the competitive situation 5. desire to avoid conditions of 1920's and 1930's 6. each case is considered separately on its own merits. The above factors on chartering and branching are from Monetary Policy and the Management of the Public Debt, Joint Committee on the Economic Report, Senate Document #123, Part 2,

82nd Congress, 2nd Session (Washington, D. C.: United States Government Printing Office: 1952), p. 925 - 932 and p. 984 - 997.

Thus, the present controversy over structure emanates from three different groups: private bankers (primarily unit bankers and their organization), state banking authorities, and federal agencies (primarily the comptroller of the Currency). The stage for the present feud (over what agency on what level of government shall have the power to determine changes in structure and what the effects would be of such a change) has been set throughout the entire history of our banking system. The laissez faire unit bank philosophies of today are the same as those that existed in early America. In the early 1900's an anti-branch feeling existed in Congress and in the American Bankers Association. In 1916 and in 1922, the A. B. A. came out with resolutions against branching on the grounds of monopoly power and of violation of the principles of our government.⁵²

⁵²Lamb, op. cit., p. 38

Also, during past history, various independent banking associations have been formed to present the viewpoint of the unit banker. These include the large

Independent Bankers Association and others. One of the most heated areas of controversy concerns the effects of the decline in the number of banks in the United States on competition. Recent testimony by the counselor for the Independent Bankers Association illustrates the unit banker's point of view:

We don't want what they have in Western Europe, where all of the countries over there, without benefit of restrictive laws such as Congress has passed on holding companies, mergers and the like, have developed concentrated banking where a small number of large banks have hundreds of thousands of branches, so that a businessman living in a smaller town may obtain a commercial loan through that branch office only according to the credit judgment of somebody that may be hundreds of miles away in the main office in a larger city.⁵³

⁵³Horace R. Hansen, Counsel, Independent Bankers Association, Conflict of Federal and State Banking Laws, Hearings before the Committee on Banking and Currency, House, (Washington, D. C.: United States Government Printing Office: 1963), p. 10

Robert Lanzillotti, an economist for the same organization, gave his views on this increased concentration:

While we have deplored the fact that the 200 largest manufacturing companies control 38 per cent of total U. S. Output, as of 1962 the 200 largest commercial banks in the U. S. held 55 per cent of total assets and deposits and 57 per cent of total loans - this is a very high level of aggregate concentration - whether taken in relation to other sectors of the economy or on its face.

Moreover, concentration of control in banking

has been increasing over the past decade due to (a) bank mergers and acquisitions, (b) the spread of bank holding companies, (c) the growth of chain banking, and (d) increased inter bank stockholder links and loans secured by stock in other banks.⁵⁴

⁵⁴Robert Lanzillotti, Conflict of Federal and State Banking Laws, Hearings before the Committee on Banking and Currency, House (Washington, D. C.: United States Government Printing Office: 1963), p. 32

The present Comptroller, James Saxon, against whose liberal chartering, branching and merging policies these barbs were aimed, answered Lanzillotti by stating that concentration ratios were not adequate measures of monopoly power.

It is not the number of independent banks, but the number of effective competitors that determines the degree of competition which exists. 'Effective competition' . . . could actually be increased, even though the country wide number of banks were reduced, wherever additional banking offices were provided in the area . . . concentration should be judged according to these tests of public benefit and not according to the mere number of banks or even banking offices.⁵⁵

⁵⁵James Saxon, Conflict of Federal and State Banking Laws, Hearings before the Committee on Banking and Currency, House (Washington, D. C.: United States Government Printing Office, 1963), p. 555. Other similar points made by economists include: "The concentration ratio, particularly in manufacturing industries, has been held by some to be a measure of potential monopoly power. Concentration ratios have a more limited meaning and are surrounded with many more reservations for banking than for manufacturing or other

forms of non-financial activity. Among the factors that limit the significance of concentration ratios for commercial banking, public regulation and the sharply expanding alternative sources of credit are particularly important" and "The real question is not the extent of concentration but rather the degree of competition. Concentration and competition are not opposite sides of the same coin as some observers imply. Effective competition is consistent with high concentration as is evident in so many sectors of our economy (e. g. automobiles). This conclusion also applies to banking, particularly when allowance is made for the role of other financial institutions." Jules Backman and Arthur Sametz, "Workable Competition in Banking" Bulletin of C. J. Devine School of Finance, New York University (November, 1962), p. 27 - 29. This view is also expressed by Carson and Cootner, op. cit., p. 84.

Much of the controversy is centered on the threat Saxon's actions have posed to the dual banking system. In 1963, the A. B. A. came out with the following resolution aimed directly at the present actions and desires of the Comptroller:

At the present time, proposals are being advanced which would upset the balance with respect to the ability of State and National banks to establish branches. Accordingly, because of its conviction that the dual banking system must be maintained and supported, the American Bankers Association reiterates its position that no class of banks operating in any State should enjoy greater rights in respect to the character of banking organization, including the establishment of branches, than do banks chartered under the laws of that State.⁵⁶

⁵⁶ American Bankers Association, Conflict of Federal and State Banking Laws, (Washington, D. C.: United States Government Printing Office: 1963), p. 4.

The virtues of our dual system of banking include,

according to some, the idea that people at the local level are far more able to decide what laws and structures are good for their area. Since local conditions vary widely among areas, regulations should vary widely. Other virtues of local control of banking include the competitive points between the state and national banking systems. If there are any advantages or disadvantages to either system, banks can shift from one system to another. Since the authorities of both systems would like to maintain their membership, the system having any disadvantages (thus losing members) will be forced to change its rules and procedures to comply with those policies of the more advantageous system.

It has been charged that Saxon is destroying the dual system by his liberality in allowing new branches, new charters, and mergers, and in his statements favoring branching over unit banking. One wonders, if the above competitive factors really do exist between these two systems, whether it should then hold that state agencies should become more liberal. But, this implied adjustment between the two systems is attacked on the grounds that the process of adjustment will lead to a greater number of offices which will over-bank our system and lead to a wave of failures similar to the 1920's and 1930's. This adjustment is also criticized because it is a dictate from Washington and not from the

local level from where the rules should originate.⁵⁷

⁵⁷Hansen, op. cit., p. 7 - 8. see also Randolph Hughes, Chairman of the Legislative Committee of the National Association of Supervisors of State Banks, Conflict of Federal and State Banking Laws, Hearings before Committee on Banking and Currency, House (Washington, D. C.: United States Government Printing Office: 1963), p. 103.

Saxon answers those that state he is a threat to the Dual Banking System by saying:

Those who oppose the present policies of this office often attack them on the grounds that they pose a threat to duality. We would suggest a concluding question: What meaning should be attached to the dual banking system and how should it function? We see no way that a dual banking system can function if either segment, State or National, is held in check for the purpose of safeguarding the other. Such an approach would subordinate one system to the other, and there would be no true duality.⁵⁸

⁵⁸Saxon, op. cit., p. 275

Many private bankers and state supervisors claim that extensive branching and merging is inimical to a solvent competitive system of banking. Saxon claims that state supervisors desire to allocate financial markets for the purpose of maintaining local monopolies.

They would approach this problem by parceling out these markets among National and State chartered banks so that each group, and individual banks within the group, would have assured territories reserved to them. This

is their concept of how a dual banking system should operate. Viewed in these terms, any action by the national authorities which fails to preserve these sheltered markets is regarded as a threat to the dual banking system.⁵⁹

⁵⁹Ibid., p. 280.

Another point he makes is that his office does not originate or initiate these petitions for new charters and branches, thus there are some individuals in the local area that believe there should be more bank facilities.

Finally, in the background of these current conflicts rest the older, little tested hypotheses regarding the efficiencies or lack of efficiencies enjoyed by different banking structures. These advantages and disadvantages were mentioned previously when the different types of structures existing in our banking system were discussed. Economies of scale and of structure, efficiencies in output, and advantages in earnings by structure and size are all part of the broad arguments that exist today in banking.

An interesting paradox that presently exists is that some unit bankers, in attacking Saxon's liberal merger decisions, claim that his actions have led to a reduction in the number of banks and have increased the concentration in banking. At the same time, other

opponents of Saxon's chartering actions claim that his activities have led to a vast proliferation of banks and to wild competition.

. . . over and over again, bankers warned that the rapid proliferation of new banks and branches would result in a wave of bank failures similar to the 1920's and 1930's, caused by over-banking, cut-price competition to obtain accounts, and the destruction of good, sound banking.⁶⁰

⁶⁰"Proliferation of Banks Could Cause Failures, Bankers Say In Survey" The Wall Street Journal (September 26, 1963), p. 13.

At the very least, this paradox lends support to the contention that concentration is not necessarily synonymous with monopoly power.

A study in diverse opinion was made to illustrate the lack of adequate criteria on which to base the question of what is the effect on competition of a bank merger. Since taking office, Saxon has taken the brunt of the criticism on past merger decisions. Recently, Saxon made available information as to the opinions of the other three federal agencies on the competitive factor in 143 merger cases that Saxon had approved. The degree of mutual agreement among the agencies on the criterion of competition was amazingly low. One must be warned that these opinions do not necessarily mean that the agencies would have disagreed on Saxon's merger decision. There

are seven criteria to be studied in a merger case of which the competitive factor is only one. A negative vote on the competitive factor does not necessarily mean a negative vote on the entire merger. Therefore, one cannot include the Comptroller in these comparisons but only the three other agencies and their opinions on the competitive factor.

Table 7 gives the number of reports by each agency on the competitive factor and is classified according to the tenor of the opinion. The opinions of the Justice Department, in general, were the most severe of the three, having 46 "substantially adverse" opinions as against only 7 and 8 for the Federal Reserve and the F. D. I. C., respectively. A far more interesting point is the degree of agreement among these agencies regarding competition. Table 8 shows that no two agencies agreed more than 52.4 per cent of the time, and in fact, agreement between the F. D. I. C. and the Justice Department was quite low, being ~~only~~ 44.3 per cent. All three agencies agreed only 33.6 per cent of the time, which implies a rather high degree of disagreement on the competitive criterion.

A further breakdown was made based on the percent of time each agency agreed with the other, classified by the tenor of the opinion. Table 9 shows this information. The number of times an agency gave an

TABLE 7

NUMBER OF ADVISORY REPORTS, BY AGENCY AND BY TENOR
 OF REPORT ON AFFECT OF MERGER ON COMPETITION⁽¹⁾
 (November 16, 1961 through April 19, 1963)

	Not Adverse	Slightly Adverse	Moderately Adverse	Substantially Adverse	Total
Fed.	58	56	22	7	143
F.D.I.C.	95	36	3	8	142 ⁽²⁾
Justice Dept.	51	46	0	46	143

(1) Actually includes mergers, consolidations and purchases of assets.

(2) Did not report on one merger.

Source: Compiled from data presented in Conflict of Federal and State Banking Laws, Hearings before the Committee on Banking and Currency, House (Washington, D. C.: United States Government Printing Office: 1963), p. 482.

opinion, classified by tenor, was used for the base, and the number of times the remaining two agencies agreed with it was used as a measure of the "degree of agreement" reached between the agencies. The record is not good, especially when one moves toward the "substantially adverse" category. It seems much more difficult to judge when a merger is adverse to competition than when it is not. The agreement record of the Justice Department with both the Federal Reserve and the F. D. I. C. combined on the "substantially adverse" category was a low 6.5 per cent.

The poor record of agreement made by the Justice Department, the Federal Reserve System and the F. D. I. C. illustrates the lack of adequate criteria for measuring the effects on competition of a change in the market structure of banking, and it gives one an idea of why there is so much controversy and confusion, not only on the question of competition and concentration, but on all other facets as well.

Although the confusion is formidable, this study may help to clear the air in some areas. The general question of competition in banking will be treated in the following chapter, while some criteria of efficiency will be discussed in later chapters.

TABLE 8
PERCENT OF TIME AGENCIES HAVE AGREED WITH EACH
OTHER ON AFFECT OF MERGER ON COMPETITION (1)
(November 16, 1961 through April 19, 1963)

	Board of Governors Federal Reserve System	Federal Deposit Insurance Corporation	Department of Justice	All Three Agencies
Board of Governors Federal Reserve System	100.00	52.4	51.7	
Federal Deposit Insurance Corpor- ation	52.4	100.0	44.8	
Department of Justice	51.7	44.8	100.0	
All Three Agencies				33.6

(1) Actually includes mergers, consolidations and purchases of assets.

Source: See source Table 7.

TABLE 9

PERCENT OF TIMES AGENCIES HAVE AGREED WITH EACH OTHER--BY GENERAL
TENOR OF OPINION--ON AFFECT OF MERGER ON COMPETITION⁽¹⁾
(November 16, 1961 through April 19, 1963)

AGENCIES AGREED WITH FEDERAL RESERVE--PERCENT OF TIME

	Not Adverse	Slightly Adverse	Moderately Adverse	Substantially Adverse
F. D. I. C.	89.7	33.9	4.5	42.9
Justice Dept.	65.5	53.6	- (2)	85.7
Both	63.8	14.3	- (2)	42.9

AGENCIES AGREED WITH F.D.I.C.--PERCENT OF TIME

	Not Adverse	Slightly Adverse	Moderately Adverse	Substantially Adverse
Fed.	54.7	52.9	33.3	37.5
Justice Dept.	46.3	38.9	- (2)	75.0
Both	38.9	22.2	- (2)	37.5

AGENCIES AGREED WITH JUSTICE DEPT.--PERCENT OF TIME

	Not Adverse	Slightly Adverse	Moderately Adverse	Substantially Adverse
F.D.I.C.	86.3	30.4	- (2)	13.0
Fed.	74.5	65.2	- (2)	13.0
Both	72.5	17.4	- (2)	6.5

(1) See Appendix B for absolute data. - Actually includes mergers, consolidations and purchases of assets.

(2) Justice Department made no moderately adverse tenor statement.

Source: See source Table 7.

TABLE 10

NUMBER OF TIMES AGENCIES HAVE AGREED WITH EACH OTHER--BY GENERAL
TENOR OF OPINION--ON AFFECT OF MERGER ON COMPETITION (1)
(November 16, 1961 through April 19, 1963)

AGENCIES AGREED WITH FEDERAL RESERVE--NUMBER OF TIMES

	Not Adverse	Slightly Adverse	Moderately Adverse	Substantially Adverse
F.D.I.C.	52	19	1	3
Justice Dept.	38	30	-(2)	6
Both	37	8	-(2)	3

AGENCIES AGREED WITH F.D.I.C.--NUMBER OF TIMES

	Not Adverse	Slightly Adverse	Moderately Adverse	Substantially Adverse
Fed.	52	19	1	3
Justice Dept.	44	14	-(2)	6
Both	37	8	-(2)	3

AGENCIES AGREED WITH JUSTICE DEPT.--NUMBER OF TIMES

	Not Adverse	Slightly Adverse	Moderately Adverse	Substantially Adverse
F.D.I.C.	44	14	-(2)	6
Fed.	38	30	-(2)	6
Both	37	8	-(2)	3

- (1) Actually includes mergers, consolidations and purchases of assets.
(2) Justice Department made no moderately adverse tenor statement.

Source: See source Table 7.

CHAPTER IV

COMPETITION AND STRUCTURE IN BANKING

Recently, the question of competition in banking has received more attention than any other question, but few, if any, adequate answers have been given. The reasons for this inadequacy are many and stem from the varied features of the banking industry. Banking is a multi-product service industry. It operates through different structures and compete with other institutions both in services and for raw materials. At the same time, its products are sold to customers of different sizes through geographic markets of varied extremes. These complexities mock any attempts at simple, singular answers to the question of competition in banking.

Economic theory gives two approaches to market analysis. One approach centers its attention on a particular product and examines the price and output results in a firm or an industry. In analyzing the price-output relationships of a firm, attention is centered on one product produced and sold by that firm. An Industry is analyzed by "summing" the relevant firm supply curves and the relevant consumer demand curves for a particular product. Further refinements are made by dividing the analysis

into short run and long run periods. The type of market (pure competition, monopolistic competition, oligopoly, or monopoly) is determined by the degree of similarity between the market under study and various characteristics of the different theoretical market models.

Another approach has been devised by Robert Triffin. He centers his attention on the firm and the degree of substitutability that firm's product has with other firms' products. In both cases, the basis for comparison is the product. In the first case, the product is defined and then those firms producing "similar" or "substitute" products are included in the industry. In the second case (Triffin's) a product produced and sold by one firm is compared to a product produced and sold by another firm, and the type of competition is determined by the relative cross elasticity of demand between the two firms' products.⁶¹

⁶¹Robert Triffin, Monopolistic Competition and General Equilibrium Theory (Cambridge: Harvard University Press, 1941).

Therefore, if one were to use traditional market analysis in analyzing competition in banking, one should center one's attention on a particular banking product and then either examine the firms producing similar products, (noting how certain characteristics in this

market compare to those in normative theoretical models) or examine the cross elasticities of demand that exist between a bank and any other institution producing similar products. The latter method implicitly would define the geographic extent of the market while the former would not.

Triffin's method has the virtue of a built-in geographical limitation on the market, but it has the vice of complexity of measurement. Both methods are handicapped by centering only on price relationships, leaving non-price competition mainly to descriptive analysis.

The first method is the one followed by most analysts of markets including both professional economists, and unfortunately, those of lesser economic know-how. And, it seems that the latter fall into two traps set by a superficial knowledge of economic theory. First, they fail to examine a particular product and any close substitutes, and instead, center their attention on a particular institution. Second, they ignore the fact that markets are limited geographically by buyer immobility, buyer and seller size, and barriers to knowledge, and they lump all institutions sharing particular characteristics into the same market, no matter what may be the barriers involved.

BANKING MARKETS

One cannot place the banking industry under the banner of a single market classification. Instead, one must analyze competition along the many product lines offered by banks and substitute product lines offered by non-bank financial institutions and other institutions. A major problem arises in attempting to define the product. In analyzing the market for business loans, for instance, should one include accounts receivable financing with more risky business loans made by commercial finance companies? Should one include long term loans with shorter term loans to arrive at the product in question? Decisions as to how these and other questions should be answered will affect the number and type of competing institutions in the same market and will thus affect its classification.

Usually, an economist, after defining the product and the relevant market, will focus his attention on the degree of control one seller may have over the price and quantity of the product sold. In most lines of products sold by banks the price of the product (its interest rate) may not be the most important regulator of the quantity sold, and more attention must be placed on non-price means of allocating banking products. Also, the size of the borrower in relation to other similar

borrowers will affect the decision of the institution in its allocation of credit. As Backman and Sametz point out, "the countervailing power of big customers vis-a-vis big banks is an important competitive element in banking that is only slightly related to the number of competing banks."⁶²

⁶²Jules Backman and Arnold Sametz Workable Competition in Banking Bulletin Number 22 (New York: C. J. Devine Institute of Finance, Graduate School of Business Administration, New York University: November, 1962), p. 8.

The prices offered by financial institutions are also affected by national forces including the policies of the federal government, and these forces may not coincide with the desires of individual banks. ". . . banks as a whole are but one of many forces determining the level of interest rates and the individual bank's influence is, in the last analysis, negligible."⁶³

⁶³Ibid., p. 9.

One must analyze competition in financial markets along three dimensions: the product produced, the extent of buyer and seller mobility (geographic extent of the market), and the different institutions involved in selling substitute products. Clifton H. Kreps, Jr.,

in an excellent article in Banking and Monetary Studies, gives a table in which he describes the three dimensions of banking competition. He divides the analysis into two categories: deposit-holding product lines and credit-granting product lines.⁶⁴

⁶⁴Clifton H. Kreps, Jr., "Characteristics of Local Banking Competition" Banking and Monetary Studies, Edited by Deane Carson (Homewood, Illinois: Richard D. Irwin, Inc.: 1963), pp. 319-332.

Kreps states that of the two lines of service produced by banks, there is more competition between banks in their provision of credit granting services than deposit holding services. The reasons he gives for this are that, first, the deposit services extended by banks are much more homogeneous than are credit services; thus there is not much basis for choosing between banks (although banks often try to differentiate their deposit services). Second, there is less difference between saving deposit services of banks than between saving deposit services of banks and savings and loan associations. Third, deposit balances often follow lending services. A person or corporation keeps deposits in a bank in anticipation of a borrowing need in the future.⁶⁵

⁶⁵Ibid., p. 323.

TABLE II
RANGE OF COMPETITION IN BANKING

DEPOSIT-HOLDING PRODUCT LINES		
Deposit-Holding Services	Geographic Range of Competition	Institutional Range of Competition
Demand deposits		Commercial banks only
Large corporate (including bank) balances	National	
Medium-sized corporate (including bank) and large individual balances	Regional	
Small corporate and medium-sized individual balances	To some extent regional, but largely local	
Small individual balances	Local	
Time deposits		
Savings deposits	Local	Commercial banks and non-bank institutions (mutual savings banks, savings and loan associations, credit unions)
Time deposits, open account, and time certificates of deposit		
Small T/D, open account Christmas savings, etc.)	Local	Same as for Savings
Large T/D, open account, and TCD's		
Individual, partnership, and corporate	National	Commercial banks and the whole open market for short-term funds.

TABLE II (Continued)

DEPOSIT-HOLDING PRODUCT LINES		
Deposit-Holding Services	Geographic Range of Competition	Institutional Range of Competition
Public (state and local government)	National, to the extent that state and local governments are able or willing to utilize open-market obligations as outlets for temporarily surplus funds. Regional (state-wide) for state funds and local for local government funds to the extent that state and local governments, as a matter of law or custom, use state and local banks and nonbank financial institutions as outlets for these funds.	

CREDIT-GRANTING PRODUCT LINES		
Credit-Granting Services	Geographic Range of Competition	Institutional Range of Competition
Business loans		Commercial banks, commercial finance companies, factors, and, for large and medium-sized borrowers, some segments of the open market (commercial paper and bankser acceptance
Short-term	National	
Large	National to some extent but largely	
Medium	regional	
Small	Local	
Term		
Large	National	Commercial banks, life insurance companies, trusts and pension funds, private place-8
Medium	National to some extent but largely regional	ments, investment bankers (the open market for long-term funds)

TABLE II (Continued)

CREDIT-GRANTING PRODUCT LINES		
Credit-Granting Services	Geographic Range of Competition	Institutional Range of Competition
Small	Local	Commercial banks, small business investment companies, state and local development corporations
Real estate Mortgage loans Commercial	May be national, regional, or local, depending on size	Commercial banks, savings banks, life insurance companies, trusts and pension funds, mortgage bankers
Residential	Local (or same as above)	Commercial banks, savings banks, savings and loan associations, life insurance companies, individuals
Consumer installment Loans	Local	Commercial banks, sales and consumer finance companies, credit unions

TABLE II (Continued)

CREDIT-GRANTING PRODUCT LINES		
Credit-Granting Services	Geographic Range of Competition	Institutional Range of Competition
Other (nonpurpose) Loans to individuals	May be regional or local, depending on size, but probably largely local	Commercial banks, life
Farm loans Short-term	Local for private lenders, but federal government farm-credit granting agencies are extensively involved	Commercial banks, government or government sponsored agencies (production credit associations)
Term	Same as for short-term	Commercial banks, federal intermediate credit banks
Mortgage	For private lenders: to some extent regional for larger loans; otherwise local. Again extensive federal government involvement	Commercial banks, life insurance companies, farmers Home Administration, federal land banks, individuals.

Source: Clifton H. Kreps, Jr., "Characteristics of Local Banking Competition," Banking and Monetary Studies Edited by Deane Carson (Homewood, Illinois: Richard D. Irwin, Inc.: 1963), p. 321-323.

Because of the greater degree of competition existing between banks in their credit granting services, Kreps centers his attention on these services saying:

. . . for purposes of studying banking competition to attempt to determine its adequacy or inadequacy in particular situations as a regulator of banking market performance, or for purposes of analyzing the differing market performance results associated with differing banking market structures . . . it is the credit-granting product lines of banks that are strategic, and it is on these that attention should be focused.⁶⁶

⁶⁶ Ibid., p. 324.

Kreps makes this choice, as stated above, because banks compete more with each other in their credit granting product lines. This basis for his decision misses the point of the nature of competition for bank services. The markets in which banks compete are many--as many as are the different types of products offered by banks--and banks are governed in their ability to restrict output and control prices not only by the number of banks in that market, but also by the number of non-bank institutions competing by providing the same service. Deposit-holding service competition, even though it might not be great between banks, is doubly important. First, and most important, deposit holding services give financial institutions the raw materials needed to create and provide credit-granting services. And, second, banks do

compete with non-bank financial institutions for thrift (other than demand) deposits. To the extent that this competition is real, it will govern the abilities of banks and non-bank institutions to compete for specific credit-granting services.

DEPOSIT-HOLDING PRODUCT LINES

Demand deposits

Perhaps the most important product or service provided by banks, from the viewpoint of the economy, is the provision of demand deposit services. The ability of banks to create a part of the money supply sets them apart from other types of financial institutions and means that competition for the provision of demand deposits can be analyzed by focusing one's attention on the banking institution. (This is true except in certain instances: Money can be held as a store of value and will thus satisfy an asset demand as well as a desire for money. In this case other financial institutions, including the United States Treasury, compete with banks in providing liquid assets. Also, there is some substitution between thrift deposits and demand deposits by individuals using cashiers checks to settle money claims. Finally, there is the substitution of the

other components of the money supply for demand deposits.)⁶⁷

Lawrence L. Werboff and Marvin E. Rozen, "Market Shares and Competition Among Financial Institutions," Private Financial Institutions For the Commission on Money and Credit (Englewood Cliffs, N. J.: Prentice-Hall, Inc.: 1963), p. 270.

As is stated in Table 11, the competition for demand deposits can be national (or, even international to some extent for foreign balances), regional (roughly state wide or by economic region in the case of smaller states that encompass areas of heavy population density), or local (which is the town and the immediate area surrounding the town). The geographical extent of competition will depend upon the size of the depositor measured by his ability to seek alternative suppliers of money motive satisfying services. In terms of the number of demanders, probably the majority are individuals or small business deposit holders that seek convenience and stability or safety from a highly localized market.

Since the product is highly homogeneous when taken by itself, it would seem that there would be a great tendency for the movement or switching of deposits from one bank to another. But, through the use of non-price methods of competition as means of differentiating their product, banks try to maintain their holdings of demand deposit liabilities.

There are at least two important reasons for the use of non-price competition by banks as an attempt to differentiate their product. First, and most important, banks have been prohibited from paying interest on demand deposits since the 1930's. Second, because the market is highly localized and in many cases serviced by only a few banks that hold a relatively large share of the demand deposit liabilities in the market and because the product is homogeneous, the market is one of pure oligopoly. Therefore, banks are faced with a kinked demand curve for their product so that if banks could use price competition, any attempt by one of the banks to lower prices would immediately be met by other competitors. Actually, this is true in the use of non-price methods of competition as well. As is pointed out by Werboff and Rosen, non-price service innovations by one bank are quickly followed by other banks and little lasting advantage seems to be derived.⁶⁸

⁶⁸Ibid., p. 271.

However, there is some implicit price competition among banks. Carson and Cootner state that banks grant various credits to customers, who maintain a minimum average balance. They also point out that price cutting of service charges on demand deposits would be

ineffective because this action would have to be highly publicized, and other banks, noting this change, would follow the cut in service charges. On the other hand, there is price leadership in the raising of service charges.⁶⁹

⁶⁹Carson and Cootner, op. cit., p. 94.

When one measures the importance of demand deposits by the amounts held by larger corporations and business firms, it is apparent that the market includes banks much more distant from each other. For the 200 or so largest banks in the United States Werboff and Rozen estimate that the greatest amount of competition lies in the acceptance of demand deposit liabilities from large corporations, some individuals, and some partnerships. The authors estimate that of the accounts over \$25,000 (which actually numbered less than one per cent of all accounts in 1959) some individuals, corporations, and partnerships held over 50 per cent of the dollar value of these accounts.⁷⁰

⁷⁰Werboff and Rozen, op. cit., p. 271.

The competition for these large accounts is much more intense because holders of large balances are much

more sophisticated and will become familiar with alternatives. "But, the large corporation usually presses its bargaining advantage through obtaining as favorable terms within the frame of its old banking connections rather than by hopping around from bank to bank."⁷¹ This sta-

⁷¹Ibid., p. 272.

bility is due to two factors. First, over time, close deposit connections are built up between the bank and the large corporate borrower. Second, because of this close bond, the bank becomes familiar with the intimate financial details of the corporation and this gives the bank insight into specific financial problems facing the corporation. This familiarity leads to financial counseling services, personal loyalties, and to the growth of a financial tradition of close corporate-banker connections. Therefore, Werboff and Rozen conclude that it seems more likely that there will be more intense competition in this market in the area of new accounts created by the growth of new firms and the spread of existing firms.⁷²

⁷²Ibid., p. 273.

The competition among the larger banks for

interbank deposits is similar to the competition for large corporate balances. Some differences do exist. There exists a closer connection between the value of the interbank balances maintained and the services rendered and there may be more switching of balances due to this closer connection. "Banks keep balances because services (check clearing, financial counseling, joint ventures and loan participations, management assistance, etc.) are worth it. Businessmen keep balances because they want to improve their borrowing status. Correspondent balances are kept in return for something; corporate balances in the hope of getting something."⁷³

⁷³ Ibid., p. 275.

From the above analysis, one can conclude that the vast majority of banks compete in a highly local market and only amongst themselves for demand deposit balances. This competition is a function of convenience to the depositor. Banks compete by using various non-price stimulants to maintain the depositor's balance. A small number of large banks (in comparison to the total in the United States) compete for large corporate and interbank balances. Here there is some tendency for balance switching, especially of interbank balances.

Time deposits

The main difference between the competition for time deposit balances and demand deposit balances is that banks do not compete only amongst themselves for time deposits. Demand deposits satisfy a money balance motive whereas time deposits satisfy a thrift-yield (hereafter called thrift) motive and do not meet the criteria for being classified as money. There are several different types of institutions, besides banks, that can satisfy this thrift motive. This is a most important distinction because it increases the number of alternatives open to the depositor, and thus the potential competition for thrift services.

Another crucial difference is that in providing thrift balances to institutions, time depositors can shop around on the basis of price differences. Even though maximum rates are regulated by public authority, commercial banks may pay interest on time deposits, thus to a certain extent, banks may use price competition as a means of attracting deposits from other banks, non-bank financial institutions, individuals, and other institutions.

Even though the above differences do exist there is a great deal of similarity between the two deposit

markets. The vast majority of the number of time depositors satisfies its thrift motives in a highly local market. In most cases the majority's time deposits are held by the same institutions that hold its demand deposits. Convenience dictates where the thrift deposits will go in this market as it does in the market for demand deposits. But, in the post World War II period even small local depositors have become more aware of the non-bank savings institutions that compare favorably with banks in terms of risks while offering rates of interest higher than banks.

In the local market, savings and loan associations and credit unions have become the most important challenge to banks for small thrift deposits. The reasons for this threat are many. Savings and loan associations offer approximately the same degree of liquidity, safety, and convenience, while at the same time a higher rate of interest. Some blame the rate regulation imposed by the Federal Reserve Regulation Q, but many bankers simply feel ambivalent about the role of savings liabilities. Many bankers feel they need savings funds only intermittently while at the same time, savings and loan associations need savings at all times. Savings rates for banks tend to be inflexible. Bankers hesitate to raise rates because of the adverse public reaction

that would occur if the bank lowered the rates some time later. Saving deposits represent a cost, thus there is the basic question of costs to the bank. It has been found that banks have higher operating costs and lower gross operating revenue per dollar of non-cash assets than savings and loan associations. The higher costs to banks are due to the fact that banks have a greater number of employees per dollar of assets and per deposit account than do savings and loans. Thus, there is a squeeze on the amount of interest that banks can offer. Banks emphasize federally insured mortgage loans which bring a lower rate of return, while savings and loans specialize more in conventional mortgages that offer a higher rate of return. This and other factors mean that bankers remain more conservative and more interested in liquidity rather than in higher returns at the expense of liquidity. Savings and loan associations enjoy a tax advantage over banks. Savings and loans may accumulate tax free reserves out of income up to 12 per cent of their savings deposits, whereas, the bank's loss reserve limitation is based on the bank's past loss experience which has been modest. It has been estimated that this limit is much lower than the savings and loan's 12 per cent limit. Finally, the selling effort of savings and loans has been much greater and they have been much more

competitive than banks in the areas of convenience, location, and services.⁷⁴

⁷⁴Ibid., p. 279-290.

Credit unions also compete with banks for thrift deposits on the local level. Although the funds received by credit unions are labeled shares rather than deposits, they have many of the characteristics of time deposits. They are withdrawable, the total amount is variable rather than fixed, and their withdrawable value is fixed and does not fluctuate with earnings. Credit unions are usually formed by a cooperative association of individuals who have a common bond for the purpose of making loans to members and promoting thrift.⁷⁵

⁷⁵Comparative Regulations of Financial Institutions Subcommittee on Domestic Finance, Committee on Banking And Currency, House of Representatives, 88th Congress (Washington, D. C.: United States Government Printing Office: November 22, 1963), p. 135.

To the extent that thrift deposits are held for both security and insurance purposes, insurance companies also compete with banks on the local level. This is true if the inflow of funds to insurance companies from premiums is greater than the outflow of funds for claims. Insurance companies have a wide range of services and a broad

network of agents that seek out these funds. But, insurance companies are at a disadvantage because their rates tend to be lower than other thrift institutions.⁷⁶

⁷⁶Werboff and Rozen, op. cit., pp. 276, 277, 288.

Finally, the desire to hold thrift deposits comes into close competition in the local market from the desire to consume. "Thus, the size of the savings flow depends upon how vigorously savings are stimulated at the expense of consumption."⁷⁷

⁷⁷Ibid., p. 278.

As with demand deposit competition, the picture is much different when one focuses on the larger thrift deposits. The alternatives open to those individuals, corporations, and governments holding large amounts of funds for thrift-yield-liquidity reasons are much more numerous. As Table 11 points out, the market for these funds is national rather than local and includes not only banks but the whole range of financial institutions and securities that demand short term funds. The most recent and startling change in the competition for these funds has been in the issuance by banks of negotiable time certificates of deposits. The change in Regulation

Q in 1962 and 1963, and the rapid development of a strong secondary market for CD's have made this instrument a close substitute for government bills and other short term highly liquid placements. It has been said that CD's represent to some extent a mere transfer of funds from demand deposits to time deposits, but to a greater extent they represent money which bankers would otherwise not see.⁷⁸

⁷⁸Sheehan, op. cit., p. 242.

Structure

In summarizing the characteristics of the market for demand and time deposits it can be said that in both areas the majority of depositors satisfies its money balance and thrift-yield motives locally. Therefore, if competition is the goal, it is within this local market that competition should be examined. One should focus one's attention on the bank's power relative to the local market.

The market for small money balance deposits is entered only by banks. On the other hand, the money balance motives of large corporations and some individuals may be satisfied by many different institutions offering short term, highly liquid securities. There

are also many large banks that compete for interbank balances on the national level. The market for thrift deposits like the market for demand deposits is characterized by some large deposits, allocated in a more national market which is serviced by many financial institutions. On the local level, however, the thrift deposit market is entered not only by banks but by savings and loan associations, credit unions, and other financial institutions.

Because of the fact that individuals and small businesses can turn only to banks for demand deposit services (or hold cash), it is in this area that differences in banking structure could have their most important effects. To the extent that multiple office banking does provide alternative sources of demand deposit services, along with a variety of non-pricing techniques, branch banking may be better. However, there would be no reason why a market served by a few unit banks or by a few branch and unit banks could not also remain competitive. No matter what the type of banking structure, agreements as to service charges and other methods of non-price competition could be made to reduce competition. Actually, public policy has been to discourage competition among banks for deposits no matter what the type of structure because of the belief

that methods of price competition are costly and could lead to bank failures.

If competition is not to be the criterion against which different types of structures should be compared, then what should be the criterion? Most economists and public banking officials feel that in the provision of demand and time deposit services, social goals (convenience and safety) should be emphasized. Schweiger and McGee point out that in Illinois, a unit banking state, people turned to postal savings accounts in the 1930's because of the large number of unit bank failures, and that they continued to use postal savings after the 1930's because of the lack of adequate savings facilities. They state that "it appears that if the market for specific bank services is considered to be local in terms of the neighborhood or the suburban town, greater choice of banking alternatives may be available with multiple office banking in addition to greater convenience resulting from the larger number of offices."⁷⁹

⁷⁹ Schweiger and McGee, op. cit., p. 342.

No easy, absolute statement can be made as to what type of structure is best for the provision of time and demand deposit services. The answer only be deduced from a study of the actual conditions that exist in a

specific local market. But, if multiple office banks really do experience a lower incidence of failure than unit banks and are able to provide even part time services in small, local markets where unit banks cannot, then in the demand deposit side of the market, multiple office banking would be at least of equal benefit, if not of greater benefit than unit banking.

CREDIT-GRANTING PRODUCT LINES

The question of competition in the allocation of credit granting product lines is even more confusing and complex than for deposit granting product lines. A broad clue as to why this is so can be seen in Table 11. Banks are truly department stores of credit, while at the same time an individual bank may differ in its asset preferences from other banks in the same locality. Because banks do provide a large array of credit services, they compete with many different specialized credit institutions, all of which (including banks) use a wide variety of price and non-price methods of attracting customers.

Mortgage credit

As an example of the complexities involved in generalizing about the market for a specific credit

granting service, the market for mortgage credit is certainly representative. Under the heading of mortgage credit can be placed a large number of different divisions, each of which may be provided by a different institution. For instance, conventional mortgages can be distinguished from government insured (FHA and VA) mortgages, residential from nonresidential, multi-family from single family residential, permanent from temporary, and tract from custom mortgages.

Savings and loan associations compete with banks for mortgages but specialize in conventional, single family, residential mortgages made in a highly local market. Because these mortgages typically have higher interest rates, savings and loan associations earn more on their loans than banks. Commercial bank participation in the mortgage market tends to be specialized in the more liquid, lower yield, federally underwritten mortgages. This is probably due to the fact that banks have more stringent loan-value ratios and maturity requirements which tends to force them to specialize in the latter.⁸⁰

⁸⁰Werboff and Rozen, op. cit., p. 288.

Mutual savings banks also compete for mortgages

and specialize in federally insured, single family residential mortgages obtained indirectly from non-local markets. Mutual savings banks tend to participate in an indirect way because, in many cases, their mortgage-making capacity exceeds their local markets. It has also been noted that savings and loan associations and mutual savings banks participate very little in non-residential mortgages. It is in this segment of the mortgage market that commercial banks and life insurance companies specialize.

The mortgage market is also influenced by three agencies of the federal government. In the area of farm mortgages, the federal government participates through its Federal Land Bank system of twelve regional banks. This system was set up to provide a source of long term farm mortgage credit by lending funds to Federal Land Bank Associations that were set up by law to act as loan retailers. The Federal Land Bank sells both long term and short term bonds to get funds and lends these funds to the several associations who then loan the funds to member farmers. "Throughout the post war period, the extent of mortgage credit through the Federal Land Banks has risen both absolutely and relative to the total volume of farm mortgages."⁸¹

⁸¹"Federal Agency Securites: The Supply," Monthly Review Federal Reserve Bank of San Francisco (October, 1963), p. 149.

In the area of housing needs, there are two agencies that influence the market. These are the Federal Home Loan Banks and the Federal National Mortgage Association. Their function, to strengthen the availability of private funds in the market, is the same for both agencies. However, their techniques are quite different. The Federal Home Loan Bank System is made up of eleven reserve credit banks that serve thrift institutions, the most important of which are savings and loan associations. The system provides advances to member institutions when there are heavy demands on them. This action affects the mortgage market (especially for convention residential mortgages) by providing a source of funds when normal savings are not large enough.⁸²

⁸²Ibid., p. 151.

The Federal National Mortgage Association or "Fannie Mae" operates by providing a secondary market for FHA and VA insured mortgages. This activity also provides funds, in this case to institutions that specialize in FHA and VA mortgages (commercial banks and

mutual savings banks).⁸³

⁸³Ibid., p. 152.

There have been some changes in the shares of mortgage credit held by these different institutions in the post war period. The share of savings and loan associations increased sharply, while the share of mutual savings banks increased slightly, and the shares of commercial banks and life insurance companies declined. In other words, the shares of the market held by specialist institutions have risen, while the shares held by diversified institutions have fallen.

Werboff and Rozen claim that this pattern was caused by the fact that the diversified institutions were not interested in the mortgage market during periods of high yields because they were enticed by the more attractive yields elsewhere. This put them at a disadvantage for re-entry into the mortgage market. FHA and VA insured and marketable mortgages eased portfolio switching for the diversified institutions. These authors also claim that there were two other factors that influenced the development of market shares during the post war period. First, specialist institutions have been more willing to aggressively seek funds, and, second, their more liberal policies on savings rates and

mortgage terms have enabled them to obtain a greater share of the market.⁸⁴

⁸⁴Werboff and Rozen, op. cit., pp. 307, 309.

Price and non-price competition

From the above description of the many facets of the mortgage market, one can begin to realize the tremendous complexities involved in any attempt at analyzing bank competition. Most of the markets for credit granting product lines, even on the local level, are entered by both bank and non-bank competitors, therefore the same complexities held for most of the different segments of the bank's loan portfolio.

Price competition in banking refers to changes in the interest rates on loans. The most widely known rate is the prime rate at which large, low risk, nationally known customers borrow. One study of the banking industry estimates that ten per cent of the number and fifty per cent of the dollar amount of business loans were made at the prime rate. The same study states that even though the prime rate is subject to price leadership by one of the largest New York banks, it is responsive to competitive forces because eligible

borrowers have alternative sources of supply. Changes in the prime rate do affect all loan rates in time, thus according to the authors, the whole structure of loan rates is similarly affected by competitive conditions (as well as by the Federal Reserve's discount rate and open market operations). In periods of tight money, banks will find themselves loaned up. In order to satisfy their regular customers, they will be forced to go to the discount window or to seek federal funds in the market. Banks may be forced to sell some of their assets and this action will tend to drive up interest rates. Finally, the banks will be forced to raise the prime rate. Therefore, as to other loan costs and yields, the prime rate is a competitive rate and does allocate resources according to supply and demand pressures.⁸⁵

⁸⁵Beckman and Sametz, op. cit., p. 12.

This description is admittedly a rather long run adjustment process that is affected by broad pressures emanating from large transactions in the money market. In the area of small, local loans, banks tend to rely on different methods of non-price competition. Changes in the terms on which credit is granted are the most important tools of non-price competition for

consumer and real estate loans, as well as for business loans.

The main competitive weapon for consumer loans has been the advertisement of present over future consumption. The advantage of present over future consumption is enhanced by offering lines of credit to consumers, and some banks even offer to finance customer charges at several stores, billing the customer at some future date.

Other methods of non-price competition include variations in the size of the down payment, size of installments, time of maturity, collateral required, minimum deposits, and changes in the time needed to negotiate the credit.

Small business loans

The small business loan sector, which includes small local short term business and farm loans, is one sector of the credit granting market of banks in which there are fewer different institutions competing. David Alhadeff concludes that this is the segment of the loan market on which attention should be focused in analyzing competition in banking. He arrives at this conclusion by examining the relative importance of the other loan assets held by banks. Not only do business

loans comprise 50 per cent of total loans, but many non-business loans (some consumer loans and some farm loans) are in actuality, business loans.⁸⁶

⁸⁶David A. Alhadeff, Monopoly and Competition in Banking (Berkeley, California: University of California Press: 1954), p. 19.

Alhadeff also concludes that there are no important alternative non-bank suppliers of business loans, and that trade credit is the only close substitute. Even trade credit, according to Alhadeff, "is a highly imperfect substitute for bank (business) loans and, under most conditions, does not constitute a competitive source of supply. Hence the market for bank (business) loans can be examined by itself."⁸⁷

⁸⁷Ibid., p. 19. Words in parentheses added for context clarification.

Some authors would think this to be a rather narrow statement about the market for business loans.⁸⁸

⁸⁸"Living Higher on the Hog" Business Week (October 19, 1963), p. 166. In discussing the effects of the rise in cash flow, Business Week states that "Trade credit, which has expanded enormously in the past five years (by almost \$50 billion), should become even more liberal in the months ahead." Also, "By the same token-- as Dr. Joseph H. Taggart and Dr. Marcus Nadler of New York University Business School pointed out--expanded

cash flow has cut the dependence of major corporations on traditional sources of bank credit."

There are, at first glance, at least three important non-bank substitutes for business loans, one of which Alhadeff has discarded above. These are cash flow financing, trade credit financing, and federal agency financing. The large cash flow of many businesses is due to three factors: liberal depreciation allowances, large corporate profits, and recent tax changes. As a substitute for business loans from banks, this large cash flow either allows the business the use of its own cash flow for working capital or allows it to extend more liberal terms on trade credit. As a substitute for small business loans, however, this cash flow is not available as for large business loans. Small businesses have not been blessed so much as have large corporations with this surge of cash flow. This is pointed out in the quote in the last footnote by Nadler and Taggart, in which they state that cash flow financing has cut the dependence of major corporations on banks. One can benefit from liberal depreciation allowances and investment credits only if one has large assets and investment plans. Therefore, as a substitute for small local business loans, cash flow is probably much less important than it is as a substitute for large business loans.

Trade credit financing has already been downgraded as an effective substitute for small local business loans. As Alhadeff points out, many businessmen do regard trade credit as a legitimate substitute for bank credit, but "the majority of businessmen who approach a bank for credit have presumably already exploited the resources of trade credit. Hence, although trade credit is a source of supply for short term business credit, it is not usually a competitive alternative for the business borrower actually seeking a bank loan."⁸⁹ Although

⁸⁹Alhadeff, op. cit., p. 15.

it might not be a substitute for business loans, trade credit alternatives for business purposes must have reduced the need for businessmen to approach banks for credit, due to the increase in cash flow. In all fairness it must be pointed out that the rise in the importance of cash flow availability has taken place in the last few years, whereas Alhadeff wrote of the lesser importance of trade credit ten years ago. Still, for those who have already exhausted trade credit channels, banks remain the only real alternative. Thus, it would seem that even with large cash flows and more trade credit availability, the small local businessman must still rely on local bank sources for working capital needs.

For small local farmers the federal government offers some substitutes for local bank loans. One agency, the Federal Intermediate Credit Bank system, is set up to facilitate the extension of short term credit to farmers for production and marketing needs. There are twelve banks in this system and their importance, measured by the agency's sales of debentures, more than doubled (to nearly \$2 billion) between 1955 and 1962. A second agency, the thirteen Banks for Cooperatives, makes loans to farmer-owned cooperatives to meet marketing and operating capital needs. This agency is the smallest, measured by its borrowings, of the five federal agencies that participate in both the short term loans and long term mortgage markets.⁹³

⁹³"Federal Agency Securities: The Supply" op. cit., p. 149-150.

Structure

From the above brief description of the markets for credit granting services, it is apparent that the question of competition (or the lack of it) becomes much more important in the area of small non-farm business loans. As Kreps points out, "a range of credit-granting

alternatives to local banks (non local banks or local nonbank institutions) is available to most if not all classes of borrowers except the smallest business borrowers."⁹⁴

⁹⁴ Kreps, op. cit., p. 329.

Even if there are two or more alternatives open to the small local businessman, or for that matter, to any demander of credit-granting services of banks,

. . . the presence or absence of real alternative sources of bank credit accommodation cannot always be ascertained simply by reference to the number of such alternatives that apparently exist: that is, to the total number of locally competing banks. Instead, one must go beyond this apparent number of alternatives, however large or small it may be, and determine and aggregate the collective preference schedules of these banks for (1) loans as compared with other assets, and (2) various types of loans to (3) various kinds of borrowers. That is, the overall asset-allocation and lending policies of each bank in the market must be first ascertained and then aggregated with those of the other banks in the market before any sensible judgement can be rendered as to whether apparent borrower alternatives are real alternatives or not.⁹⁵

⁹⁵ Ibid., p. 326.

The mere number of alternatives is not a completely correct reflection of the degree of competition in a local area, but without a detailed study of each individual market for small business loans in the United States,

the number of alternatives is the best measure available in generalizing the effects of structure on competition.

In one-bank towns it is apparent that at least for the market for small business loans, the bank holds a high degree of monopoly power. Alhadeff states that "available statistics show that, on the average, customer loan rates in small towns are higher than in large cities. This deductive evidence is reinforced by empirical knowledge that small banks do not engage in intercity competition because most small borrowers are tied to these local banks."⁹⁶

⁹⁶David Alhadeff, "Market Structure of Commercial Banking in the United States," The Quarterly Journal of Economics (February, 1951), p. 69.

Therefore, to the extent that branch or unit banking can offer alternatives to borrowers in one-bank towns or can offer equal-sized alternatives in towns where unequal-sized banks exist, either system of banking would enhance the competition for local bank loans. A recent study of the effects of branch banking on competition in local markets has found that, "after taking account of population and geographical regions (differences) we found the highest average number of banks in communities in branch banking states. The difference between branch banking and unit banking states was not

large, but it was definite enough to refute the implication of over all state comparisons, i.e., that the extension of branch banking leads to smaller numbers of competing banks in local markets."⁹⁷

⁹⁷ Bernard Shull and Paul M. Horvitz, "Branch Banking and the Structure of Competition," The National Banking Review Volume 1, Number 3 (March, 1964), p. 339. The word in parentheses added for clarification.

The authors conclude:

Our analysis suggests that neither in terms of number of competitors, nor concentration (measures of actual competition), nor in terms of the condition of entry (potential competition) have the structures of local banking markets been adversely affected by branch banking in the United States. The weight of evidence suggests that, to the contrary, market structures are adversely affected by restrictions on branch banking.⁹⁸

⁹⁸ Ibid., p. 341.

CONCLUSIONS

The greater the number of approximately equal-sized, profitable, separately owned and controlled banking alternatives in a specific market, the greater the probability that competition will exist and that the consumer of bank products will be getting more credit and deposit services at competitive rates. This is a most important conclusion. Because the majority of

credit and deposit customers do satisfy themselves in a local market rather than a larger regional or national market, banking legislation should be written in order to support and promote competition in these local markets. Competition in banking is a major goal--this is spelled out in chartering, branching, and merger laws and, more recently, has been emphasized by the Supreme Court rulings.

On the other hand, the word profitable mentioned above is crucial. Under existing laws and banking agency policies, profitability (or the lack of it) cannot be measured through market performance, but must be measured, in making decisions on bank entry, by the various bank agencies. Public and private interests feel that competition with stability and safety is vital; therefore, public authorities prevent the market mechanism from determining entry or exit. The one great imperfection in using competitive performance standards which include profitability is that profitability cannot be determined by trial and error, and instead is determined, for the purposes of entry, by need and convenience criteria set up by state and federal agencies. And, under existing regulations the profitability of existing banks is probably quite different from what it would be without the regulation of price competition

among banks. The mere existence of banking alternatives does not mean the market is allocating credit most efficiently. Because of this implicit subsidy provided by cost-reducing, interest rate regulation, the true cost of providing credit under competitive conditions cannot be measured.

Public authorities seem to have a bias in determining the needs of banking markets. In many cases "the question of convenience and needs of a market very often reduces to the question of whether existing banks would be injured if they shared their market with another, not to whether there are economic reasons for the establishment of a new bank."⁹⁹

⁹⁹Almarin Phillips, "Competition, Confusion, and Commercial Banking," The Journal of Finance, Volume XIX, Number 1 (March, 1964), p. 41. See also comments by James Saxon, Comptroller of the Currency in Chapter III of this dissertation.

Control of entry is not the only area in which market forces are thwarted. Almarin Phillips, in a recent article on banking competition, states that public frustrations of market adjustments are many. They include not only the above mentioned regulation of both time and demand deposit interest rates, but also limitations on mortgage lending, stock ownership, risk-asset ratio requirements, lending standards, and accounting

procedures. These restrictions do nothing but encourage a non-competitive pattern of behavior in banking.¹⁰⁰

¹⁰⁰Phillips, loc. cit.

Private means of thwarting competition also exist in abundance. Clearing house arrangements are necessary, but do "not require either the ownership of or active participation in the clearing house by the member banks. The functions beyond those of clearing which are performed are something of a mystery to any save the members, but no one would be surprised if matters such as hours of business, service charges on checking accounts, and perhaps even interest rates charged and paid, were occasionally discussed."¹⁰¹ Also,

¹⁰¹Ibid., p. 42. See also David Alhadeff, "Market Structure of Commercial Banking in the United States," The Quarterly Journal of Economics, (February, 1951), p. 67. Alhadeff states that the real marvel is that of the complete frankness with which collusive agreements are accomplished. Banks refer to this as mutual assistance, which includes clearing house arrangements, the regulations of maximum rates of interest to be paid on time deposits, and the elimination of competition among banks in the area of service charge competition. Arrangements also include banking hours, the solicitation of business through advertising and the provision of information through correspondent banking relationships.

correspondent banking relationships, loan participation, and large trade associations tend to facilitate the

passage of information which could lead to the practice of the "quiet life" among oligopolistic banks.

Because of all the restrictions on competition in banking, both public and private, one cannot assume that credit will be allocated most efficiently. Because of this, some economists advocate major changes in banking regulations that would admittedly end the dual banking system in the United States. Phillips states that freer entry should be allowed through less stringent need criteria and through the allowance of banks to branch across state lines. Also, he advocates the elimination of controls over rates paid on time and demand deposits, greater reliance on bank controls of risk and credit standards, and more realistic anti-trust legislation to control collusive activity and to control the reduction in competition that might arise out of mergers and holding company activity. This, Phillips, admits, would reduce the number of banks in the United States, but would leave the more efficient banks to compete with each other.¹⁰²

¹⁰²Phillips, op. cit., pp. 43-45.

Are there are modifications that can be made within the existing dual banking philosophy of bank regulation? One important change that could be made in some

states is the allowance of branch banking along with unit banking. Public authorities would still have to rely on need and convenience criteria in judging whether or not to allow new entrants into a particular market. And, they would still have to balance the possible social and private revenues gained with the possible private and social (opportunity) costs incurred by allowing new entrants, using resources in this manner. But, even though judgment, rather than market forces, would have to be relied upon, the fact remains that states that do allow branch banking do seem to have more banking alternatives in local markets than do states that prohibit branch banking. This does not mean that branch banks are necessarily more competitive than unit banks. It means only that, given a local economic area, markets will be serviced by more alternative sellers when branch banking, along with unit banking, is allowed. Branch banks may collude, or one branch system may control all the alternatives in a local market in the same manner as may one unit bank or two collusive unit banks or collusive unit and branch banks. The allowance of branch banking is no proof that the market will automatically become more competitive. All that one can say is that with the allowance of branch banking along with unit banking, more offices per small town have

resulted. The maintenance of effective and active competition is a matter of effective and active supervision of the relevant market just as it is in any other highly oligopolistic market in the United States.

If one type of structure has some real advantages over the other in the areas of expenses, earnings, and lending services, and if unit bankers can survive and prosper in competition with branch banks, further support will be lent to those who argue that restrictions on branching should be liberalized. Liberalization of branching laws would then provide a legal environment more susceptible to the development of a greater number of banking alternatives in already existing monopoly markets and this development would have a greater probability of providing more services at lower costs to the consumer. The following chapters examine the differences and possible advantages that one type of structure may have over another in the areas of earnings, expenses, and lending activity.

CHAPTER V

AN EMPIRICAL STUDY OF BANKING STRUCTURE

NATURE OF THE PROBLEM

This chapter will set the stage for the testing of the three hypotheses listed in Chapter I. In order to determine if one type of banking structure is superior to the other two structures in lending, earnings, and cost behavior, data must be gathered on these characteristics from banks operating under each of the three structures. Thus, the first question that must be answered is what banks should be examined? The answer to this question depends on the purposes of the study and on how one's concept of the problem is constructed.

As was stated in Chapter I, the purpose of this dissertation is to test the three hypotheses in order to arrive at more effective decisions regarding regulatory policies on banking structure (restrictions on branching (none, limited, or state-wide)). Presently, states are vested with the authority to specify branch banking laws. Three degrees of restrictions exist: no branching within a state, limited branching within a state, or state-wide branching. Idealistically, it would be desirable to test each hypothesis by answering the question, what would be

the behavior of banks that existed and operated under a state-wide branch banking law, a limited branch banking law, and a unit banking law - for the same time period and in the same geographical region? In other words, the best way to test these hypotheses would be to select a state (say California), stipulate a branch banking law, observe the development of banking that evolved, and then re-wind the economy and run it over again under a different restriction on branching with nothing changed but the regulation on branching.

Of course, this ideal technique is not available to the economist. One cannot re-run the economy with nothing changed but the branching statute. Thus, some compromise method of investigation must be developed.

One method would be to select a state that allows state-wide branch banking and then compare the unit banks' performance to the branch banks' performance, assuming that (a) small to medium size branch banks were limited branch banks and that (b) medium to large size branch banks were state-wide branch banks. Actually, there is some logic to these assumptions but the over-all model does not really yield measures of output performance under different branching laws. Besides, it is felt that there are real differences between the bank entrepreneur's decisions under limited branch laws and under state-wide

branch laws. The above mentioned method does not explicitly separate these two structures.

There is another approach that is more applicable to the objectives of this study. If one selected three states, each of which had a different restriction on branching and each of which was fairly comparable in terms of its economic environments, then one could test the three hypotheses under three different legal structures over the same time period. Under this method, the main weakness becomes the degree of comparability of the three states selected. This method is the most desirable, therefore it will be used to test the hypotheses.

RATIONALE FOR THE SELECTION OF STATES

The primary requirement for selecting the states to be analyzed is that each state have a different law on branching. Also, the states selected must be comparable as possible in their economic environments.

The states chosen are California, representing state-wide branching, Ohio, having limited branch banking laws (limited to county or contiguous municipal corporation) and Illinois, with unit banking laws. California was one of the first states to allow state-wide branching and the state's banking system has become the topic of much interest and study. Most of which has centered on California's

large branch systems and the state's great economic development. Illinois has also been the topic of much discussion and study. Illinois, in contrast to California, has interested economists because of the state's unit banking law. Ohio's banking system has not been of as great an interest to economists as have the systems of California and Illinois but Ohio's economic environment does compare quite favorably to California's and Illinois' economic environment.

According to the 1962 Survey of Manufacturers, these three states were comparable in total employment, payrolls, the number of production workers, man hours worked, wages, value added by manufacturing, and capital expenditures. These statistics are presented in Table 12.

However, in terms of the average size of business in manufacturing, retailing, wholesaling, services, and farming, there are some differences among the states. Size of firm is an important variable because it is a determinant of both the borrower's bargaining power and his mobility. Any differences in size could influence bank behavior. Thus, differences in bank behavior purported to be caused by different structures could, instead, be caused by size differences of borrowers among the states. The areas where the states are not as favorably comparable are especially important when comparing branch and unit

banks. This is true because differences in borrower mobility will affect unit banks much more than branch banks simply because branch banks have more offices and thus have a greater chance of servicing smaller, less mobile customers than have unit banks. Table 13 gives the number of manufacturing concerns in each state by size class (size being determined by the number of employees hired). Even though California, Ohio, and Illinois do compare favorably in the total workers employed in manufacturing, the distribution of these workers, thus the sizes of manufacturing establishments, is somewhat different among the states. For example, Table 13 shows that California has a greater share of its manufacturing units in the one to four employee size class (some 38.7 per cent) while Illinois and Ohio have only 31.7 and 31.8 per cent respectively. Thus, the manufacturing units in California seem to be smaller on the average than in Ohio or Illinois. Another indicator of this difference is the average number of employees per manufacturing concern. California has the smallest average, 41.73, as compared with Ohio's high of 77.84, and Illinois' 62.95 workers per establishment.

Another area in which the three states are not as favorably comparable is in the farming sector. Ohio and Illinois compare favorably with each other in terms of the number of farms in each state, but do not compare

as well when one examines other agricultural statistics.

Table 14 gives selected agricultural statistics for the three states along with other relevant information.

California's farming sector is quite different from either Ohio's or Illinois' farming sector. Farming in California tends to be a large scale operation in comparison to farming in Ohio and Illinois. This fact can be seen by noting that California had only 99 thousand farms in 1959 as compared with Ohio which had 140 thousand and Illinois with 155 thousand farms. But, California's farms were, on the average, larger. The average number of acres per farm in California was 372, whereas in Ohio and Illinois the average acreage per farm was 132 and 196 respectively. This difference becomes even more apparent when one examines the average value per farm in the three states. Actually, when one looks at the total acres of land in agriculture, California and Illinois are the more favorably comparable. In terms of this study, the relevant statistics on agriculture are the average acres per farm and the average value per farm. These figures give some indication of the relative bargaining power and the borrower mobility of the average farmer in the three states.

Table 15 gives statistics for the retail trade sector in California, Ohio, and Illinois. Even though,

TABLE 12
COMPARATIVE MANUFACTURING STATISTICS FOR
CALIFORNIA, OHIO, AND ILLINOIS - 1962

States	All Employees		Production Workers			Value Added by Man	Capital Expend- itures
	Number	Payroll (\$1,000)	Number	Man-hours (1,000)	Wages (\$1,000)	(\$1,000)	(\$1,000)
California	1,359,085	8,925,975	886,770	1,791,079	5,010,948	15,868,371	912,616
Ohio	1,222,600	7,678,564	879,216	1,767,880	4,997,805	14,577,689	775,711
Illinois	1,194,131	7,184,260	837,221	1,697,133	4,438,484	13,670,874	768,146

Source: 1962 Annual Survey of Manufacturers, U. S. Department of Commerce,
Bureau of the Census (Washington, D. C.) Ohio and Illinois, Parts, Table 1, p. 8.
California, Part 9, Table 1, p. 14

TABLE 13

EMPLOYEE SIZE DISTRIBUTION OF MANUFACTURING
ESTABLISHMENTS: CALIFORNIA, OHIO, ILLINOIS
1958

Employee Size Class (no. of employees)	California Number of Establishments	%	Ohio Number of Establishments	%	Illinois Number of Establishments	%
1-4	10,973	38.7	4,729	31.7	5,762	31.8
5-9	5,034	17.8	2,363	15.8	2,868	15.8
10-19	4,457	15.7	2,305	15.4	2,883	15.9
20-49	4,268	15.1	2,350	15.7	3,022	16.7
50-99	1,775	6.3	1,239	8.3	1,502	8.3
100-249	1,161	4.0	1,082	7.2	1,204	6.7
250-499	399	1.4	445	3.0	477	2.6
500-999	151	.5	232	1.6	219	1.2
1000-24999	64	.2	131	.9	120	.6
2500 over	40	.1	55	.4	42	.2
Total	28,322	100.0	14,931	100.0	18,100	100.0
X employee per establish.	41.73		77.84		62.95	
No. of employees total	1,181,795		1,162,276		1,139,412	

Source: Census of Manufacturers - 1958. Vol. III Area Statistics, U. S. Dept. of Commerce, Bureau of Census (U. S. Government Printing Office: 1961), California data table 7, p. 4-28 and Table 3, p. 4-6; Ohio data Table 3, p. 34-7 and table 7, 34-28; Illinois data Table 3, p. 12-6 and Table 7, p. 12-27.

TABLE 14
FARM, POPULATION, AND PER CAPITA INCOME STATISTICS
FOR CALIFORNIA, OHIO, AND ILLINOIS

State	Farms 1959					
	Number (1,000)	Average Acre per farm	Average Value per farm	Acres in farm land	Per Capital Income 1961	Population 1960 (1,000)
California	99	372	\$131,212	36,828	\$2,780	15,717
Ohio	140	132	32,583	18,480	2,330	9,706
Illinois	155	196	61,946	30,380	2,672	10,081

Source: Statistical Abstract 1963, Farm Information, Table 846, p. 614;
Income, Table 441, p. 329. Population

in terms of the aggregate number of retail firms, the states are not as comparable as could be hoped, the size distributions of retail firms, measured by employee class, in the three states, are quite comparable with only a few percentage point differences among the states. This comparability of size distributions is true also for the wholesale and service sectors of the three states. Tables 16 and 17 give the size distributions for wholesaling and service industries for California, Ohio, and Illinois. The important point is that to the extent that the size distributions of the states are more equal, the average size of the firms in each sector will be more equal, thus borrower mobility will be favorably comparable among the states under examination.

California's distribution of human resources is also somewhat different from that of Ohio's and Illinois' distribution. This difference can be seen by comparing California's total population figure (Table 14) with that of Ohio's and Illinois and noting that the three states do compare favorably in the number of employees in manufacturing and that California has fewer farms. Also, as seen in Tables 15, 16, 17, the number of firms in retailing, wholesaling and services industries in California is much larger than in Ohio and Illinois. From these figures, one can infer that California, relative to Ohio and Illinois,

TABLE 15

EMPLOYEE SIZE DISTRIBUTION OF RETAIL TRADE
ESTABLISHMENTS: CALIFORNIA, OHIO, ILLINOIS
1958

Employee Size Class (No. of employees)	California Number of Establishments	%	Ohio Number of Establishments	%	Illinois Number of Establishments	%
No paid employees	43,731	34.3	26,652	32.0	31,490	34.6
1-3	43,961	34.5	30,397	36.5	32,963	36.2
4-7	21,527	16.9	14,562	17.5	14,096	15.5
8-19	12,299	9.6	8,105	9.7	8,701	9.6
20 and over	5,964	4.7	3,476	4.2	3,856	4.2
Total	127,482	100.0	83,192	100.0	91,106	100.0

Source: Retail Trade BC 58-RS2 Employment Size, U. S. Bureau of Census,
U. S. Census of Business 1958 (U. S. Government Printing Office: 1961) Table 3-C
California, p. 3-43, Ohio, p. 3-38, Illinois, p. 3-55.

TABLE 16

EMPLOYEE SIZE DISTRIBUTION OF WHOLESALE TRADE
ESTABLISHMENTS: CALIFORNIA, OHIO, ILLINOIS
1958

Employee Size Class (No. of employees)	California Number of Establishments	%	Ohio Number of Establishments	%	Illinois Number of Establishments	%
1	5,568	23.1	2,820	20.9	4,483	25.0
2	2,912	12.1	1,544	11.4	2,190	12.2
3	2,466	10.2	1,278	9.5	1,905	10.6
4-5	3,225	13.4	1,901	14.6	2,359	13.2
6-7	2,063	8.6	1,294	9.6	1,481	8.3
8-9	1,401	5.8	854	6.3	1,044	5.8
10-19	3,400	14.1	2,094	15.5	2,352	13.2
20-49	2,182	9.1	1,320	9.8	1,456	8.1
50-99	574	2.4	295	2.2	406	2.3
100 or more	299	1.2	120	.9	240	1.3
Total	24,090	100.0	13,520	100.0	17,916	100.0

Source: Wholesale Trade BC 58-WS1 Sales Size and Employment Size, U. S.
Bureau of Census, U. S. Census of Business 1958 (U. S. Government Printing Office:
1961) Table 2F, California, p. 2-101, Ohio, p. 2-105, Illinois, p. 2-102.

TABLE 17

EMPLOYEE SIZE DISTRIBUTION OF SELECTED SERVICE
ESTABLISHMENTS: CALIFORNIA, OHIO, ILLINOIS
1958

Size Class (No. of employees)	California		Ohio		Illinois	
	Number of Establishments	%	Number of Establishments	%	Number of Establishments	%
No paid employes	54,652	57.7	28,476	59.5	30,438	59.0
1-3	24,853	26.2	11,995	25.1	13,096	25.4
4-7	7,894	8.3	3,792	7.9	3,711	7.2
8-19	4,966	5.2	2,485	5.2	2,797	5.4
20 and over	2,406	2.5	1,103	2.3	1,567	3.0
Total	94,772	100.0	47,851	100.0	51,609	100.0

Source: Selected Services BC 58-SS2 Employment size, U. S. Bureau of
Census, U. S. Census of Business, 1958 (U. S. Government Printing Office: 1961)
Table 3-C Calif. p.3-53, Ohio p. 3-98, Illinois p. 3-65.

has a greater proportion of its human resources in non-manufacturing and non-agricultural industries than has either Ohio or Illinois. The three states also differed in per capita incomes in 1961. California's and Illinois' per capita income were \$2,780 and \$2,672 respectively while Ohio's was \$2,330 in 1961.

In summarizing the rationals used in selecting these three states, four important criteria were considered. First, and of greatest importance, California, Ohio, and Illinois have different branch banking regulations. Second, an examination of the possible alternative states in which the three different banking laws existed resulted in finding no other three states that were as comparable as were California, Ohio, and Illinois. Third, as previously indicated the banking systems of both California and Illinois have received some study so that past data are available for comparison with the result of this dissertation. Fourth, a study of these states and of their banking systems' behavior will give insight into the affects of setting regional-wide regulations on branching. If any other smaller states were chosen, such inference would not be as valid as would be an analysis of banking under the different structures in larger states. Is there much of a difference between limited branching in Ohio and state-wide branching in Rhode Island? It is doubtful

if there would be much of a difference - *ceteris paribus*. A bank's size is determined by the wealth and income foundation of the market the bank serves. Branch banking allows a bank to encompass a larger market area. Limited branching reduces the possible market area - the size of the state being the same. Therefore, the information and conclusions reached in this dissertation give one some insight into what would happen if regional branch banking were allowed (California's experience), or if state-wide branching in smaller states were allowed (Ohio's experience), or if unit banking were established (Illinois' experience).

SOURCE OF THE DATA

Probably the greatest problem encountered in any empirical study has to do with data collection. This study is no different. As was explained in Chapter III, our banking system is highly regulated which would tend to imply that data are readily available. But, as was also pointed out in the same chapter, there are numerous banking agencies. If one desires data on all the banks in a particular state one will end up by seeking information from either the Federal Reserve Bank of the district in which the state is located or the Regional Federal Deposit Insurance Corporation office or the state banking department. When one desires information on banks in three different

states and different Federal Reserve and F.D.I.C. districts then one must seek data from a more centralized agency.

One of the better sources of banking data is the Annual Report of the Federal Deposit Insurance Corporation. Unfortunately, this agency presents certain statistics on banking by state and by bank size, but does not present the data classified by branch or unit status.

The Federal Reserve System has recently established a Banking Markets Unit in the System's Division of Research and Statistics, Washington, D. C. Data were requested and subsequently received from this Unit on several banking characteristics classified by branch or unit status for California, Ohio, and Illinois.

These banking characteristics were:

1. Total assets
2. Total capital accounts
3. Total demand deposits
4. Total time and savings deposits
5. Total loans and discounts
6. Real estate loans
7. Loans to farmers
8. Commercial and industrial loans
9. Loans to consumers
10. Total current operating revenue
11. Total current operating expenses

12. Salaries - officers

13. Fees paid to directors and executives

From these characteristics the following items were then computed:

14. Net earnings

15. Total deposits

16. Total management expenses

Data on the banks of California, Ohio, and Illinois were obtained for the year 1962. The reasons for selecting this year were that 1962 was the most recent year for which data were available, and 1962 represents a time period surrounded by years of relatively stable economic growth. This stability means that the statistics will not be biased by any cyclical differences among the states. It should be pointed out that statistics on assets, liabilities, and net worth were collected as of the December, 1962 call date, while earnings and expense data were for the calendar year 1962.

As of 1962 there were 1,670 banks in California, Ohio, and Illinois on which the Federal Reserve had data. Dr. Tynan Smith, Senior Economist for the Banking Markets Unit, had his department's data processing division gather the data on these banks.

One problem in comparing these banking systems is that the range of deposit sizes in the states is tremendous. In 1962, California unit banks ranged from

\$307,000 to \$191,326,000, while California branch banks ranged from \$1,886,000 to \$12,045,956,000 in size. At the same time, unit banks in Ohio ranged from \$217,000 to \$120,730,000. The state's branch banks ran from \$1,733,000 to \$1,505,004,000. Illinois unit banks ranged from \$367,000 to \$3,542,055,000 in size.

The distribution of banks by size in all three states is thus positively skewed and any study attempting to compare banking systems by using mean values for the whole system would result in findings that were biased by the extremely large banks. To counteract this bias, data obtained for this study were grouped according to deposit sizes used by federal agencies. These class sizes along with the number of banks in each class are shown in Table 18. One should be aware that the class intervals are extremely unequal. To get an idea of why unequal classes had to be used and also some idea of how skewed the distribution of banks really is one need only note that if one million dollar deposit size class intervals were used, it would take approximately 13,000 of them to include all branch banks and 500 to include all unit banks in California. This same problem also exists in the other two states.

The mean size branch bank in California is \$437,221,000, while in Ohio the mean size branch bank is \$53,074,000.

TABLE 18
NUMBER OF BANKS BY STATE AND TYPE OF STRUCTURE:
CALIFORNIA, OHIO, AND ILLINOIS
DECEMBER 1962

Deposit Sizes (in dollars)	Class No.	California		Ohio		Illinois
		Branch	Unit	Branch	Unit	Unit
0 to 1,000,000	1		3		19	48
1,000,000 to 1,999,999	2		5	1*	71	178
2,000,000 to 4,999,999	3	3	17	17	162	318
5,000,000 to 9,999,999	4	6	19	41	78	178
10,000,000 to 24,999,999	5	20	11	86	22	158
25,000,000 to 49,999,999	6	10	2*	34	1*	71
50,000,000 to 99,999,999	7	9	1*	10		26
100,000,000 to 499,999,999	8	7	1*	17	1*	11
500,000,000 to 12,999,999,999	9	8	1*	3		5
Totals		63	60	209	354	993

*No statistics on these classes due to limitations on disclosure of aggregates of less than three banks.

Source: Banking Markets United, Federal Reserve System, Washington, D.C.

In California, Ohio, and Illinois the mean size unit bank is \$7,012,000, \$4,280,000 and \$20,245,000 respectively. If one assumes that size is an important determinant of bank behavior, one cannot use averages of the total system for comparison.

Mean deposit sizes classified by size and structure are shown in Table 19. This method of classification reduces the differences between average sizes. However, some large differences still exist. These differences, as shown in Table 19, exist among branch banks in California and Ohio and unit banks in Illinois in class numbers eight and nine and exist also to a lesser extent in class seven (California branch as compared to Ohio and Illinois). These differences in average sizes must be kept in mind when one compares the statistics presented in the following chapters on the extremely large deposit size classifications.

A bank's ability to produce or to use its capacity is considered to be a function of the size and composition of its deposits. Since the range of deposits is so great and because the size of a bank's deposits has been held to be a major determinant of a bank's behavior, all comparisons will be made based on statistics presented and classified by these deposit classes. This size classification also allows one to examine the differences

TABLE 19
MEAN DEPOSIT SIZES OF BANKS BY SIZE AND TYPE OF
STRUCTURE: CALIFORNIA, OHIO AND ILLINOIS
DECEMBER, 1962

(to nearest \$1,000)						
Deposit Sizes (in dollars)	Class No.	California		Ohio		Illinois
		Branch	Unit	Branch	Unit	Unit
0 to 1,000,000	1		549		709	784
1,000,000 to 1,999,999	2		1,657		1,525	1,478
2,000,000 to 4,999,999	3	3,323	3,782	3,704	3,299	3,265
5,000,000 to 9,999,999	4	8,025	7,441	7,595	7,121	6,913
10,000,000 to 24,999,999	5	16,268	15,460	14,627	13,407	15,409
25,000,000 to 49,999,999	6	33,039		34,200		36,024
50,000,000 to 99,999,999	7	59,548		73,559		72,077
100,000,000 to 499,999,999	8	179,925		259,699		146,272
500,000,000 to 12,999,999,999	9	3,129,496		1,031,302		1,811,717

Source: Banking Markets Unit, Federal Reserve System, Washington, D. C.

in behavior not only between structures but as the size of banks, measured in deposits, increases.

By legal provision, the federal banking agencies and state banking agencies are not allowed to release data on individual banks. Therefore, the data gathered by the Banking Markets Unit were received in aggregates of three or more banks in order to comply with federal and state regulations. The data were received classified by branch or unit status and by deposit sizes, rounded to the nearest thousand dollars.

A COMPARATIVE ANALYSIS

OF THE THREE STATE'S BANKING SYSTEMS

The banking systems of California, Ohio and Illinois differ in more ways than just their structures. Tables 20, 21, and 22 show the number of offices, total banks, unit banks, banks operating branches, and branches for the three states from 1950 to and including 1962. To get some idea of the position of these states in terms of the above statistics relative to the United States as a whole, Tables 23, 23, and 25 were constructed. Table 23, illustrating the relative position of California's banking system, points out what might be expected of a state-wide branch banking system. California's share of total banking offices increased almost two percentage

TABLE 20

NUMBER OF OFFICES, BANKS, UNIT BANKS, BRANCH BANKS
AND BRANCHES: CALIFORNIA
1950 to 1962

Year	All Offices	All Banks	All Unit Banks	All Banks Operating Branches	All Branches
1962	2,097	129	63	66	1,968
1961	1,914	122	57	65	1,792
1960	1,793	117	55	62	1,676
1959	1,671	115	57	58	1,556
1958	1,590	124	69	55	1,466
1957	1,515	128	74	54	1,387
1956	1,443	139	85	54	1,304
1955	1,361	149	96	53	1,212
1954	1,292	171	117	54	1,121
1953	1,264	206	148	58	1,058
1952	1,235	199	147	52	1,036
1951	1,205	201	151	50	1,004
1950	1,181	202	156	46	979

Source: Annual Report, Federal Deposit Insurance Corporation, (Washington, D.C.: 1950 to 1962).

TABLE 21

NUMBER OF OFFICES, BANKS, UNIT BANKS, BRANCH BANKS
AND BRANCHES: OHIO
1950 to 1962

Year	All Offices	All Banks	All Unit Banks	All Banks Operating Branches	All Branches
1962	1,312	566	355	211	746
1961	1,276	578	381	197	698
1960	1,228	587	400	187	641
1959	1,191	590	414	176	601
1958	1,174	609	444	165	565
1957	1,117	614	467	147	503
1956	1,066	620	486	134	446
1955	1,006	626	518	108	380
1954	980	637	540	97	343
1953	955	647	561	86	308
1952	925	654	587	67	271
1951	905	659	598	61	246
1950	888	662	605	57	226

Source: Annual Report, Federal Deposit Insurance Corporation, (Washington, D.C.: 1950 to 1962).

TABLE 22
 NUMBER OF OFFICES (UNIT BANKS) ILLINOIS
 1950 to 1962

Year	All Offices (Unit Banks)	Year	All Offices (Unit Banks)	Year	All Offices (Unit Banks)
1962	995	1958	942	1954	907
1961	972	1957	935	1953	897
1960	962	1956	924	1952	891
1959	951	1955	915	1951	893
				1950	889

Source: Annual Report, Federal Deposit Insurance Corporation, (Washington, D.C. 1950 to 1962).

points, from 5.95 to 7.76 per cent in the period from 1950 to 1962. At the same time, the state's shares of total banks, total unit banks, banks operating branches, and surprisingly, total branches all declined since 1950.

TABLE 23

**CALIFORNIA OFFICES, BANKS, UNIT BANKS, BRANCH
BANKS AND BRANCHES AS A PERCENT OF UNITED STATES
1950 to 1962**

Year	All Offices	All Banks	All Unit Banks	All Banks Operating Branches	All Branches
1962	7.76	.92	.57	2.27	15.05
1961	7.37	.87	.51	2.34	14.88
1960	7.14	.84	.48	2.38	15.09
1959	6.89	.82	.49	2.38	15.20
1958	6.75	.88	.59	2.40	15.44
1957	6.61	.91	.62	2.49	15.80
1956	6.46	.98	.70	2.62	16.09
1955	6.28	1.04	.78	2.78	16.40
1954	6.11	1.19	.93	2.99	16.60
1953	6.08	1.42	1.15	3.41	16.99
1952	6.04	1.36	1.13	3.31	17.76
1951	5.98	1.37	1.15	3.34	18.27
1950	5.95	1.37	1.17	3.25	18.98

Source: Annual Report Federal Deposit Insurance Corporation (Washington, D.C.: 1950 to 1962).

TABLE 24

OHIO OFFICES, BANKS, UNIT BANKS, BRANCH
BANKS AND BRANCHES AS A PERCENT OF UNITED STATES
1950 to 1962

Year	All Offices	All Banks	All Unit Banks	All Banks Operating Branches	All Branches
1962	4.85	4.06	3.22	7.24	5.70
1961	4.91	4.14	3.41	7.11	5.80
1960	4.89	4.19	3.51	7.18	5.77
1959	4.91	4.21	3.58	7.22	5.87
1958	4.98	4.33	3.77	7.21	5.95
1957	4.88	4.35	3.90	6.78	5.73
1956	4.78	4.36	4.00	6.51	5.50
1955	4.64	4.38	4.19	5.66	5.14
1954	4.63	4.42	4.29	5.36	5.08
1953	4.60	4.45	4.37	5.06	4.95
1952	4.52	4.47	4.50	4.26	4.65
1951	4.49	4.49	4.54	4.07	4.48
1950	4.47	4.51	4.56	4.03	4.38

Source: Annual Report Federal Deposit Insurance Corporation (Washington, D.C.: 1950 to 1962).

TABLE 25
ILLINOIS OFFICES, BANKS, AND UNIT BANKS
AS A PERCENT OF UNITED STATES
1950 to 1962

Year	All Offices	All Banks	All Unit Banks
1962	3.71	7.16	9.01
1961	3.77	6.99	8.69
1960	3.86	6.90	8.44
1959	3.96	6.82	8.22
1958	4.03	6.73	8.00
1957	4.12	6.65	7.82
1956	4.18	6.53	7.61
1955	4.26	6.43	7.39
1954	4.31	6.32	7.20
1953	4.35	6.18	6.98
1952	4.39	6.12	6.83
1951	4.45	6.10	6.78
1950	4.50	6.06	6.69

Source: Annual Report F.D.I.C. (Washington, D.C.: 1950 to 1962).

Ohio, the limited branch banking state, actually maintained its position relative to the United States as a whole from 1950 to 1962. Table 24 shows that Ohio's share of offices, banks operating branches, and total branches increased slightly while the state's share of all banks and unit banks fell slightly. Undoubtedly, the reduction in the state's share of unit banks is due to unit banks being purchased for branch purposes by other banks.

Illinois' share of all offices declined slightly from 1950 to 1962, as might be expected for a unit banking state. Also as might be expected, the state's share of unit banks increased. This increase took place during a period of time when the number of unit banks in the United States declined on the average of 187 per year.

The year by year changes in the number of offices, banks, unit banks, banks operating branches, and branch offices in the United States can be seen in Table 26. Each year since 1951 has witnessed a greater and greater increase in the number of banking offices in the United States with the largest change, 1,021, coming in 1962. During the same time period the number of banks and unit banks in the United States has declined each year while there has been a yearly increase in the number of banks operating branches and an increasing rate of increase in

the number of branches in the United States.

The state of California experienced similar changes in the above mentioned structural characteristics. Table 27 illustrates the year to year changes in California's banking structure. The number of offices in California has risen at an increasing rate since the early 1950's. This trend also was visible in the number of branches. One change that has taken place in the last few years in California is the movement from a negative to a positive change in the number of banks and unit banks. This movement is even more significant when one considers the fact that changes in the number of unit banks and total banks have a tendency to be negative in a state that allows branching due to the conversion of unit banks into branches and unit banks acquiring branches. The change in the total number of offices in California relative to the change in the same variable for the United States as a whole shows that California has maintained a large per cent of the new offices, with 1962 experiencing some 17.8 per cent of this change.

Ohio has also experienced a yearly increase in the number of offices but this increase was very irregular. In Ohio, one can see from Table 28 the effects of converting unit banks to branch offices and of unit banks acquiring branches by noting that the largest reduction in the number of unit banks came in 1956, a year when there was

TABLE 26

CHANGES FROM PREVIOUS YEAR IN OFFICES, BANKS, UNIT
BANKS, BRANCH BANKS AND BRANCHES: UNITED STATES
1951 to 1962

Year	All Offices	All Banks	All Unit Banks	All Banks Operating Branches	All Branches
1962	1027	-8	-149	141	1035
1961	897	-40	-208	168	937
1960	863	-5	-171	166	868
1959	689	-56	-205	149	745
1958	646	-70	-192	122	716
1957	593	-78	-185	107	671
1956	639	-76	-227	151	715
1955	515	-125	-225	100	640
1954	381	-143	-251	108	524
1953	329	-65	-195	130	394
1952	295	-54	-118	74	339
1951	304	-32	-115	83	356

Source: Annual Report Federal Deposit Insurance
Corporation (Washington, D.C.: 1950 to 1962).

TABLE 27

CHANGES FROM PREVIOUS YEAR IN OFFICES, BANKS, UNIT
BANKS, BRANCH BANKS AND BRANCHES: CALIFORNIA
1951 to 1962

Year	All Offices	All Banks	All Unit Banks	All Banks Operating Branches	All Branches
1962	183 (17.8) ⁽¹⁾	7	6	1	176
1961	121 (13.5)	5	2	3	116
1960	122 (14.1)	2	-2	4	120
1959	81 (11.8)	-9	-12	3	90
1958	75 (11.6)	-4	-5	1	79
1957	72 (12.1)	-11	-11	0	83
1956	82 (12.8)	-10	-11	1	92
1955	69 (13.4)	-22	-21	-1	91
1954	28 (7.4)	-35	-31	-4	63
1953	29 (8.8)	7	1	6	22
1952	30 (10.2)	-2	-4	2	32
1951	24 (7.9)	-1	-5	4	25

(1) Figure in parentheses is percent that change in offices is of change in total offices for United States.

Source: Annual Report Federal Deposit Insurance Corporation (Washington, D.C.: 1950 to 1962).

TABLE 28

CHANGES FROM PREVIOUS YEAR IN OFFICES, BANKS
UNIT BANKS, BRANCH BANKS AND BRANCHES: OHIO
1951 to 1962

Year	All Offices	All Banks	All Unit Banks	All Banks Operating Branches	All Branches
1962	36 (3.5) ⁽¹⁾	-12	-26	14	48
1961	48 (5.4)	-9	-19	10	57
1960	37 (4.3)	-3	-14	11	40
1959	17 (2.5)	-19	-30	11	36
1958	57 (9.6)	-5	-23	18	62
1957	51 (8.6)	-6	-19	13	57
1956	60 (9.4)	-6	-32	26	66
1955	26 (5.1)	-11	-22	11	37
1954	25 (6.6)	-10	-21	11	35
1953	30 (9.1)	-7	-26	19	37
1952	20 (6.8)	-5	-11	6	25
1951	17 (5.6)	-3	-7	4	20

(1) Figure in parenthesis is percent that change in offices is of change in total offices for United States.

Source: Annual Report Federal Deposit Insurance Corporation (Washington, D.C.: 1950 to 1962).

TABLE 29
CHANGES FROM PREVIOUS YEAR IN OFFICES
(UNIT BANKS): ILLINOIS
1951 to 1962

Year	All Offices (Unit Banks)	Year	All Offices (Unit Banks)	Year	All Offices (Unit Banks)
1962	23 (22) ⁽¹⁾	1958	7 (1.1)	1954	10 (2.6)
1961	10 (1.1)	1957	11 (1.9)	1953	6 (1.8)
1960	11 (1.3)	1956	9 (1.4)	1952	-2 (-.7)
1959	9 (1.3)	1955	10 (1.9)	1951	4 (1.3)

(1) Figure in parentheses is per cent that change in offices is of change in total offices for United States.

Source: Annual Report Federal Deposit Insurance Corporation (Washington, D.C.: 1950 to 1962).

also the largest increase in the number of banks operating branches and in the number of branches. The number of banks and unit banks in Ohio fell while the number of banks operating branches and the number of branches increased in every year from 1951 to 1962. Again, these changes were very irregular in number during this period of time.

Illinois, a unit banking state, had a positive change in the number of banks in every year from 1951 to 1962, except in 1952, when the state had a net loss of two banks. When one compares the change in the total number of offices in these three states one finds exactly what would be expected. The largest increases in the number of offices, by far, took place in a state-wide branch banking state: California. Ohio's increases were much smaller ranging from 17 to 60. California's increases ranged from a low of 295 to a high of 1027. Illinois had the smallest changes from year to year in the number of banking offices. Illinois' changes ranged from a low of -2 to a high of 23 in 1962.

As was pointed out in an earlier chapter, concentration ratios, especially in their use in banking, are poor and misleading measures of monopoly or competition. One ratio that does give one some idea as to how well a system has "kept up" with the growth in a particular area is the ratio of total banking offices and total banks to

TABLE 30

NUMBER OF OFFICES AND BANKS PER DOLLAR
OF PER CAPITA INCOME: CALIFORNIA, OHIO AND ILLINOIS
1951 to 1961

Year	California		Ohio		Illinois
	Offices	Banks	Offices	Banks	Offices (Unit Banks)
1961	.69	.044	.55	.25	.37
1960	.65	.043	.53	.25	.37
1959	.63	.043	.52	.26	.37
1958(1)	.64	.050	.55	.28	.39
1957	.61	.052	.50	.27	.38
1956	.60	.058	.49	.29	.39
1955	.59	.065	.49	.30	.41
1954 (1)	.60	.079	.51	.33	.43
1952	.63	.101	.49	.34	.45
1951	.63	.106	.50	.36	.46

(1) Recession years: upward bias in number of banks per dollar of per capita income.

Source: Annual Report Federal Deposit Insurance Corporation (Washington D.C.: 1951 to 1961) and Statistical Abstract of United States 1962, table 6, p. 9 and Survey of Current Business, August issues, 1961 to 1951.

per capita income. From Table 30 one can see that in California the number of offices per dollar of per capita income declined from .63 to .59 between 1951 and 1955, a high of .69 in 1961. During the same time period the number of banks per dollar of per capita income in California declined throughout the entire period. This reduction is what one would expect considering that California is a state-wide branch banking state and a state that has experienced a great increase in per capita income (\$1,901 to \$2,792) since 1951.

Ohio has experienced, generally, the same movement in the number of offices per dollar of per capita income as did California, except that the movement was less severe. Since 1951 Ohio's number of banks per dollar of per capita income has declined (as California's) but again the reduction has been much less in Ohio.

Illinois, in contrast to both California and Ohio, experienced a steady decline in the number of offices per dollar of per capita income since 1951. This ratio fell from .46 in 1951 to .37 in 1961, while the state's per capita income rose from \$1,943 in 1951 to \$2,678 in 1961.

From the above statistical description one can get some idea of the changes that have taken place in the number and character of banks in the selected states over the past decade.

SUMMARY

An examination of the state banking systems of three states (each having different legal restrictions on structure) over the same time period will yield insight into the differences among structures. The more comparable the three states are in everything except banking structures, the more likely that differences in bank behavior are caused by differences in banking structures.

California, Ohio, and Illinois are the three states that were chosen for this study. These states fulfill as many of the criteria as is possible for meeting the requirements of comparability.

Therefore, these three states' banking systems will be compared over the same time period (1962) so that differences in lending, earnings, and cost behavior may be determined and examined.

CHAPTER VI

DIFFERENCES IN LENDING BEHAVIOR AMONG BANKING STRUCTURES IN SELECTED STATES

CRITERIA OF SUPERIORITY

In order to test the first hypothesis listed in Chapter I, one must have some criterion of superiority against which to compare the empirical evidence that has been gathered. In this case, it is the desire to measure the superiority of one structure over another by using some concept of output performance.

Two important banking studies that have developed measures of output performance have used loans and investments. David Alhadeff, in his study, Monopoly and Competition in Banking, used what he termed a "load factor" to measure the productive capacity used by banks. He said that the total assets of banks are a measure of capacity and that the ratio of loans and investments to total assets is a measure of the load factor of banks.¹⁰³

¹⁰³David Alhadeff, Monopoly and Competition in Banking (Berkeley, California: University of California Press: 1954), p. 62.

Another study, Irving Schweiger and John S. McGee's Chicago Banking, was more interested in the

superiority of banks in using their capacity to satisfy loan demands. As these authors state:

Loans are the chief means by which a bank affects its local area. Loans may provide credit to the businessman to purchase new and more efficient equipment, to establish a new business, to finance seasonal inventory and working capital needs, etc. Bank credit to a family can finance acquisitions of a new home or the repair and improvement of an existing home. Other major family purchases such as an automobile or furniture, can also be facilitated by bank credit either directly to the individual family or indirectly to the dealer or finance company. These are just a few of the many ways in which commercial bank credit contributes to the local community. The importance of bank lending is underscored by the fact that cost of bank credit is usually lower than that of the other credit granting institutions.¹⁰⁴

¹⁰⁴Irving Schweiger and John S. McGee, "Chicago Banking" The Journal of Business, Volume XXXIV (July, 1961), p. 217.

Even though Alhadeff used the total of loans plus investments as a measure of banking output in California, he agreed that loans are the most important form of output of banks. ". . . loans, not investments, must be considered as the primary form of output of commercial banks."¹⁰⁵ Because of this importance, this

¹⁰⁵Alhadeff, op. cit., p. 61.

dissertation uses the ratio of loans to assets as a measure of the "load factor" or degree of use of capacity by banks. A structure is superior if it has a greater proportion of its assets in loans than does another structure.

It should be pointed out that the use of the ratio of loans to assets as a measure of superiority is not without some controversy. Schweiger and McGee's (hereafter called S & M) Chicago Banking was attacked on this very point by Donald P. Jacobs and Eugene M. Lerner in Chicago Banking: A Critical Review. Jacob's and Lerner's objections were that first, they did not see any reason for regarding any particular rate of loans to assets as being optimal. Second, the two authors thought that the ratio of loans to assets was determined primarily by regulatory authorities and not by the banks and that the authorities, like depositors preferred lower ratios. Third, the critics pointed out that there was no reason to think that higher ratios led to maximum profits. Fourth, Jacobs and Lerner felt that the various loan to asset ratios did not indicate market imperfections. Thus, the ratio of loans to assets was not a measure of superiority of one structure over another.¹⁰⁶

¹⁰⁶Donald P. Jacobs and Eugene M. Lerner, "Chicago Banking: A Critical Review" The Journal of Business, Volume XXXV (October, 1962), p. 414.

As an answer to Jacob's and Lerner's (hereafter called J & L) first criticism, Schweiger took great pains to state the importance of loans on the local community. (Note the extensive quote from Chicago Banking on this importance stated previously.) As further evidence, Schweiger states:

Now J & L say, in effect, that unit banks should be protected even if they do provide less credit to their communities, that credit granted locally does not matter. I think it does matter and largely because creation of a perfect capital market has been frustrated by regulations devised mainly by local interests. It turns out, not unexpectedly from a theoretical view point, that special legislation which is fostered by local bankers to 'protect' local areas leads to financial structures that furnish relatively poor service to local areas and protect chiefly the local bankers.¹⁰⁷

¹⁰⁷Irving Schweiger, "Reply to 'Chicago Banking: A Critical Review'," The Journal of Business Volume XXXV (October, 1962), p. 420.

As to the second criticism, Schweiger stated that if one did assume that regulatory agencies preferred lower loan ratios, a lower ratio by unit banks over branch banks would imply that the authorities believe the unit banks to be more risky. Or, the lower ratio might mean that branch banks simply do not follow the rules laid down by banking agencies. "Neither explanation justifies

ignoring or being indifferent to the observed lower loan ratios of unit banks."¹⁰⁸

¹⁰⁸Ibid., p. 421.

Schweiger further pointed out that it has been shown by existing evidence that depositors do not look to lower loan ratios to alleviate their fears of insolvency, but rather that depositors will look instead to the bank's size and its affiliation with the F.D.I.C. to provide safety. In fact, depositors would like a higher ratio of loans to assets. Depositors are interested in the yield on their savings accounts and the quality of services offered by their banks. A higher loan ratio would be desirable because loans are the best yielding assets that banks have available.¹⁰⁹

¹⁰⁹Ibid.

As an answer to J & L's third criticism, Schweiger repeated the findings of his study that stated that loans did make a difference in explaining higher profits. Schweiger examined the relationship between net current earnings and eight other variables which included the ratios of commercial and industrial loans to assets,

consumer loans to assets, and farm loans to assets. His results supported the contention that earnings are positively associated with higher loan ratios.¹¹⁰

¹¹⁰Ibid., p. 422.

J & L's fourth criticism, that the various loan to asset ratios did not indicate market imperfections, has been disputed by Bernard Shull in an article in the recent book, Banking And Monetary Studies, in which Shull presents a multi-product model of the banking firm.

Nevertheless 'various loan-to-asset ratios' might also be explained, at least in part, by the hypothesis that banks are more isolated from competition in local loan markets in unit bank communities than in branch bank communities. In the simplest of terms, we may consider a bank investing its funds in local loans and government securities, similar to a producer selling in a monopolistic market domestically and a competitive market abroad. For profit maximization, the output in each market must be such that marginal revenues in each market are equal. The lower the elasticity of demand in the domestic market the smaller would be the domestic output and the lower the ratio of domestic output to total output. It follows that for two comparable firms, the comparative ratios of domestic output to total output would depend on the comparative elasticities of demand in the domestic market.

Given two banks, the same in all respects with the exception that the first faced less elastic demands in local loan markets, we would expect the first to have a lower ratio of local loans to total earning assets. The excess resources

would find their way into more competitive markets in which marginal revenue exceeded marginal costs. In banking, the funds might be invested in short-term government securities, where the demand curve facing the bank is close to, if not actually, infinitely elastic.¹¹¹

¹¹¹Bernard Shull, "Commercial Banks As Multiple-Product Price-Discriminating Firms, "Banking and Monetary Studies Edited by Deane Carson (Homewood, Illinois: Richard D. Irwin, Inc.: 1963), p. 364-365.

Because of the above counter-arguments and positive points, it is felt that, on balance, the ratio of loans to assets is an adequate measure of the superiority of a bank's lending behavior. No measure is without some problems. However, the ratio of loans to assets has stood the test of academic criticism and has emerged favorably.

LENDING BEHAVIOR

The ratios of loans to assets (or the load factors) for the banks in California, Ohio, and Illinois, by structure and for the nine size classifications are given in Table 31. Chart III gives a better visual interpretation of the differences that exist in the load factors among states and structures. As was stated previously, one must remember that the size and classifications used throughout this study are unequal.

From Chart III one can conclude that very definite, systematic differences in the load factor do exist. In all size classifications except number nine, California state-wide branch banks have a larger load factor than do either limited branch banks in Ohio or unit banks in Illinois. What is significant is that the California branch banks' load factor is over 50 per cent in all except the fifth size class. At the same time, Ohio limited branch banks have, consistently, a load factor that is around 45 per cent for all size classifications except number nine. The above evidence tends to support the statement that there are indeed systematic differences in lending behavior between state-wide branch banks and limited branch banks.

Size does not appear to affect appreciably the load factors for branch banks. There is a slight upward trend in the load factor for California branch banks but the ratios are rather erratic when compared with Ohio limited branch banks. The effect of size is much more noticeable when one focuses on Illinois and Ohio unit banks. The load factor increases consistently from a low of 32 per cent to a high of 48 per cent in the largest size class in Illinois. In all cases, Illinois unit banks have, on the average, a lower load factor than do either Ohio limited branch banks or California state-wide branch banks.

TABLE 31
RATIOS OF AGGREGATE LOANS TO ASSETS OF BANKS BY SIZE AND TYPE OF
STRUCTURE; CALIFORNIA, OHIO AND ILLINOIS
DECEMBER, 1962

Deposit Sizes (in dollars)	Class No.	California Branch	Unit	Ohio Branch	Unit	Illinois Unit
0 to 1,000,000	1		32.96		37.11	32.07
1,000,000 to 1,999,999	2		31.12		42.88	35.83
2,000,000 to 4,999,999	3	50.00	48.36	46.38	42.86	37.70
5,000,000 to 9,999,999	4	53.96	43.16	46.23	45.10	36.57
10,000,000 to 24,999,999	5	47.72	42.48	46.00	45.48	38.19
25,000,000 to 49,999,999	6	53.96		45.61		39.38
50,000,000 to 99,999,999	7	51.54		46.18		41.89
100,000,000 to 499,999,999	8	54.40		45.53		42.35
500,000,000 to 12,999,999,999	9	52.97		53.12		47.97
Mean		52.96	43.40	47.79	44.14	43.26

Source: Tables 1 and 5, Appendix D.

CHART III

RATIOS OF AGGREGATE LOANS TO ASSETS OF BANKS
BY SIZE AND TYPE OF STRUCTURE:
CALIFORNIA, OHIO AND ILLINOIS

Source: Table 31

Comparing the load factors between branch and unit banks in both California and Ohio, one finds that California's branch banks, in all comparable size classes, have a higher load factor than do that state's unit banks. The same is also true in Ohio, but the differences in load factors are not so great as in California. Thus, when one compares state-wide branch and limited branch banks to unit banks either of the same state or of another state, one finds higher load factors under the branch type of organization.

The unit banks in California exhibit a very erratic load factor. As this study progresses, one will find that over the five size classes California unit banks are consistently different (and consistently erratic) from the behavior of Ohio unit and Illinois unit banks. One observation of further interest is that the unit banks in California (except class number two) and in Ohio have higher load factors than comparable size unit banks in Illinois. An interesting hypothesis for this difference is that the competition encountered by unit banks in Ohio and California from branch banks stimulates the unit banks to greater loan production and thus a higher load factor.

In summary, using the ratio of loans to assets as a measure of output superiority, state-wide branch

banks have a superiority over both limited branch banks and unit banks which encompasses the whole range of deposit sizes. Also, limited branch banks have a superiority over unit banks in their lending behavior. A possible reason for this superiority of branch banks is that branch banks have the ability to operate in a much more extensive market area, thus can obtain a greater diversity of types of loans. A small unit bank operates in a local market in which a diverse loan portfolio is impossible to obtain. As the size of unit banks increases, the market area available to the bank is larger, thus larger unit banks have a higher load factor than small unit banks.

OTHER FACTORS THAT MAY

AFFECT LENDING BEHAVIOR

Time deposit ratios

Alhadeff states that perhaps one item that affects the load factor of different banks is the proportion of total deposits in the form of time deposits. It is claimed that the ratio of time to total deposits is an indication of how well the bank is economizing on its resources. The higher this ratio, the higher should be the load factor. Members of the Federal Reserve System

will be subject to much lower reserve requirements on time deposits than on demand deposits. A bank with a higher ratio of time to total deposits can extend more loans than can a bank with a lower ratio of time to total deposits. Also, time deposits are much less liquid than are demand deposits, thus making time deposits more stable. This stability allows a bank to tie up less of its assets in cash.

Does the ratio of time to total deposits vary directly with the load factor as it should if the two effects mentioned above hold true? Table 32 presents the ratio of time to total deposits for the three states by structure and size. Chart IV illustrates the differences among structures and size classes.

In terms of the differences between structures, it appears that they are approximately the same as when load factors were examined. State-wide branch banks have a higher ratio of time to total deposits in every size class except four and six. Limited branch banks have a lower ratio of time to total deposits than state-wide branch banks (except in classes four and six) and have a higher ratio than Illinois unit banks in all classes except seven and eight. Illinois unit banks, therefore, have the lowest ratios of time to total deposits except in classes seven and eight.

TABLE 32
RATIOS OF TIME AND SAVING DEPOSITS TO TOTAL DEPOSITS OF BANKS BY SIZE AND TYPE
OF STRUCTURE: CALIFORNIA, OHIO AND ILLINOIS
DECEMBER, 1962

Deposit Sizes (in dollars)	Class No.	California		Ohio		Illinois
		Branch	Unit	Branch	Unit	Unit
0 to 1,000,000	1		40.11		37.62	26.78
1,000,000 to 1,999,999	2		44.29		51.51	31.20
2,000,000 to 4,999,999	3	56.89	55.00	50.70	54.21	39.83
5,000,000 to 9,999,999	4	48.31	51.66	50.19	52.32	41.91
10,000,000 to 24,999,999	5	50.97	51.27	50.83	48.62	46.89
25,000,000 to 49,999,999	6	46.23		49.33		48.70
50,000,000 to 99,999,999	7	56.29		46.29		50.94
100,000,000 to 499,999,999	8	57.51		33.37		45.77
500,000,000 to 12,999,999,999	9	50.11		44.71		29.91
Mean		50.53	51.84	41.65	52.08	38.84

Source: Tables 4 and 15, Appendix D.

CHART IV

RATIOS OF TIME AND SAVINGS DEPOSITS TO TOTAL DEPOSITS OF BANKS
BY SIZE AND TYPE OF STRUCTURE:
CALIFORNIA, OHIO AND ILLINOIS

Source: Table 32

An interesting point brought out by Schweiger and McGee is that the unit banking structure in Illinois has been inadequate in the provision of savings services and that this inadequacy has led to the substitution of postal savings, credit unions, and savings and loans for bank savings accounts.¹¹² Some positive evidence on this

¹¹²Schweiger and McGee, op. cit., p. 343-346.

point can be seen from these figures. A glance at Chart IV shows that there is a great difference between California and Ohio unit banks and Illinois unit banks in the ratio of time to total deposits with Illinois ratios being much lower.

It becomes much more difficult to arrive at any conclusions as to the effects of time deposits on the load factor when one examines the differences between branch and unit banks in California and Ohio. In the three size classes that are comparable, California unit banks have a higher ratio of time to total deposits, except for class three, and a lower load factor than do California branch banks. The unit banks should have a lower time deposit ratio to be consistent with the hypothesis that time deposits allow for a higher load factor. Ohio unit banks also have a higher time deposit

ratio than Ohio branch banks except in class five.

Size seems to be a much more important factor for unit banks than for branch banks as an explanation for time deposit behavior, especially in classes one through six. The reason that this is true is obvious. Unit banks have only one office to collect savings while branch banks have at least two offices and more often many more. Small unit banks, especially in unit banking states, are typically located in small communities where the income and wealth base is small, thus generating fewer savings dollars. Branch banks may have outlets in both small and large communities. This tendency is much more pronounced in the size classes one, two, and three in California and Ohio and in sizes one through six in Illinois.

Another important point is that the whole nature of time deposit services changes as the size of bank increases, especially in the extremely large size classes. For example, size class nine in Illinois includes five banks all located in Chicago. The smallest of the five has just over \$500 million in deposits and the largest just over \$3 billion in deposits. These banks are money market banks as well as retail outlets for saving services and will thus provide a mixture of saving services including certificates of deposit. The rapid growth of this

instrument began after the change in Regulation Q in January of 1962, and will thus show up in the figures for these banks. In California, size class nine includes eight banks, the five largest of which have their main offices located in San Francisco and Los Angeles. These five include the giant Bank of America with deposits over \$11 billion in 1962. These banks are also money market banks and have issued the majority of the dollar amount of CDs in the Twelfth District, according to the Federal Reserve Bank of San Francisco.¹¹³ In Ohio, size

¹¹³Monthly Review, Federal Reserve Bank of San Francisco, (June, 1963). p. 87.

class nine includes four Cleveland banks and one Columbus bank. Their sizes range from a little over \$443 million to just over \$1.4 billion in deposits. It is presumed that these banks have also been active in the issuance of CDs but undoubtedly not to the extent as have the larger banks in Chicago and California.

The point of all the above is that the large branch banks in California and Ohio have an advantage over the large unit banks in Chicago gathering savings simply because they are not only active in obtaining large savings balances through CDs, but because they are

active and have a larger number of outlets for smaller, personal time and savings deposit services and other retail banking services. Thus, the greater number of outlets of branch banks plus the fact that the larger Illinois unit banks provide more wholesale than retail banking services, causes Illinois banks in size class nine to have a much lower ratio of time to total deposits and Ohio limited branch banks to have a higher ratio than Illinois but lower than California statewide branch banks. And, California, with its Bank of America network of branches, has the highest ratio of time deposits to total deposits for that size class.

In summary, it is very difficult to arrive at any conclusions as to the effects of a higher or lower time deposit ratio on the load factor. Not only does the mix of time and savings services change as size increases, but the load factor mix also changes. From the information presented in this section, it can be said that this ratio has, at the most, a small affect on the load factor. This is true because even though some size classes and structures have higher load factors and also higher time deposit ratios, the differences in the time deposit ratios among some structures are not so pronounced as are differences in load factors, and indeed, either do not exist in some size classes or

are the opposite from what one would expect, assuming the hypothesis to be true. In size classes three, four, and five, Ohio and California unit banks have higher time deposit ratios and lower load factors (except in one class each) than have the branch banks in these two states - just the opposite from what one would expect following the hypothesis developed in this section. Also, even where Illinois unit banks have a higher ratio of time to total deposits than California branch banks (size six) and a higher ratio than Ohio branch banks (sizes seven and eight), Illinois unit banks have consistently a lower load factor. If it is true that the ratio of time to total deposits does affect the bank's ability to lend, then all one can say is that unit banks do not use this advantage when they have it.

Capital restrictions

Another major factor thought to affect lending behavior and believed to be related to bank size is the affect of capital restrictions on lending. If capital restrictions do affect the load factor, then a comparison of load factors and capital ratios would show that unit banks had consistently lower capital ratios than comparable size branch banks. If this were true it would lend evidence to demonstrate that little capital in relation to assets causes banks to have little lending activity

relation to assets. To test this hypothesis, the ratio of capital to assets was computed and is shown in Table 33. Chart V illustrates this ratio by state and structure and as size increases.

From Chart V, the most startling thing that one notes is the wide divergence of California unit banks from the other classifications. California unit banks in size one have a ratio of 43 per cent which is over two and a half times greater than the closest structure-Illinois unit banks. As was noted previously, California unit bank's load factor was quite erratic throughout the size classes. These banks had the lowest load factor of all structures in class two and the second lowest in size classes one, four, and five. Thus, California unit banks consistently have a tremendously high capital ratio and a rather low load factor in relation to the other structures. This pattern is the opposite of what it should be if the above hypothesis were true.

The second most important observation is that the ratio declines almost continuously over the range of bank sizes. The ratio of capital to assets is thus negatively related to bank size. This fact, in itself, tends to disprove the capital restrictive hypothesis stated above. Since larger Illinois unit banks have

TABLE 33
RATIOS OF CAPITAL FUNDS TO ASSETS OF BANKS BY SIZE AND TYPE OF
STRUCTURE: CALIFORNIA, OHIO AND ILLINOIS
DECEMBER, 1962

Deposit Sizes (in dollars)	Class No.	California Branch	California Unit	Ohio Branch	Ohio Unit	Illinois Unit
0 to 1,000,000	1		43.64		14.19	16.32
1,000,000 to 1,999,999	2		21.81		11.04	11.23
2,000,000 to 4,999,999	3	9.64	15.97	8.80	9.83	9.57
5,000,000 to 9,999,999	4	7.71	9.00	8.08	8.88	7.82
10,000,000 to 24,999,999	5	7.91	11.04	8.29	8.95	7.02
25,000,000 to 49,999,999	6	7.16		7.64		6.86
50,000,000 to 99,999,999	7	7.16		8.31		6.44
100,000,000 to 499,999,999	8	7.81		8.07		6.68
500,000,000 to 12,999,999,999	9	6.34		8.06		8.46
Mean		6.46	11.66	8.07	9.43	7.84

Source: Tables 2 and 1, Appendix D.

RATIOS OF CAPITAL FUNDS TO ASSETS OF BANKS BY SIZE AND
TYPE OF STRUCTURE: CALIFORNIA, OHIO AND ILLINOIS

Source: Table 33

larger load factors than small Illinois unit banks, the larger unit banks should have larger ratios of capital to assets than the smaller unit banks. Just the opposite is the case.

Actually, low ratios of capital to assets would be more restrictive to smaller banks than to larger banks. The small banks are the ones that will be forced to seek participating banks if a loan demand is greater than the legal restrictions specified. Also, as S & M point out, smaller banks will usually incur a cost of capital that is greater than that incurred by large banks. From this it would seem that small banks would be under pressure to seek high yield assets. As loans are the highest earning assets available to banks, it would seem that small banks would seek these assets to compensate for the higher cost of capital.¹¹⁴ But, small

¹¹⁴Schweiger and McGee op. cit., p. 224.

banks, especially unit banks, have lower load factors and higher capital ratios.

Another piece of evidence that tends to prove that capital ratios have less effect on load factors than structure is that in all size classes (three through nine) Ohio branch banks have a higher capital ratio than do

California branch banks of comparable sizes. Yet California branch banks have higher load factors in all cases except size class nine. Under the above hypothesis, the reverse should be the case. Also, unit banks of Ohio and California have a higher capital ratio and a lower load factor (except class three California unit banks) than do comparable size Ohio and Californian branch banks.

In summary, it seems that size, rather than structure is important in determining the ratio of capital to assets, and that capital restrictions are a poor explanation of differences in load factors both as size increases and among structures. These conclusions are the same as were those found by Schweiger and McGee. They state that

. . . banking structure appears to have at least two important effects related to the utilization of capital funds. If smaller banks grant fewer loans for a given amount of capital and capital funds are a scarce commodity, it appears to follow that any banking structure which places the limited amount of capital funds in institutions of smaller average size tends to reduce the volume of total bank loans thereby. Also, it appears that for banks comparable as to capital and deposits, a larger volume of loans will be generated by branch banks on the average.¹¹⁵

¹¹⁵Ibid.

And, from the evidence presented in this chapter,

it appears that for banks comparable on the basis of capital and deposits, a larger loan volume will be generated by state-wide branch over limited branch and unit banks, and a larger loan volume will be generated by limited branch over unit banks.

DIFFERENCES IN TYPES OF LOANS

The first section in this chapter illustrated that state-wide branch banks were superior to limited branch banks and unit banks, and that limited branch banks were superior to unit banks in their lending behavior. What are the differences in loan distributions within each state and within the asset portfolios of banks of different structures? In this section the different types of loans will be analyzed in order to arrive at some answers concerning where branch bank superiority exists within bank loan portfolios and what the effects of having different legal restrictions on branching are on loan distributions within each state.

Differences in loan distributions

One can get some idea of the geographical area in which most bank loans are made by examining the distribution of types of loans in Illinois. The above is true because small size unit banks typically operate in small towns and large unit banks operate in large cities.

However, the analysis does have some flaws. Of course, not all small unit banks are located in small towns and even if they were one could not get a complete idea of where loans originated because of loan participations. Perhaps it is better to say that this analysis shows in part the geographic distribution of loans and the areas of lending in which small loans and/or large loans originate.

Tables 1 through 5, Appendix B, give per cent distributions of total loans, farm loans, real estate loans, commercial and industrial loans, and consumer loans of banks by size and type of structure for the three states. As seen from Table 1, Appendix B, total loans in Illinois are distributed so that the majority are made by banks in size class nine. As was pointed out previously, these are large banks located in Chicago which probably participate in many non-Chicago loans. When one compares the distribution of total loans in Illinois with Ohio, one finds a greater per cent of loans made by sizes four, five, and eight in Ohio than in Illinois (combining both branch and unit banks in Ohio). In Ohio in sizes three and four, unit banks make a greater per cent of total loans than do branch banks of comparable sizes. However, unit banks in Ohio for all comparable size classes make a smaller share of total loans

than do unit banks in Illinois. The largest differences exist among structures and sizes between California branch and unit banks and the other two states. Almost 90 per cent of total loans are made by state-wide branch banks in size class nine while some 28 and 51 per cent of total loans are made by the same size class banks in Ohio and Illinois respectively. Large differences exist between unit banks in California and unit banks in Ohio and Illinois, with Ohio and Illinois unit banks being closer together in state loan shares.

Table 2, Appendix B, gives the distribution of farm loans for the three states. In Illinois, classes three, four, and five make the greatest shares of farm loans in the state. This is true also for Ohio except that for the same three classes, the distribution centers in unit banks in classes three and four, and branch banks in class five. These distributions, both in Ohio and Illinois illustrate the small, local nature of farm loans. In stark contrast is the distribution of farm loans in California. Over 90 per cent of the dollar amount of farm loans in the state are made by banks in size class nine (state-wide branch banks). This size class nine share in California is even greater than for total loans whereas just the opposite is true in Ohio and Illinois. Also, branch banks make the majority of farm loans in California whereas unit banks make the majority of farm

loans in Ohio. This fact further reinforces the hypothesis stated earlier that small banks, especially small unit banks, tend to be located in small towns which are in agriculturally dominated regions. Bank of America, Security First National, Wells Fargo, United California Bank, Crocker Anglo National Bank, and a few other large, statewide branch banks obviously have branches not only in large industrial cities but also in small, agricultural communities. At the same time, as was pointed out in Chapter V, farms are typically larger and of greater average value in California, which means farm loans are probably larger and borrowers more mobile than in either Illinois or Ohio.

The distribution of business loans in the three states' banking systems runs just the opposite to the distribution of farm loans. Table 4, Appendix B, shows that the distribution of business loans in Illinois is such that the larger size classes make larger shares of the total business loans. Banks in class nine in Illinois make over 70 per cent of these loans as compared with 50 per cent of the total loans. In Ohio class eight and nine banks make approximately 75 per cent of the business loans while in California size nine banks make over 90 per cent of these loans. Two logical factors exist which explain why larger banks make a larger share of business

loans. First, large banks, especially unit banks, are located in large cities where more business and industries are located, and because of the bank's larger size, they can provide specialized services not available from smaller banks. Second, because of the larger size of businesses relative to other economic units, large banks undoubtedly participate in business loans originated by smaller banks.

Table 5, Appendix B, shows the distribution of total consumer loans within each state system. It appears that the distribution of consumer loans is about the same as the total loan distribution in each state between branch and unit banks and over the range of bank sizes. This distribution illustrates the fact that consumer loan customers are distributed more evenly over the state than are farm, real estate, or business loan customers. Table 3, Appendix B, gives the distribution of real estate loans. In Illinois, banks in classes three through seven make a substantially larger share of mortgage loans than they make of total loans. Evidently, medium size banks, especially unit banks, have neither the size and location advantages for business loans nor the location advantages for farm loans. Thus, they specialize in mortgages, and to some extent, consumer loans. This same pattern in mortgage loan distributions is true also

in Ohio and California, except that as the banking laws become more liberal (limited branch to state-wide branch laws) the distribution of mortgage loans becomes more concentrated in the larger size classes. This concentration is what one would expect in branch banking areas where banks have multiple offices located in both rural and urban areas of the state.

In summary, the distribution of total loans among the three states becomes more concentrated in the larger size classes as the laws on branching become more liberal. In size classes eight and nine combined, 58, 61, and 94 per cent of total loans are made by banks in Illinois, Ohio, and California respectively. When one analyzes the distribution of different kinds of loans, especially in unit banking or limited branch banking states, one finds that farm loans are concentrated, relative to the distribution of total loans, in the small size classes, mortgage loans in medium size classes, consumer loans (like total loans) more evenly over all the size classes (except still concentrated to some extent in the larger classes as are total loans), and business loans in large size classes. In all loan categories, there is a greater concentration of all types of loans in larger classes and in branch banking structures as one moves from unit to state-wide branch banking systems.

Differences in loan portfolios

Any differences in loan portfolios among branch, limited branch, and unit banks can be examined by comparing the ratios of different kinds of loans to total assets of banks classified by size and structure. There are two general hypothesis to explain why any differences might exist among structures. First, differences could be caused by the types of structures that are under investigation and also by the competitive differences that might exist between structures in the two states that have two structures. Or, second, differences could be caused by dissimilarities in the economic environments that exist in the three states. It is, of course, assumed that the former hypothesis is of much more importance in explaining any differences than is the latter hypothesis.

Table 34 gives the ratio of farm loans to assets by size and structure for the three states. Chart VI illustrates these ratios for different size classes and types of structures. State-wide branch banks in size class six through nine have a larger share of assets in farm loans than do either limited branch or unit banks. In all size classes, unit banks in Illinois have a larger share of assets in farm loans than do limited branch banks in Ohio. Californian unit banks have a

smaller share of assets in farm loans than do Californian branch banks in two out of three comparable size classes, whereas unit banks in Ohio have a larger share of those loans than branch banks of Ohio in two out of three comparable size classes. Illinois unit banks have a larger share of assets in farm loans than do either Ohio unit banks or California unit banks in all five comparable size classes. California unit banks, as was found before, are quite atypical when compared with the unit banks of the other states, especially in size classes one through three. In this case California unit banks have very small ratios of farm loans to assets whereas Ohio and Illinois unit banks have quite large ratios of farm loans to assets for size classes one through three.

The most outstanding characteristic from this analysis is the variation of this ratio as size of banks changes. Small to medium size banks (up to class seven), both branch and unit, have much larger shares of assets in farm loans. Thus, this ratio is inversely related to bank size. As was pointed out in the preceding section, farm loans in unit bank and limited branch bank states are distributed more heavily towards the smaller banks. This distribution illustrates the local and rural, small town nature of farm loans, especially in states where the average size of farms is relatively small. In Chart

TABLE 34
RATIOS OF FARM LOANS TO ASSETS OF BANKS BY SIZE AND TYPE OF
STRUCTURE: CALIFORNIA, OHIO AND ILLINOIS
DECEMBER, 1962

Deposit Sizes (in dollars)	Class No.	California Branch	California Unit	Ohio Branch	Ohio Unit	Illinois Unit
0 to 1,000,000	1		.70		12.15	14.35
1,000,000 to 1,999,999	2		.92		8.17	15.05
2,000,000 to 4,999,999	3	6.46	1.41	4.51	5.77	13.60
5,000,000 to 9,999,999	4	3.28	4.80	3.63	4.28	6.99
10,000,000 to 24,999,999	5	1.19	1.04	1.73	1.18	3.01
25,000,000 to 49,999,999	6	2.73		.67		1.04
50,000,000 to 99,999,999	7	.62		.07		.46
100,000,000 to 499,999,999	8	.69		.04		.57
500,000,000 to 12,999,999,999	9	2.11		1		.23
Mean		2.02	2.42	.42	4.56	2.02

Source: Tables 1 and 7, Appendix D.

RATIOS OF FARM LOANS TO ASSETS OF BANKS BY SIZE
AND TYPE OF STRUCTURE: CALIFORNIA,
OHIO AND ILLINOIS

Source: Table 34

VI, one can see that, indeed, small banks do rely more on farm loans for earnings than do large banks. In California, more farm loans are made by branch banks than by unit banks. Size class nine includes large, statewide systems that have branches throughout the entire state in both rural and urban areas. From Chart VI, it appears that unit banks in California cannot compete with branch banks for farm loans. Whether this is because farmer borrowers in California are more mobile than in Ohio or Illinois (due to their larger average size in terms of both acreage and value), or because small unit banks cannot service these farmers due to the unit bank's small size (doubtful when one considers the excessive amounts of capital in relation to assets that these small unit banks have - see Table 33), or whether unit banks just can't compete on the same grounds with branch banks, cannot be determined here. Any one or any combination of those hypotheses could be the answer.

In any case, small unit banks in Ohio and Illinois rely much more heavily than large banks on farm loans as a source of revenue. The best answer probably is that farmers owning small farms are restricted in their ability to seek alternative lenders and therefore must seek loans from local sources, which in Ohio and Illinois happen to

be small unit banks. In contrast larger farmers in California are more mobile, can seek a greater number of alternatives, and are served not only by unit banks in small town rural areas but by branches of large state-wide branch systems in these areas. These large branch banks in California have a larger proportion of their assets in farm loans than do both large limited branch and large unit banks in Ohio and Illinois. Finally, limited branch banks, especially large ones, must exist in well populated urban, non-farm areas, and because of branch limitations their branch systems must also be located in these areas. Thus, of all structures these larger banks rely least on farm loans for earning assets.

As with farm loans, some state-wide branch banks have a greater proportion of their assets in the form of business loans than do banks of other structures. In the case of business loans, however, this greater proportion exists in all size classes and increases with size (when compared with Ohio limited branch and Illinois unit banks) except in class nine, whereas with farm loans the greater proportion exists in only the four largest, out of seven, size classes. Limited branch banks are very similar to Illinois and Ohio unit banks, except in class nine, in their emphasis on business loans. These characteristics can be seen in Table 35. Chart VII illustrates

TABLE 35
RATIOS OF COMMERCIAL AND INDUSTRIAL LOANS TO ASSETS OF BANKS BY SIZE AND
TYPE OF STRUCTURE: CALIFORNIA, OHIO AND ILLINOIS
DECEMBER, 1962

Deposit Sizes (in dollars)	Class No.	California Branch	California Unit	Ohio Branch	Ohio Unit	Illinois Unit
0 to 1,000,000	1		12.31		1.99	3.59
1,000,000 to 1,999,999	2		10.86		3.95	4.26
2,000,000 to 4,999,999	3	7.41	10.48	6.90	4.67	4.72
5,000,000 to 9,999,999	4	13.66	10.64	5.93	5.30	5.79
10,000,000 to 24,999,999	5	11.63	17.24	6.94	9.12	7.35
25,000,000 to 49,999,999	6	17.13		8.04		9.37
50,000,000 to 99,999,999	7	15.09		11.28		11.44
100,000,000 to 499,999,999	8	17.87		14.68		12.23
500,000,000 to 12,999,999,999	9	17.64		13.51		27.05
Mean		17.51	13.56	12.26	5.70	17.18

Source: Tables 1 and 8, Appendix D.

CHART VII

RATIOS OF COMMERCIAL AND INDUSTRIAL LOANS TO ASSETS OF BANKS
BY SIZE AND TYPE OF STRUCTURE: CALIFORNIA
OHIO AND ILLINOIS

Source: Table 35

the ratio of business loans to assets for the different structures and size catagories.

Again, as with farm loans, unit banks in California are quite different from unit banks in Ohio and Illinois. In fact, in two out of the three comparable size classes, California unit banks have a greater proportion of assets in the form of business loans than do California state-wide branch banks. Why is there such a wide divergence between unit banks in California and unit banks in Ohio and Illinois? This question cannot be answered here but a tentative hypothesis might be that because of the greater proportion of business activity in the areas of retailing, wholesaling, and service industries in California, unit banks in California have a greater opportunity to seek local business loans. (See tables 15, 16, and 17, Chapter V.)

The most important determinant of the proportion of assets in business loans seems to be the size of the bank. The ratio of business loans to assets is positively related to bank size in all states and structures, except for unit banks in California. This size relationship was also found in the preceding section where the distribution of business loans was analyzed. A logical explanation for this pattern might be that large banks,

especially large unit banks, tend to be located in cities where more business than farming is done. The larger the city, the larger the bank that can be supported by that city. Thus, as one moves from small to large banks, the ratio of farm loans to assets declines and the ratio of business loans increases.

It is in the areas of consumer and mortgage loans that state-wide branch and limited branch banks really outperform similar size unit banks. This is true for both unit banks within branch bank states and unit banks in Illinois. Table 36 gives the ratio of mortgage loans to assets for the three states and Chart VIII illustrates these ratios by structure and size.

California branch banks outperform all other banks in all size classes except number seven. Here, limited branch banks in Ohio held a larger proportion of their assets in mortgages than California branch banks. Also, limited branch banks in Ohio are superior to unit banks in Illinois in all size classes. California branch banks have a larger ratio of mortgage loans to assets than California unit banks in all comparable size classes while Ohio branch banks have a larger ratio than Ohio unit banks in two out of three comparable size classes. In all comparable size classes except class three, Ohio unit banks are superior to California and Illinois unit

TABLE 36
RATIOS OF AGGREGATE REAL ESTATE LOANS TO ASSETS OF BANKS BY SIZE AND TYPE OF
STRUCTURE: CALIFORNIA, OHIO AND ILLINOIS
DECEMBER, 1962

Deposit Sizes (in dollars)	Class No.	California Branch	California Unit	Ohio Branch	Ohio Unit	Illinois Unit
0 to 1,000,000	1		8.96		12.16	6.01
1,000,000 to 1,999,999	2		10.93		17.92	8.29
2,000,000 to 4,999,999	3	21.11	20.94	20.37	20.22	10.88
5,000,000 to 9,999,999	4	22.56	17.45	20.11	21.02	13.41
10,000,000 to 24,999,999	5	20.51	9.53	19.18	16.79	13.77
25,000,000 to 49,999,999	6	17.06		18.73		14.43
50,000,000 to 99,999,999	7	21.76		17.38		12.43
100,000,999 to 499,999,999	8	23.09		11.17		8.31
500,000,000 to 12,999,999,999	9	19.18		17.19		2.66
Mean		19.41	14.32	15.28	19.60	7.92

Source: Tables 1 and 6, Appendix D.

CHART VIII

RATIOS OF REAL ESTATE LOANS TO ASSETS OF BANKS
BY SIZE AND TYPE OF STRUCTURE: CALIFORNIA
OHIO AND ILLINOIS

Source: Table 36

banks, and in all comparable size classes except class five, California unit banks are superior to Illinois unit banks.

Size does not seem to be as important in explaining the differences in mortgage loan behavior as it was in explaining business and farm loan behavior for branch banks, except that there appears to be a slight negative relationship between size of the branch bank and mortgage loan ratios. However, when one examines the mortgage loan behavior of unit banks, size seems to be much more important. Small unit banks, in all three states, have a smaller ratio of mortgage loans to assets than have medium size unit banks. Also, large unit banks in Illinois have a much smaller ratio than medium size unit banks in Illinois. It appears that what is "medium size" fluctuates between states. For Illinois, medium size banks are banks in classes four through seven. In California, medium size unit banks are banks in class three, and in Ohio, medium size unit banks are in classes three and four.

The above analysis of mortgage loan behavior could almost be applied to consumer loans except that the behavior of state-wide branch and limited branch banks is reversed. Table 37 gives the ratios of consumer loans to assets and Chart IX illustrates these ratios by

TABLE 37
RATIOS OF CONSUMER LOANS TO ASSETS OF BANKS BY SIZE AND TYPE OF
STRUCTURE: CALIFORNIA, OHIO AND ILLINOIS
DECEMBER, 1962

Deposit Sizes (in dollars)	Class No.	California Branch	California Unit	Ohio Branch	Ohio Unit	Illinois Unit
0 to 1,000,000	1		10.92		10.29	7.91
1,000,000 to 1,999,999	2		8.59		12.94	7.78
2,000,000 to 4,999,999	3	15.02	14.76	14.27	12.16	8.11
5,000,000 to 9,999,999	4	13.92	10.02	16.35	14.24	9.92
10,000,000 to 24,999,999	5	12.52	11.50	17.77	17.08	12.62
25,000,000 to 49,999,999	6	16.22		16.62		11.59
50,000,000 to 99,999,999	7	12.09		13.60		13.26
100,000,000 to 499,999,999	8	10.35		11.78		12.06
500,000,000 to 12,999,999,999	9	9.55		7.65		3.35
Mean		9.76	11.48	12.07	13.93	7.86

Source: Tables 1 and 9, Appendix D.

RATIOS OF CONSUMER LOANS TO ASSETS OF BANKS
BY SIZE AND TYPE OF STRUCTURE: CALIFORNIA,
OHIO AND ILLINOIS

Source: Table 37

size and structure for the three states. In all comparable size classes except class eight, limited branch banks are superior to Illinois unit banks in consumer loan behavior, but California branch banks are superior to Illinois unit banks in only four out of seven comparable size classes. Ohio limited branch banks have a larger ratio of consumer loans to assets than Ohio unit banks and the same is also true between California branch and unit banks. Again, it is the medium size banks that have larger ratios than either small or large banks (except that the ratio of consumer loans to assets for both California state-wide branch and unit banks is quite erratic over the size classes).

One hypothesis for this size behavior, given previously, is that medium size banks, especially unit banks, have neither the location advantage for farm loans nor the size and location advantages for business and industrial loans, thus they must draw their borrowing customers from the local, urban consumer and mortgage markets. Of all medium size banks of different structures, medium size state-wide branch banks need to rely on those loans least due to their ability to locate branches in all areas of the state.

SUMMARY

Using the ratio of total loans to assets as a measure of lending superiority, state-wide branch banks in California have a superiority, in all size classes, over both limited branch and unit banks including California unit banks. At the same time, limited branch banks in Ohio are superior to unit banks in all size classes (except class three California unit banks) in lending performance. Neither the ratio of time to total deposits nor the ratio of capital to assets help to explain this superiority. Also, size does not appear to influence branch bank superiority, although size is very important when considering unit bank performance. There appears to be a real difference between state-wide branch bank and limited branch bank lending behavior.

Californian unit bank behavior of the smaller banks in almost all areas examined in this chapter is quite atypical when compared with unit banks in the other two states. Small Californian unit banks have a ratio of total loans to assets that is smaller than any other structure in size class two, larger than even limited branch banks in class three, and in between Ohio unit and Illinois unit banks in classes four and five. At the same time small Californian unit banks have a tremendously

large ratio of capital to assets, a low ratio of farm loans to assets (when other comparable unit banks have very high ratios) and a relatively high ratio of business loans to assets (when other comparable unit banks have a low ratio). One explanation for this diverse behavior that is also reinforced by the bank's rather excessive amounts of capital is that these unit banks may be relatively new banks that have not had the time to either grow into larger unit banks or to convert into branch banks. This hypothesis will be discussed in the following chapter.

The analysis of both the loan distributions within the states and the importance of different loans in the asset portfolios of banks classified by structure and size, raise more questions than they answer. Unfortunately, there is neither the space nor is it the purpose to answer these questions in this dissertation. However, tentative hypotheses were developed from the data presented in this and other chapters to explain why lending behavior differed among sizes and structures.

The analysis of the distribution of loans in the states illustrates the effects on loan shares of different sizes and structures, and in general, gives evidence that total loans are distributed more heavily in the large banks with an increasingly large share in the

larger sized and in branch structures as one moves from unit to state-wide branch states. There are also some differences in the distributions of different types of loans among the three states. In general, farm loans are distributed more in the smaller unit bank and medium size branch bank size classes, while business loans are distributed in just the opposite manner in all three states. Both consumer and mortgage loans are concentrated more in the medium size banks than are total loans. As is true with total loans, the distribution of all types of loans are more concentrated in the larger size classes in the state-wide branch than in the limited branch banking state and more concentrated in the larger size classes in the limited branch banking state than in the unit banking state.

Size of bank is a very important factor in explaining the lending behavior of unit banks, both for the load factor and for different kinds of loans. Size influences lending behavior less as one moves from unit banks to limited branch banks. Small unit banks specialize in farm loans, Medium size unit banks are more diversified but emphasize mortgage and consumer loans over both small and large unit banks. (This is especially true for Illinois unit banks.) Large unit banks specialize in making business loans. The same pattern exists but to

a lesser extent for limited branch banks in Ohio. State-wide branch banks in California are the most diversified, in all size classes, of all structures. Branch banks in California have the greatest advantage over unit banks in the area of mortgage lending and a smaller advantage in the area of consumer and farm loans (except for the extremely small sizes) and in the area of business loans (except for the extremely large sizes). Limited branch banks in Ohio have their superiority over unit banks in the areas of consumer and mortgage loans in terms of assets, as do comparable size state-wide branch banks. Thus, clearly, state-wide branch banks are superior to all other structures in their lending behavior, while limited branch banks are superior to unit banks in their lending behavior.

CHAPTER VII
DIFFERENCES IN COSTS AND EARNINGS BEHAVIOR
AMONG BANKING STRUCTURES IN
SELECTED STATES
COST BEHAVIOR

There have been a few studies made of banking expenses in which most authors have focused their attention on the effects of size on per unit costs. Some studies have not only examined the effect of size on banking costs but have studied the differences in costs between branch and unit structures as well. No studies have specifically separated branch banks operating under state-wide branch banking laws from those operating under limited branch banking statutes. In this chapter comparisons are made among limited branch banks, state-wide branch banks, and unit banks so that any differences that might exist may be observed. These comparisons should allow one to test the two sub-hypotheses that state-wide branch banks are superior to limited branch banks and unit banks in their cost behavior and that limited branch banks are superior to unit banks in their cost behavior.

Criteria of superiority

In order to test the above hypotheses some criteria of cost superiority must be constructed. This is not an easy task - especially in dealing with the banking industry. In theory, economies of scale relate to a firm producing a single product. If the firm increases its size by a given percentage and costs increase by a smaller percentage than the firm has experienced increasing returns to scale. A measure of structural superiority would have to center on the same type of analysis. If bank A of a certain structure and size, producing a certain product, has a smaller average unit cost than bank B of a different structure and similar size, then bank A could be considered to have a cost superiority over bank B. There may be a question as to whether the cost advantage was the result of pecuniary (price differences of factors of production) or technological economies, but in general, structural economies should center on an examination of banks of different structures but equal sizes which are producing a similar product.

Banking, as was mentioned in Chapter IV, is not a single product but a multi-product industry. Because there is more than one product, it is impossible to arrive at some simple measure of output. Also, if some

of the products consist of services, then the problem is much greater. It is virtually impossible to allocate costs among the different services offered by banks and on a basis that would be comparable from bank to bank. This is true because of the varied methods of non-price competition used by banks to attract and keep customers. As was pointed out in the previous chapter, banks of different structures tend to do different things in carrying out their lending functions. Branch banks are more diversified for all size classes whereas unit banks of small sizes tend to specialize in business loans. This difference means that branch banks do more retail banking than comparable size unit banks. Therefore, when one compares branch and unit banks, it is like comparing two different types of firms (if one bases the "type" of firm on the types of output produced).

As there are differences in lending behavior among structures, there are also differences in the cost behavior of different structures which are influenced by the bank's lending behavior. Thus, the reasons for any cost differences become even more important than the average cost results when making any conclusions as to the superiority of one type of structure over another.

The average costs or per unit costs of banking can be measured in many ways. Of four empirical cost

studies of both economies of scale and of structure, two have used the ratio of current operating expenses to total assets (Schweiger and McGee's Chicago Banking and Gramley's Scale Economies in Banking), and two have used the ratio of current operating expenses to total loans and investments (Alhadeff's Monopoly and Competition in Banking and Horvitz's Economies of Scale in Banking).¹¹⁶

¹¹⁶Schweiger and McGee, op. cit.; Lyle E. Gramley, Scale Economies In Banking (Kansas City: Federal Reserve Bank of Kansas City: 1962); David Alhadeff, op. cit.; Paul M. Horvitz, "Economies of Scale In Banking," Private Financial Institutions (Englewood Cliffs, N. J.: Prentice-Hall, Inc.: 1963).

Each study implicitly or explicitly assumed that either total assets or total loans and investments was the measure of a bank's "output." An examination of the percentage distribution of assets of banks for the United States as a whole, classified by the same size classes as are used in this study, shows that the per cent of total assets made up of loans and investments does not vary over seven percentage points among the size classes. (For the nine classes the per cent was: 78, 81, 81, 81, 83, 82, 81, 78, 75 respectively.)¹¹⁷

¹¹⁷Annual Report of the Federal Deposit Insurance Corporation, 1962 Table 110, p. 134.

Unfortunately, these figures are not classified by structure. Because there is no great variation among size classifications of the ratio of loans and investments to total assets, it would seem immaterial as to which is used as a measure of banking output, especially when measuring economies of scale in banking. However, when one becomes interested in the differences, not only as size increases but for different structures, then one must find if this ratio varies with structure. Alhadeff used the ratio of loans and investments to assets as a measure of output performance by branch and unit banks in California. He found that branch banks, on the average, had a higher ratio of loans and investments to assets than did unit banks. This means, using the same current operating expenses and the same total assets for both structures, that unit banks would have a higher ratio of costs to loans and investments. Thus, branch banks would appear more "superior" and unit banks would appear more "inferior" than if total assets were used.

Because of the above differences and because of the problems of deciding on what measure of output should be used, two measures of cost (and earnings) performance are used in this study: the ratio of current expenses to total assets and to total loans. The latter measure is consistent with the belief (stressed in this study and

in Schweiger and McGee's study) that loans, not investments, are the most important form of output of banks and that loans are important because they affect the local area in which banks operate. Actually, as was seen in the last chapter, the ratio of expenses to loans will be different for different structures simply because unit banks place a greater percentage of their assets in government securities than do branch banks. This fact, in itself, might explain any cost differences that might exist between structures. These differences will be discussed later.

Thus, two measures of cost superiority will be used making it possible to arrive at two and perhaps opposite conclusions regarding the superiority one structure might have over another. However, the final decision as to the superiority of a structure must wait until all facets of bank behavior deemed pertinent are analyzed and summarized.

Measures of cost behavior

Table 38 gives the ratio of current operating expenses to total assets by state, structure, and for the nine size classes. Current operating expenses include officers salaries, employees wages, officer and employee benefits, fees paid to directors and members of the

TABLE 38
RATIOS OF TOTAL CURRENT OPERATING EXPENSES TO ASSETS OF BANKS BY SIZE AND TYPE
OF STRUCTURE: CALIFORNIA, OHIO AND ILLINOIS
DECEMBER, 1962

Deposit Sizes (in dollars)	Class No.	California Branch	California Unit	Ohio Branch	Ohio Unit	Illinois Unit
0 to 1,000,000	1		3.09		2.83	2.51
1,000,000 to 1,999,999	2		3.41		3.00	2.69
2,000,000 to 4,999,999	3	4.02	3.22	3.11	3.00	2.80
5,000,000 to 9,999,999	4	4.16	3.39	3.26	2.91	2.97
10,000,000 to 24,999,999	5	4.11	2.84	3.18	2.79	3.23
25,000,000 to 49,999,999	6	4.03		3.20		3.22
50,000,000 to 99,999,999	7	4.00		2.92		3.20
100,000,000 to 499,999,999	8	3.77		2.65		3.04
500,000,000 to 12,999,999,999	9	3.41		2.75		2.16
Mean		3.45	3.11	2.83	2.92	2.67

Source: Tables 1 and 11, Appendix D.

CHART X

RATIOS OF TOTAL CURRENT OPERATING EXPENSES TO ASSETS
OF BANKS BY SIZE AND TYPE OF STRUCTURE:
CALIFORNIA, OHIO AND ILLINOIS

Source: Table 38

executive, interest on time deposits, interest and discount on borrowed money, and expenses of bank premises including depreciation. Chart X illustrates these ratios by size and structure.

The most startling observation that can be made from observing Chart X is that for all size classes, state-wide branch banks have a higher ratio of costs to assets than either unit banks in Illinois or Ohio or even Ohio limited branch banks. The second most startling observation is that size has a different affect on different structures. For instance, there is a definite downward sloping average cost curve for state-wide branch banks (although the total reduction is just over one-half of one percent). At the same time, unit banks in Illinois of the small size classes one through four have lower average costs than the larger size classes five through eight. Only in the largest class (nine) do large unit banks have lower average costs than the first four size classes (although average costs decline slightly from class five through nine). This is in direct contrast to an earlier study made of Illinois unit bank average costs. S & M (Schweiger and McGee) found, studying the same banks in 1959 and using the same ratio, that unit bank costs declined as size increased. However, it seems the reason for this disparity of costs results could be

explained by two reasons. First, S & M used an arithmetic average of the ratios of each bank in the size classes. Any banks having exceptionally higher cost ratios in classes one and two could have pulled this class average higher in S & M's study. Second, S & M classified banks according to type of community in Illinois and they found that smaller "Illinois banks had lower costs when they were located in less congested metropolitan areas or in small towns."¹¹⁸

¹¹⁸Schweiger and McGee, op. cit., p. 315.

Undoubtedly there is a greater number of these small banks (sizes one through four) located outside of metropolitan areas. This location factor would tend to pull down the average costs for the extremely small classes of banks.

A third difference to be noted from Chart X is that limited branch banks in Ohio have slightly lower average costs than unit banks in Illinois in four out of seven comparable size classes. In general, the average costs of banking, measured by the ratio of current expenses to assets, declines slightly for limited branch banks in Ohio.

When a comparison is made between California unit

banks and branch banks, one finds that unit banks have more than a half percentage point advantage over state-wide branch banks of comparable sizes, except in class nine where state-wide branch banks have average costs equal to unit banks in class two.

In general, limited branch banks in Ohio have higher average costs than unit bank in Ohio of comparable sizes.

Out of the three studies in which costs were analyzed not only by size but by structure, all three found that branch banks had higher average costs than comparable size unit banks.

Horvitz found that

For any given size and time deposit ratio, the branch bank expenses were greater (with only one exception) than the unit bank costs. What is important is not only the fact that branch bank costs were higher but also the considerable spread between branch and unit bank costs.¹¹⁹

¹¹⁹Horvitz, op. cit., p. 37.

S & M, in their multi-variate analysis of bank costs for all Federal Reserve member banks, found that

Branch banks tended to have operating expense rates \$262.485 (per \$100,000.00) higher than unit banks, holding our other variables constant. On average, to achieve equally low or lower expense rates, a branch

bank would have to be two size classes larger than a unit bank.¹²⁰

¹²⁰Schweiger and McGee, op. cit., p. 324.

Alhadeff found that

Branch banks on the whole have higher unit costs than large unit banks although the branch banks are typically larger than the largest category of unit banks.¹²¹

¹²¹Alhadeff, op. cit., p. 97.

In two out of three of the above mentioned studies, there was no attempt made to separate banks operating under state-wide branch laws. (Of course, Alhadeff's study centered on only state-wide branch banks and thus, in effect, separated the two.) From Chart X one can see that limited branch banks have average costs comparable to unit banks in all size classes. Thus, if limited branch banks had not been separated from state-wide branch banks, the combined branch bank average costs would have been somewhere in between the two branch averages (neither as low, as limited, nor as high as state-wide branch banks). From this study one can conclude that there is a real cost difference between state-wide branch banks and limited branch banks of comparable sizes.

The second measure of cost behavior, the ratio of current operating expenses to total loans, shows an average cost relationship more in keeping with traditional economies of scale theory. Table 39 gives the ratio of costs to total loans by structure, size, and state. Chart XI illustrates these relationships. The results, as shown in Chart XI, of using total loans as a measure of output are exactly as would be expected after analyzing the ratio of total loans to assets in Chapter VI. Chart III, Chapter VI, illustrated that for unit banks in Illinois the ratio of total loans to assets was low for the small banks and gradually increased in size for the larger banks, the largest class still having a ratio of loans to assets lower than either limited branch or state-wide branch banks of the same size class. Knowing this relationship, it is partially a matter of mathematics to arrive at the relationship in Chart XI. Given the same current operating expense figure (dividend), a smaller divisor, relative to other banking structures, will produce a larger quotient, relative to other structures.

Thus, state-wide branch banks have a lower average cost relationship in three size classes than Illinois unit banks, and limited branch banks have average costs much lower than Illinois unit banks. A further

TABLE 39
RATIOS OF TOTAL CURRENT OPERATING EXPENSES TO AGGREGATE LOANS OF BANKS
BY SIZE AND TYPE OF STRUCTURE: CALIFORNIA, OHIO AND ILLINOIS
DECEMBER, 1962

Deposit Sizes (in dollars)	Class No.	California Branch	California Unit	Ohio Branch	Ohio Unit	Illinois Unit
0 to 1,000,000	1		9.37		7.63	7.83
1,000,000 to 1,999,999	2		10.94		6.99	7.50
2,000,000 to 4,999,999	3	8.05	6.66	6.71	6.99	7.43
5,000,000 to 9,999,999	4	7.72	7.85	7.05	6.45	8.12
10,000,000 to 24,999,999	5	8.90	6.68	6.91	6.14	8.47
25,000,000 to 49,999,999	6	7.47		7.02		8.17
50,000,000 to 99,999,999	7	7.76		6.32		7.64
100,000,000 to 499,999,999	8	6.93		5.82		7.18
500,000,000 to 12,999,999,999	9	6.43		5.18		4.50
Mean		6.52	7.17	5.93	6.62	6.16

Source: Tables 5 and 11, Appendix D.

CHART XI

RATIOS OF TOTAL CURRENT OPERATING EXPENSES TO AGGREGATE
LOANS OF BANKS BY SIZE AND TYPE OF STRUCTURE:
CALIFORNIA, OHIO AND ILLINOIS

Source: Table 39

implication in using this ratio is that because of the fact that there is either a slight increase in the ratio of loans to assets as size increases (in the case of state-wide branch banks) or a great increase in the ratio of loans to assets as size increases (in the case of Illinois unit banks), and because the ratio of expenses to assets does show a slight negative relationship as size increases, the ratio of expenses to loans falls quite sharply as size increases for all structures.

From the above analysis one can conclude that the ratio of expenses to loans as compared with the ratio of expenses to assets gives at least a partial explanation of why state-wide branch banking appears more costly in one case and at least equally costly in another. Banks making more loans per dollar of assets will have more costs per dollar of assets (and more revenue per dollar of assets, as will be seen). Thus, small unit banks in California, Illinois, and Ohio have lower costs when measured against assets, and higher costs when measured against loans. This relationship seems quite logical at first glance. Small banks, especially unit banks, have a greater share of assets in government securities than do large banks, especially branch banks. Government investment activity, entailing less active promotion by banks, would mean less costs to

banks. This is consistent with the above results.

But, how does one explain the fact that limited branch banks in Ohio have a higher ratio of loans to assets in all size classes yet the lowest ratio of expenses to assets in four out of seven size classes? The explanation of why costs are higher for branch banks must be different for state-wide branch and limited branch banks. It cannot be explained on the basis of aggregate loans alone.

One important reason for this cost difference between state-wide and limited branch banks is that the state-wide branch banks in California have higher ratios of time to total deposits, thus incurring higher interest costs than limited branch banks in Ohio. This can be seen from Chart IV, Chapter VI. In five out of seven comparable size classes, state-wide branch banks have higher ratios of time to total deposits than limited branch banks in Ohio. Also a percentage distribution of the components of total costs for the three states shows that for California, interest costs as a percent of total costs were four percentage points higher than in either Ohio or Illinois. The percentages of total costs made up of interest expenses were 42.2, 38.4, and 37.8 for California, Ohio and Illinois

respectively. However, there are other cost affecting factors that are also important.¹²²

¹²²Annual Report, The Federal Deposit Insurance Corporation, 1962, Table 120, pp. 154-163.

Past studies have given some explanations as to why cost differences exist, both as size of bank increases and for different structures. Bank costs can be divided into three categories, the two most important of which are labor and interest costs. The third is made up of occupancy expenses.

Wage costs, relative to output, depend on a series of factors. Wage costs are a function of the wage rate and the volume of employment in relation to output. Horvitz concludes that average salaries paid to employees vary more with the size of bank than with any other factor. There is a direct relationship between wage rates and size of bank.

Large banks tend to be located in large cities while small banks tend to be located in small towns. Since wage rates are generally higher in the large cities, it is likely that large banks must pay higher wage rates than small banks. Furthermore, because of the prestige in a small town of being a bank officer, many officers of small banks are apparently willing to work for

a small bank for relatively low salaries.¹²³

¹²³Horvitz, op. cit., p. 16-17.

Because of this direct relationship between wages and size, the inverse relationship between costs and size must represent a real rather than a pecuniary economy.

One study has found that large banks, even though they must pay more for both officers and employees, use fewer officers per employee. This is one of the ways in which large banks can economize on labor resources, thus experiencing lower labor costs per dollar of output.¹²⁴ Also, it was found that because of the declining

¹²⁴Gramley, op. cit., p. 26.

number of officers to employees as size increased, the average cost per worker (both officers and workers combined) was the same for all size classes, thus "lower wage and salary payments per dollar of assets at larger banks must derive from fewer numbers of employees per dollar of assets"¹²⁵ and represent real economies of scale.

¹²⁵Ibid., p. 27.

In order to see what differences existed in managerial expenses data were gathered on officer salaries and director fees. Chart XII illustrates the ratio of these costs to assets among structures and as size increases. (See Appendix C, Table 1, for actual ratios). One can see that the amount of managerial expense per dollar of assets declines as size increases. This lends support to the above point that larger banks use fewer officers per employee. The chart also illustrates a characteristic of state-wide branch banking that might logically be expected. Branch bank managerial costs decline per dollar of assets but state-wide branch managerial costs remain higher than equivalent size unit or limited branch bank managerial costs. In many cases, there are more branch offices per state-wide branch bank than for comparable size limited branch banks. This greater number of branches would necessitate more officers, thus resulting in a higher managerial expense per dollar of assets than comparable size unit or limited branch banks.

It must be pointed out that the differences among structures in managerial expenses are very slight and also that a job that is classified as being a managerial position by one bank may not be classified as such by another bank. This is especially true as size

RATIOS OF OFFICERS SALARIES AND DIRECTORS FEES TO ASSETS
OF BANKS BY SIZE AND TYPE OF STRUCTURE:
CALIFORNIA, OHIO AND ILLINOIS

Source: Table 1, Appendix C.

increases. As one author states, "it is probable that smaller banks tend to classify as officers persons whose functions would be performed by non-officer personnel at larger banks."¹²⁶

¹²⁶Ibid., p. 26.

In any event, economy in the use of labor measured by labor costs per dollar of assets is dependent not only on wage rates but on the volume of employment per dollar of output. The latter factor depends upon the size mix of loans, the loan mix and the product mix. The size mix of loans has to do with loans classified by size. A larger size loan means less administrative costs per dollar of loan and a smaller loan means greater costs. The loan mix refers to the different types of loans made by banks. Total loans can be broken down into farm loans, business loans, consumer loans, and mortgage loans. S & M find that costs increase with increased percentages of consumer and business loans.¹²⁷ However, Gramley

¹²⁷Schweiger and McGee, op. cit., p. 324.

found that only consumer loans, as a loan type, affected average costs.

. . . the division of loans by major classes of borrower (except for consumer loans) seems to register relatively little impact on bank cost ratios. This conclusion might well indicate, however, that the administrative costs of making a loan are determined not so much by the type of borrower as by characteristics of the individual loan transaction, particularly the size of loan. Consumer loans are high cost assets because they are small loans and because the bulk of them are repaid in installments.¹²⁸

¹²⁸Gramley, op. cit., p. 33, words in parantheses added for context clarification.

After further study, Gramley went on to substantiate the above hypothesis.

A significant portion of the decline in cost ratios with increasing bank size . . . must be ascribed to the fact that, as a bank increases in size, it deals with larger borrowers who need larger loans.¹²⁹

¹²⁹Ibid., p. 34.

The product mix of banks has to do with the relative amount of loans in different banks. This was measured in Chapter VI by the ratio of total loans to assets. Alhadoff claims, as was claimed in an earlier section of this chapter, that, *ceteris paribus*, "a bank with a higher percentage of loans as against investments

has also higher unit costs" (costs per dollar of output).¹³⁰

¹³⁰Alhadeff, op. cit., p. 89.

How then do state-wide branch, limited branch, and unit banks match up to these cost affecting factors? Alhadeff found that in California, branch bank costs per dollar of output was higher than unit bank costs. This was true because branch bank labor costs and interest costs were higher than unit bank labor and interest costs. Not only did branch banks in California have a higher loan ratio, but they also has a size mix of loans that made branch banks more costly to operate than unit banks. As Alhadeff states:

This greater stress on loans among branch banks is partly responsible for the higher wage costs (and, thus, unit costs) in branch banks. This follows from the fact that loans are more expensive to transact than investments. Whereas the latter are generally rated by standard investment manuals (e.g. Poor's), each loan must be investigated separately. Even large loans where the credit check may be less important still must be formally negotiated through loan contracts, and so on.¹³¹

¹³¹Ibid., p. 98.

Also, Alhadeff found that the size mix of loans (stressed so heavily by Gramley as previously noted) was such that branch banks have a higher proportion of small loans than the largest unit banks. This difference is a function of banking structure more than anything else. As the size of the branch bank increases, state-wide branch banks tend to locate branches in small towns. Thus, as size of branch bank increases, the per cent of offices outside metropolitan areas increases. Since borrowers in these areas are usually small, the per cent of total loans made up by small loans increases and the higher the per cent of small loans, the higher the wage cost.¹³²

¹³²Ibid., p. 91-92.

Unit bank costs decline much more sharply than do branch bank costs when measured against loans. As was seen in Chapter VI, small unit banks specialize in farm loans and large unit banks specialize in business loans. Although lacking data on the size of these loans, one would probably not be mistaken to assume that those farm loans are small whereas the business loans made by large unit banks are quite large. Thus, costs, as measured by operating expenses to loans, are high for small unit banks and lower for large unit banks. This size of loan

specialization, as pointed out above, would not be nearly as clear cut for branch banks as for unit banks.

Also, Alhadeff found that branch banks had higher wage costs because branch banks made a variety of loans which large unit banks did not make.¹³³

¹³³Ibid., p. 99.

Alhadeff found that interest costs per dollar of assets for state-wide branch banks tended to be higher than interest costs for Californian unit banks. Greater state-wide branch bank interest costs undoubtedly contribute to greater state-wide branch bank average total costs as found in this dissertation. This is true simply because state-wide branch banks have a higher ratio of time to total deposits than do Illinois unit banks (especially in the large size classes) and a slightly higher ratio than do limited branch banks. However, the ratio of time to total deposits does not vary appreciably among structures (other than when Illinois unit banks are included in the comparison) and seems to vary more with size, whereas average total costs vary more with structure. This difference between cost and time deposit variation means that time deposit interest costs are less important as an explanation of cost differences for different size

banks of similar structures. This is even more true when a structure has a low load factor. If the load factor is low, then the relative cost importance of loans is smaller and the relative cost importance of time deposits is greater. Thus, interest costs explain a greater amount of the cost variation for the relatively low load factor unit banks (and to a certain extent for Ohio limited branch banks) than for the relatively high load factor California state-wide branch banks. Comparing Chart X with Chart IV of Chapter VI, one can see as size of bank changes, a greater similarity between time deposits and average costs for all unit banks and to a certain extent for limited branch banks, than for state-wide branch banks. Thus, the high load factor is an important variable in explaining the higher costs of state-wide branch banks and is of lesser importance in explaining the differences in costs for different size state-wide branch banks, whereas the time deposit ratio is an important variable in explaining differences in cost behavior for different size unit banks (and to a lesser extent, for different size limited branch banks).

There still remains the problem of explaining why limited branch bank average costs per dollar of assets are more comparable to Illinois and Ohio unit banks costs than to California state-wide branch bank costs

(even though the limited branch bank loan to asset ratio is higher than for comparable unit banks). One hypothesis that can be made is that medium size limited branch banks perform similarly to medium size unit banks in the types of loans that each structure makes. Therefore, if medium size unit banks and limited branch banks emphasize the same types of loans, perhaps the average size of these loans are more comparable, thus making costs more comparable. However, it still remains that medium size limited branch banks stress consumer loans (supposedly high cost loans) and real estate loans more than do medium size Illinois unit banks. Again, it is impossible to arrive at any conclusions in this study on why this cost relationship exists. More detailed research is needed on the unique characteristics of limited branch banks before any definite conclusions can be made.

Summary

Costs, measured by the ratio of operating expenses to assets, are higher for state-wide branch banks than for either limited branch or unit banks. However, costs measured by the ratio of expenses to loans show that in some size classes costs for state-wide branch banks are lower than costs for unit banks and that limited branch banks have the lowest costs of any structures. Either measure illustrates economies of scale, with the ratio

of expenses to loans showing lower costs for larger banks than for smaller banks for all structures.

Studies have shown that wages and interest costs are higher for state-wide branch banks than for unit banks. The reasons for this are that state-wide branch banks have more loans per dollar of assets and more time deposits per dollar of total deposits, and that larger branch banks tend to have a larger per cent of the total number of loans that are small than do comparable size unit banks. Size of loan, rather than type of loan, is an important determinant of costs and this factor explains why small unit banks (having made small size loans) have higher costs per dollar of loans than do larger unit banks. It also hypothesized that, since limited branch banks of medium size diversified their loan holdings in a fashion similar to comparable size unit banks in Illinois, limited branch bank costs are similar to Illinois unit bank costs. However, more study is needed on this relationship.

The ratio of costs to assets may be a measure of superiority (lower ratio - more efficient, etc.) but this measure must be interpreted in the context of other measures. Certainly a bank that maintains a higher proportion of non-loan assets is going to have lower costs per dollar of assets - especially if it is a small bank serving a

small, local market in which the bank feels no pressure to pay higher wages and interest on time deposits, and in fact maintains a higher proportion of non-interest cost demand deposits than time deposits. But, are these measures of efficiency in banking? The fact that the bank having a lower proportion of its assets in loans has already been judged to be less efficient, shows that whether a structure is better or worse can only be answered by analyzing many characteristics, including lending, expenses, and earnings.

EARNINGS BEHAVIOR

In a very real sense, an analysis of earnings behavior of banks is more important in seeking an answer to the question of efficiency or superiority than is an analysis of cost behavior. This is true especially when examining net earnings figures as opposed to gross earnings because the net earnings figure summarizes both cost and earnings advantages and disadvantages. Thus, this section is vitally important when considering the net performance of banks, both of different structures and of different sizes.

Criteria of superiority

Again, one must define what is to be used as a measure of one bank's superiority over another. With

earnings, there is a vast array of possible measures that could be used, including the ratios of current operating earnings to assets, net operating earnings to loans, or net operating earnings to capital. All of these measures are based on different concepts, thus all of them can be used to measure different aspects of a bank's superiority. The first two measures are gross measures of earnings superiority and are more similar to the economist's definition of average revenue. Depending on how one wishes to define the output of a bank, either the ratio of current operating earnings to assets or the ratio of current operating earnings to loans can be used to measure average revenue per dollar of output. In the previous section of this chapter, both assets and loans were used to give a picture of average costs per dollar of output. Since it was found that the differences in costs between the use of assets or loans as a measure of output reflected differences in aggregate lending behavior among structures, it can be assumed that differences in the ratio of current operating revenue to assets and to loans will be caused by the same thing - differences in aggregate lending behavior.

When one turns to measures of net earnings superiority, one finds even more concepts of superiority or profitability or efficiency. Here, the different

measures to be used are based on different questions for which different answers are sought. For instance, the ratio of net earnings to capital has been said to measure the rate of return to the investor and to influence considerations of entry and exit in the banking industry. The ratio of net earnings to assets has been taken to measure the earning power on the corporation's output as has the ratio of net earnings to loans.

It is felt that the most important net earnings measures are the ratios of net earnings to assets and to capital since the ratio of net earnings to assets and to loans are both attempts, more or less, to measure the same thing and will differ only as the relationship between assets and loans differs. This variation has already been amply described. Of most importance in discarding the net earnings to loan measure, however, was the fact that there was no appreciable difference between net earnings on assets and on loans. This is true, as will be seen, because the relationship between the ratios of operating costs to assets and gross revenues to assets was the same for all sizes and structures as was the relationship between the ratios of operating costs to loans and gross revenues to loans. (See Appendix C, Table 3 and Chart I, for the ratios of net earnings to loans.)

Finally, since these measures of profitability are net measures, differences in net earnings relationships on assets as size increases and for different structures stem only from differences in the relationships between operating costs and gross operating earnings on assets. However, when net earnings are taken as a ratio to capital, then differences in the ratio of capital to assets among sizes and structures become important.

Measures of total earnings behavior

Table 40 gives the ratio of total current operating revenue to assets for banks classified by state, structure and size. Chart XIII illustrates this ratio for the same classifications. Total current operating revenue includes interest and dividends on securities, interest and discount on loans, service charges on bank loans, service charges on deposit accounts, trust department revenue, and other miscellaneous earnings.

A comparison of Chart X with Chart XIII shows quite a similarity between the ratio of total earnings to assets and total current operating expenses to assets. In the first place, state-wide branch banks have higher average earnings on assets than do any other classification or size. State-wide branch banks also had a higher average cost per dollar of assets than any other type

TABLE 40
RATIOS OF TOTAL CURRENT OPERATING REVENUE TO ASSETS OF BANKS BY SIZE AND
TYPE OF STRUCTURE: CALIFORNIA, OHIO AND ILLINOIS
DECEMBER, 1962

Deposit Sizes (in dollars)	Class No.	California Branch	California Unit	Ohio Branch	Ohio Unit	Illinois Unit
0 to 1,000,000	1		1.99		3.88	3.36
1,000,000 to 1,999,999	2		3.13		3.98	3.65
2,000,000 to 4,999,999	3	4.98	3.82	3.98	3.97	3.79
5,000,000 to 9,999,999	4	5.12	4.29	4.10	4.00	4.00
10,000,000 to 24,999,999	5	5.10	3.64	4.16	4.16	4.12
25,000,000 to 49,999,999	6	5.18		4.16		4.04
50,000,000 to 99,999,999	7	4.93		4.08		3.99
100,000,000 to 499,999,999	8	4.85		3.96		3.88
500,000,000 to 12,999,999,999	9	4.55		3.95		3.53
Mean		4.59	3.88	4.02	4.02	3.78

Source: Tables 1 and 10, Appendix D.

RATIOS OF TOTAL CURRENT OPERATING REVENUE TO ASSETS OF BANKS
BY SIZE AND TYPE OF STRUCTURE: CALIFORNIA,
OHIO AND ILLINOIS

Source: Table 40

or size of bank (except California unit banks of size class two).

Another similarity is the effect of bank size on total earnings. In general, earnings decline slightly as size increases for state-wide branch banks as do their costs. And, total earnings, as size of bank increases, at first rise and then fall for Illinois unit banks as did their costs.

However, this is about as far as the similarity goes between total earnings and costs. Ohio limited branch banks have slightly higher earnings per dollar of assets than Illinois unit banks and average earnings approximately the same as Ohio unit banks whereas Ohio limited branch banks had some size categories in which they experienced lower average costs than Illinois unit banks and higher average costs than Ohio unit banks. Also, size does not seem to affect earnings for either Ohio limited branch banks or Ohio unit banks, whereas there was a slightly negative relationship between average costs and size for these two classes of banks.

The largest difference between total costs and earnings occurs for Californian unit banks. These banks had average costs that, in general, compared favorably with other unit banks, but the average total earnings for Californian unit banks is some 42 per cent lower than the

closest comparable size bank class in class one and some 14 per cent lower in class two. Earnings on assets for Californian unit banks in classes one and two are so low that earnings are less than the rate of costs to assets, thus making net earnings negative for those two size classes.

Another observation that should be stressed is that, as was found in analyzing average costs, there is a great difference between limited branch bank and state-wide branch bank earnings on assets, limited branch banks being more comparable to unit banks than to state-wide branch banks. Again, this points out the fact that there are great differences between branching systems that are allowed to extend over larger areas and those that can only expand over small areas. Any decisions as to what branching law is the most advantageous must take these differences into account. Limited branch banks produce a greater amount of loans per dollar of assets than do comparable size unit banks, but less than comparable size state-wide branch banks. However, limited branch bank average costs per dollar of assets are lower than comparably sized unit banks while limited branch bank revenues per dollar of assets are slightly higher, which should make limited branch bank net earnings on assets slightly higher than banks operating under a completely unit banking system.

There are some comparable features between limited branch banks and state-wide branch banks. For instance, one would expect earnings on assets to rise (or be higher than unit banks) as the ratio of loans to assets rose (or was higher than unit banks) since loans yield, in general, more than non-loan assets. When one compares earnings on assets to the ratio of loans to assets, one finds that, for state-wide branch banks, earnings are higher when the ratio of loans to assets is higher (although the degree of change from one size to another is not as great for earnings as it is for loans). Similarly, when examining limited branch banks, one finds that a higher ratio of loans to assets for those banks than for unit banks produces a higher ratio of earnings to assets (except that there is less of a connection between the direction of movement as sizes change for limited than for state-wide branch banks). There is also a similarity between the two types of branch systems when the effects of size are examined. Size of bank affects state-wide and limited branch bank earnings only slightly whereas size affects unit bank earnings much more.

There are also differences among the different unit banking systems of the three states. Unit banks in Ohio experience rather stable average costs and earnings on assets, whereas Illinois unit bank costs rise with size

as do their earnings. Also, unit banks in Ohio are quite similar to limited branch banks in Ohio in their earnings and expense behavior, but not in their lending behavior. Unit banks of comparable sizes in California, in comparison with Ohio unit banks, experience higher average costs and much lower earnings and a rather erratic relationship between loans and assets as size increases (the load factor being, in general, lower for California unit banks than for Ohio unit banks.)

It would seem logical that, since loans yield more than non-loan assets, revenues per dollar of assets should at least rise when the ratio of loans to assets rises as size of bank increases. Yet, the ratio of revenues to assets for unit banks seems to have little relationship to the ratio of loans to assets. A possible explanation for this can be deduced when differences between structures in their loan to asset ratios are taken into account. Revenue, as a ratio to loans rather than to assets, accomplishes this adjustment. Chart XIV illustrates this ratio by size, structure, and state. Again, as was true with the ratio of costs to loans, the differences between Chart XIII, revenue to assets, and Chart XIV, revenue to loans, stems from the differences in lending behavior among sizes and structures. Small unit banks have lower ratios of loans to assets and for

RATIOS OF TOTAL CURRENT OPERATING REVENUE TO AGGREGATE LOANS
OF BANKS BY SIZE AND TYPE OF STRUCTURE:
CALIFORNIA, OHIO AND ILLINOIS

Source: Table 2, Appendix C.

a given amount of earnings the smaller bank's ratio of earnings to loans will be higher than banks having higher ratios of loans to asset. The negative trend of revenue to loans for unit banks is due partly to the fact that revenue to assets does not fluctuate appreciably with size, and partly to the fact that loans to assets rise steeply with size of bank. (Given an amount of revenue, a greater amount of loans in relation to assets will result in a much smaller ratio of revenue to loans than a smaller amount of loans in relation to assets.)

But, the above merely explains why, mathematically, the ratio of revenue to loans falls with increasing bank size. What are the aspects of bank behavior that cause the ratio of earnings to assets to fall with increasing bank size? Why is the ratio of earnings to assets so high for small Illinois and Ohio unit banks and so low for large Illinois unit banks when the load factor is low for the small unit banks and high for the largest unit banks? Why don't the two ratios move together as size of bank changes? And, if loans are high yielding assets, why is the ratio of revenue to loans negatively related to size whereas the load factor is positively related to size of unit bank?

There are two general answers to those questions. First, prices for similar services are higher for small

banks than for large banks, and second, the loan mix and size mix changes as size of bank increases.

Small unit banks generally charge higher prices for comparable services than do large unit banks and this would tend to make unit bank revenue per dollar of assets rise less sharply than the unit bank loan to asset ratio. This fact would also tend to raise the ratio of revenue to loans for small unit banks and lower the ratio of revenue to loans for large unit banks. Stated another way, the reason the ratio of revenue to loans for unit banks falls so sharply as size increases is because small unit banks charge, for comparable services, higher prices than do larger unit banks. Gramley, in analyzing the effects of size on banking behavior from a sample of unit banks, found that average interest rates on similar loans did, indeed, decline as size of unit bank increased. He hypothesized that the cause of this relationship was due to the fact that the strength of competitive forces increased with size of bank. The greater degree of competition in cities is also due to the fact that larger firms located in large cities will have more alternatives for borrowing purposes than small businesses in small towns. This would tend to make rates on similar services among competitors more equal. Gramley found in his study

that, indeed, rates were more similar in cities and among larger banks than in towns and among smaller banks.¹³⁴

¹³⁴Gramley, op. cit., p. 45, 46, 47.

The ratio of revenue to assets does not rise as steeply as does the load factor when size increases for the unit banks in Illinois because the smaller banks make loans which are smaller, of greater risk, and higher priced, thus making revenue per dollar of assets higher. For large unit banks, size of loan is larger, loans are lower in risk, and the prices of services are lower, thus making revenues per dollar of assets lower. An examination of loan portfolios in Chapter VI revealed that small unit banks in Illinois specialize in farm loans, and large unit banks specialize in business loans. Undoubtedly the average size of farm loan made by small unit banks is smaller than the average size of business loan made by large unit banks. And, undoubtedly, the yield on these small farm loans is higher than the yield on the larger business loans. Also, medium size unit banks in Illinois tend to diversify their loan portfolios more and make more consumer and mortgage loans per dollar of assets than either small or large unit banks. Consumer loans are small, high yield loans compared with farm or

business loans, thus revenue per dollar of assets is higher for medium size unit banks in Illinois than for either small or large unit banks in Illinois.

State-wide branch bank revenue is high for the same reasons that their costs are high. That is, state-wide branch banks make more loans per dollar of assets than unit banks and state-wide branch bank loan portfolios are more diversified, being made up of relatively small, high yield consumer loans, real estate loans, business loans, and in the larger size classes, farm loans. One reason for this diversity in loans in comparison to unit banks is that, of course, branch banks have more outlets for credit and as the state-wide branch bank gets larger it tends to place more branches outside of metropolitan areas, thus attracting a greater number of small size, administratively more costly, but higher yielding loans. However, the largest size class state-wide branch banks have the highest ratio of business loans to assets of all state-wide branch size classes. These business loans are undoubtedly made up of extremely large loans that are of relatively low risk and are probably made at the relatively low prime rate. This would make earnings on assets for the largest state-wide branch banks lower than for the smaller state-wide branch banks.

Californian unit bank revenue, as a ratio to assets,

is quite low for the first two size classes. The reasons for this can be found in the nature of their loan placements. In the first place, these two size classes have the lowest ratio of aggregate loans to assets, except for one class of Illinois unit banks, of all structures and sizes of banks. Californian unit banks, especially those of the first two or three size classes, deviate drastically from similar size unit banks of other states in farm loan placements. Californian unit banks have a very low ratio of farm loans to assets. However, Californian unit banks have a higher ratio of business loans to assets than unit banks in either Ohio or Illinois. Californian unit banks have, in general, more real estate loans and more consumer loans per dollar of assets than Illinois unit banks, but less of both types of loans than unit banks in Ohio. It seems, from this analysis, that small Californian unit banks have less revenue per dollar of assets because they are sub-standard in farm loan placements and in total loan placements when compared with Ohio and Illinois unit banks. Small unit banks in Illinois depend on farm loans for their revenue (and, of course, government securities) whereas small Californian unit banks have a very low share of their assets in farm loans and a somewhat higher share of assets in business loans,

Business loans seem to be lower yielding assets than are farm loans.

There is one comment that has been referred to in previous sections regarding the poor performance of small Californian unit banks. The quantity of deposits held by banks is a good measure of size in usual cases where banks are fairly well established, going concerns. However, when the bank is relatively new and cannot perform well in terms of loans (and thus deposits) because of the newness or perhaps because of stiff competition from already existing branch banks and other financial institutions, deposits become a much more ambiguous measure of bank size. This situation may fit the activities of these small unit banks in California. There are only eight banks in the first two size classes of unit banks in California whereas there are ninety and two-hundred and twenty-six banks in these same two classes in Ohio and Illinois respectively. Thus, newness or problems of competition, even though they may be considered highly random events in Ohio and Illinois and therefore may not be considered of significant influence on size class performance, could influence small size class unit bank behavior in California much more readily. Evidence of this contention is the fact that these two smallest size class banks have, on the average, a

tremendously high ratio of capital to assets (denoting unused capacity) being 43 and 21 per cent in classes one and two, respectively. A measure of newness could be the relative distribution of total assets between capital and deposits for banks of similar asset sizes. A newer bank would have a greater proportion of assets in capital and a smaller proportion of deposits than an older bank. And, this is exactly the case of the first two classes of unit banks in California relative to unit banks in both Ohio and Illinois. In fact, both Ohio and Illinois unit banks compare quite favorably in the distribution of capital and deposits to assets.

Limited branch banks in Ohio have earnings on assets quite similar to medium size Illinois unit banks (and, quite similar to smaller size Ohio unit banks). This is true even though Ohio limited branch banks had a higher load factor than either Ohio unit banks or Illinois unit banks. Smaller Ohio limited branch banks have similar shares of assets in farm loans as do comparable size Illinois unit banks. These same size, limited branch banks have similar shares of assets in business loans as do both Illinois and Ohio unit banks. However, the similarity of business loan portfolios between Ohio limited branch and Illinois unit bank ends in class nine. Class nine Illinois unit banks specialize in business

loans whereas Ohio class nine limited branch banks are more diversified, thus probably causing these banks to have higher average revenue per dollar of assets than Illinois unit banks of similar sizes. The big differences between medium size limited branch banks and medium size Illinois unit banks is in the area of consumer and mortgage loans. Ohio limited branch banks have much higher proportions of total assets in the form of mortgage and consumer loans than do comparable size Illinois unit banks. These higher yielding loans probably give Ohio limited branch banks their slight earnings advantage over Illinois unit banks.

Comparably sized Ohio unit bank earnings on assets are similar to those of Ohio limited branch banks, even though their ratios of total loans to assets are lower, because these unit banks have a slightly higher ratio of farm loans to assets, (which compensates for the slightly lower ratio of business loans to assets) and have comparably high ratios of consumer and real estate loans to assets. Small sized Ohio unit banks (classes one and two) compare favorably with larger Ohio branch and unit banks because of a much larger share of higher yielding farm loans. One should be reminded again of Gramley's findings. Smaller banks in smaller towns tend to charge higher prices for comparable services than larger banks

in larger towns. This helps to explain why smaller unit banks, having smaller shares of consumer, real estate, business, and total loans to assets, would have ratios of revenue to assets comparable to larger banks.

Smaller unit banks in Ohio have a higher ratio of earnings to assets than comparably sized unit banks in Illinois because Ohio unit banks have larger load factors which are made up of higher ratios of high yielding consumer loans and real estate loans. In other words, small Ohio unit banks specialize in farm loans less and are more diversified than small Illinois unit banks. Undoubtedly, these smaller unit banks in Ohio run into competition in making farm loans from medium size limited branch banks. It is impossible to say how much of the differences among similar size unit banks in California, Illinois, and Ohio (in all aspects of their behavior) are due directly to the fact that each competes under different degrees of branch bank regulations (almost zero in Illinois for small unit banks to probably quite high in California). Possibly, the before mentioned price differences between small and large banks that exist because small banks are isolated from competition would be much less in state-wide branch banking areas than in limited branch areas. Unfortunately, the limited scope of this dissertation precludes the testing of this hypothesis

here except to note that in Chapter IV, evidence was presented to prove that state-wide branch banking states have the highest average number of banks in communities of all states, thus lending evidence to the existence of more competitive pricing policies between banks in branch banking areas.

Measures of net earnings behavior

The two measures of profitability used in this paper to describe the "net superiority" of one structure over another are, first, the ratio of net current earnings (before taxes and less charge-offs) to assets, and second, the ratio of net current earnings to capital. The first measures the profitability per dollar of assets or output, while the second measures the net profitability per dollar of investment.

As was expressed earlier, to the extent that total earnings per dollar of assets for different structures and sizes were similar to total costs per dollar of assets, net earnings would not be different among structures. In other words, if earnings were higher but so were costs then net earnings for that class would be similar to a class that had low costs but also low revenues. This situation exists, more or less, for all sizes and structures, except in California unit banks of sizes one and two.

Table 41 gives the ratio of net earnings to assets for banks by size and structure and Chart XV illustrates these relationships. Even though there were great differences between unit, limited branch, and state-wide branch banks in total earnings and costs, net earnings relationships among the same structures are quite comparable. There is a slight tendency for the three structures to diverge from one another as size increases, especially above size five, but in general, all structures are quite close together, the only exception being size one and two California unit banks. These banks have negative net earnings that decline as size increases.

There is a very slight tendency for net earnings to increase with size (see Table 41) but the movement is very erratic especially for Illinois unit banks. Limited branch and state-wide branch banks from size classes five to nine have slightly higher net earnings than Illinois unit banks, but in class nine, Illinois unit banks have the highest net earnings. Ohio unit and Illinois unit, over the first five comparable size classes, are quite similar to Ohio limited branch banks, the former earning slightly more per dollar of assets. Actually, the differences are so slight both among structures (except for California unit banks in classes one and two) and for all size classes, that it is impossible to say whether

TABLE 41
RATIOS OF NET EARNINGS TO ASSETS OF BANKS BY SIZE AND TYPE OF
STRUCTURE: CALIFORNIA, OHIO AND ILLINOIS
DECEMBER, 1962

Deposit Sizes (in dollars)	Class No.	California Branch	California Unit	Ohio Branch	Ohio Unit	Illinois Unit
0 to 1,000,000	1		-1.10		1.05	.85
1,000,000 to 1,999,999	2		- .28		.99	.97
2,000,000 to 4,999,999	3	.96	.60	.86	.98	.99
5,000,000 to 9,999,999	4	.96	.90	.84	1.09	1.03
10,000,000 to 24,999,999	5	.99	.80	.98	1.37	.89
25,000,000 to 49,999,999	6	1.15		.96		.82
50,000,000 to 99,999,999	7	.93		1.16		.79
100,000,000 to 499,999,999	8	1.08		1.32		.84
500,000,000 to 12,999,999,999	9	1.14		1.20		1.38
Mean		1.14	.76	1.18	1.10	1.11

Source: Tables 1 and 14, Appendix D.

RATIOS OF NET EARNINGS TO ASSETS OF BANKS BY SIZE
AND TYPE OF STRUCTURE: CALIFORNIA
OHIO AND ILLINOIS

December, 1962

Source: Table 41

one structure or size has a definite superiority over another in net earnings. The most amazing observation one can make is that even though different structures and sizes behave quite differently (in terms of not only total lending but in terms of types of loans, costs, and revenues), banks of different structures and sizes maintain similar relationships on profitability or net earnings.

Other studies of net earnings among structures, using slightly different subjects for observation, have found similar relationships. Alhadeff found, in California, that:

When the influence of the capital deposit ratio is excluded, as in the use of a net earnings asset measure of profitability, branch banks earnings are less easily distinguished from unit bank earnings because they are lower in about 50 per cent of the cases and higher in about 50 per cent.¹³⁵

¹³⁵Alhadeff, op. cit., p. 191.

However, there is a real difference here between this study and Alhadeff's in the sense that Alhadeff found no differences when examining just California branch and unit banks whereas this study found that small size class one and two unit banks in California have negative net earnings and are considerably inferior to California

branch banks in terms of average net earnings. It should be pointed out that in 1950, the last year included in Alhadeff's study, there were ten banks in the under two million deposit size class, whereas in 1962 there were still eight. In 1950, these two classes (combined in Alhadeff's study) earned 1.06 per cent on assets whereas in this study, they earned - .54 per cent or just over a minus one-half of one per cent on assets in 1962. Thus, the small unit banks of today in California are considerably inferior in terms of net earnings than they were in the past. However, this analysis covers only one year which makes it impossible to say whether or not negative earnings for these small unit banks represents a real trend. But, in no year, from 1938 to and including 1950, did these small classes register negative earnings whereas they did in 1962.

Horvitz also found that there was no appreciable difference between branch and unit banks in their net earnings behavior.

Despite the differences in the various income and expense items, net current earnings were virtually identical for branch and unit banks.¹³⁶

¹³⁶ Horvitz, op. cit., p. 39.

Even when banks operating under limited branch laws are compared with those operating under state-wide branch laws, there is no appreciable difference. State-wide branch banks have higher net earnings on assets in four out of seven size classes, but the differences are so small that they hardly represent a real advantage. Size affects limited branch net earnings more than state-wide branch earnings, although in each structure, net earnings rise slightly with increased size.

When the ratio of net earnings to capital is used as a measure of profitability, a different picture emerges. Table 42 and Chart XVI give the ratios of net earnings to capital by state, structure, and deposit sizes. Size of bank affects this measure more than type of structure. This is true not because size of bank affects net earnings so much but because size affects the ratio of capital to assets. As was seen in Chapter VI, Table 33, the ratio of capital to assets fell with increased size. This would make, given the same net earnings figure, the ratio of net earnings to capital rise as size increased. Another parallel between capital ratios and earnings to capital exists when one focuses on structural differences. There are few extreme structural differences in the ratio of capital to assets, except for California unit banks which had much higher ratios of capital to assets. In

TABLE 42
RATIOS OF NET EARNINGS TO CAPITAL FUNDS OF BANKS BY SIZE AND TYPE OF
STRUCTURE: CALIFORNIA, OHIO AND ILLINOIS
DECEMBER, 1962

Deposit Sizes (in dollars)	Class No.	California Branch	California Unit	Ohio Branch	Ohio Unit	Illinois Unit
0 to 1,000,000	1		-2.51		7.39	5.20
1,000,000 to 1,999,999	2		-1.28		8.93	8.60
2,000,000 to 4,999,999	3	9.93	3.75	9.80	9.94	10.34
5,000,000 to 9,999,999	4	12.40	10.00	10.44	12.33	13.14
10,000,000 to 24,999,999	5	12.50	7.28	11.85	15.26	12.63
25,000,000 to 49,999,999	6	15.98		12.59		11.92
50,000,000 to 99,999,999	7	13.01		13.95		12.20
100,000,000 to 499,999,999	8	13.87		16.29		12.60
500,000,000 to 12,999,999,999	9	18.05		14.89		16.26
Mean		17.59	6.55	14.65	11.63	14.11

Source: Tables 14 and 2, Appendix D.

RATIOS OF NET EARNINGS TO CAPITAL FUNDS OF BANKS BY SIZE AND
TYPE OF STRUCTURE: CALIFORNIA, OHIO AND ILLINOIS

December, 1962

Source: Table 42

examining the ratio of net earnings to capital there are also few structural differences except, again, for California unit banks. As these banks have very high capital ratios in all classes except number five, they also have much lower net earnings to capital ratios in all except size class four. One can only speculate, without a much more intensive study of these banks, as to whether or not poor earnings and high capital ratios are caused by competition disadvantages with state-wide branch banks or by some other factor. Again, in all the years from 1938 to and including 1950 these small unit bank size classes experienced a ratio of net earnings to assets well over 10 per cent, according to Alhadeff's study.¹³⁷

¹³⁷Alhadeff, op. cit., p. 184.

Chart XVI shows that California state-wide branch banks are much superior to California unit banks. However, Ohio limited branch banks have a lower ratio of net earnings to capital than Ohio unit banks in all three comparable size classes. But, Ohio limited branch banks have a higher ratio of net earnings to capital in three out of seven size classes than Illinois unit banks. *Ceteris paribus*, a lower ratio of capital to assets would mean a

higher ratio of net earnings to capital. However, Illinois unit banks have the lowest ratio of capital to assets in size classes five through eight while having also the lowest net earnings on capital in classes six through eight. Thus, as size increases, branch banks, both limited and state-wide, have slightly higher net earnings on capital than Illinois unit banks, except for size class nine. In this class, state-wide branch banks excel while limited branch banks in Ohio have the lowest ratio of net earnings to capital. Thus the ranking from the highest to lowest net earnings on capital in class nine is state-wide, unit, and limited branch banks which is exactly the ranking of the mean deposit sizes for this class. This would tend to reinforce the direct relationship between bank size and earnings on capital.

In all cases, the differences between structures are either mixed or slight. Therefore, it is virtually impossible to say what structure is superior in terms of profitability measured either by net earnings to assets or by net earnings to capital, except that from size five on, branch banks, both limited and state-wide, seem to have a slightly higher rate of earnings to capital over unit banks of comparable sizes. It is impossible to say whether this difference represents a real superiority

except over small California unit banks which are quite inferior to both other state unit banks and to state-wide and limited branch banks.

The ratio of net earnings to capital varies more with size than structure (because the ratio of capital to assets varies with size rather than with structure), thus making larger banks more profitable than smaller banks, at least from the investor's point of view. One hypothesis for this behavior might be that large banks are inherently less risky than small banks. This risk differential could be caused by two characteristics. First, larger banks make more large loans at the prime rate than do small banks and second, large banks have a better opportunity for diversifying their assets than do small banks.

Gramley found that actual losses as a per cent of net earnings diminished as size increased and that deposits were more unstable in small banks than in large banks. Both of these findings would lend support to the contention that risk of enterprise declines with bank size. However, using a multi-variate analysis of capital to assets which included measures of loan diversification, Gramley found that the rate of growth of banks and after-tax profits (both considered non-risk variables) were the two most significant explanatory variables, besides bank size, in determining capital to asset ratios. The

rate of growth was inversely related to capital ratio because ". . . it is more difficult for banks that grow rapidly to keep the expansion of capital in step with the growth of deposit liabilities. Conversely, high after tax profits tend to be positively associated with ratios of capital to assets because high profits facilitated additions to capital from retained earnings."¹³⁸

¹³⁸Gramley, op. cit., p. 57.

Even though the two most significant explanatory variables were non-risk variables and even though over half of the variation in capital to asset ratios was left unexplained, Gramley concluded by stating:

It appears clear from the data on loan losses and deposit declines, however, that small banks do indeed face risks that are in excess of those encountered by large banks. Large-scale operations in banking, by permitting the selection of earnings assets of higher credit quality and enabling greater portfolio and deposit diversification, confer a definite profits advantage by reducing uncertainties about the future. Comparisons of rates of return on assets by size of bank - which do not make adequate allowances for risk considerations - understates the profits advantage of increasing size by an unknown, but perhaps very considerable, amount. Ratios of earnings to capital may overstate the profits advantage of large-scale banking, after due allowances for risk, but it could be argued just as convincingly that differences in profitability are understated by these measures.¹³⁹

¹³⁹Ibid., p. 58.

From the above brief discussion of measures of profitability and the effects of risk on profitability, one can say that profitability is a very confusing and ambiguous concept that does not lend itself to easy, concise measurement. Size does seem to have a positive effect on both the ratio of net earnings to assets and to capital but any advantage of one structure over another is less well defined.

Summary

Total earnings, both as a ratio of assets and of loans, shows the same relationships as did costs as a ratio of assets and of loans. Thus, there is little variation among structures in net earnings performance although size and profitability have a slightly positive relationship.

The above differences in net earnings among structures is very crucial. In Chapter I, three hypothesis were established, two of which were based on earnings and expense behavior. It was hypothesized that state-wide branch banks were superior to both limited branch and unit bank expense and earnings behavior and that limited branch banks were superior to unit bank expense and earnings behavior. Superiority meant that a structure had lower costs and greater earnings which would make net earnings greater for that structure.

The evidence presented in this chapter shows that state-wide branch banks are inferior in their cost performance to both limited branch banks and unit banks and that limited branch banks are about equal to unit banks in their expense performance. These differences are caused by higher labor and interest costs due to different loan to asset ratios and size mix of loans and to the fact that state-wide branch banks have higher proportions of total deposits in interest expensive time deposits. In all cases, unit banks in the three states differ in their cost performance and in their loan ratios and loan size mixes.

On the other hand, when total earnings are examined, state-wide branch banks are as superior to both limited branch and unit banks as they are inferior to these structures in expense behavior. Earnings are high for the same reasons that costs are high, both as a percent of assets and of loans. Also, limited branch and unit banks compare favorably in their total earnings pattern, with limited branch banks having a slightly higher ratio of total earnings to assets than Illinois unit banks. Major differences exist for California unit banks in cases in which the two smallest size classes have very low total earnings to assets when compared to the two other state's unit banks.

In both areas of behavior, costs and revenues, there is a great difference between state-wide branch and limited branch behavior. But the differences offset each other so that when net earnings are used as a measure of superiority, there are only slight and erratic differences among the three types of banking structures. This is true except for California unit banks in classes one and two which have negative net earnings.

Net earnings as a per cent of assets increase with size of bank only slightly but when measured against capital, net earnings increase much more markedly with size.

Thus, on the whole, both unit and branch banks are going concerns and seem to have little superiority over one another in terms of profitability. Aside from this measure the three types of structures produce radically different behavior, both in terms of the average size of bank in the state, the number of individual banks, offices, unit banks, and banks operating branches in the state, and in terms of output performance measured by aggregate loans and by the diversity of loan behavior.

CHAPTER VIII

SUMMARY AND CONCLUSIONS

SUMMARY

This study has found many differences in bank behavior both among banks of different structures and different sizes. It is felt that these differences merit the observation of state and federal legislators and state and federal banking authorities as well as members of the banking and non-banking public. The pertinent points of the analysis are summarized below.

Lending behavior

1. There are systematic differences in lending behavior between branch systems in which the geographic limitations on branching differ. Thus a decision to allow only limited branching with a state will produce a system in which banks will behave differently than banks operating under more liberal state-wide branch limitations.

2. State-wide branch banks are superior to both limited branch and unit banks in aggregate lending behavior. State-wide branch banks achieve this superiority

by providing more diversified lending services and at the expense of investing in the rather passive government securities markets.

3. Limited branch banks are inferior to state-wide branch banks but are superior to unit banks in aggregate lending behavior. However, limited branch banks superiority over unit banks is not so great as state-wide branch bank superiority over unit banks. Limited branch banks achieve this superiority over unit banks in the areas of mortgage and consumer lending.

4. Unit banks operating under a completely unit banking law, are inferior to both state-wide and limited branch banks in aggregate lending behavior and are most inferior in the areas of mortgage and consumer lending and inferior to only state-wide branch banks in business lending.

5. Size of bank does not appreciably affect aggregate lending behavior of state-wide or limited branch banks, but size of bank is very important in determining unit bank aggregate lending behavior, size being positively related to the load factor.

6. State-wide branch banks of all size classes are more diversified than are either limited branch banks or unit banks. Small unit banks specialize in farm loans and large unit banks specialize in business loans, using

government securities to spread the risks of specialization. (The importance of government securities declines with size of unit banks.) Medium size unit banks emphasize consumer and mortgage loans. Limited branch banks are neither as diversified as state-wide branch banks nor as specialized as unit banks. Small to medium size limited branch banks emphasize mortgage, consumer, and some farm lending whereas large limited branch banks emphasize business and mortgage loans and de-emphasize consumer and farm loans. Small state-wide branch banks emphasize mortgage and consumer loans and to a lesser extent business and farm loans. Large state-wide branch banks emphasize business and mortgage loans and to a lesser extent farm and consumer loans.

7. There are definite differences in the lending behavior of unit banks operating under different degrees of branch banking limitations. As has been mentioned above, Illinois unit banks are lowest of all in providing mortgage and consumer loans, below average in providing business loans, and above average in providing farm loans, the latter two loan types being directly and inversely related to bank size respectively. Ohio unit banks behave more like Ohio limited branch banks as the unit bank size increases. In cases where Ohio unit and limited branch banks are comparable in size, unit bank behavior is quite

similar to limited branch bank behavior in aggregate lending and in different types of lending behavior. Possibly because of the greater number of banks in the two small size classes in the other two states, California unit banks of small sizes are completely atypical to other Ohio and Illinois unit and Ohio branch banks. This may be due to conditions considered random in the other states which drastically affect small unit bank behavior in California: newness and lack of success in competing with other institutions. However, Californian unit banks of sizes comparable to other structures compare more favorably with Californian branch banks, except in the areas of mortgage and consumer lending. It is more probable that the similarity between this unit bank behavior and its branch bank counterpart arises because of inter-structure competition rather than from differences that exist in the economic environments of the states. Evidence to support this includes the fact that Ohio and Illinois are quite comparable in their economic environments, yet Ohio unit bank behavior is more like that of Ohio branch banks than unit banks in Illinois.

8. Neither time deposit ratios nor capital ratios are adequate explanatory variables in interpreting the differences in load factors that exist. In fact, the results are just the opposite of what should be expected

if these variables were important. Capital ratios are inversely related to size. Time deposit ratios at first increase and then decrease with increased size for unit and limited branch banks and are stable with increased size for state-wide branch banks.

Cost behavior

1. Again, there are great and systematic differences between state-wide and limited branch banks in their cost behavior.

2. Superiority in the area of costs, taken by itself, is not a good measure of over-all superiority. However, an examination of costs gives one some idea of scale and structural differences.

3. Limited branch banks are superior to Illinois unit banks in four out of seven size classes and state-wide branch banks in all size classes when assets are used as a measure of output. State-wide branch banks have, by far, the greatest costs per dollar of assets. However, when loans are used as a measure of output, limited branch banks are superior to Illinois unit banks in all but the largest size class and state-wide branch banks and Illinois unit banks are equally inferior to limited branch banks in cost behavior.

4. Using both assets and loans as measures of banking output, there are definite economies of scale. However, loans as a measure of output, show steeper declining average cost curves than assets.

5. Size of loan, the load factor, and time deposit ratios are the three most important determinants of bank costs. These three cost determining factors are, in turn, determined by the unique behavioral characteristics of the different banking structures. Size of loan is important because small loans are more costly and large loans less costly to administer, and the load factor is important because loans are higher cost assets than are government securities. Of course, time deposits are important because of the interest expense involved.

6. Higher state-wide branch bank costs are caused by those banks having larger load factors, a greater proportion of total loans in small loans than comparable size limited branch and unit banks, and higher ratios of time to total deposits. Limited branch and unit banks have lower costs because of lower load factors, size distributions of loans that are cheaper to administer and less time deposits per dollar of total deposits.

Gross earnings behavior

1. There are definite differences between state-wide and limited branch banks in their gross earnings behavior.

2. Gross earnings, as is true with costs, are not good measures of a structure's superiority when used alone.

3. State-wide branch banks are superior to both limited branch and Illinois unit banks in their gross earnings behavior. Limited branch and Illinois unit banks are equally inferior to state-wide branch banks in their gross earnings behavior. High load factors and greater loan diversification explain state-wide branch bank gross earnings superiority.

4. On the basis of gross earnings small Californian unit bank behavior is quite inferior when compared to the other two state unit banking structures.

5. Gross earnings on assets of unit banks do not increase with increased bank size as does the load factor because small unit banks charge high prices, make small, high risk loans, and receive high revenues per dollar of assets because of this behavior. Conversely, large unit banks charge low prices, make large low risk loans, and receive low earnings per dollar of assets because of this behavior. State-wide branch and limited branch banks tend to be more diversified and thus have rather stable gross earnings as size increases.

Net earnings behavior

1. Net earnings superiority is the best measure of bank cost and revenue behavior because it summarizes total cost and earnings advantages and disadvantages.

2. Generally, net earnings on assets increase with size but only very slightly. There are no appreciable differences between structures, but both limited and state-wide branch banks have higher net earnings on assets than do Illinois unit banks in four out of seven comparable size classes.

3. Small California unit banks have negative net earnings on assets that decline with size.

4. Net earnings on capital are positively related to bank size, the ratio almost doubling over the sizes from the smallest to largest for all structures. Again, large size branch banks, both limited and state-wide, seem to have higher earnings on capital than large size Illinois unit banks.

5. Again, small California unit banks are considerably inferior, having negative earnings on capital of over two percent in the smallest class.

6. Net earnings both on assets and on capital are ambiguous measures of profitability. Larger net earnings on capital generally reflect lower risks of enterprise for larger banks but risk is still not the only answer.

7. Net earnings, whether on assets or on capital, are not good measures of monopoly profits. This is true because of the multi-product nature of banking,

especially branch banking. One would have to check actual rates charged and discriminatory credit granting policies used by each bank in selling an individual product in order to determine if monopoly power is being wielded.

8. It has been found that small rural unit banks charge higher prices for similar services than do larger urban banks. Yet, smaller banks have lower net earnings or are less profitable than are larger banks. This inconsistency is due to the low load factors of small unit banks which means that small banks have smaller shares of high yielding loans and larger shares of low yielding investments than do larger unit banks.

Differences among state banking systems

1. State-wide banking produces fewer banks but an increasing number of offices per dollar of per capita income. Complete unit banking maintains the number of banks but reduces the number of offices per dollar of per capita income. Limited branch banking also reduces the number of banks (but to a lesser extent than does state-wide branch banking) and produces an increasing number of offices per dollar of per capita income (but, again, to a lesser extent than does state-wide branch banking).

2. Aggregate loans and loans of all types are

concentrated less in large banks in unit banking states, more in large banks in limited branching states, and most of all in large banks in state-wide branch banking states. Also, more liberal laws on branching result in more loans being made by branch banks than non-branch banks. Thus, most state banking activity becomes centered more in branch banks as the laws on branching become more liberal.

3. Finally, the average size bank increases with more liberal laws on branching. This means branch laws will, on the average, produce fewer, larger branch banks that have higher costs, higher revenues, somewhat higher net earnings on both assets and capital, more loans, and more diversified than comparable size unit banks. And, of equal importance, these large branch banks will have higher net earnings on assets and capital, lower risk of enterprise, and they will be much more diversified than smaller unit banks.

CONCLUSIONS AND RECOMMENDATIONS

Because of the above findings branch banking is the most advantageous method of banking both from the viewpoint of the use of resources and the public interest. A state-wide system of branching is more advantageous than a limited branch system of banking. However, a limited

branch system is superior to a completely unit banking system.

As was pointed out in Chapter IV, competition in banking is not a matter of simple, black and white, clear cut distinctions that can supposedly be analyzed by counting the number of banks or measuring the degree of deposit concentration. Any worth while analysis of competition must center on an individual market and the individual price, non-price and output decisions being made there. It seems that many banking markets are fairly competitive and that competition depends on the number of alternative sources of credit available to the borrower which, in many cases, is a function of the size of the borrower. There is less danger of monopoly power being used in large or medium size cities because of the tendency for a greater number of both bank and non-bank competitors to exist in these areas. The gravest dangers of monopoly lie in the selling of small farm and business loans and in the local provision of demand deposits. And, geographically, these dangers predominate in small town rural areas of America.

Branch banking has tended to increase the number of alternatives available in different small communities. It can do this because the branch system can specialize, whereas a unit bank finds it difficult or impossible.

In other words, the branch system can place a deposit office in a non-loan area and maintain it by funneling funds to areas of high loan demand and vice versa if conditions warrant. Therefore, in general, branch banking is not only advantageous because of its size, lending, and earnings advantages, but because branch banking will tend to promote the maintenance of a competitive market.

Aside from these conclusions and in the light of present controversies over branching laws, one basic point exists that must be emphasized. This is that the markets in which banks compete are either monopolistically competitive or oligopolistic - in some cases purely oligopolistic. Oligopolistic markets tend to make firms highly interdependent and will motivate these firms toward either the "quiet life" of price leadership and/or collusive agreements or toward cut-throat competition at the expense of bank safety - similar to the gasoline retailer. Regulation and collusion have produced, on the whole, a stable banking system in which some innovational activity, developed by some large banks, has occurred in meeting bank and non-bank competition. If, after more liberal laws on branching are passed, larger banks evolve and small banks disappear so that the overall number of individually owned banks is reduced, then evidence suggests that there will still be oligopolistic markets both on

a more national market scale and in local markets where a few branches may face each other. Depending on the extent of branching allowed, there will probably be fewer separately owned banks competing in national markets and more separately owned branches competing in local markets than presently exist. Thus, nationally, it would seem that the market will become a more tightly controlled oligopoly and that, locally, in some markets, the situation might change from one of near monopoly to one of oligopoly. In any event, bank behavior, under the same non-branch regulatory provisions that exist today, would tend also, toward the quiet life and collusion. Therefore, the main advantages gained by allowing branching are not necessarily competitive (except perhaps in small rural markets) but are operational and flow from the behavioral advantages exhibited by the branch structure.

It is truly amazing to note the quantity of lip service given to making the banking system more competitive when, in fact, the nature of banking markets make them markets in which it is virtually impossible to efficiently maintain more than oligopolies or perhaps situations of monopolistic competition. And, in fact, this desire for competition is even more amazing when one considers the vital role that banks play in our economy. To demand unfettered competitive activities by removing

legal restraints will only lead to a replacement of those restrictions by private collusion, and to demand the removal of both collusive agreements and regulations is either virtually impossible or courts chaos at the expense of bank safety. Of course, the removal of specific regulations, individually, will cause varied results that will depend upon the market conditions that exist at that time and may or may not affect banking stability.

State authorities pay lip service to competition but tend to place greater emphasis on the safety of the local banking system. This tends to be anti-competitive, encouraging private bank collusion on the local level. The Comptroller of the Currency, on the other hand, would like banks to reap the rewards of economies of scale, he would like the economy to reap the rewards of the advantages of branch banking. He tends to worry more about small town monopoly situations, and at the same time, ignores the tendency that no matter what changes are made, banking markets will be oligopolistic and will likely lead to oligopolistic price leadership and/or collusive agreements. The Comptroller wants more freedom in branching and price competition. At the same time he seems to disregard any problems of safety that might result from these policies. He appears to have the idea that after some period of adjustment, large scale banks will

be more stable, will provide more offices (thus offering more alternatives in local markets), and will provide greater efficiency in the areas of capital mobility and the provision of banking products. Thus, he tends to emphasize competition through branching and price activities but overlooks the collusive behavior that would probably emerge from the oligopolistic markets which would exist after branching was liberalized.

The Justice Department, on the other hand, seems to be more interested in maintaining an atomistic concept of competition in banking markets. This interest ignores the fact that a market structure is a function of, among other things, the effective size of the market and the number of the optimum sized firms it will support. Since it is unlikely that banking markets will support anything close to the number of efficient size firms needed to make the market atomistically competitive, the Department is striving for an impossible and an economically inefficient goal. Also, historically speaking, the Department's anti-trust guns have been leveled, in the banking industry, at large bank firms (in terms of absolute size) rather than at firms that may be small in absolute terms but large and monopolistic, relative to the market in which they compete.

Bankers, in the meantime, worry about profit margins. Some large bankers would like greater branching powers while many small bankers would not like to see any extension of branching powers. Some bankers advocate branching if it will allow them to maintain or increase their profit margins, while others advocate the status quo if they see this position as a sort of protective tariff for their market power. Some undoubtedly recognize their public service function along with their profit goals and thus may be more liberal. Others may downgrade service goals, emphasize profit goals, and be much less liberal out of sheer survival desires. For some, rivalry to a certain extent is always good and healthy - if it's for the other fellow in another market. Bankers seem to be much more aware of the interdependent nature of their markets than are their regulatory agencies - or so it seems from the pronouncements and actions of those agencies. The banker expresses this knowledge every time he acts to protect his market or to expand it, many times at the expense of others.

It is indeed unfortunate that all parties do not act with the recognition of the type of market structure inherent in most banking markets. If they did, much less confusion would be present in determining the means necessary to obtain a jointly desirable end: an efficient and stable banking system.

In terms of the recommendations of this study for public policy, the author feels that all agencies should shift from the idea of preserving competition in the atomistic sense and move toward a recognition of the oligopolistic nature of banking markets (and the desires of individual bankers operating in oligopolistic, interdependent markets). With this in mind, banking agencies should stress safety, convenience, and greater services in banking. From this study, one can conclude that the best method of obtaining these goals is to liberalize laws on branching, allowing banks to branch at least state-wide and preferably within the Federal Reserve Districts. This recommendation is made because it is felt that the advantages of such an action will outweigh the disadvantages. As was seen, the advantages of branch banking, which increase as the extent of branching allowed increases, include safety through diversification, a variety of services offered, economies of scale, a fuller use of capacity for lending purposes, and on the local level, a possible greater rivalry. Disadvantages that might emerge include a greater concentration of political and social power, possible development of monopoly problems, and possible disruptions of services that may be created by the process of developing larger branch systems.

It should be stressed that, since banking markets

will still remain oligopolistic (in fact, the more national and inter-state banking markets will probably become tighter oligopolistic markets with fewer banks) the role of anti-trust activities should be increased. Thus, the role of the Justice Department should shift from one of creating and maintaining atomistic markets to one of discouraging the oligopolistic price and service collusion which is present today and which would undoubtedly increase with the advent of more extensive branching powers. Collusive tendencies, though not lacking today, are some of the prices that will have to be paid in seeking a more efficient branch banking system.

Some may call choosing state or regional branching an act of straddling the fence and a simple-minded compromise. Why not go all the way and allow nationwide branching? In answer to this criticism, every society does not strive for the attainment of a single goal but moves towards many goals simultaneously, some economic, others non-economic in nature. The above recommendation allows for greater services, efficiencies of scale, safety, and conveniences of branch banking under regional branching. At the same time, it allows the private market, under public supervision, to allocate resources, resulting in a lower concentration of power than under nationwide branching - a goal that is both political and

philosophical as well as economic. Thus, public goals of safety, efficiency in banking, and stability of the economy can be obtained without sacrificing more than is gained.

If this action of allowing regional branching could not be taken without destroying the Dual Banking System, then the dual system should be altered. Surely, the arguments that were given for creating the dual system in 1863 are not valid today. Improved communication techniques, a more diversified economy, greater mobility of not only capital but of people and all resources as well, have all tended to reduce the diversities that perhaps existed when the dual system was founded. The rationale at the time was that the unique characteristics of local areas necessitated local and state control of banking regulations. It follows that to the extent that these differences have been reduced from what they were in 1863, state administration of regulations becomes much less tenable today.

As a post script, probably the greatest barrier against such a change in branching laws is based on non-economic motives. State control is a matter of historical preference based partially on non-economic goals which are perhaps of great importance to some individuals. Also, in the past, it has been only out of national

emergencies or economic crises that large changes, such as the National Banking Acts, have been made. It is hoped that the liberalization of state-wide or regional branching will not have to wait for the occurrence of such painful prodders as financial disruption and economic depression.

APPENDIX A

TABLE 1

PERCENTAGE DISTRIBUTION OF COMMERCIAL BANKS
 OPERATING BRANCHES, BY AREA, SELECTED
 YEARS, 1900-1959, NUMBER, BY CLASS OF BANK

Year	Banks Operating Branches	Area Branches in Head Office City	Area Branches Outside of Head Office City	Banks Operating Branches	Area Branches in Head Office City	Area Branches Outside of Head Office City
		<u>United States</u>			<u>New England</u>	
1900	100.0	100.0	21.0	79.0	10.3	12.6
1910	100.0	100.0	49.5	50.5	9.9	8.2
1920	100.0	100.0	60.3	39.7	11.9	3.5
1925	100.0	100.0	68.2	31.6	11.5	6.3
1930	100.0	100.0	67.9	32.1	13.4	6.8
1933	100.0	100.0	60.3	39.7	13.4	7.4
1937	100.0	100.0	48.4	51.6	9.7	6.9
1941	100.0	100.0	45.3	54.7	9.0	6.8
1952	100.0	100.0	42.6	57.4	8.4	7.6
1957	100.0	100.0	36.1	63.9	8.3	7.9
1959	100.0	100.0	35.4	64.6	7.7	8.1

TABLE 1 (Contd.)

Year	Banks Operating Branches	Area Branches in Head Office City	Area Branches Outside of Head Office City	Banks Operating Branches	Area Branches in Head Office City	Area Branches Outside of Head Office City
<u>Middle Atlantic</u>				<u>East North Central</u>		
1900	20.2	20.2	50.0	14.9	16.0	57.9
1910	21.2	26.8	91.1	17.8	18.8	80.6
1920	18.5	22.3	93.5	17.5	27.6	93.8
1925	23.6	22.0	95.9	17.2	24.0	96.4
1930	27.4	28.7	98.2	16.5	20.4	95.3
1933	25.0	29.6	97.9	14.9	13.4	79.6
1937	19.9	25.1	91.2	21.1	14.7	60.0
1941	19.5	24.2	87.6	21.6	15.1	53.9
1952	19.2	24.0	69.6	20.9	15.0	54.1
1957	21.7	25.7	40.5	22.2	15.9	50.5
1959	21.4	25.4	37.4	22.4	16.1	48.8
<u>West North Central</u>				<u>South Atlantic</u>		
1900	1.1	.8	100.0	31.0	24.4	0.0
1910	.3	.2	100.0	19.5	18.8	14.6
1920	.4	.2	100.0	20.4	14.6	18.7
1925	.6	.3	100.0	19.9	12.5	35.6
1930	.5	.2	100.0	19.6	11.5	36.5
1933	6.7	2.2	13.3	19.3	10.4	39.8
1937	14.8	5.5	4.2	15.4	10.1	31.9
1941	16.6	6.5	3.5	15.1	10.5	31.3
1952	12.3	4.7	3.6	16.9	13.3	36.6
1957	9.3	3.3	3.9	16.4	13.3	41.9
1959	8.8	2.9	7.8	15.8	13.2	41.4

TABLE 1 (Contd.)

Year	Banks Operating Branches	Area			Banks Operating Branches	Area		
		Branches	Branches in Head Office City	Branches Outside of Head Office City		Branches	Branches in Head Office City	Branches Outside of Head Office City
		<u>East South Central</u>				<u>West South Central</u>		
1900	16.1	18.5	0.0	100.0	0.0	0.0	0.0	0.0
1910	9.6	10.2	0.0	100.0	3.1	2.7	0.0	100.0
1920	6.0	5.9	18.4	81.6	6.8	6.7	40.7	59.3
1925	6.4	4.6	35.3	64.7	5.3	3.9	46.5	53.5
1930	7.5	4.0	42.3	57.7	6.0	3.2	45.9	54.1
1933	6.2	3.4	38.9	61.1	5.3	1.9	44.4	55.6
1937	6.7	4.3	27.6	72.4	4.5	2.0	32.4	67.6
1941	6.4	4.1	29.7	70.3	4.3	2.0	32.9	62.1
1952	7.8	5.0	40.9	59.1	5.3	2.3	37.2	62.8
1957	9.1	5.3	46.5	53.5	5.6	2.4	43.2	56.8
1959	9.9	5.5	49.4	50.6	6.2	2.6	50.2	49.8
		<u>Mountain</u>				<u>Pacific</u>		
1900	2.3	2.5	0.0	100.0	4.6	5.0	0.0	100.0
1910	2.4	2.7	0.0	100.0	16.1	11.5	30.2	69.8
1920	1.7	2.0	0.0	100.0	16.8	14.8	31.6	68.4
1925	1.1	.9	0.0	100.0	14.4	25.3	48.2	51.8
1930	1.5	.9	0.0	100.0	7.6	24.4	35.4	64.6
1933	1.4	1.6	6.7	93.3	7.9	30.1	32.9	67.1
1937	2.3	2.5	3.6	96.4	5.4	28.9	27.2	72.8
1941	2.4	2.6	3.3	96.7	4.9	28.2	25.5	74.5
1952	3.2	4.0	17.1	82.9	6.0	24.2	23.9	76.1
1957	3.0	4.1	17.8	82.2	4.4	22.1	20.6	79.4
1959	2.9	4.2	20.6	79.4	4.4	21.0	19.7	80.3

Source: Banking and Monetary Statistics, Federal Reserve System, p. 298-301 and Annual Reports of the Federal Deposit Insurance Corporation, 1952, 1957 and 1959.

MAP I
STATES ENCOMPASSED IN REGIONS

MAP II

TYPE OF STRUCTURE PREVALENT
AS OF 1960

TABLE 2
GROUP AND CHAIN BANKING, BY AREA, NUMBER, BANK AND DEPOSIT SHARES,
AND BRANCHES, SELECTED YEARS, 1931, 1939, 1941, 1945, 1960

GROUP BANKING ²						CHAIN BANKING ²				
Year	Number of Groups	Banks in Group	Banks in Groups as % of all Commercial Banks In Area	Deposits as a % of all Commercial Bank Deposits In Area	Branches of Group	Number of Chains	Banks in Chains	Banks in Chains as % of all Commercial Banks In Area	Deposits as a % of all Commercial Bank Deposits in Area	Branches of Chain
<u>United States</u>										
1931	97	978	5.1	22.2	4	176	908	4.7	2.4	4
1939	41	427	3.0	12.6	869	96	424	2.9	1.6	75
1941	37	405	2.8	11.5	841	101	455	3.2	2.1	65
1945	33	387	2.7	13.3	861	115	522	3.7	3.4	74
1960 ³	47	426	3.2	8.0	1037					
<u>New England</u>										
1931	10	71	11.4	33.4	4	1	4	.6	.3	4
1939	5	31	5.5	33.3	82	1	4	.7	.2	2
1941	5	31	5.6	31.8	83	1	4	.7	.2	2
1945	4	31	6.6	28.9	87	3	11	2.3	1.6	3
1960	5	34	8.0	12.2	144					

TABLE 2 (Continued)

GROUP BANKING ²						CHAIN BANKING ²				
Year	Number of Groups	Banks in Group	Banks in Groups as % of all Commercial Banks In Area	Deposits as a % of all Commercial Bank Deposits In Area	Branches of Group Bank	Number of Chains	Banks in Chains	Banks in Chains as % of all Commercial Banks In Area	Deposits as a % of all Commercial Bank Deposits in Area	Branches of Chain Banks
						<u>Middle Atlantic</u>				
1931	28	164	6.4	15.3	4	15	58	2.3	1.6	4
1939	9	70	3.2	7.0	91	6	21	1.0	.3	9
1941	9	67	3.1	6.7	93	5	16	.7	.3	9
1945	6	45	2.2	5.0	98	5	32	1.5	.8	17
1960	9	22	1.6	3.9	185					
						<u>East North Central</u>				
1931	10	145	3.5	27.1	4	21	107	2.6	1.8	4
1939	2	33	1.1	4.1	30	8	34	1.1	1.3	38
1941	2	32	1.1	3.8	27	6	25	.8	.9	30
1945	3	32	1.1	5.8	27	21	71	2.3	4.0	25
1960	12	51	1.7	5.2	58					
						<u>West North Central</u>				
1931	7	221	4.5	22.2	4	77	408	8.4	8.1	4
1939	6	149	4.4	23.8	26	47	217	6.4	8.1	13
1941	6	144	4.3	18.7	26	50	228	6.8	12.9	17
1945	6	138	4.2	18.7	26	46	232	7.1	15.0	25
1960	14	192	5.8	19.8	52					

TABLE 2 (Continued)

Year	GROUP BANKING ²					CHAIN BANKING ²				
	Number of Groups	Banks in Group	Banks in Groups as % of all Commercial Banks In Area	Deposits as a % of all Commercial Bank Deposits In Area	Branches of Group Bank	Number of Chains	Banks in Chains	Banks in Chains as % of all Commercial Banks In Area	Deposits as a % of all Commercial Bank Deposits in Area	Branches of Chain Banks
<u>South Atlantic</u>										
1931	7	55	3.1	11.6	4	5	32	1.8	1.6	4
1939	6	50	3.2	11.0	12	7	32	2.0	1.5	--
1941	5	40	2.5	9.7	13	6	37	2.4	3.4	--
1945	5	41	2.5	10.5	20	5	33	2.0	4.8	4
1960	10	38	2.2	7.1	52					
<u>East South Central</u>										
1931	7	54	3.9	19.6	4	6	31	2.2	2.0	4
1939	3	20	1.8	12.7	22	4	13	1.1	.5	--
1941	2	17	1.5	9.0	12	4	13	1.2	.6	--
1945	2	18	1.1	8.0	12	3	10	.9	.3	--
1960	4	11	1.0	4.0	32					
<u>West South Central</u>										
1931	7	69	3.3	11.1	4	29	152	7.2	5.4	4
1939	2	7	.4	5.4	--	11	56	3.5	2.3	--
1941	2	7	.4	5.6	--	19	86	5.4	6.2	--
1945	3	11	.7	7.9	1	19	79	4.9	4.5	--
1960	3	12	.7	2.4						

TABLE 2 (Continued)

Year	GROUP BANKING ²					CHAIN BANKING ²				
	Number of Groups	Banks in Group	Banks in Groups as % of all Commercial Banks In Area	Deposits as a % of all Commercial Bank Deposits In Area	Branches of Group Bank	Number of Chains	Banks in Chains	Banks in Chains as % of all Commercial Banks In Area	Deposits as a % of all Commercial Bank Deposits in Area	Branches of Chain Banks
<u>Mountain</u>										
1931	3	78	9.8	15.7	4	15	89	11.2	15.2	4
1939	2	36	7.4	23.3	33	8	30	6.1	16.7	6
1941	2	37	7.6	23.4	33	7	32	6.5	15.8	5
1945	2	35	7.3	23.6	40	8	31	8.1	7.0	4
1960	14	53	10.2	30.5	191					
<u>Pacific</u>										
1931	18	121	13.8	49.0	4	7	27	3.1	.9	4
1939	6	31	7.0	36.7	573	4	17	3.8	.5	7
1941	4	30	7.0	34.4	554	3	14	3.3	.4	2
1945	2	36	9.0	37.7	551	5	23	5.8	.5	--
1960	8	13	5.1	8.8	323					

TABLE 2 (Continued)

1. Table does not preclude data on chains for 1960 because last year data was available in 1945, according to Recent Development in the Structure of Banking, Staff Report from Federal Reserve Board, Federal Reserve System, U. S. Senate.

2. A group or chain operating in more than one state has been assigned to state in which the principal banking office of the controlling interest is located, but each constituent bank has been assigned to the state in which it operates.

3. Does not include Alaska and Hawaii. Those statistics for 1960 are thus reported under the Bank Holding Company Act of 1956 and thus may understate the importance of Group Banking as previously measured.

4. Data not available.

Source: Data for groups and chains 1931, 1939, 1941, Banking and Monetary Statistics, Federal Reserve System. Data for group and chains, 1945, Federal Reserve Bulletin, Board of Governors, Federal Reserve System, April, 1947, p. 462-463. Data on groups, 1960, Lamb, op. cit., p. 105-107, and Annual Report, Federal Department Insurance Corporation, 1960.

TABLE 3
DEPOSITS OF GROUP MEMBER INSTITUTIONS TO ALL COMMERCIAL
BANK DEPOSITS IN STATES IN DESCENDING ORDER, 1960

States	Percentages	States	Percentages
Nevada	73.4	Kentucky	11.1
Minnesota	61.1	California	9.9
Montana	52.0	Nebraska	9.7
Utah	51.8	Iowa	8.6
Oregon	43.7	Florida	8.1
North Dakota	39.9	Ohio	6.0
Idaho	38.6	New York	5.7
Arizona	36.7	Maine	5.3
Georgia	35.2	Colorado	4.3
South Dakota	32.9	Missouri	4.0
Wisconsin	32.8	Texas	3.8
Massachusetts	21.2	Tennessee	3.3
Wyoming	17.6	Virginia	1.9
Washington	13.3	Illinois	1.2
New Mexico	12.8	Indiana	.8
New Hampshire	12.3		

Source: Lamb, op. cit., p. 105-106.

APPENDIX B

TABLE 1
PERCENTAGE DISTRIBUTION OF TOTAL LOANS
BY STATE AND TYPE OF STRUCTURE:
CALIFORNIA, OHIO AND ILLINOIS
DECEMBER, 1962

Deposit Sizes (in dollars)	Class No.	California Branch	Unit	Ohio Branch	Unit	Illinois Unit
0 to 1,000,000	1		.01		.09	.15
1,000,000 to 1,999,999	2		.02		.79	1.09
2,000,000 to 4,999,999	3	.03	.23	.49	3.86	4.45
5,000,000 to 9,999,999	4	.17	.41	2.40	4.20	5.04
10,000,000 to 24,999,999	5	1.04	.51	9.70	2.27	10.39
25,000,000 to 49,999,999	6	1.20		8.85		11.31
50,000,000 to 99,999,999	7	1.85		5.69		8.81
100,000,000 to 499,999,999	8	4.59		33.92		7.67
500,000,000 to 12,999,999,999	9	89.94		27.72		51.09
Total			100.00		100.00	100.00

Source: Table 5, Appendix D.

TABLE 2
PERCENTAGE DISTRIBUTION OF FARM LOANS
BY STATE: CALIFORNIA, OHIO AND ILLINOIS
DECEMBER, 1962

Deposit Sizes (in dollars)	Class No.	California Branch	Unit	Ohio Branch	Unit	Illinois Unit
0 to 1,000,000			(1)		1.49	1.42
1,000,000 to 1,999,999	2		.02		7.83	9.86
2,000,000 to 4,999,999	3	.16	.17	2.46	26.91	34.52
5,000,000 to 9,999,999	4	.27	1.19	9.75	20.67	20.69
10,000,000 to 24,999,999	5	.68	.32	18.94	3.07	17.63
25,000,000 to 49,999,999	6	1.56		6.72		6.42
50,000,000 to 99,999,999	7	.58		.45		2.07
100,000,000 to 499,999,999	8	1.52		1.70		2.23
500,000,000 to 12,999,999,999	9	93.53		(2)		5.16
Total			100.00		100.00	100.00

(1) Less than 1/100 of a percent.

(2) No figure given by Federal Reserve for this class no.

Source: Table 7, Appendix D.

TABLE 3
PERCENTAGE DISTRIBUTION OF REAL ESTATE LOANS
BY STATE: CALIFORNIA, OHIO AND ILLINOIS
DECEMBER, 1962

Deposit Sizes (in dollars)	Class No.	California Branch	California Unit	Ohio Branch	Ohio Unit	Illinois Unit
0 to 1,000,000	1		(1)		.09	.15
1,000,000 to 1,999,999	2		.02		.99	1.38
2,000,000 to 4,999,999	3	.04	.27	.64	5.46	7.04
5,000,000 to 9,999,999	4	.20	.46	3.13	5.87	10.12
10,000,000 to 24,999,999	5	1.22	.31	12.13	2.52	20.52
25,000,000 to 49,999,999	6	1.03		10.90		22.69
50,000,000 to 99,999,999	7	2.13		6.42		14.32
100,000,000 to 499,999,999	8	5.33		24.94		8.24
500,000,000 to 12,999,999,999	9	88.97		26.90		15.54
Total			100.00		100.00	100.00

(1) Less than 1/100 of a percent.

Source: Table 6, Appendix D.

TABLE 4
PERCENTAGE DISTRIBUTION OF COMMERCIAL AND INDUSTRIAL LOANS
BY STATE: CALIFORNIA, OHIO AND ILLINOIS
DECEMBER, 1962

Deposit Sizes (in dollars)	Class No.	California Branch	Unit	Ohio Branch	Unit	Illinois Unit
0 to 1,000,000	1		.01		.02	.04
1,000,000 to 1,999,999	2		.02		.30	.33
2,000,000 to 4,999,999	3	.02	.15	.30	1.74	1.41
5,000,000 to 9,999,999	4	.13	.31	1.27	2.04	2.01
10,000,000 to 24,999,999	5	.77	.63	6.04	1.88	5.05
25,000,000 to 49,999,999	6	1.15		6.44		6.79
50,000,000 to 99,999,999	7	1.64		5.74		6.09
100,000,000 to 499,999,999	8	4.56		45.13		5.59
500,000,000 to 12,999,999,999	9	90.62		29.09		72.71
Total			100.00		100.00	100.00

Source: Table 8, Appendix D.

TABLE 5
 PERCENTAGE DISTRIBUTION OF CONSUMER LOANS OF BANKS
 BY STATE: CALIFORNIA, OHIO AND ILLINOIS
 DECEMBER, 1962

Deposit Sizes (in dollars)	Class No.	California Branch	California Unit	Ohio Branch	Ohio Unit	Illinois Unit
0 to 1,000,000	1		.01		.13	.22
1,000,000 to 1,999,999	2		.03		.80	1.47
2,000,000 to 4,999,999	3	.03	.21	.47	3.71	5.08
5,000,000 to 9,999,999	4	.18	.49	2.35	4.02	5.81
10,000,000 to 24,999,999	5	1.16	.60	9.38	2.30	10.52
25,000,000 to 49,999,999	6	1.29		8.94		10.67
50,000,000 to 99,999,999	7	1.70		5.99		7.48
100,000,000 to 499,999,999	8	3.87		33.80		7.10
500,000,000 to 12,999,999,999	9	90.43		25.95		51.64
Total			100.00		100.00	100.00

Source: Table 9, Appendix D.

APPENDIX C

TABLE 1
RATIOS OF OFFICERS SALARIES AND DIRECTORS FEES TO ASSETS OF BANKS BY SIZE
AND TYPE OF STRUCTURE: CALIFORNIA, OHIO AND ILLINOIS
DECEMBER, 1962

Deposit Sizes (in dollars)	Class No.	California Branch	California Unit	Ohio Branch	Ohio Unit	Illinois Unit
0 to 1,000,000	1		1.06		.95	.98
1,000,000 to 1,999,999	2		.84		.84	.93
2,000,000 to 4,999,999	3	.69	.57	.61	.60	.74
5,000,000 to 9,999,999	4	.73	.57	.54	.52	.60
10,000,000 to 24,999,999	5	.62	.39	.46	.46	.48
25,000,000 to 49,999,999	6	.56		.41		.40
50,000,000 to 99,999,999	7	.45		.32		.35
100,000,000 to 499,999,999	8	.38		.28		.31
500,000,000 to 12,999,999,999	9	.32		.17		.20
Mean		.34	.50	.30	.56	.34

Source: Tables 1 and 16, Appendix D.

TABLE 2
RATIOS OF TOTAL CURRENT OPERATING REVENUE TO AGGREGATE LOANS OF BANKS
BY SIZE AND TYPE OF STRUCTURE: CALIFORNIA, OHIO AND ILLINOIS
DECEMBER, 1962

Deposit Sizes (in dollars)	Class No.	California Branch	California Unit	Ohio Branch	Ohio Unit	Illinois Unit
0 to 1,000,000	1		6.04		10.46	10.48
1,000,000 to 1,999,999	2		10.04		9.29	10.19
2,000,000 to 4,999,999	3	9.96	7.90	8.57	9.27	10.04
5,000,000 to 9,999,999	4	9.49	9.93	8.87	8.88	10.93
10,000,000 to 24,999,999	5	11.04	8.57	9.09	9.14	10.79
25,000,000 to 49,999,999	6	9.60		9.13		10.25
50,000,000 to 99,999,999	7	9.56		8.83		9.51
100,000,000 to 499,999,999	8	8.92		8.71		9.17
500,000,000 to 12,999,999,999	9	8.59		7.44		7.37
Mean		8.66	8.93	8.40	9.11	8.71

Source: Tables 10 and 5, Appendix D.

TABLE 3
RATIOS OF NET EARNINGS TO AGGREGATE LOANS OF BANKS BY SIZE AND TYPE OF
STRUCTURE: CALIFORNIA, OHIO AND ILLINOIS
DECEMBER, 1962

Deposit Sizes (in dollars)	Class No.	California Branch	California Unit	Ohio Branch	Ohio Unit	Illinois Unit
0 to 1,000,000	1		-3.32		2.82	2.65
1,000,000 to 1,999,999	2		- .90		2.30	2.70
2,000,000 to 4,999,999	3	1.91	1.24	1.86	2.28	2.61
5,000,000 to 9,999,999	4	1.77	2.09	1.82	2.43	2.81
10,000,000 to 24,999,999	5	2.14	1.89	2.14	3.00	2.32
25,000,000 to 49,999,999	6	2.12		2.11		2.08
50,000,000 to 99,999,999	7	1.81		2.51		1.88
100,000,000 to 499,999,999	8	1.99		2.89		1.99
500,000,000 to 12,999,999,999	9	2.16		2.26		2.87
Mean		2.14	1.76	2.47	2.49	2.55

Source: Tables 5 and 14, Appendix D.

RATIOS OF NET EARNINGS TO AGGREGATE LOANS OF BANKS BY SIZE
AND TYPE OF STRUCTURE: CALIFORNIA, OHIO AND ILLINOIS

Source: Table 3, Appendix C.

APPENDIX D

TABLE 1

TOTAL ASSETS OF BANKS BY SIZE AND TYPE OF STRUCTURE:
CALIFORNIA, OHIO, AND ILLINOIS
DECEMBER, 1962
(to nearest thousand dollars)

Deposit Sizes (in dollars)	Class No.	California Branch	Unit	Ohio Branch	Unit	Illinois Unit
0 to 1,000,000	1		\$3,013		\$15,747	\$45,123
1,000,000 to 1,999,999	2		10,747		122,863	297,506
2,000,000 to 4,999,999	3	\$11,282	77,898	\$69,988	597,975	1,152,294
5,000,000 to 9,999,999	4	53,374	157,184	344,202	618,695	1,344,406
10,000,000 to 24,999,999	5	359,027	198,926	1,399,764	331,898	2,654,741
25,000,000 to 49,999,999	6	364,733		1,287,453		2,800,540
50,000,000 to 99,999,999	7	591,031		818,194		2,051,252
100,000,000 to 499,999,999	8	1,387,114		4,943,753		1,765,795
500,000,000 to 18,999,999,999	9	27,939,871		3,462,284		10,389,648
Total		30,706,433	447,768	12,325,638	1,687,179	22,501,215

Source: Banking Markets Unit, The Federal Reserve System,
Washington 25, D. C.

TABLE 2
TOTAL CAPITAL OF BANKS BY SIZE AND TYPE OF STRUCTURE:
CALIFORNIA, OHIO, AND ILLINOIS
DECEMBER, 1962
(to nearest thousand dollars)

Deposit Sizes (in dollars)	Class No.	California Branch	California Unit	Ohio Branch	Ohio Unit	Illinois Unit
0 to 1,000,000	1		\$1,315		\$2,234	\$7,366
1,000,000 to 1,999,999	2		2,344		13,565	33,415
2,000,000 to 4,999,999	3	\$1,088	12,442	\$6,161	58,767	109,893
5,000,000 to 9,999,999	4	4,113	14,150	27,798	54,916	105,119
10,000,000 to 24,999,999	5	28,407	21,952	116,025	29,689	186,420
25,000,000 to 49,999,999	6	26,132		98,421		192,245
50,000,000 to 99,999,999	7	42,297		67,955		132,097
100,000,000 to 499,999,999	8	108,298		399,081		118,022
500,000,000 to 12,999,999,999	9	1,771,847		278,981		878,680
Total		1,982,181	52,203	994,422	159,171	1,763,256

Source: Banking Markets Unit, The Federal Reserve System,
Washington 25, D. C.

TABLE 3

TOTAL DEMAND DEPOSITS OF BANKS BY SIZE AND TYPE OF STRUCTURE:
 CALIFORNIA, OHIO, AND ILLINOIS
 DECEMBER, 1962
 (to nearest thousand dollars)

Deposit Sizes (in dollars)	Class No.	California Branch	Unit	Ohio Branch	Unit	Illinois Unit
0 to 1,000,000	1		\$987		\$8,399	\$27,560
1,000,000 to 1,999,999	2		4,616		52,515	181,022
2,000,000 to 4,999,999	3	\$4,298	28,930	\$31,046	244,705	624,775
5,000,000 to 9,999,999	4	24,900	68,349	155,091	264,804	714,766
10,000,000 to 24,999,999	5	159,535	82,856	618,493	151,546	1,293,100
25,000,000 to 49,999,999	6	177,653		589,171		1,312,219
50,000,000 to 99,999,999	7	234,275		395,100		919,427
100,000,000 to 499,999,999	8	534,968		2,941,565		872,546
500,000,000 to 12,999,999,999	9	12,490,167		1,710,545		6,348,894
Total		13,625,795	185,738	6,441,004	721,968	12,294,309

Source: Banking Markets Unit, The Federal Reserve System,
 Washington 25, D. C.

TABLE 4

TOTAL TIME AND SAVINGS DEPOSITS OF BANKS BY SIZE AND TYPE OF STRUCTURE:
CALIFORNIA, OHIO, AND ILLINOIS
DECEMBER, 1962
(to nearest thousand dollars)

Deposit Sizes (in dollars)	Class No.	California Branch	Unit	Ohio Branch	Unit	Illinois Unit
0 to 1,000,000	1		\$661		\$5,065	\$10,082
1,000,000 to 1,999,999	2		3,670		55,789	82,073
2,000,000 to 4,999,999	3	\$5,671	35,363	\$31,926	289,700	413,558
5,000,000 to 9,999,999	4	23,272	73,041	156,303	290,604	515,661
10,000,000 to 24,999,999	5	165,822	87,202	639,422	143,413	1,141,588
25,000,000 to 49,999,999	6	152,732		573,615		1,245,472
50,000,000 to 99,999,999	7	301,710		340,488		954,586
100,000,000 to 499,999,999	8	724,132		1,473,317		736,443
500,000,000 to 12,999,999,999	9	12,545,800		1,383,362		2,709,692
Total		13,919,138	199,936	4,598,433	784,572	7,809,154

Source: Banking Markets Unit, The Federal Reserve System,
Washington 25, D. C.

TABLE 5
TOTAL LOANS OF BANKS BY SIZE AND TYPE OF STRUCTURE:
CALIFORNIA, OHIO, AND ILLINOIS
DECEMBER, 1962
(to nearest thousand dollars)

Deposit Sizes (in dollars)	Class No.	California Branch	Unit	Ohio Branch	Unit	Illinois Unit
0 to 1,000,000	1		\$993		\$5,843	\$14,472
1,000,000 to 1,999,999	2		3,345		52,687	106,584
2,000,000 to 4,999,999	3	\$5,640	37,672	\$32,459	256,287	434,440
5,000,000 to 9,999,999	4	28,779	67,838	159,139	279,002	491,676
10,000,000 to 24,999,999	5	171,333	84,499	643,923	150,942	1,013,936
25,000,000 to 49,999,999	6	196,817		587,261		1,102,906
50,000,000 to 99,999,999	7	304,602		377,848		859,372
100,000,000 to 499,999,999	8	754,554		2,251,057		747,787
500,000,000 to 12,999,999,999	9	14,799,504		1,839,303		4,984,357
Total		16,261,230	194,346	5,890,990	744,762	9,755,530

Source: Banking Markets Unit, The Federal Reserve System,
Washington, D. C.

TABLE 6

TOTAL REAL ESTATE LOANS OF BANKS BY SIZE AND TYPE OF STRUCTURE:
CALIFORNIA, OHIO, AND ILLINOIS
DECEMBER, 1962
(to nearest thousand dollars)

Deposit Sizes (in dollars)	Class No.	California Branch	Unit	Ohio Branch	Unit	Illinois Unit
0 to 1,000,000	1		\$270		\$1,986	\$2,712
1,000,000 to 1,999,999	2		1,175		22,019	24,649
2,000,000 to 4,999,999	3	\$2,382	16,315	\$14,256	120,927	125,378
5,000,000 to 9,999,999	4	12,032	27,421	69,226	130,035	180,317
10,000,000 to 24,999,999	5	73,636	18,960	268,532	55,710	365,467
25,000,000 to 49,999,999	6	62,232		241,173		404,072
50,000,000 to 99,999,999	7	128,579		142,175		255,003
100,000,000 to 499,999,999	8	321,677		552,072		146,761
500,000,000 to 12,999,999,999	9	5,359,741		595,326		276,865
Total		5,960,279	64,141	1,882,760	330,676	1,781,224

Source: Banking Markets Unit, The Federal Reserve System,
Washington 25, D. C.

TABLE 7

TOTAL FARM LOANS OF BANKS BY SIZE AND TYPE OF STRUCTURE:
CALIFORNIA, OHIO, AND ILLINOIS
DECEMBER, 1962
(to nearest thousand dollars)

Deposit Sizes (in dollars)	Class No.	California Branch	California Unit	Ohio Branch	Ohio Unit	Illinois Unit
0 to 1,000,000	1		\$21		\$1,914	\$6,474
1,000,000 to 1,999,999	2		99		10,038	44,778
2,000,000 to 4,999,999	3	\$729	1,100	\$3,154	34,482	156,710
5,000,000 to 9,999,999	4	1,750	7,538	12,495	26,486	93,952
10,000,000 to 24,999,999	5	4,270	2,066	24,262	3,937	80,026
25,000,000 to 49,999,999	6	9,974		8,606		29,137
50,000,000 to 99,999,999	7	3,663		580		9,378
100,000,000 to 499,999,999	8	9,622		2,172		10,146
500,000,000 to 12,999,999,999	9	590,383				23,417
Total		620,391	10,824	51,269	76,857	454,018

Source: Banking Markets Unit, The Federal Reserve System,
Washington, D. C.

TABLE 8

TOTAL COMMERCIAL AND INDUSTRIAL LOANS OF BANKS BY SIZE AND TYPE OF STRUCTURE:
 CALIFORNIA, OHIO, AND ILLINOIS
 DECEMBER, 1962
 (to nearest thousand dollars)

Deposit Sizes (in dollars)	Class No.	California Branch	Unit	Ohio Branch	Unit	Illinois Unit
0 to 1,000,000	1		\$371		\$313	\$1,621
1,000,000 to 1,999,999	2		1,167		4,855	12,681
2,000,000 to 4,999,999	3	\$836	8,165	\$4,829	27,916	54,393
5,000,000 to 9,999,999	4	7,285	16,718	20,418	32,791	77,854
10,000,000 to 24,999,999	5	41,739	34,295	97,143	30,280	195,075
25,000,000 to 49,999,999	6	62,496		103,538		262,469
50,000,000 to 99,999,999	7	89,170		92,296		234,569
100,000,000 to 499,999,999	8	247,922		725,543		216,036
500,000,000 to 12,999,999,999	9	4,927,468		467,607		2,810,126
Total		5,376,915	60,717	1,511,374	96,155	3,864,823

Source: Banking Markets Unit, The Federal Reserve System,
 Washington 25, D. C.

TABLE 9
TOTAL CONSUMER LOANS OF BANKS BY SIZE AND TYPE OF STRUCTURE:
CALIFORNIA, OHIO, AND ILLINOIS
DECEMBER, 1962
(to nearest thousand dollars)

Deposit Sizes (in dollars)	Class No.	California Branch	Unit	Ohio Branch	Unit	Illinois Unit
0 to 1,000,000	1		\$331		\$1,621	\$3,572
1,000,000 to 1,999,999	2		923		15,895	23,152
2,000,000 to 4,999,999	3	\$1,695	11,501	\$9,988	72,742	93,494
5,000,000 to 9,999,999	4	7,424	15,746	56,294	88,119	133,315
10,000,000 to 24,999,999	5	44,934	22,880	248,759	56,687	334,989
25,000,000 to 49,999,999	6	59,142		214,031		324,656
50,000,000 to 99,999,999	7	71,446		111,260		272,031
100,000,000 to 499,999,999	8	143,509		582,188		213,005
500,000,000 to 12,999,999,999	9	2,668,741		264,849		369,602
Total		2,996,891	51,382	1,487,368	235,063	1,767,815

Source: Banking Markets Unit, The Federal Reserve System,
Washington 25, D. C.

TABLE 10

TOTAL OPERATING REVENUE OF BANKS BY SIZE AND TYPE OF STRUCTURE:
 CALIFORNIA, OHIO, AND ILLINOIS
 DECEMBER, 1962
 (to nearest thousand dollars)

Deposit Sizes (in dollars)	Class No.	California Branch	California Unit	Ohio Branch	Ohio Unit	Illinois Unit
0 to 1,000,000	1		\$60		\$611	\$1,516
1,000,000 to 1,999,999	2		336		4,893	10,866
2,000,000 to 4,999,999	3	\$562	2,976	\$2,783	23,763	43,621
5,000,000 to 9,999,999	4	2,731	6,739	14,122	24,777	53,733
10,000,000 to 24,999,999	5	18,300	7,243	58,268	13,795	109,418
25,000,000 to 49,999,999	6	18,889		53,595		113,021
50,000,000 to 99,999,999	7	29,128		33,366		81,764
100,000,000 to 499,999,999	8	67,307		196,006		68,546
500,000,000 to 12,999,999,999	9	1,271,974		136,797		367,197
Total		1,408,890	17,354	494,937	67,838	849,682

Source: Banking Markets Unit, The Federal Reserve System,
 Washington 25, D. C.

TABLE 11

TOTAL OPERATING EXPENSES OF BANKS BY SIZE AND TYPE OF STRUCTURE:
 CALIFORNIA, OHIO, AND ILLINOIS
 DECEMBER, 1962
 (to nearest thousand dollars)

Deposit Sizes (in dollars)	Class No.	California Branch	Unit	Ohio Branch	Unit	Illinois Unit
0 to 1,000,000	1		\$93		\$446	\$1,133
1,000,000 to 1,999,999	2		366		3,681	7,993
2,000,000 to 4,999,999	3	\$454	2,510	\$2,179	17,923	32,263
5,000,000 to 9,999,999	4	2,221	5,324	11,219	18,006	39,924
10,000,000 to 24,999,999	5	14,750	5,644	44,516	9,264	85,866
25,000,000 to 49,999,999	6	14,712		41,201		90,096
50,000,000 to 99,999,999	7	23,625		23,884		65,649
100,000,000 to 499,999,999	8	52,287		130,991		53,677
500,000,000 to 12,999,999,999	9	952,170		95,269		224,321
Total		1,060,218	13,937	349,257	49,320	600,923

TABLE 12

TOTAL OFFICERS SALARIES OF BANKS BY SIZE AND TYPE OF STRUCTURE:
 CALIFORNIA, OHIO, AND ILLINOIS
 DECEMBER, 1962
 (to nearest thousand dollars)

Deposit Sizes (in dollars)	Class No.	California Branch	California Unit	Ohio Branch	Ohio Unit	Illinois Unit
0 to 1,000,000	1		\$32		\$138	\$408
1,000,000 to 1,999,999	2		89		914	2,513
2,000,000 to 4,999,999	3	\$76	423	\$367	3,136	7,701
5,000,000 to 9,999,999	4	371	832	1,667	2,888	7,270
10,000,000 to 24,999,999	5	2,154	752	5,934	1,436	11,766
25,000,000 to 49,999,999	6	1,943		4,952		10,496
50,000,000 to 99,999,999	7	2,572		2,457		6,785
100,000,000 to 499,999,999	8	5,240		13,417		5,196
500,000,000 to 12,999,999,999	9	89,844		5,676		20,239
Total		102,198	2,128	34,470	8,513	72,373

Source: Banking Markets Unit, The Federal Reserve System,
 Washington 25, D. C.

TABLE 13

TOTAL DIRECTORS FEES OF BANKS BY SIZE AND TYPE OF STRUCTURE:
 CALIFORNIA, OHIO, AND ILLINOIS
 DECEMBER, 1962
 (to nearest thousand dollars)

Deposit Sizes (in dollars)	Class No.	California Branch	California Unit	Ohio Branch	Ohio Unit	Illinois Unit
0 to 1,000,000	1				\$12	\$33
1,000,000 to 1,999,999	2		\$1		118	243
2,000,000 to 4,999,999	3	\$2	19	\$60	432	870
5,000,000 to 9,999,999	4	18	60	176	327	768
10,000,000 to 24,999,999	5	89	26	562	98	1,036
25,000,000 to 49,999,999	6	86		376		719
50,000,000 to 99,999,999	7	63		166		310
100,000,000 to 499,999,999	8	96		454		223
500,000,000 to 12,999,999,999	9	731		111		184
Total		1,085	105	1,905	987	4,386

Source: Banking Markets Unit, The Federal Reserve System,
 Washington, D. C.

TABLE 14

TOTAL NET EARNINGS OF BANKS BY SIZE AND TYPE OF STRUCTURE:
 CALIFORNIA, OHIO, AND ILLINOIS
 DECEMBER, 1962
 (to nearest thousand dollars)

Deposit Sizes (in dollars)	Class No.	California		Ohio		Illinois
		Branch	Unit	Branch	Unit	Unit
0 to 1,000,000	1		\$-33		\$165	\$383
1,000,000 to 1,999,999	2		-30		1,212	2,873
2,000,000 to 4,999,999	3	\$108	466	\$604	5,841	11,358
5,000,000 to 9,999,999	4	510	1,415	2,903	6,771	13,809
10,000,000 to 24,999,999	5	3,550	1,599	13,752	4,531	23,552
25,000,000 to 49,999,999	6	4,177		12,394		22,925
50,000,000 to 99,999,999	7	5,503		9,482		16,115
100,000,000 to 499,999,999	8	15,020		65,015		14,869
500,000,000 to 12,999,999,999	9	319,804		41,528		142,876
Total		348,672	3,417	145,680	18,518	248,759

Source: Banking Markets Unit, The Federal Reserve System,
 Washington 25, D. C.

TABLE 15

TOTAL DEPOSITS OF BANKS BY SIZE AND TYPE OF STRUCTURE:
CALIFORNIA, OHIO, AND ILLINOIS
DECEMBER, 1962
(to nearest thousand dollars)

Deposit Sizes (in dollars)	Class No.	California Branch	Unit	Ohio Branch	Unit	Illinois Unit
0 to 1,000,000	1		\$1,648		\$13,464	\$37,642
1,000,000 to 1,999,999	2		8,286		108,304	263,095
2,000,000 to 4,999,999	3	\$9,969	64,293	\$62,972	534,405	1,038,333
5,000,000 to 9,999,999	4	48,172	141,390	311,394	555,408	1,230,427
10,000,000 to 24,999,999	5	325,357	170,058	1,257,915	294,959	2,434,688
25,000,000 to 49,999,999	6	330,385		1,162,786		2,557,691
50,000,000 to 99,999,999	7	535,985		735,588		1,874,013
100,000,000 to 499,999,999	8	1,259,100		4,414,882		1,608,989
500,000,000 to 12,999,999,999	9	25,035,967		3,093,907		9,058,586
Total		27,544,933	385,674	11,039,437	1,506,540	20,103,463

Source: Banking Markets Unit, The Federal Reserve System,
Washington 25, D. C.

TABLE 16

TOTAL MANAGERIAL EXPENSES OF BANKS BY SIZE AND TYPE OF STRUCTURE:
 CALIFORNIA, OHIO, AND ILLINOIS
 DECEMBER, 1962
 (to nearest thousand dollars)

Deposit Sizes (in dollars)	Class No.	California Branch	California Unit	Ohio Branch	Ohio Unit	Illinois Unit
0 to 1,000,000	1		\$32		\$150	\$441
1,000,000 to 1,999,999	2		90		1,032	2,756
2,000,000 to 4,999,999	3	\$78	442	\$427	3,568	8,571
5,000,000 to 9,999,999	4	389	892	1,843	3,215	8,038
10,000,000 to 24,999,999	5	2,243	778	6,496	1,534	12,802
25,000,000 to 49,999,999	6	2,029		5,328		11,215
50,000,000 to 99,999,999	7	2,635		2,623		7,095
100,000,000 to 499,999,999	8	5,336		13,871		5,419
500,000,000 to 12,999,999,999	9	90,575		5,787		20,423
Total		103,283	2,233	36,375	9,500	76,759

Source: Banking Markets Unit, The Federal Reserve System,
 Washington 25, D. C.

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AUTOBIOGRAPHY

I, Bernard Eric Anderson, was born in Modesto, California, November 1, 1936. I received my elementary and secondary school education in the public schools of Modesto, graduating in 1954. In the fall of 1954 I entered Modesto Junior College and majored in political science. In February of 1955 I entered the United States Navy and served two years, being released from active duty with the rate of Yeoman Third Class in February of 1957. In February I entered Sacramento State College in Sacramento, California, and majored in business administration. In February of 1959 I transferred to Arizona State College in Flagstaff, Arizona, where I continued my work in business administration, graduating with a Bachelor of Science degree in May of 1960. I was given a teaching assistantship in the College of Business and Public Administration, the University of Arizona, Tucson, Arizona, and began work toward a Master of Arts degree in Economics in the fall of 1960. In August of 1961 I received the Master of Arts degree and was given an Assistant position in the Department of Economics, The Ohio State University, where I worked toward the Doctor of Philosophy degree in Economics. I held various teaching positions in the Department of Economics and also

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