

AN ANALYSIS OF THE STOCKS OF
ONE-BANK HOLDING COMPANIES

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Chapter I

INTRODUCTION

The stockholders of over 13,700 American commercial banks¹ have over 30 billion dollars² invested in the commercial banking business. If one also considers the tremendously larger amounts handled as deposits and in trust accounts, this surely places banking among the larger industries in the nation.

In the last few years, holding companies have been formed by many commercial banks. By 1971, most of the largest banking institutions in the country had adopted the holding company format.³ The Bank Holding Company Act structures the legal corporate relationship of any company that controls a bank.⁴ The act also limits the kinds of businesses in which a bank holding company may engage. The control by the holding company lies in the

¹Federal Deposit Insurance Corporation, 1971 Annual Report, p. 186.

²Ibid., p. 206.

³Standard and Poors, "Banking," Industry Surveys, Mar. 30, 1972, p. 11.

⁴Hamilton F. Potter, "The Bank Company Amendments of 1970--An Overview" The New Bank Holding Company Act of 1970, (New York: Practising Law Institute, 1971) p. 9.

ownership of the common stocks of the subsidiary companies. The bank holding companies and their diversified activities will be discussed in Chapter III.

The analysis of a banking institution as an investment opportunity must entail the following areas of study:

1. The general economic conditions.
2. The spread--the difference between the interest rate the bank must pay to attract deposits and the interest rate affected by the demand for loans.
3. The financial analysis.
4. The local economy: market area and growth prospects.
5. The management.

Before any investment decisions can be made, each of these areas should be investigated. An investigation of each area will supplement the other, and all five must be done if a complete picture of an investment opportunity is to be obtained. This paper will not deal in detail with the external factors (1 and 2); the local economy (4) and its direct impact on the bank will include the analysis of external factors. The financial analysis, the management, and the market area of each one-bank holding company will be extensively analyzed.

By drawing the information exclusively from the banks' annual reports, the aim of this paper is to determine which information most significantly influences the price of a bank stock. This bank stock price is used in the computation of the price/earnings ratio. The price/earnings ratio is the one single measure that most nearly reflects the degree of favor with which an investor looks upon a stock.⁵ The writer's hypothesis is that the price/earnings ratio of the stock of a one-bank holding company is primarily a function of 11 independent variables. Of those variables, nine are financial accounting ratios, one is a market area rating, and one is a management rating. These variables are assumed by the writer to be most significant in determining investor favor for certain stocks of one-bank holding companies. These 11 variables will all be discussed in later chapters.

In the following chapters, this pattern of presentation will be followed. Chapter II will offer a historical review of bank stocks and a review of the existing literature on bank stocks.

Since it is impossible to discuss a bank's market area without involving legal restrictions, Chapter III will

⁵Nicholas Molodovsky, "Some Aspects of Price/Earnings Ratios," The Financial Analysts Journal, May 1953, p. 65.

first cover the legal aspects of market areas and then the market areas. In Chapter IV a list of 12 principles is presented to assist a bank stock analyst in evaluating the management capabilities of a one-bank holding company. Both of these chapters present subjective approaches where a formal technique of analysis has not been established. However, a set of principles is presented whereby the reader can develop an understanding of the many areas which should be studied before any conclusions are reached.

Chapter V deals with financial analysis. The financial statements presented in the banks' annual reports are the sources of data for the nine financial ratios. The discussion of each ratio will cover the information it conveys to the investor.

In Chapter VI a multiple linear regression model will be built. The author has selected 20 one-bank holding companies as the sample of data for this statistical model. The parent population which this sample represents is all of the larger one-bank holding companies in the United States whose stock is nationally traded. The model will combine the three analytical techniques presented in this paper: the market area, the management appraisal, and ratio analysis. This model will combine judgmental factors and ratio analysis.

The writer based his selection process for the 20 one-bank holding companies on the following criteria: (1) the companies must have the structure of a one-bank holding company, or be in the process of forming a one-bank holding company; (2) the selections are limited to the 50 largest commercial banking companies in the United States according to asset size;⁶ and (3) the writer selected certain one-bank holding companies to introduce more geographical diversity to the model.

Chapter VII will cover a final summary of the paper and the conclusions reached as a result of the information derived from the statistical model.

⁶"Commercial Banking Companies" (ranked by assets), Fortune, May 1972, pp. 210-211. The 20 one-bank holding companies were selected from this list of commercial banking companies.

Chapter II

INFORMATION ON BANK STOCKS

General Background Information

It is on a historical basis that one can best understand many of the actions taken by the public, the government, and the investor toward banks. Prior to World War I, bank stocks were regarded by the general investing public as "mystery stocks."¹ Usually, the bank's stock was held and traded in the local community that the bank served. Since the general investing public knew little about bank stocks, they generally avoided bank securities.

During the prosperity of the 1920's, the growth in deposits and retained earnings increased the book values to higher amounts, in some instances doubling or tripling them. It did not take long for the investing public to realize the potentialities of large profits in bank stocks, hence a rapid rise in the demand for bank stocks ensued. Before the stock market decline of 1929, bank stocks were bid up to fantastically high levels. In this frenzied era, investors tended to think of bank stocks as the

¹Shaw Livermore, Investment, Principles and Analysis (Chicago: Business Publications, 1938) p. 381.

miracle investment because it combined steady income, strong appreciation possibilities, and a high level of safety. The price/earnings ratio of many bank stocks rose to extremely high proportions. Since that era, bank stocks have been placed on a more rational level of valuation.²

After the stock market crash, leading bank stock prices showed greater percentage declines from their 1929 highs than almost any other class of stock.³ In reality, this drop reflected the disappearance of the earning power of commercial banks. The necessity for increased liquidity and a large drop in the demand for commercial loans forced banks to place more of their assets in low-yielding government securities. In 1936, the Federal Reserve System and state laws doubled the reserve requirements. In effect, this forced a larger proportion of the banks' assets to be held in a non-productive capacity. Banks were prohibited from dealing in securities, even through affiliates. A ban on the payment of interest on demand deposits⁴ was a partial compensation to the banks for the increased reserve requirements. Regulations imposed by the Federal

²Ibid., p. 382.

³Ibid., p. 384.

⁴Demand deposits are checking account deposits. A check recipient presenting a validly endorsed check to the bank can demand immediate compensation. Time deposits are savings account deposits.

and state governments, coupled with greatly diminished investor interest, put bank stock prices on a closer level with industrial securities and general business conditions. Partly because of the memory of numerous bank failures during the 1930's, bank stocks stayed out of favor with investors until the 1950's.

Since the late 1940's, a great deal of inflation has taken place. Prices of most goods and services rose, and the security prices of those companies dealing in such goods and services had commensurate increases. Responding to consumer demand, the industrial concerns increased their production. The earnings of many of these industrial companies also increased. Their securities rose strongly in response to these favorable conditions. In contrast, bank deposits remained relatively stable, and the percentage rise in other bank accounts was smaller than in other periods. Book values did increase slightly but bank equity prices remained close to their book values. The disparity continued to grow between industrial securities and bank securities.

Today, banks no longer offer the spectacular growth prospects they once did, instead they offer steady earnings and dividends. Their growth has been slower, although more steady, even during times of business readjustments. When the security markets have been very high, investors interested in conservative equities have looked to bank stocks.

Noting this investor interest, it would be interesting to see what authors have written about bank stocks.

Survey of the Literature

In recent years, a great deal has been written about the principles of investments and securities. Chapters in textbooks and journal articles have been published on the various forms of analysis for industrial securities; in contrast, detailed and concise publications on methods used to analyze bank stocks⁵ are lacking. The classic investment textbook by Graham, Dodd, and Cottle,⁶ contains no more than a few scattered references and footnotes that deal directly with bank stock analysis, but the principles of the book can be applied to all stocks.

⁵During his research, the writer could not find one single publication offering a method of procedure used to analyze one-bank holding companies. The authors, whose textbooks are surveyed in this chapter, wrote about the background of the banking industry, the theoretical approach to bank stock analysis, and they developed analytical models to be used to compare several bank stocks; but always, the authors used the single-banking-company approach. The writer could not find one publication where an author had analyzed a bank and one of its financially related companies--together. Hence, the literature surveyed will not contain an in depth discussion of one-bank holding companies. The survey of literature will contain publications discussing banks and bank stocks, and the principles presented in the literature can be applied to all banking companies and their stocks.

⁶Benjamin Graham, David L. Dodd, and Sidney Cottle, Security Analysis (New York: McGraw-Hill, 1962) 4th ed., pp. 60-125.

In the investment text by John C. Clendenin,⁷ the coverage of bank stocks emphasizes the theory of banking. The theoretical approach consists of a general discussion of subjects that are pertinent to bank stock analysis. However, no attempt is made to apply any of the information to a specific example, and no attempt is made to quantify any of the information. By quantifying some information, a comparative model can easily be built. The writer feels that a comparative model is a better way to analyze bank stocks than trying to directly apply a theoretical approach to a unique situation.

The theory of banking strongly emphasizes bank reserves, liquidity, loan growth, and deposit growth. The chapter does deal briefly with income figures, capital accounts, government regulations, inflation, competition, bank stock prices, and bank stock markets. These are all subjects of the utmost concern to bank security analysts. However, the writer feels that these subjects are covered in insufficient detail.

The Jordan and Dougall text⁸ uses a similar theoretical approach. In one section entitled Non-Financial

⁷John C. Clendenin, Introduction to Investments (New York: McGraw-Hill, 1964) 4th Ed., pp. 375-394.

⁸David F. Jordan and Herbert E. Dougall, Investments (Englewood Cliffs: Prentice-Hall, 1965) 7th Ed., pp. 467-481.

Considerations⁹ (ten lines in length), the authors attempt to cover management appraisal, market area, and legal regulations. The writer feels that those three subjects can not adequately be covered in one paragraph. A major portion of this paper is devoted to those subjects.

This text includes a section on bank holding companies.¹⁰ This small section covers some statistical information (dated 1957), some legal information concerning the background and administration of the Bank Holding Company Act, and the differences between bank stocks and the stocks of bank holding companies.

Unlike the two previous texts which concentrated on the theory of bank stock analysis, the Badger and Coffman text¹¹ starts with some general background information and then builds a model. The background information is concentrated on the structure of the banking industry and the structure of the Federal Reserve System. Ratios are exclusively used to supply the data input for this three-bank comparison model.¹²

⁹Ibid., p. 469.

¹⁰Ibid., pp. 479-480.

¹¹Ralph E. Badger and Paul B. Coffman, The Complete Guide to Investment Analysis (New York: McGraw-Hill, 1967) pp. 254-281.

¹²Ibid., pp. 273-277.

The text by Badger, Torgerson, and Guthmann¹³ covers the same essential investment material as the previous book (also by Ralph E. Badger). Of particular interest to the bank security analyst is an extensive ratio-comparison model.¹⁴

Recently there have been several articles on bank stocks printed in investment and financial magazines. A major reason for this increase is the favorable economic recovery of the banking industry, plus more bank stocks are being listed on major stock exchanges. As more bank stocks are listed, there has been a great deal of pressure put on banks to further standardize their methods of financial reporting. Bank financial reporting is still too dissimilar for the comparisons bank security analysts wish to make. Frequently, articles discussing bank stocks can be found in the following magazines: Fortune, Banking, Bankers Monthly, The Journal of Finance, and The Financial Analysts Journal.

The magazine articles cover such varied topics that other than length, it is not possible for the writer to make any general criticisms about them. Due to their length, the magazine articles can only cover a limited topic. The better ones are referenced in the bibliography. The textbook

¹³Ralph E. Badger, Harold W. Torgerson, and Harry G. Guthmann, Investment Principles and Practices (Englewood Cliffs: Prentice-Hall, 1969) 6th Ed., pp. 343-364.

¹⁴Ibid., pp. 360-363.

chapters do not go into sufficient detail to be of much interest to other than an elementary student of bank stocks. The writer was unable to find a single textbook chapter or magazine article that offered a comprehensive treatment of the subject desired by a bank security analyst.

Chapter III

MARKET AREAS AND LEGAL REGULATIONS

One subject which is discussed in all 20 annual reports is the market area served by a one-bank holding company. The importance of market areas can be seen by the amount of space given this subject in the annual reports of one-bank holding companies.¹

Annual reports of one-bank holding companies typically contain only a few statements concerning legal matters. Since so many of the legal regulations directly restrict the market area of a one-bank holding company, the writer finds it is difficult to discuss the subjects separately. The legal regulations will include: the one-bank holding company's international operations which are regulated by the Edge Act, the one-bank holding company's intrastate operations which are regulated by the laws of that state, and a definitive discussion of the Bank Holding Company Act and its amendments. The market areas will be discussed in detail after the legal regulations have been covered.

¹A good example is the 1971 Annual Report of the Republic National Bank in Dallas, pp. 13-24. This report devotes twelve pages to its domestic market area, the Dallas-Fort Worth region.

The Edge Act

The Edge Act empowers American banks to form international subsidiaries for foreign banking and investment purposes. An Edge Act corporation is a subsidiary bank of a commercial banking company. The commercial banking company is only one of several financially-related companies controlled by the one-bank holding company.

As subsidiaries of commercial banks, the Edge Act corporations serve American exporters by extending export credit and providing a mechanism by which banks may invest in foreign enterprises. These corporations are given special powers and privileges that enable them to compete successfully with foreign banks. Consequently, to prevent them from competing on an unequal basis with domestic banks, their operations in the United States are limited. The business transacted in the United States by Edge Act corporations is restricted to that which is incidental to or for the purpose of conducting foreign operations.

The Edge Act also provides for the establishment of branches in foreign countries. The establishment of branches abroad still requires the approval of the Federal Reserve Board, but such foreign branches are not subject to the same limitations as those located within the United States.

The Edge Act became a federal law in 1919.² Little use was made of this act until after World War II. The prosperity that followed the war, the expansion of foreign trade, and the improvements in the foreign exchange mechanism encouraged bankers to investigate the advantages of expanding their foreign banking operations. The New York City banks were the first to set up large foreign operations. Yet it remained until the 1960's for one-bank holding companies located outside of New York City to actively engage in foreign operations on a large scale. In 1971, one or more Edge Act corporations were formed by almost all of the 20 one-bank holding companies discussed in this paper.

Just as Edge Act activities are frequently discussed in a bank's annual report, so are local expansion activities discussed. Local expansion activities may be limited by state banking laws.

State Banking Laws

Each state banking commission is given a wide degree of latitude in interpreting its state banking laws. The commission interprets these laws according to what they feel is in the best interest of the people of that state. For example, Wyoming has no laws restricting branch banking,

²Siegfried Stern, The United States in International Banking (New York: Columbia University Press, 1951) p. 362.

but they only have single-unit banks. In Table 1, the Branch Banking Laws of Each State, the writer has grouped each state's banking laws into these three categories: no branch banking is permitted, limited branch banking is permitted (under certain conditions), and statewide branch banking is permitted. Total figures for each group are given at the bottom of the table.

TABLE 1
THE BRANCH BANKING LAWS OF EACH STATE³

States	No Branching	Limited Branching	Statewide Branching
Alabama		X	
Alaska			X
Arizona			X
Arkansas			X
California			X
Colorado	X		
Connecticut		X	
Delaware			X
District of Columbia			X
Florida	X		
Georgia		X	
Hawaii			X
Idaho		X	
Illinois	X		
Indiana		X	
Iowa	X		
Kansas	X		
Kentucky		X	
Louisiana		X	
Maine		X	
Maryland			X

³Henry J. Bailey, ed., Encyclopedia of Banking Laws (Hartford: Lamont Cross & Co., 1964).

TABLE 1--Continued

States	No Branching	Limited Branching	Statewide Branching
Massachusetts		X	
Michigan		X	
Minnesota	X		
Mississippi		X	
Missouri	X		
Montana	X		
Nebraska	X		
Nevada			X
New Hampshire		X	
New Jersey		X	
New Mexico		X	
New York		X	
North Carolina			X
North Dakota	X		
Ohio		X	
Oklahoma	X		
Oregon		X	
Pennsylvania		X	
Rhode Island			X
South Carolina			X
South Dakota		X	
Tennessee		X	
Texas	X		
Utah		X	
Vermont			X
Virginia		X	
Washington		X	
West Virginia	X		
Wisconsin	X		
Wyoming			X
	14	23	14 = Σ 51

The state banking laws affect the intrastate market area of a bank. The Edge Act affects the international market area. There is a separate market area for each subsidiary company of a one-bank holding company. The Bank Holding Company Act and its amendments affect the legal structure between the bank holding company and its subsidiary corporations.

The Bank Holding Company Act

In December of 1970, an important amendment to the Bank Holding Company Act of 1956 was passed.⁴ This amendment requires the registration of all bank holding companies; before only the multi-bank holding companies were required to register with the Federal Reserve Board. A bank holding company is any company that has control over a bank or over another bank holding company. Control is determined by holding more than 25 per cent of the voting stock in a bank or company.⁵

The result of this amendment is that bankers know just where they stand as far as diversification is concerned. The amendment gave the Federal Reserve Board the power to determine what are permissible activities for one-bank

⁴Carter H. Golembe Associates, Inc., The Bank Holding Act Amendment of 1970 (Wash.: Financial Publications of Wash., 1971) p. 1.

⁵Ralph E. Badger, Harold W. Torgerson, and Harry G. Guthmann, Investment Principles and Practices (Englewood Cliffs: Prentice-Hall, 1969) p. 345.

holding companies. The list of activities includes: lending, leasing, industrial banking, servicing loans, carrying on trust activities, factoring, acting as an investment or financial advisor, providing data processing services, and insurance services with certain limitations.⁶ This list is a fairly broad one, and banks now know whether to proceed with their diversification plans or not. The uncertainty of being stopped by regulatory agencies or by lawsuits from potential competitors has been removed.

By acquiring control of a company, the one-bank holding company may now be able to diversify into new financial fields. This new subsidiary corporation may also allow the one-bank holding company to enter a new market area.

Market Areas

All of the annual reports of the 20 one-bank holding companies in this paper contain some mention of their market area. From these annual reports, it would appear that each one-bank holding company is located in a growing area of the country and has a promising economic future. This is true in that the United States continues to grow in its gross national product, its population, and its standard of living. However, all areas do not share

⁶Standard and Poors, "Banking," Industry Surveys, Mar. 30, 1972, p. 11-12.

equally in this growth, and some areas have even declined.

TABLE 2

LISTING OF THE 20 ONE-BANK HOLDING COMPANIES

The numbers in parentheses represent the national ranking of the bank by asset size.⁷ The name of the one-bank holding company is followed by the name of the bank.

California

- (1) BankAmerica Corporation - Bank of America
- (10) Securities Pacific Corporation - Security Pacific National Bank
- (13) Wells Fargo & Company - Wells Fargo Bank
- (14) Crocker National Corporation - Crocker National Bank
- (39) BanCal Tri-State Corporation - The Bank of California

Georgia

- (44) Citizens & Southern Nat. Bank - Citizens & Southern Nat. Bank

Illinois

- (9) Continental Illinois Corp. - Continental Illinois Nat. Bank
- (11) First Chicago Corporation - First National Bank of Chicago

Massachusetts

- (18) First National Boston Corp. - First National Bank of Boston

New York

- (2) First Nat. City Corp. (Citicorp) - First Nat. City Bank
- (3) Chase Manhattan Corporation - Chase Manhattan Bank
- (5) Morgan (J. P.) & Co. Inc. - Morgan Guaranty Trust Company
- (7) Chemical New York Corporation - Chemical Bank
- (8) Bankers Trust New York Corp. - Bankers Trust Company

⁷"Commercial Banking Companies" (ranked by assets), Fortune, May 1972, pp. 210-211.

TABLE 2--ContinuedNorth Carolina

- (42) North Carolina Nat. Bank (NCNB) - North Carolina Nat. Bank

Pennsylvania

- (15) Mellon National Corporation - Mellon National Bank
(21) First Pennsylvania Corp. - First Penn. Banking & Trust Co.
(41) Pittsburgh National Corp. - Pittsburgh National Bank

Texas

- (26) Republic Nat. Bank of Dallas - Republic Nat. Bank of Dallas
(30) First National Bank in Dallas - First Nat. Bank in Dallas

In analyzing the market area of a one-bank holding company, a bank security analyst is most concerned with growth, location, and competition. Growth will be discussed first.

Growth is important because it usually fosters an increase in both deposits and loans. As both items rise, they bring about increased earnings. These earnings are transmitted to the stockholders in the form of higher dividends and greater capital appreciation. However, growth does not affect all one-bank holding companies in the same market area in the same manner. Thus, a study into the underlying factors affecting the growth of each one-bank holding company should be made.

A bank security analyst should compare the growth rate of a one-bank holding company and the growth rate in the number of transactions taking place in the business community. Since the business development of a community may expand at a faster or slower rate than the growth in population, the interest of the bank security analyst should center on the increase in the business activity of the community, not the rate at which the population increases.

Owing to the nature of the business, banks which are located in commercial centers should offer better investment opportunities. Their volume of business ought to increase about as fast as the business activity of the community. An interesting example is the growth of the New York City banks. Early leadership in banking was attained due to New York's location as a trading port between the United States and Europe. As business increased in New York and other sections of the nation, these banks grew and prospered. Due to their size and importance, they became depositories and correspondent banks for smaller banks located in other parts of the country. However, their growth was limited in the State of New York because state banking laws prohibit branching outside of one banking district. Although business increased for the New York City banks, their growth was less than that of banks not impeded by such restrictive branching laws. Considering

their desire to continue growing and their commercial contacts with Europe, they chose to expand overseas. New York City banks were the first in the United States to build large international operations. Their international operations contributed substantially to their earnings in 1971.⁸ Due to a recent change in New York banking laws, statewide branch banking will be permitted in 1976.⁹ Therefore, many bank security analysts are anticipating renewed domestic growth for New York City banks.

In looking for growth areas, one should observe market areas growing faster than the national average, and then find their financial centers. It is in these centers that rapidly growing banks are to be found. It should be remembered that a bank as part of a holding company offers only one group of services. However, an enterprising management may find other financially related services that can be profitably offered to local businesses. Presently, the areas of most rapid growth in the United States are the Southeast and Southwest, namely Florida, Georgia,

⁸Standard and Poors, "Banking," Industry Surveys, Mar. 30, 1972, p. 3.

⁹Bankers Trust New York Corporation, 1971 Annual Report, p. 1.

Texas, and Arizona.¹⁰ Of the 20 banks covered in this study, the Citizens and Southern National Bank of Atlanta, the Republic National Bank of Dallas, and the First National Bank in Dallas are located in rapidly growing areas.

Before going further, it would be interesting to see how much emphasis has been placed on growth by the banks themselves. Their attitude toward growth can be seen by reviewing their annual reports. Although this may not be true of all banks located in growth areas, it does appear to this writer that many banks located in growth areas have strongly emphasized in their annual reports the economic activities of their area. Banks located in stable or declining areas seem to emphasize other activities, such as their community involvement or that part of the one-bank holding company that is the most financially successful. For example, one-bank holding companies in New York City have little to say about their domestic operations, they prefer to discuss their financially-successful, foreign operations in their annual reports.

The 1971 Annual Report of the Chase Manhattan Corporation can be partitioned into three major geographical areas: the international operation, the national operation,

¹⁰Richard A. Holmon, ed., "Banking Industry: What do Wallstreeters Think?," Wall Street Transcript, July 17, 1972, pp. 29,218.

and the local operation. The international operation includes the realignment of world exchange rates, and their far flung international customers. There are large color photographs with captions telling the reader about investments in Japan, Spain, and Puerto Rico. The national operation includes a discussion of money market interest rates and the wage-price freeze. The local operation includes: company plans concerning a paper recycling problem, extensive bank reorganization efforts, and a minority-group, job-training project.

In contrast, one-bank holding companies that are located in rapidly growing areas stress growth in their annual reports. The annual report not only offers the reader a complete picture of the rising economic activity, but it may even start to look like a lesson in regional geography. The 1971 Annual Report of the Republic National Bank in Dallas devotes 12 pages to graphs, photographs, and data on the Dallas-Fort Worth area. The following statement on the North Texas region was taken from the 1971 Annual Report of the First National Bank in Dallas:

It is becoming increasingly clear that 1972 will be a year of steady growth, particularly for the North Texas region which is centered by First National. Many forecasters view the Southwest as the brightest growth area of the United States, and our continued aim is to assist this growth and in the process continue our own. ...As we move through the first quarter of 1972, abundant credit is available to help finance the region's anticipated growth, employment is

climbing steadily, and consumer confidence is beginning to turn from its low point of last year.¹¹

Since examples of both extremes of regional growth have been presented, here is an example of a region experiencing stable but improving economic activity. While the population has remained constant and the employment in the manufacturing sector has remained relatively stable, employment in the non-manufacturing sector has increased by slightly more than 100,000 jobs.

In the last several years, the Pittsburgh region's economy has been undergoing significant change. The region's economy is less affected than in the past by business cycles. Changes in the employment pattern and, to a degree, in the industrial mix are reflected in an unemployment rate for Pittsburgh that has been lower than the national average over the last seven years.¹²

Statements such as these show that banks are aware of the growth prospects in their market area. They are attempting to impress their stockholders with this favorable information.

In studying regional growth, it is usual to find a certain industry or several industries responsible for the increase in economic activity. The growing industry creates jobs which tend to attract people from other areas,

¹¹First National Bank in Dallas, 1971 Annual Report, p. 2.

¹²Pittsburgh National Corporation, 1971 Annual Report, p. 18.

thus causing an increase in the area's population. Increases in demand for goods and services by the growing population give rise to supportive businesses, and the growth pattern continues to build. Once a growth pattern gets started, it becomes cumulative and builds upon itself. When the dominant industry suffers a lessening of demand, it affects not only their employees, but those employed in supportive businesses. If one industry is principally responsible for the growth in an area, then a bank in that area will tend to rise and fall with the cyclical movement of the dominant industry.

Detroit and Akron are cities where one industry is dominant, the automobile industry and rubber industry, respectively. Both are large cities with many industries, yet one industry is so huge that its cyclical movement affects most of the other industries in that city. Los Angeles with the aviation, tourist, motion picture, and petroleum industries is a good example of a large city with a great deal of diversified economic activity. Many people seem determined to place New York City in the same category as Los Angeles. New York City is changing away from an industrial city to a service center, but still can be considered a diversified area.

General regional economic conditions are important determinants in the rise and fall of loans and deposits in

local banks. Where there is more economic diversification in a market area the lending policy of a bank can be more liberal. One-bank holding companies located in economically diversified market areas tend to be more stable and achieve better operating results.

There are a few one-bank holding companies in the nation which serve such varied market areas that they are not dependent on the economy of one specific region. Banks located in states that allow statewide branch banking will more likely enjoy wider diversification. The Bank of America has about 1,000 branch offices¹³ covering the State of California. A unique situation is with the Bank of California (the holding company is BanCal Tri-State Corporation), which has 75 outlets in California, two in Washington, and one in Oregon.¹⁴ This one-bank holding company holds the oldest commercial charter in the West, dated 1864, and the bank serves probably the most diversified market area in the nation. The market area covers every major port on the Pacific Coast.

On the basis of this discussion, the bank security analyst should look for diversification in the business community of a bank's market area. It is impossible for many banks to have diversification, principally because

¹³BankAmerica Corporation, 1971 Annual Report, p. 30.

¹⁴Moody's, Bank & Finance Manual, 1972, p. 594.

of the legal limitations some states have against branch banking. Within the market area served by a one-bank holding company, the bank security analyst should observe the competitive situation among banks.

Many cities and market areas are dominated by large banks, which through their policies and operations influence smaller competitors located in the same market area. Most of the one-bank holding companies in this study are of the dominant type; the only exception might be in California where the Bank of America may dominate other California banks. These dominant banks tend to create similar operating conditions among competitors in a market area. Smaller competitors who do conform but have dissimilar patterns of operation, may find themselves in unfavorable circumstances. Other banks which are non-conformists to the policies of the dominant bank may find themselves at a competitive disadvantage.

In the writer's opinion, competition is less important than either growth prospects or local industry for the purpose of analyzing a market area. The reason is that state regulatory agencies must approve all applications for new branch banks, and these state regulatory agencies are traditionally conservative and thus do not permit excessive competition.

Conclusion

While market areas are an important consideration in the analysis of one-bank holding companies, one must go further and define what market area really means and what affect it has on banking in that area. Market area may be defined as the people, the economic activity, the industry, the competition, the law, and the other intangible factors which comprise a geographically limited section.

Legal regulations of a market area are important because they restrict the activities of a one-bank holding company. The Edge Act restricts a bank's foreign operation. Edge Act corporations may be located either in the United States or in foreign countries. Regulations are more restrictive if the corporation is domestically located.

Each state has its own set of laws concerning branch banking. The state branch banking laws are generally divided into three groups: no branch banking is permitted, limited branch banking is permitted, and statewide branch banking is permitted. These laws may limit the intrastate market area of a one-bank holding company.

The Bank Holding Company Act and its Amendment of 1970 may limit the diversification plans of a one-bank holding company. The list of permissible activities includes: lending, leasing, industrial banking, servicing loans, carrying on trust activities, factoring, acting as

an investment or financial advisor, providing data processing services, and insurance services with certain limitations. A one-bank holding company by acquiring control of a (subsidiary) company may enter a new financial field or a new market area.

In reviewing a market area, the number of business transactions should be studied. Where business transactions are increasing, this area is termed a growing area. In looking for growth areas, a bank security analyst should search out those areas growing faster than the national average. For investors interested in growth stocks, a one-bank holding company located in the financial center of a growth area may offer a promising investment opportunity. The volume of business of the one-bank holding company should increase about as fast as the business activity of the community.

The amount and composition of the dominant industries in an area are important determinants of the stability of loans and deposits. One-bank holding companies located in market areas which are widely diversified tend to achieve a more stable operation, a more liberal lending policy, and better operating results.

It must be realized that an analysis of a market area is not the complete answer to the selection of a one-bank holding company. Further study of the management

and financial statements must be completed before a bank security analyst is able to reach a final conclusion.

Chapter IV

MANAGEMENT APPRAISAL

Although bank security analysts emphasize market areas and financial analysis, the management factor is regarded as an important item. Good management is so important that it can alter the impact of the other two items. In banking, personal services are offered and these services are guided and coordinated by management. The market area is considered fixed in the short run, and the financial statements are historical records of the company's past performances. In short, one might conclude that one-bank holding companies only have the management factor to offer the investor.

In writing their stock reports, bank security analysts have not been able to fully appraise the value of management. So bank security analysts purposely limit such references and concentrate on statistical data. For example, in researching the Bank of America this reference to management was uncovered, "...this aggressive institution..."¹

¹Standard and Poors, Standard NYSE Stock Reports, Apr. 27, 1972, p. 280. There were no statements concerning management appraisal in Moody's Bank and Finance Manual, 1972, p. 633+ or Value Line, 1972, p. 1665.

To justify their silence, bank security analysts reply that company operations and financial statements show the true value of management. While this is true, months or even years may have elapsed between the time the management decision was made and when the results of the decision showed up in the financial statements. The writer feels that bank security analysts should take management into greater consideration, for the investor who uses these stock reports in making his investment decisions finds himself without some important information.

Investment houses have their reasons for not including opinions about a bank management in their reports. First, management is such an intangible factor that it is hard to express in concrete terms. Second, investment houses maintain close business connections with banks. It is felt that management evaluations of an uncomplimentary nature would result in hard feelings, and perhaps lead to a severance of business connections.

In looking for an explanation of the ways to evaluate managements, one should find out first what textbook authors have to say on the subject. Of the books surveyed in Chapter II, here are two examples.

A final factor that will be mentioned is the management of the bank. As close a check as possible on the ability of the management should be made. The personnel of the bank's board of directors and their underlying policies

are important, for a bank can make unsound loans and pursue unwise policies for a considerable time without detection. The stock of a bank is no better than the poorest assets on its books, for the first losses must be borne by stockholders. In studying the relative merits of banking institutions, an analyst should not rely solely on statistical data.²

Under the heading "NON-FINANCIAL CONSIDERATIONS," this is the entire section.

While the major emphasis in the analysis of bank stocks is given to the examination of financial statements, the interpretation of those statements requires a knowledge of the size, character, economic stability, and growth of the community served, the type of industry represented in the bank's clientele, the types and degree of regulation imposed, and the connections and associations of management. The investor would prefer a growing bank in a growing and stable community, not dependent on any one industry or small group of borrowers, with deposits diversified both as to size and type, and with a management alert to the possibilities of new services and sources of revenue.³

It is obvious that both examples lack the depth to be of any real value to the bank security analyst. The first one is a good start, but neither example provides a yardstick that is needed to measure the efforts and accomplishments of a management. The writer feels that the

²Ralph E. Badger, Harold W. Torgerson, and Harry G. Guthmann, Investment Principles and Practices (Englewood Cliffs: Prentice-Hall, Inc., 1969) 6th Ed., p. 363.

³David F. Jordan and Herbert E. Dougall, Investments (Englewood Cliffs: Prentice-Hall, Inc., 1965) 7th Ed., p. 469.

next example is the best one.

Every analysis of balance sheet and income statement tests good and bad management. However, the analyst should not stop at operating ratios. He should carefully investigate the membership of the official staff, the length of their service, and their ages. Management is almost everything in a bank. The savings of a lifetime may be wiped out in a relatively short period of poor lending and investing. For this reason sizable investments in a small bank should not be made unless the investor can secure representation in the management or access to reports of bank examiners. Further, he should always consider the possibility that the management may change.

Connections are another item of considerable importance. Many profitable accounts come to banks because of business and social connections.⁴

There is one source of information on the management of a one-bank holding company that is easily obtainable. This information is published in their annual report. This report contains information on bank officers, corporate directors, and any changes in the membership of these boards or any changes in the senior bank officers. Often company policies are disclosed and future plans are discussed in the annual reports.⁵ However, one should keep in mind that annual reports fulfill several corporate needs, and one such need is a public relations brochure.

⁴Kenneth Field, Introduction to Investment Analysis (New York: Ronald Press Co., 1940) p. 274.

⁵For example, the 1971 Annual Report of the First Pennsylvania Corporation contains excerpts from a typical meeting with bank security analysts, pp. 12-20.

These annual reports must conform to certain rules and laws. As a result, they are similar in format and they must be accurate.

Management Appraisal Qualifications

After studying the data on a particular company and studying the comparative data for the industry, the bank security analyst is ready to interview the management. After a discussion with the bank management, a knowledgeable bank security analyst should be able to arrive at a sound evaluation of the company's management capabilities. There is no accepted method by which one can appraise a bank management, but there must be some principles the bank security analysts use to arrive at their conclusions.

The directors of the Keystone Custodian Funds (a mutual fund) were each requested to respond to the following question:

Assuming that you are personally considering investment in the securities of a given company, and that you have access to balance sheets, income statements, and other statistical and economic data, what five questions would you ask--over and above those that may be answered by analysis of statistical reports--in obtaining an objective measure of the quality of management of the company?⁶

This request brought forth a wide variety of

⁶Erwin H. Schell, "Trends in Managerial Qualifications and Techniques," The Financial Analysts Journal, June 1953, p. 34.

responses, which when classified and summarized, resulted in a list of principles. This list contains 12 principles and each will be discussed in turn: administration, managerial personnel, presidential qualifications and objectives, organization, plans, control, upkeep, improvement, morale, executive attitude, competitive resource, and reputation.

1. Administration

In essence, this is a study of the board of directors. In banking, the board of directors are in closer contact with the operations and policies of the enterprise than with other types of businesses. The desirable qualifications for directors fall into two categories--legal and necessary qualifications, and desirable and personal qualifications.

There are several legal requirements with which directors of a banking company must comply. The following requirements are for national banks, and they may vary from state-to-state for a state-chartered bank. The bank director is required to own not less than \$1,000 of par value stock in the bank. The director must reside in the state in which the bank is located or within 100 miles of the area served. An individual cannot serve as a director of two banks in competition with each other. A security dealer is ineligible to be a director because

it would be unethical for him to buy or sell the securities of the bank which he is serving.⁷

The one personal qualification which is most desirable in a director is that he has the ability to contribute something constructive to the bank. That is a general statement, but being more specific is difficult. Having a reputation for integrity and responsibility should be considered essential. In no other type of business is integrity and the command of confidence more necessary than in financial matters. Does the director possess good business judgement, and has he enjoyed success in his own profession? Does he have a general knowledge of and participate in community affairs? Will he instill confidence in your present customers and perhaps bring in some new business? When a board has representatives from many different backgrounds, then the board is more representative of the public, the stockholders, and the community it endeavors to serve.

2. Managerial Personnel

Are the executives sufficiently experienced in their fields? Are there an adequate number of talented

⁷Walter Kennedy, Bank Management (Boston: Bankers Publishing Co., 1969) 4th Ed., pp. 289-290 and Philip A. Shaver, Ed., Federal Banking Laws (Boston: Warren, Gorham, and Lamont, 1969) pp. 34-35.

executives through the second and third echelons? Are officers being trained to move into higher management positions? In virtually every large bank, there is a training program for future officers. Is this program adequate? Has the organization been consciously and intelligently age-balanced? Will there be adequate replacements as older officers leave the company? If there is an option, one would prefer to see this balance lean toward youth. It is pleasing to find in executive personnel a kind of top-to-bottom unity. Is effective communication and contact structure between top and lower officers evident? A growing necessity in industry is that easy corporate adjustment to increasing change be made. These and many more questions should be investigated about management personnel. The preceding questions are a good place to start, and as they are answered other questions will come to mind.

3. Presidential Qualifications and Objectives

The qualifications of the modern bank president are changing. To a growing degree presidents must reflect new aptitudes in areas of negotiation and representation. Presidents are increasingly being called upon to delegate operating decisions to specialists in favor of currently pressing decisions arising from external changes that directly affect the business. The ability to meet these

outside challenges are among the finest attributes a president can have. Bank security analysts are delighted to see a president state how he is going to accomplish his goals, how far along he is on his program, and how he thinks the company is progressing. Since the duties of the president vary greatly with the size of the bank, these are general observations concerning the president's qualifications: the president should have a general education and background (many vice presidents in the larger banks are specialists, so this person may be difficult to find), he should be aware of current events that affect the bank in the local community and in the larger community (state, nation, or world, depending on the bank's market area), and he should understand the principles of economics.

4. Organization

The principal idea to look for is whether the chief executive is convinced that in his bank current changes happen frequently. In fact, changes happen so frequently as to make organization a continuing problem, requiring the setting up of a permanent committee to assure the scrutiny and adjustment of the organization to meet new needs. Some members of top management should be on this committee. It is desirable to have this committee report directly to the board of directors. A bank security

analyst would like to know what specific steps management has taken to insure the perpetuity of the current high quality of management in the face of encroaching age, illness, termination, etc. The presence of a detailed inventory of the executive organization, showing the age and specialty of the present incumbents and any future plans for their ultimate replacement, is always a welcome find. However, banking companies are notoriously tight when it comes to parting with such information about their officers.

5. Plans

It is a must that banks do some long-range planning to be constructively aggressive. There are a multitude of different types of plans management may formulate. Their plans may capitalize upon modern forecasting and planning techniques. Some banks plan to keep ahead of the competition by acquiring or opening several branch offices each year.⁸ Some banks which are increasing their deposits rapidly plan to increase their capital structure to maintain a certain deposits-to-capital ratio.

⁸An example of a one-bank holding company that annually opens several branch offices would be the Bank-America Corporation. This corporate policy dates back to World War II. An example of an aggressive one-bank holding company that has been acquiring banks by an exchange of stock is the BanCal Tri-State Corporation (Bank of California).

Some of these plans may be apparent by just observing the actions of the banks; other plans do not generally become known to the public, yet both may be extremely important for appraisal purposes. If possible, the bank security analyst would like to see these plans laid down in some comprehensive form and question management about them. It is their presence and potency as they affect current decisions that is of interest.

6. Control

One should note the degree to which management actually guides the business as well as insures its solvency. Consider this analogy, it is one thing to head a boat into the wind to prevent it from being overturned, but it is quite another to hold the boat on a predetermined course.

Too much control is in truth little more than a policy of day-to-day fortuitousness. Do the executives really run the business or, in reality, is the business running them? Answering such a question may be very difficult, but the competition can sometimes answer this question in strong tones. In banking, it is especially important to control loan applications and other forms of credit extension. One should be interested in the uses to which the control structure is put, rather than the precise nature of the structure itself.

7. Upkeep

The primary concern here is not wear and tear, but obsolescence. This extends to human resources even more than buildings and equipment. Can management maintain or improve upon its present standards? The key word is training. To combat obsolescence of employee skills, it is necessary to develop training programs of a unique nature. Many banks are quite proud of their training programs and comment on them in their annual reports. Most companies take advantage of some form of educational training program offered by the American Institute of Banking. Many of these courses are taught by classroom instruction to groups of employees. There are also opportunities in a formal college curriculum, such as the Graduate School of Banking at Rutgers University, and the Pacific Coast School of Banking at the University of Washington.

A number of large banks have their own training programs. This offers deserving employees the training that they need to advance to jobs of greater responsibility. Some banks have assisted employees by sharing their tuition expenses to universities, business schools, and technical correspondence courses. There is some form of educational training to suit every bank employee, regardless of his job level. In no other phase of management is an aggressive and enterprising outlook by a bank more desirable.

8. Improvement

It has often been said that industry must run even faster in order to stand still. In these times, it is usual for improvements to be made mandatory by increased labor costs. These costs affect the entire industry, necessitating a parity of advancement as a minimum competitive requirement. The position of each bank in the community is carefully watched by its competitors, as each one attempts to advance at the expense of the others.

A bank must continue to increase the amount of its deposits and loans or lose its competitive position. Growth may be internal or it may come by acquiring smaller institutions. Bank security analysts hope to find an organization that is steadily growing in effectiveness.

9. Morale

In a service business like banking, employees constantly deal with the public. Their show of enthusiasm and spirit reflects upon the bank. Tellers-in-training at the First National City Bank of New York City have a small sign over their cage door which only they can read and not their customers, "You are the First National Bank to the customer at the window."⁹ Morale does not

⁹This information is taken from a photograph in the 1971 Annual Report entitled, Citicorp Today, p. 44. Citicorp is the one-bank holding company for the First National City Bank of New York City.

mean sporadic excitement or group enthusiasm, but the temper of spirit which causes organizations to drive patiently and unceasingly through difficulty and disappointment. Morale can be the cohesive force which holds the entire staff together, and causes it to rise to greater heights.

Morale is difficult to measure, but a tendency toward enthusiasm or dejection can be detected from a discussion with a selected group of employees. Studies show that employees are usually happy with their job for either of two reasons. The bank is treating its personnel properly and the employees believe they have good promotional opportunities. In other cases, one finds that employees feel that the bank has passed its peak and they are content to just put in an eight-hour day. One should examine this factor with great interest, since it permeated the entire organization. While it serves as an indicator of how the organization feels about itself, more importantly, a pleasant and accommodating attitude by employees will pay dividends by attracting new business and keeping old accounts.

10. Executive Attitude

Morale is an attitude that permeates the entire company structure, but there is also an attitude peculiar to top management which is termed executive attitude. This

is the personal attitude of top executives toward their subordinates, their stockholders, their community, the public, and the government. The bank security analyst wants to know what these attitudes are and what actions have resulted from them. This information can best be obtained by personal interview. The reputation of the bank partly rests upon their works and accomplishments in this area.

11. Competitive Resource

It is especially important to find out why customers do business with this bank in preference to a competitor. Has this competitive strength resulted from planned developments within the company or by chance? Too often management does not realize what constitutes its advantages, nor do they recognize their loss until it is too late. Advantages of some banks can readily be seen. Branch banks have an advantage of location. Some banks offer specialized departments. Some banks have the invisible advantage of good contacts. There are many other advantages to look for, some are obvious and some are not so obvious.

12. Reputation

This should always be the last factor to be examined, because an opinion hastily formed about a bank may prejudice one's judgement in other areas. The reputation of a bank is in reality a summation of all the other

principles. The real danger here is in quickly concluding that the bank has a good reputation. A good reputation is built on past performances, and may be a carryover from older administrations. Is this firm unjustifiably holding onto the reputation of older administrations? Bank security analysts enjoy seeing steady, consistent growth, which indicates that there has been no let up in the services provided.

The nightmare of every bank security analyst is the company that to all outward appearances is well managed, but that is undeservedly living on its reputation, while within dry rot is at work. To obtain a good picture of a company's reputation, the bank security analyst may consult competitors, customers, bankers, and other investment houses.

Conclusion

The 12 factors used to evaluate the management of a bank are: administration, management personnel, objective, organization, plans, control, upkeep, morale, improvement, attitude, competitive resource, and reputation. An answer to each question should provide the bank security analyst with a sufficient amount of information about the management. Combining all of his answers, the bank security analyst should be able to evaluate the management capabilities of a bank.

All 12 factors are applicable in evaluating the management of a bank. Some of the factors are applicable in evaluating the managements of other subsidiary companies of a one-bank holding company. An answer to each applicable factor should provide the bank security analyst with a sufficient amount of information on the management of a one-bank holding company. Combining all of his information, the bank security analyst should be able to appraise the management capabilities of a one-bank holding company. If a number of one-bank holding companies are analyzed using this similar structure, then a comparative analysis can be made.

Bank security analysts evaluate a one-bank holding company with a maze of statistical data, but they rarely present any specific criticisms of management. Yet the same bank security analysts will admit that it is important to analyze the management factor. In their favor is the fact that no one has yet come up with an adequate way to express this type of analysis. The brokerage firms do not wish to criticize a bank with which they maintain close business relations. Defending a subjective criticism can be awkward and embarrassing, so bank security analysts take the most expedient way out by concentrating on statistical data. Basing one's conclusions on statistical data, when correctly drawn, make supporting the conclusions

easier. The writer hopes that by combining an analysis of the management factor and the market area with statistical data, the job of analyzing a one-bank holding company will be made easier.

Chapter V

FINANCIAL ANALYSIS

Banks occupy a central position of economic importance in the community they serve. The major functions performed by banks include: the receiving of funds from individuals, businesses, and other organizations who will later withdraw their deposits; the investing of these funds in marketable, interest-bearing securities; and the loaning of these funds. Other departments which are customarily operated by banks include trust, safe-deposit, and foreign operations. By forming one-bank holding companies, banks are entering new areas of business that are financially related to banking. This makes the task of analyzing a one-bank holding company more complex.

All banks are required to submit reports of their financial condition to regulatory authorities. Two statements submitted by banks are called the Report of Condition and the Report of Income and Dividends. Frequently a separate set of reports are submitted for the domestic and foreign operations of a bank. Other subsidiary companies of a one-bank holding company are not included in these reports. These reports submitted to regulatory agencies

are not distributed to the general public.¹

A report of condition is to the bank, what the balance sheet is to the industrial firm. A report of income and dividends by a bank is similar to an income statement by an industrial firm.

The banks' annual reports are a good source of financial data, and they are available to the general public upon request from the bank. Rather than publish in their annual reports a series of financial statements similar to those statements submitted to the regulatory authorities, the annual reports of one-bank holding companies contain a Consolidated Statement of Condition, a Consolidated Statement of Income, and other financial statements. A consolidated statement means that the financial contributions of all of the companies that comprise the one-bank holding company are included in the statement, not just the bank's contributions. Annually banks are required to publish a statement of condition in at least one local newspaper, but they are not required to publish a statement of income.²

Ratios were selected to work with the key figures developed by the financial statements presented in a

¹F. L. Garcia, How to Analyze a Bank Statement (Boston: Bankers Publishing Co., 1966) p. 1.

²Garcia, p. 4.

one-bank holding company's annual report.

Ratios

Ratios frequently indicate a compromise between interests which management must serve: the regulatory agencies, the borrowers, the depositors, and the stockholders. Of the many ratios available, the writer selected nine ratios that represent several different viewpoints, not just the stockholder's viewpoint. These ratios work with information developed by the Consolidated Statement of Condition, the Consolidated Statement of Income, and other financial statements. The writer was influenced in his choices by those ratios that frequently appeared in the literature read during the research of this paper.

The nine ratios are listed, along with the low, high, and average figures for each ratio. This data was selected as each ratio was computed for the 20 one-bank holding companies (Reference Table 3). The last column covers the accepted standard for the banking industry. Where the figure is preceded by the word, above, this figure represents a minimum standard acceptable for the banking industry. If a range of figures is presented, these figures represent a historical average for the banking industry.

The nine ratios will be presented and discussed.

TABLE 3

LISTING OF THE NINE ACCOUNTING RATIOS

	Low	High	Average	Industry Standard*
1. Cash and Government Securities/Total Deposits	25.65%	55.98%	41.76%	above 35%
2. Risk Assets/Stockholders' Equity	7.39:1	19.46:1	12.77:1	above 6:1
3. Earning Assets/Stockholders' Equity	7.95:1	20.03:1	13.25:1	9-12:1
4. Total Deposits/Stockholders' Equity	10.09:1	23.24:1	15.50:1	above 10:1
5. Loans and Discounts/Deposits	53.36%	84.01%	65.27%	30-60%
6. Net Income/Earning Assets	.50%	1.50%	1.00%	.80-1.00%
7. Net Income/Stockholders' Equity	8.64%	16.00%	12.26%	above 9%
8. Percent Earned on Loans and Securities	6.29%	8.50%	7.11%	4-6%
9. Payout Percentage	34.6%	53.5%	45.04%	40-45%

*The data for the industry standards was taken from F. L. Garcia, How to Analyze a Bank Statement (Boston: Bankers Publishing Co., 1966) pp. 71-115.

1. Cash and Government Securities/Total Deposits³

The accounts Cash and due from banks and U. S. government securities are regarded as nonrisk assets. This ratio indicates the absolute protection afforded the depositor. It is a liquidity ratio. If all other assets were to become worthless, this ratio indicates the minimum amount that is immediately available for each dollar deposited. The reason that non-U. S. government securities are excluded is that their forced conversion could result in a greater loss than in the case of U. S. government securities.

Liquidity ratios are interpreted according to the type and volatility of deposits, the size of the capital funds compared to more risky assets, and the individual bank's reliance on quick assets other than cash and U. S. government securities. Quick assets include cash and due from banks, government securities, loans and discounts, and other investments.

2. Risk Assets/Stockholders' Equity⁴

The risk asset ratio is designed to show the amount of risk assets as they relate to the capital structure. Risk assets are defined as total assets less cash and all government securities. Since most of a bank's money is

³Garcia, pp. 71-75.

⁴Garcia, pp. 78-80.

on loan from depositors, this figure will give the bank security analyst an idea of the leverage involved. This ratio is one of a number of capital adequacy ratios that reveal information of interest mainly to stockholders. If this ratio is too high, it is an indication of inadequate equity capital or of an undue concentration of investments classified as risk assets. A very high ratio may result in regulatory authorities calling for additional capital. A low ratio may indicate that the bank is holding an unduly large portion of its assets in cash and government securities, and they are low-yielding assets.

3. Earning Assets/Stockholders' Equity⁵

Earning assets are defined as the total of loans and securities including U. S. government securities as well as other types of securities. This ratio indicates the number of dollars working in invested form per dollar of equity, an indication of actual investment leverage.

This ratio does not indicate the composition of the earning assets. The composition can greatly affect the rate of return, i.e., low-yielding, conservative government securities compared to higher-yielding, more risky commercial loans.

⁵Garcia, pp. 81-82.

4. Total Deposits/Stockholders' Equity⁶

This ratio measures the relationship between the depositor's interest and the stockholder's interest in the bank. Since the bulk of available funds is in the form of deposits, this ratio measures the leverage given to each dollar of the stockholder's investment compared to the volume of depositors. The higher the ratio, the smaller the stockholder's investment per dollar of deposit. This ratio is interpreted thusly: a too high ratio may be dangerous because of the large amount of deposits supported by each stockholder dollar, or a low ratio may be fiscally unsatisfactory because a bank is holding more stockholders' capital than it can profitably employ.

5. Loans and Discounts/Deposits⁷

The other version of this ratio, which will work equally well, is to replace deposits with earning assets. The bank security analyst is principally studying the loans and discounts. By tying that figure to a more constant one, any variation in the loan figure can be carefully observed. Loans are of particular interest to bank security analysts because they represent the largest part of a bank's earning assets. In times of high business

⁶Garcia, pp. 81-83.

⁷Garcia, pp. 77-78.

activity, their size is a good indication of the bank's ability to employ its funds in credit channels, maintaining a high level of earnings. During a recession, any decline, less than an average one, may point toward a problem area. Since loans produce a higher return than any other earning asset, the higher this ratio the better the earnings performance of a bank is likely to be.

6. Net Income/Earning Assets⁸

Earning assets are defined as the total of loans and securities. This ratio is intended to show the relation of earnings to earning assets. The higher this ratio is, the better the earnings performance of a bank will be.

7. Net Income/Stockholders' Equity⁹

This ratio indicates the net rate of return on invested capital. Assets underlying the common stock of a bank are very liquid. The ability to employ these assets to earn at a satisfactory rate under a bank's management is most important.

8. Percent Earned on Loans and Securities¹⁰

Banks must invest a portion of their funds in securities in order to maintain adequate liquidity. Beyond

⁸Garcia, pp. 97-98.

⁹Garcia, pp. 106-107.

¹⁰Garcia, pp. 100-101.

a minimum amount of such investment, the major portion of their earnings will be determined by the larger amount of loans carried by the bank. Loans generally produce higher returns than securities. Nevertheless, the higher the return on securities, the better the total earnings results will be.

9. Payout Percentage¹¹

It is debatable whether earnings or dividends have a greater influence on bank stock prices. One position is that there should be a definite positive correlation between the dividend policy of a bank and its deposit growth rate. The reason is that as deposits grow the bank needs more capital to support them. This capital can be retained by reducing or failing to increase the dividend payment. If retained earnings and payout ratios are a function of the investment opportunities of a bank, it is expected that those banks that are earning the highest return on their capital would retain the highest percentage of their earnings. Therefore the earnings are more important than the dividends, and the payout percentage ratio should have little effect on bank stock prices.

Contrary to this position, the writer found during his research that stock brokers felt very strongly that one

¹¹Garcia, pp. 106-109.

of the prominent factors in the determination of bank stock prices is the stock dividend. This view is further supported by David Durand¹² in his study about bank stock prices.

Conclusion

Ratios frequently indicate a compromise between interests which management must serve: the regulatory agencies, the borrowers, the depositors, and the stockholders. The ratios selected represent several different viewpoints. The ratios work with key figures taken from the Consolidated Statement of Condition, the Consolidated Statement of Income, and other financial statements presented in a one-bank holding company's annual report. These nine ratios are: cash and government securities/total deposits, risk assets/stockholders' equity, earning assets/stockholders' equity, total deposits/stockholders' equity, loans and discounts/deposits, net income/earning assets, net income/stockholders' equity, percent earned on loans and securities, and the payout percentage.

The management factor, the market area factor, and these ratios are the 11 independent variables in the statistical model. The model will determine which group

¹²David Durand, Bank Stock Prices and the Bank Capital Problem (New York: National Bureau of Economic Research, 1957) p. 5.

of variables are most significant in determining the price of a one-bank holding company's stock.

Chapter VI

STATISTICAL MODEL

This chapter proposes to deal with those factors and ratios that have been discussed and that are assumed to be most significant in determining the price of a one-bank holding company's stock. This stock price is used in the computation of the price/earnings ratio. The price/earnings ratio is the one single measure that most nearly reflects the degree of favor with which an investor looks upon a stock. The writer's hypothesis is that the price/earnings ratio of a one-bank holding company's stock is primarily a function of 11 independent variables. These independent variables influence the bank stock price, which is reflected in the price/earnings ratio, the dependent variable. This model will determine which group of variables are most significant in determining the price of a one-bank holding company's stock.

The prices used in the computation of the price/earnings ratios are the bid prices at the close of business as of December 31, 1971. The earnings figures are the 1971 net income figures based on the average number of shares outstanding during the year.

Of the 20 one-bank holding companies selected for

this study, the price/earnings ratios range from a low of 9.44:1 to a high of 20.39:1. The two lowest price/earnings ratios are the Continental Illinois Corporation at 9.44:1 and the Pittsburgh National Corporation at 9.73:1. The two highest price/earnings ratios are the North Carolina National Bank Corporation at 20.16:1 and the Citizens and Southern National Bank at 20.39:1. The price/earnings ratios of the other one-bank holding companies all fall in the 10 to 15:1 range.

A computer model was designed to process statistical data, and it operates using the most common regression technique, the least squares method. This multiple linear regression model will combine the three analytical techniques presented in this paper: the market area, the management, and the ratio analysis. The model will combine financial analysis with two judgmental factors.

This model will yield information showing how closely the price/earnings ratio, the dependent variable, correlates with the independent variables. The model will yield a coefficient of determination (r^2), a standard error of the estimate (s), and an F-value for each regression. The coefficient of determination (r^2) measures the closeness of the relationship between the dependent variable and the joint simultaneous configuration of the independent variables. The coefficient of determination has a range of

0 to +1, and the closer it is to +1, the higher the degree of correlation. The standard error of the estimate (s) is the positive square root of the unbiased estimate of the population variance. It measures the error of the spread of points from the fitted straight line. The lower the standard error of the estimate, the better the fit.

The model will also yield a regression coefficient and a student's t -distribution value for each independent variable entered into the regression equation. These independent variables will be ranked in the order of their importance.

It was anticipated that certain independent variables would influence the price of a one-bank holding company's stock. For a given level of earnings, the price/earnings ratio, the dependent variable, will be affected by the independent variables in either a positive or negative manner. The manner in which a variable affects the price/earnings ratio will be shown by the positive or negative sign preceding the regression coefficient of that variable.

In Chapter III, it was stated that the growth prospects in a market area (x_{11}) can greatly influence the price of a bank's stock. It was stated in Chapter IV that in banking, personal services are offered and these services are guided and coordinated by management. In fact, good management (x_{12}) is so important it can alter the impact

of other factors on the bank. It was anticipated that both judgmental variables (x_{11} , x_{12}) would affect the price/earnings ratio in a positive manner.

In Chapter V, nine accounting ratios were presented. It was anticipated that eight of the variables would have a positive effect on the price/earnings ratio, while for one variable it could not be anticipated whether a positive or negative sign would precede its regression coefficient. Cash and government securities/total deposits (x_2) is a liquidity ratio. If this ratio is too high, the adverse reaction of investors may result in a lower price for the bank's stock because of the bank's large investment in assets with no return or a low return. Below some maximum figure, a positive regression coefficient would be anticipated for this ratio.

This chapter will first cover the variables and the input data for the model. Then the results of the computer runs will be presented and discussed.

Statistical Model

The writer has selected 20 one-bank holding companies as the sample of data for this study. The data for this model was supplied by the annual reports of the one-bank holding companies. The equation for this model is: $x_1 = a + b_2x_2 + b_3x_3 + \dots + b_{12}x_{12}$

- x_1 = Price/earnings ratio (the dependent variable)
 a = the constant (intercept value)
 b_i = the regression coefficient of x_i
 i = 2, 3, 4, ... , 12
 x_2 = Cash and government securities/total deposits
 x_3 = Risk assets/stockholders' equity
 x_4 = Earning assets/stockholders' equity
 x_5 = Total deposits/stockholders' equity
 x_6 = Loans and discounts/deposits
 x_7 = Net income/earning assets
 x_8 = Net income/stockholders' equity
 x_9 = Percent earned on loans and securities
 x_{10} = Payout percentage
 x_{11} = Market area factor
 x_{12} = Management factor

Of the 11 independent variables, five ratios present information taken from the Statement of Condition (balance sheet) (x_2, x_3, x_4, x_5, x_6), two ratios present information taken from the Statement of Income (x_7, x_8), two ratios present information taken from other financial statements (x_9, x_{10}), one variable represents the market area factor (x_{11}), and one variable represents the management factor (x_{12}).

Unlike the other variables, the information contained in the annual reports on the market areas and the managements

are not in a quantitative form. This information must be quantified in order for the computer to process it. Therefore a system must be devised whereby the market area and the management can be numerically rated.

Using a one-bank holding company's annual report, it was the writer's job to qualitatively rate their market area and their management. The information presented in Chapter III, Market Areas and Legal Regulations, was used as a guideline by the writer for rating the market areas. The writer was heavily influenced by the growth prospects of the area. The information presented in Chapter IV, Management Appraisal, was used as a guideline for rating the managements. Next a qualitative rating scale had to be selected with enough range to allow for a differentiation between better, average, and poorer comparative ratings between the 20 one-bank holding companies' market areas and managements. It was felt that a scale with a range of five qualitative ratings possessed the necessary diversification. The qualitative rating scale accompanied by a numerical rating is: poor - 1, below average - 2, average - 3, above average - 4, and outstanding - 5. Finally the writer had to reduce his subjective judgment about each one-bank holding company's market area and management to select from that scale the most appropriate qualitative rating. Then the accompanying numerical rating became part of the

input data for the statistical model. The numerical ratings for the market area and the management of each one-bank holding company are listed along with the rest of the input data for the statistical model. (Reference Table 4.)

All 20 of the one-bank holding companies' annual reports contained comments on their market areas and their growth prospects, therefore the writer experienced little difficulty in rating the market areas. Just the opposite was found to be true when the writer rated the managements. The annual reports contained an insufficient amount of information on the banks' managements. While the writer found he could distinguish between the more outstanding ones, the less outstanding ones, and the remainder of the 20 managements, he found it was difficult to match a bank's management with the appropriate qualitative rating. The distinctions between managements were not that clear-cut.

A series of regressions will be run to determine which group of variables are most significant in influencing the price/earnings ratio of the 20 one-bank holding companies. In succeeding regressions those variables that are shown to be least significant will be deleted. It is hoped that in deleting certain variables, this will not adversely affect the coefficients of determination.

In the first regression nine variables were entered. The two judgmental factors, the market area and the management,

TABLE 4

INPUT DATA FOR THE STATISTICAL MODEL

	1 P/E Ratio	2 Cash and Govt Secs/ Deposits	3 Risk Assets/ Stkholders Equity	4 Earning Assets/ Stkholders Equity	5 Deposits/ Stkholders Equity
A. BanCal Tri-State	10.94:1	35.29%	19.46:1	20.03:1	23.24:1
B. BankAmerica Corp	13.71	44.37	15.61	17.55	21.52
C. Bankers Trust NY	10.23	45.26	13.76	15.48	19.81
D. Chase Manhattan	12.53	40.18	13.88	13.21	17.33
E. Chemical NY Corp	10.50	47.24	11.00	12.84	16.24
F. Citizens & South	20.39	37.31	9.46	10.08	10.09
G. Continental Ill	9.44	34.68	12.23	12.71	14.47
H. Crocker Nat Corp	10.61	25.65	17.80	16.43	18.69
I. First Chicago	11.26	38.88	9.98	10.98	11.20
J. First Nat Boston	10.02	55.98	7.39	7.95	10.48
K. First Nat Dallas	14.52	40.98	13.33	10.50	13.78
L. First Nat (NY)	15.10	32.12	16.09	15.95	18.15
M. First Penn Corp	13.36	46.26	13.05	14.17	13.71
N. Mellon Nat Bank	10.77	48.29	7.83	8.60	10.64
O. Morgan (J. P.)	12.56	52.73	9.79	9.72	13.07
P. NCNB Corp	20.16	35.84	16.16	16.00	16.02
Q. Pittsburgh Nat	9.73	40.67	8.20	7.95	10.17
R. Rep Nat of Dallas	14.97	41.36	14.67	13.99	16.23
S. Security Pacific	11.17	49.03	10.83	13.50	16.57
T. Wells Fargo & Co	11.05	43.10	14.85	17.07	18.76

TABLE 4--Continued

	6 Loans & Disc/ Deposits	7 Income/ Earning Assets	8 Income/ Stkholders Equity	9 % Earned on Loans and Secs	10 Payout %	11 Mkt Area	12 Mgmt
A.	69.61%	.50%	9.96%	6.29%	50.6%	2	1
B.	58.53	.77	13.55	7.13	42.5	4	3
C.	63.34	.71	10.92	6.63	53.3	2	2
D.	62.63	.91	12.01	6.96	43.2	3	2
E.	63.63	.85	10.86	6.88	53.5	1	3
F.	82.66	1.37	13.77	7.88	49.2	4	4
G.	67.66	.95	12.04	6.82	43.1	3	3
H.	60.95	.77	12.66	7.04	48.9	3	3
I.	75.92	.99	10.74	6.75	39.5	3	3
J.	59.18	1.49	11.84	6.89	44.5	2	2
K.	63.04	1.46	15.28	6.72	39.1	5	4
L.	76.07	.79	12.65	6.78	42.9	3	4
M.	84.01	1.13	16.00	8.50	40.8	3	4
N.	59.72	1.05	9.05	6.92	50.2	2	2
O.	59.40	1.44	14.02	7.05	45.9	3	3
P.	64.57	.95	15.13	8.59	34.6	5	4
Q.	52.16	1.50	11.93	7.11	48.1	2	2
R.	70.11	1.01	14.08	7.00	43.5	4	3
S.	58.81	.75	10.10	7.12	44.3	3	3
T.	53.36	.51	8.64	7.04	43.1	4	3

were deleted (x_{11} , x_{12}). The results of this regression were disappointing. (Reference Table 5.) The coefficient of determination (r^2) was .637 and the standard error of the estimate (s) was 2.603.

In the second regression when 11 variables were entered, the results were greatly improved. Since the same nine variables are common to both regressions, the second regression was to test the sensitivity of the two judgmental factors (x_{11} , x_{12}). The coefficient of determination (r^2) was .859, an increase of .222. The standard error of the estimate (s) was 1.816, a decrease of .787.

As a check to see that the writer's judgment was not poorly exercised in the market area and management ratings, 11 variables will again be entered in the third regression. As in the previous regressions, nine variables will be held constant. The two judgmental factors (x_{11} , x_{12}) will each be increased by 1. If the regression shows that the coefficient of determination is higher in the third regression than in the second regression, this would indicate that the writer was too conservative in his qualitative ratings. The results of the third regression show that the coefficient of determination (r^2) was .799, and the standard error of the estimate (s) was 2.163.

In the fourth regression, the nine variables will again be held constant. However this time the two judgmental

TABLE 5

COEFFICIENTS OF DETERMINATION, STANDARD ERRORS OF THE ESTIMATE, AND F-VALUES

 r^2 = Coefficients of Determination F = F-Values

s = Standard Errors of the Estimate a = The Constant or Intercept Value

	r^2	s	F	a
1,	.637	2.603	1.945	-30.67
2,	.859	1.816	4.410	-46.70
3.	.799	2.163	2.896	-54.94
4.	.835	1.953	3.715	-49.99
5.	.740	1.744	15.082	- 9.42
6,	.796	1.712	8.431	-23.88

TABLE 5--Continued

REGRESSION COEFFICIENTS AND STUDENT'S DISTRIBUTION VALUES

$b_i / (t_i) = \text{Regression Coefficients} / (\text{Student's } t\text{-Distribution})$

$i = 2, 3, 4, \dots, 12$

	2	3	4	5	6	7	8	9	10	11	12
1.	-11.18 (-0.67)	.32 (.32)	-1.25 (-0.81)	1.42 (1.14)	20.02 (1.52)	835.30 (.87)	-93.30 (-0.81)	519.00 (1.84)	-18.79 (-0.99)		
2.	-7.09 (-0.60)	.26 (.37)	-1.29 (-1.16)	1.55 (1.72)	25.37 (2.70)	1029.08 (1.50)	-148.17 (-1.69)	500.03 (2.49)	5.43 (.36)	2.49 (2.77)	.12 (.10)
3.	3.92 (-0.28)	.73 (.86)	-1.76 (1.30)	1.73 (1.62)	23.57 (2.13)	1140.69 (1.30)	-175.30 (-1.57)	566.75 (2.39)	-0.21 (-0.01)	1.62 (1.77)	1.14 (1.02)
4.	-5.19 (-0.41)	.37 (.47)	-1.42 (-1.22)	1.57 (1.62)	24.13 (2.42)	953.86 (1.19)	-146.15 (-1.42)	504.20 (2.33)	7.52 (.44)	2.02 (2.38)	.65 (.61)
5.					10.87 (2.25)			157.44 (1.92)		1.81 (3.91)	
6.					13.37 (2.23)	101.91 (.79)		182.27 (2.10)	20.44 (1.74)	2.78 (3.55)	-0.62 (-0.60)

factors (x_{11} , x_{12}) will be decreased by 1. If the coefficient of determination is higher in the fourth regression than in the second regression, this would indicate that the writer rated the one-bank holding companies' market areas and managements too high. The results of the fourth regression show that the coefficient of determination (r^2) was .835, and the standard error of the estimate (s) was 1.953. These results varied slightly from the results of the second regression.

In the third and fourth regressions, the numerical ratings for the judgmental factors did not extend outside of the range of the rating scale, 1 to 5. The range of the scale was decreased by 1 for the third and fourth regressions only.

The second and the fourth regressions are very high. When these regressions are compared to the first regression, it indicates that the judgmental factors (x_{11} , x_{12}) are significant in influencing the dependent variable, the price/earnings ratio. The statement that these 11 variables are assumed to be most significant in determining the price of a one-bank holding company's stock is best supported by the second regression equation.

When the variables were listed in the order of their importance, it was not anticipated that the market area variable (x_{11}) would rank first. (Reference Table 6.)

TABLE 6

INDEPENDENT VARIABLES LISTED IN
THE ORDER OF THEIR IMPORTANCE

- x_{11} = Market area factor
- x_6 = Loans and discounts/deposits
- x_9 = Percent earned on loans and securities
- x_{10} = Payout percentage
- x_7 = Net income/earning assets
- x_{12} = Management factor
- x_5 = Total deposits/stockholders' equity
- x_8 = Net income/stockholders' equity
- x_4 = Earning assets/stockholders' equity
- x_2 = Cash and government securities/total deposits
- x_3 = Risk assets/stockholders' equity

The ratios using information taken from the Statement of Income and other financial statements generally ranked higher than those ratios using information taken from the Statement of Condition (x_2, x_3, x_4, x_5, x_6).

In the fifth regression, like the second regression, 11 variables were entered. The only difference is that the proportion of the sum of the squares which limits the entering variables into the regression was increased to .05. This means that unless the proportion of the sum of the squares attributable to an entering value is greater than .05, that variable will not be entered. In the other five regressions the proportion was always .00, which means that every variable not deleted was entered into the regression.

Of 11 variables, only three variables (x_6, x_9, x_{11}) were entered into the fifth regression equation. The coefficient of determination (r^2) was .740, and the standard error of the estimate (s) was 1.744. The t-values of the fifth regression show that two variables (x_6, x_{11}) are statistically significant at 5%; however, the t-values of the second regression show that three variables (x_6, x_9, x_{11}) are statistically significant at 5%.

In an effort to return the coefficient of determination (r^2) above the .800 level, these six variables ($x_6, x_7, x_9, x_{10}, x_{11}, x_{12}$) which ranked highest in the

order of importance were entered into the sixth regression. The results show that the coefficient of determination (r^2) was .796, and the standard error of the estimate (s) was 1.712. This final regression shows that the price/earnings ratios are closely correlated with these variables: market areas (x_{11}), loans and discounts/deposits (x_6), percent earned on loans and discounts (x_9), payout percentage (x_{10}), and net income/earning assets (x_7). The sign of the regression coefficient of the management variable (x_{12}) is the opposite of the anticipated sign, it is negative. Of the six variables entered into the sixth regression, the t-values of only three variables (x_6 , x_9 , x_{11}) show that they are statistically significant at 5%.

The regression coefficients indicate that there are two unstable variables, variables whose signs change in different regressions. The management variable (x_{12}) had a positive regression coefficient in the second, third, and fourth regressions, but in the sixth regression it changed signs. The payout percentage (x_{10}) had a negative regression coefficient for the first and third regressions, and a positive regression coefficient in the second, fourth, and sixth regressions. The variable, cash and government securities/total deposits (x_2), whose sign could not be anticipated was consistently negative. It was anticipated

that two variables, earning assets/stockholders' equity (x_4) and net income/stockholders' equity (x_8), would have positive regression coefficients. Both variables had consistently negative regression coefficients. The remaining variables ($x_3, x_5, x_6, x_7, x_9, x_{11}$) all had positive regression coefficients as anticipated. Of the 11 independent variables, only three variables (x_6, x_9, x_{11}) are statistically significant at the 5% level, and had the predicted positive regression coefficients.

The F-values for the second and fourth regressions are above the figure determined to be the level of significance at 5%. The F-values for the fifth and sixth regressions are above the appropriate figures determined to be the level of significance at 1%.

When the parent population is normally distributed, the means of random samples drawn from that population are normally distributed, regardless of the size of the sample. A problem arises with respect to the assumption of normality when samples are drawn from non-normal populations. The sample size is too small for the asymptotic normality property to produce an adequate approximation to normality in the distribution of the sample means. If this is the case, the tests used on the sample distribution may not yield valid results. In practice, for samples drawn from non-normal parent populations, the approach to normality

seems to be adequate even for relatively small samples.¹

A problem exists due to the small sample size ($n = 20$). In the first four regressions, this problem is compounded by the large number of variables, which reduces the degrees of freedom even further. This means that the normality assumptions mentioned above may not hold, calling into question the validity of the F-test and the t-test. The last two regressions have fewer variables (4 and 7), so this problem is reduced.

The 20 one-bank holding companies comprising this sample are located in eight states and they represent many of the larger financial centers in the United States. Every effort was made to keep this small sample an adequate approximation to the normality of the parent population, all of the larger one-bank holding companies in the United States whose stock is nationally traded.

Conclusion

The aim of this chapter was to develop a model to determine which factors and ratios are most significant in determining the price of a one-bank holding company's stock. The model combined the three analytical techniques presented in this paper: the market area, the management, and ratio analysis. In this multiple regression model,

¹Samuel B. Richmond, Statistical Analysis (New York: The Ronald Press Co., 1964) p. 194.

the dependent variable is the price/earnings ratio and the 11 independent variables represent the factors and ratios. Through a series of regressions, this model will determine which group of variables are most significant in determining the price/earnings ratios of the 20 one-bank holding companies' stock.

It was found that information taken from the Statement of Condition is generally less significant than information taken from other areas of a one-bank holding company's annual report. The only exception is the ratio, loans and discounts/deposits (x_6), which ranked second in the order of importance.

The results of the final regression show that these variables, market area (x_{11}), loans and discounts/deposits (x_6), and percent earned on loans and securities (x_9), have a high degree of correlation with the price/earnings ratios. The t-values of these three variables show that they are statistically significant at 5%. In rating a bank's market area, the writer's judgment was heavily influenced by the growth prospects of the area. Loans are the principal source of bank earnings. Therefore growth prospects and earnings are most important in influencing the price of a one-bank holding company's stock.

Chapter VII

CONCLUSION

The aim of this paper was to determine which information in a bank's annual report is most significant in determining the price of a one-bank holding company's stock. This stock price is used in the computation of the price/earnings ratio. The writer's hypothesis is that the price/earnings ratio is primarily a function of 11 independent variables. These variables are assumed by the writer to be most significant in determining investor favor for certain bank stocks. A multiple regression model was built to determine which group of variables show the highest degree of correlation with the price/earnings ratio. The data for the model was supplied by the annual reports of the 20 one-bank holding companies. This model will combine the three analytical techniques presented in this paper: the market area, the management appraisal, and ratio analysis.

A market area may be defined as the people, the economic activity, the industry, the law, and the other intangible factors which comprise a geographically limited section. Legal restrictions may affect the expansion activities of a one-bank holding company, such as: the Edge Act restricts a bank's foreign operations, each state

has its own set of laws restricting branch banking, and the Bank Holding Company Act contains a list of permissible activities which may limit a bank's diversification plans. In reviewing the economic activity of a market area, the number of business transactions should be studied. Where business transactions are increasing faster than the national average, this area is termed a growth area. The volume of business of a one-bank holding company should increase about as fast as the business activity of the community. The growth prospects in a bank's market area can strongly influence investor interest in their stock. This increased demand can have a significant impact on the price of a one-bank holding company's stock.

Many of the factors used in the evaluation of a bank management are also applicable in evaluating the managements of other subsidiary companies that are members of a one-bank holding company. Combining this information, a bank security analyst should be able to appraise the management capabilities of a one-bank holding company. However, bank security analysts usually evaluate a bank using a maze of statistical data, and they rarely present any specific criticisms of management. Yet these same analysts will admit that it is important to analyze the management factor. In their favor is the fact that no one has yet come up with an adequate way to express this

type of analysis. The annual reports of the 20 one-bank holding companies did not contain an adequate amount of information on their managements, further complicating the difficult task of rating the managements.

Ratio analysis is the most common approach used in bank stock analysis. It has this distinction because of the ease with which conclusions can be drawn and supported by quantitative data.

The information contained in the Statement of Condition was found to be less significant in influencing the price/earnings ratios than information contained in other areas of the banks' annual reports. The only exception was the ratio, loans and discounts/deposits (x_6), which ranked second in the order of importance.

The final results of the model show that the price/earnings ratios have a high degree of correlation with the market area and loans. In rating a bank's market area, the writer's judgment was heavily influenced by the growth prospects of the area. Loans are the principal source of bank earnings. Therefore growth prospects and earnings are most important in influencing the price of a one-bank holding company's stock.

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Also there is an annual report for each of the 20 one-bank holding companies discussed in this paper.