



**AgEcon** SEARCH  
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

*The World's Largest Open Access Agricultural & Applied Economics Digital Library*

**This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.**

**Help ensure our sustainability.**

Give to AgEcon Search

AgEcon Search  
<http://ageconsearch.umn.edu>  
[aesearch@umn.edu](mailto:aesearch@umn.edu)

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*



# COMPARATIVE PERFORMANCE ANALYSIS OF COMMERCIAL BANKS IN RURAL NORTH DAKOTA

By  
John F. Mittleder  
and  
Delmer L. Helgeson



Department of Agricultural Economics  
Agricultural Experiment Station  
North Dakota State University  
Fargo, North Dakota

## FOREWORD

This study provides information on the financial performance of banks affiliated with holding companies and their independent counterparts. The authors express their appreciation to the many individuals who provided information for this publication. The authors gratefully acknowledge the valuable assistance and suggestions from the faculty and staff of the Department of Agricultural Economics, North Dakota State University. A special thanks to Donald E. Matteson for his contribution towards the completion of this study.

This project is a part of a broad study being carried out under a regional project (NC-123) entitled Costs, Quality, and Demand for Selected Community Services: The Effect of Organizational Form, Size, and Other Factors.

## Table of Contents

	<u>Page</u>
Highlights . . . . .	11
Banking Systems in the United States and North Dakota . . . . .	2
Method of Analysis . . . . .	4
Holding Company Characteristics . . . . .	5
Services Provided Affiliates . . . . .	5
Acquisition Objectives . . . . .	7
Future of Banking and Holding Companies . . . . .	8
Holding Company-Affiliate Relations: Areas for Improvement . . . . .	8
Advantages of the Bank Holding Company to the Community . . . . .	8
Comparison of the Financial Performance of Affiliated and Independent Banks in Rural North Dakota . . . . .	9
Results of Tests on Financial Performance . . . . .	9
Asset Management Variables . . . . .	11
Liability Management Variables . . . . .	11
Profitability Variable . . . . .	12
List of Tables . . . . .	13

## Highlights

*This study was undertaken to analyze the financial performance of the commercial banking system in rural North Dakota and to study the services offered by multibank holding companies to their affiliated banks.*

*Multibank holding companies offer a variety of services to their affiliated banks. Among them are advice and operational control of investment portfolios, computer and data processing services, training workshops and management seminars, and cost and profitability analyses.*

*Numerous reasons exist for an independent bank to attempt to secure affiliation with a multibank holding company, such as the lack of successor management personnel, a serious stockholder dispute, or the inability of the bank to offer competitive services.*

*The ability to meet the need for complex and sophisticated financial services is one service a multibank holding company can offer to a community. Among others are the ability to attract officers and other personnel, the ability to provide technical and managerial assistance, the ability to improve bank performance, and the ability to draw upon additional capital.*

*Affiliated banks had a higher profit margin and return on loans than their independent counterparts. Affiliated banks also invested a significantly higher proportion of their loan portfolio in commercial loans. However, these results may be due to the small sample size used in this study. Caution must be used in applying rules of thumb regarding these two groups of banks.*

Comparative Performance Analysis of Commercial  
Banks in Rural North Dakota

by

John F. Mittleider and Delmer L. Helgeson\*

Commercial banks in most rural communities are small in terms of their deposits and equity capital structure. Accordingly, they may be unable to operate as efficiently as larger banks. The lending capacity of a commercial bank is limited by deposit volume and, in many rural communities, growth in bank deposits has not kept pace with the growth in loan demand. Legal lending limitations are a function of the amount of stockholder's equity and many rural banks have legal lending limits that are substantially below many of their individual customer's credit requirements. In those cases where individual borrower needs exceed the bank's legal lending limit overlines with correspondent banks can be used to fulfill the borrower's needs.

Rural credit institutions have been criticized for the lack of quantity and quality of credit services provided. Low loan-to-deposit ratios in many rural banks suggest that locally generated savings are being exported from the local community, even though these savings could be productively used within the community.

This study compares the financial performance of affiliated and independent rural North Dakota banks<sup>1</sup> and services offered affiliated banks by their respective holding company. The underlying hypothesis of this study was that small rural affiliate banks can capture some of the alleged economies of scale inherent in banking and thereby offer more competitively priced services than their independent counterparts. The financial performance of banks in North Dakota can have a direct bearing on the economic development which takes place within the state, since the location of new industry may be determined by the availability of credit for its operations as well as for its employees, customers, and suppliers. Independent and affiliate banks may use these data to compare their financial performance with those studied in this report.

---

\*Mittleider is Research Assistant and Helgeson is Professor, Department of Agricultural Economics.

<sup>1</sup>Banks affiliated with a holding company are referred to as affiliates, while banks not affiliated with a holding company are referred to as independents.

Banking Systems in the United States and North Dakota

The gradual decline in the number of banking firms nationwide has been offset by the rapid development of branch banking systems. The organization of the American commercial banking industry is divided into three legal forms:<sup>2</sup>

1. Unit banking limits a single bank to a single location.
2. Branch banking permits a single bank to conduct operations through more than one banking office.
3. Bank holding company is any corporation or organization which owns 25 percent or more of the voting stock in one or more banks.

Individual states establish the form of bank organization which will be permitted within its boundaries.<sup>3</sup> At present, 18 states, including North Dakota, permit unit banking. Although North Dakota does not, 16 states presently permit statewide branch banking, while 16 other states permit branch banking within limited areas.

The rapid growth in bank holding companies is a recent phenomenon. In 1956, the nation had only 53 registered holding companies controlling 428 banks. By 1973, almost 1,700 bank holding companies existed, managing over 3,000 subsidiary banks. These banks accounted for 65 percent of all commercial bank deposits, having an aggregate value of \$421 billion. The overwhelming majority of this growth had taken place from 1970 through 1973.<sup>4</sup>

Multibank holding companies play an important role in the structure of the North Dakota commercial banking system. At the end of 1973, three multibank holding companies operated in the state: First Bank System,

---

<sup>2</sup>Pariser, David B., "Structure, and Performance of the North Dakota Commercial Banking System, 1962-1971," Bureau of Business and Economics Research, University of North Dakota, No. 9, January, 1974.

<sup>3</sup>In the case of branch banking, federal law has allowed state laws to be dominant. The McFaden Act of 1927 allowed branch banking by national banks in states that permitted branch banking, subject to the regulations imposed by the states.

<sup>4</sup>Reichert, Alan, and Warren Lee, "The Effect of Bank Holding Company Growth on Ohio's Rural Capital Markets," Department of Agricultural Economics and Rural Sociology, Ohio State University, 1975.

Minneapolis, Minnesota; Northwest Bancorporation, Minneapolis, Minnesota; and Otto Bremer Company, St. Paul, Minnesota. Together, these holding companies controlled 32 of the 168, or 19 percent of the unit banks in North Dakota. The largest of the three holding companies, First Bank System, had controlling interest in 14 banks, while the other two holding companies each controlled nine banks (Table 1).

TABLE 1. PERCENT OF TOTAL BANK ASSETS, LOANS, AND DEPOSITS IN NORTH DAKOTA BANKS, DECEMBER, 1973

Type of Bank	Number of Banks	Total Assets	Total Loans	Total Deposits
-----percent-----				
Holding Company				
First Bank System	14	18.0	17.4	21.0
Northwest Bancorporation	9	16.1	16.0	19.6
Otto Bremer Company	<u>9</u>	<u>7.3</u>	<u>7.4</u>	<u>7.2</u>
Total	32	41.4	40.8	47.8
Independent	<u>136</u>	<u>58.6</u>	<u>59.2</u>	<u>52.2</u>
Total	168	100.0	100.0	100.0

SOURCE: Data computed from Call Reports of Condition, 1973, Federal Deposit Insurance Corporation, Washington, D.C.

The North Dakota unit banking system consists of a large number of small banks in terms of deposit size. Total deposits, total assets, and total loans are concentrated among the largest banks.

Multibank holding companies play an important role in the North Dakota banking system. In 1973, the 32 banks controlled by multibank holding companies accounted for 47.8 percent of the total deposits, 41.4 percent of the total assets, and 40.8 percent of the total loans held in North Dakota banks, while the remaining percentage of total deposits, assets, and loans were held by 136 independent banks (Table 1).



### Method of Analysis

This study compares the performance of affiliated and independent rural North Dakota banks. Two main areas were probed. First, the three bank holding companies affiliated with banks in North Dakota were interviewed to provide information in four areas:

1. Past and future acquisition objectives,
2. The relative degree of decision-making autonomy of the affiliate banks,
3. The types of services provided to affiliated banks by the holding companies, and
4. The holding companies' views regarding North Dakota's banking laws and legal restrictions.

Second, the financial performance of affiliated and independent commercial banks in selected rural communities was measured. The affiliated banks in North Dakota were paired with their independent counterparts with respect to comparable deposit size in both December, 1969, and December, 1973, and with respect to similar geographic and resource related areas.<sup>5</sup> Data from the years 1969 and 1973 were used in an attempt to determine if any trends have been set in that time period. Only 12 pairings of affiliated-independent banks could be made under these criteria.

All holding company acquisitions are subject to the approval of the Board of Governors of the Federal Reserve System. Applications from holding companies to acquire banks are examined by the Board in terms of three broad criteria:

1. Effect on the acquired bank's solvency and profitability,
2. Community needs and service requirements, and
3. The possible anticompetitive effects stemming from increased concentration.

It is, therefore, hypothesized that affiliated banks would be more efficient and have a higher profit margin than independent banks.

---

<sup>5</sup>Federal Deposit Insurance Corporation, The Report of Condition 1969, 1973, and Report of Income and Dividends 1973, Washington, D.C.

### Holding Company Characteristics<sup>6</sup>

A bank holding company is a corporation formed for the purpose of owning and managing commercial banks and other firms in certain related fields. Holding companies themselves perform no banking functions such as accepting deposits or making loans. Banks acquired by holding companies retain their own corporate charter and independent legal status. Ownership and control of an acquired bank are transferred to the holding company, usually through an exchange of stock.

### Services Provided Affiliates

The bank holding companies operating in North Dakota offer advice and operational control of investment portfolios for their affiliates. Although it is not compulsory to use these services, a majority of affiliates do use them. Computer and data processing services are provided by the holding companies to their affiliates in much the same manner. These services cover such areas as demand deposits, time and savings deposits, and loans. Some affiliates are provided with computer and data processing services in payroll, correspondent processing services, trusts, and insurance accounting data.

The holding company frequently sponsors training workshops and management seminars for its affiliates. While the holding companies have no general policy of providing top management to local affiliates, they are directly involved in all top level personnel changes at each bank. The holding company will become involved in providing nonmanagerial personnel if requested by an affiliate. Salaries and promotions originate at the local affiliate, but final approval for salaries and promotions are sanctioned by the holding company. The holding company offers a uniform program of retirement, insurance, and pension to each of their affiliates.

Bank holding company affiliates may use affiliated or nonaffiliated correspondent banks in meeting their overline credit needs.<sup>7</sup> The holding

---

<sup>6</sup>This section of the study contains composite material provided by bank holding company personnel and, as such, the assessments and opinions given are those of the holding company personnel.

<sup>7</sup>Participation in a loan in excess of the lending limit of the parent bank is referred to as "overline credit."

company encourages loan participations, sale of loan paper, and the buying and selling of federal securities. It provides coordination when requested for both foreign, or nonaffiliated, and affiliate correspondents.

Communication between the holding company and its affiliates is via regular management seminars initiated by the holding company. There are no interlocking directorates or officerships between holding companies and their affiliates in North Dakota.

A high degree of centralization and uniformity exists in the area of accounting and budgeting services. The holding company provides its affiliates with standard accounting forms and procedures and functional cost and profitability analysis. Affiliated banks are required to prepare and submit regular operating budgets.

Increased competition for deposits has generated a growing interest in, and greater capability for, conducting marketing research. These efforts are primarily directed towards identifying current and future income and population growth areas in an effort to guide expansion and improve relative market share.

The holding companies closely review and advise their affiliates as to their current projected capital position. Holding companies have been successful in assisting affiliates in the acquisition of additional capital in all cases.

The holding company treats each affiliate uniquely, offering advice but making no decisions on loan portfolios and deposit functions. There is, however, a formalized loan policy at each individual affiliate bank. The deposit mix, however, is a function of the market place, and holding companies advise their affiliates to be competitive on interest rates paid on time and savings deposits.

Holding companies have perceived a growing demand for expanded and improved trust services. Parent organizations have been able to make high quality trust services available to a variety of nonmetropolitan areas.

Holding companies do not force the marketing of credit cards because of interest rate differences between Minnesota and North Dakota. However, the credit card is becoming increasingly important as the interface between the customer and an expanding set of advanced technological services.

Dramatic technological and systems innovations are taking place in banking. Many of these new advancements will be made available to the local affiliate. This effort is projected to provide more flexible services in a more convenient manner. There probably will be no major expansion of computer services to outside concerns as internal demands grow.

#### Acquisition Objectives

Present North Dakota law prohibits further acquisition of banks in the state by holding companies. However, because the holding companies included in this study are operating in other states which do not prohibit holding company acquisitions, the following is based on their further acquisition objectives in those states.

New affiliates are expected to improve the holding company net after-tax earnings per share after a short adjustment period. This initial period, which is approximately three years following acquisition, may involve additional investment which may contribute to a reduction in profits and a dilution of earnings. After the initial adjustments have been made, earnings are expected to increase as a result of improved efficiency and expanded services. Thus, the holding company is willing to accept a slight reduction in short-run profits to improve long-run earnings per share.

The improvement in long-run earnings, deposit growth, and relative market share are considered to be closely correlated. The holding companies view continued deposit growth as the key to improved market share and increased profitability.

The large financial and managerial resource base provided by the holding company enables the affiliate to handle a greater level of risk. The local affiliate may be encouraged to expand its loan portfolio by lowering credit standards, thus assuming a greater level of risk and earnings.

A number of reasons exist for a bank to attempt to secure affiliation with a holding company. A lack of successor management personnel, a serious stockholder dispute, or the inability to offer competitive services are common motivating factors behind many new acquisitions.

A given bank may fail to provide a wide range of competitive services in the local community. The opportunity to enter a region, provide highly

competitive services, and improve its relative market share provides strong motivation for acquisition for a holding company.

#### Future of Banking and Holding Companies

In view of North Dakota's law prohibiting further holding company acquisitions, officials of holding companies felt that if the law did not exist, holding companies would continue to increase their market share. However, even with an increase in holding company growth, the number of independent banks would continue to be high proportionately to the total number of banks, but total assets of independent banks would decline compared to affiliate banks. The importance of branch banking is expected to decrease as automatic teller machines and consumer banking facilities increase.

Officials of holding companies believe that North Dakota's banking industry will grow, occurring largely in consumer deposits and loans in agriculture and related commercial banking areas. Auxiliary banking services, demand deposits, and savings deposits appear to be the most profitable areas of expansion within the next few years.

#### Holding Company-Affiliate Relations: Areas for Improvement

Better communications are always welcomed between holding companies and their affiliates. Better communication of objectives, policies, and procedures is encouraged more than in the past because of tight money markets.

Officials of holding companies felt greater feedback is needed from their affiliate banks. An increase in communications would enhance the potential for an increase in services for affiliates. However, increased control over affiliate decisions and operations is not expected.

#### Advantages of the Bank Holding Company to the Community

Bank holding companies are geared to meet the growing need in both large and small communities for complex and sophisticated financial services. Through the bank holding company affiliates, they offer communities a wide range of financial services otherwise available only from large banks or banks with extensive branching systems. This is especially important for smaller cities and towns traditionally served by small banks that offer

only conventional banking services. An affiliate bank in such a community is a local institution which, through its affiliation with the holding company, is capable of satisfying the changing customer demands for financial services inherent in a dynamic economy.

In addition, a local bank affiliate has the advantage of being able to draw on the financial and organizational resources of the holding company. A holding company generally has greater access than individual banks to the money markets when additional capital is needed for loan functions and capital requirements for its affiliates. The communities in which bank holding companies operate benefit from these factors.

#### Comparison of the Financial Performance of Affiliated and Independent Banks in Rural North Dakota

The financial performance of the 12 affiliated independent bank pairs was measured for two different time periods, 1969 and 1973. Seventeen variables were chosen to measure quantitative differences in asset management practices, liability management practices, and profitability in 1973. However, data for only nine of these 17 variables could be obtained for the analysis of the data available for 1969. Statistical analyses were calculated comparing affiliate and independent banks to detect significant differences between several variables (Table 2). It was hypothesized that affiliated banks would be more efficient and have a higher profit margin than independent banks. The quantitative differences between independent and affiliated banks were measured at two different points in time, 1969 and 1973, to determine if changes in financial performance were taking place over time.

#### Results of Tests on Financial Performance

The absolute scale of operation of the paired banks was tested using two variables, total assets and total deposits. Both groups of banks were found to be nearly the same size, since bank size was a criterion used in sample selection (Table 2). Total assets and total deposits increased approximately 60 percent from 1969 to 1973 for both groups of banks.

TABLE 2. SELECTED FINANCIAL COMPARISONS OF 12 PAIRS OF HOLDING COMPANY AFFILIATES AND INDEPENDENT BANKS, NORTH DAKOTA, 1969 and 1973.

Variable Description	1969			1973		
	Mean Affiliate Bank Value	Mean Independent Bank Value	Signi- ficance Level <sup>a</sup>	Mean Affiliate Bank Value	Mean Independent Bank Value	Signi- ficance Level <sup>a</sup>
<u>Size Variables</u>						
Total Assets (\$000)	7,506	7,627	n.s.	11,973	12,170	n.s.
Total Deposits (\$000)	6,720	6,912	n.s.	10,703	11,088	n.s.
<u>Asset Management Variables</u>						
Total Loans ÷ Total Deposits	.517	.500	n.s.	.542	.520	n.s.
Real Estate Loans ÷ Total Loans				.223	.239	n.s.
Total Farm Loans ÷ Total Loans				.606	.659	n.s.
Commercial Loans ÷ Total Loans				.207	.111	.05
Consumer Loans ÷ Total Loans				.168	.157	n.s.
Average Annual Return on Loans				.073	.066	.05
Total Securities ÷ Total Assets	.453	.452	n.s.	.444	.470	n.s.
U.S. Government ÷ Total Securities	.974	.956	n.s.	.917	.892	n.s.
Average Annual Return on Securities				.054	.055	n.s.
<u>Liability Management Variables</u>						
Total Capital ÷ Total Deposits	.079	.090	n.s.	.078	.082	n.s.
Demand Deposits I.P.C. ÷ Total Deposits	.352	.384	n.s.	.349	.375	n.s.
Time and Savings Deposits I.P.C. ÷ Total Deposits	.573	.534	n.s.	.588	.550	n.s.
Government Deposits ÷ Total Deposits	.009	.008	n.s.	.006	.005	n.s.
Average Annual Rate of Interest Paid on Time and Savings Deposits				.053	.053	n.s.
<u>Profitability Variable</u>						
Net Operating Earnings ÷ Total Capital				.109	.052	.10

<sup>a</sup>Denotes whether differences between means for paired banks were not significant (n.s.), or significant at the 1, 5, or 10 percent levels.

### Asset Management Variables

The total loans to total deposits ratio was analyzed to measure bank aggressiveness and their response to local needs. Both groups of banks had approximately the same loan ratios for 1969 and 1973. In 1973, real estate loans and farm loans accounted for approximately equal proportions of total loans for both groups of banks. Affiliated banks were investing a significantly higher proportion of their total loan funds in consumer loans than were the independent banks in 1973. This difference in loan portfolio composition resulted in a significantly higher return to loans for the affiliated banks, 7.3 percent, compared to the independent banks, 6.6 percent, in 1973.

The ratio of securities to assets of the paired banks was tested as a measure of secondary reserve earning assets. Affiliated and independent banks held approximately the same proportion of government securities and total securities for 1969 and 1973. The return on securities was approximately the same for 1973 for both groups of banks--5.4 percent for the affiliated banks and 5.5 percent for the independent banks.

### Liability Management Variables

No significant differences in liability management practices were noted in either 1969 or 1973. Although the difference was not significant, affiliated banks were operating with a slightly higher degree of financial leverage with a total capital to total deposit ratio of 7.9 and 9.0 percent in 1969 and 7.8 and 8.2 percent in 1973 for the affiliated and independent banks, respectively. However, the difference between the total capital to total deposit ratio between the two groups of banks was growing smaller over time.

The composition of bank liabilities was measured using three ratios:

1. Demand deposits to total deposits,
2. Time and savings deposits to total deposits, and
3. Government deposits to total deposits.

The proportion of demand deposits, time and savings deposits, and government deposits to total deposits was approximately the same for both groups of banks in both time periods. Similarly, the interest paid on time and savings deposits was approximately the same for both groups of banks in 1973.



Profitability Variable

The difference in profitability between the two groups of banks could not be measured in 1969 due to insufficient data. However, in 1973 the profitability of the two groups of banks could be measured using the ratio of net operating earnings to total capital and a significant difference was found. The affiliated banks earned a 10.9 percent rate of return on their equity capital while the independent banks earned 5.2 percent.

List of Tables

<u>Table No.</u>	<u>Page</u>
1. Percent of Total Bank Assets, Loans, and Deposits in North Dakota Banks, December, 1973 . . . . .	3
2. Selected Financial Comparisons of 12 Pairs of Holding Company Affiliates and Independent Banks, North Dakota, 1969 and 1973 . . . . .	10