

A STUDY OF THE DETERMINANTS OF
COMMON STOCK PRICES AND
PRICE-RELATIVES FOR A SELECTED SAMPLE
OF LARGE COMMERCIAL BANKS

Thesis for the Degree of Ph. D.
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Eugene Francis Drzycimski
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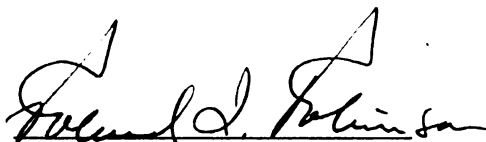
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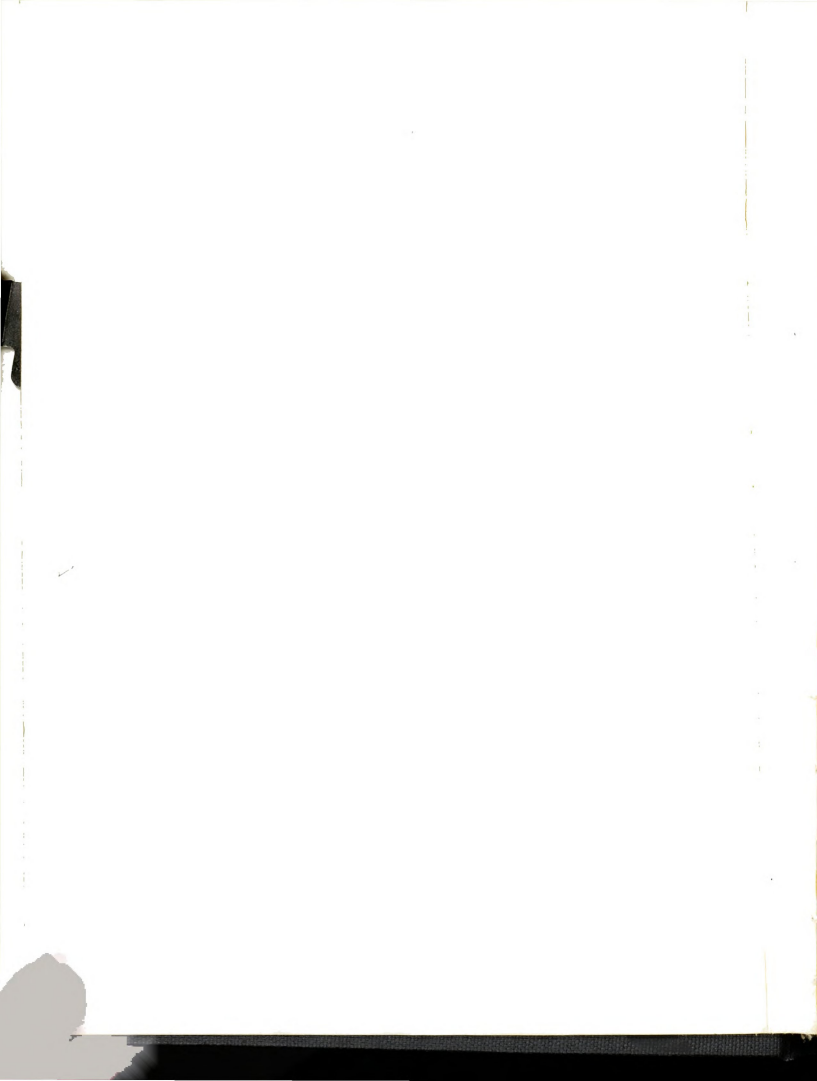
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ABSTRACT

A STUDY OF THE DETERMINANTS OF COMMON STOCK PRICES AND PRICE-RELATIVES FOR A SELECTED SAMPLE OF LARGE COMMERCIAL BANKS

by Eugene F. Drzycimski

The principle objective of this dissertation is to isolate those factors which are most important in determining the prices and price/earnings ratios of the common stocks of large commercial banks. With one notable exception, little prior work has been done in this area.

The basic methodology employed is multiple regression and correlation analysis of presumptive price determinants such as size, efficiency, growth, productivity, solvency, functional performance, market acceptance, ownership concentration, cash payout, and stability. The data were obtained for a selected sample of 122 large commercial banks and holding companies for the 1960-1964 period. Fewer observations were obtained for the 1955-1959 period.

To reduce expected heterogeneity, the banks were grouped by:

- (1) Geographic areas.
- (2) Growth rates of deposits.
- (3) Proportion of loans and discounts to total assets.
- (4) Payout ratios.

A series of arguments, both natural and logarithmic, were applied to the groups.

(1) To describe the sample experience over all ten years, the year-end bid price per share (X4)* was regressed on the following variables.

- X5 net operating earnings per share
- X6 dividends per share
- X7 loans and discounts/assets
- X8 book value per share
- X9 total year-end deposits
- X10 capital/risk assets
- X11 price/net operating earnings
- X12 net operating earnings/capital
- X13 net operating earnings/assets
- X14 interest income from loans/gross operating earnings
- X15 price/book value
- X16 earning assets/price
- X17 dividends/net operating earnings
- X18 dividends/price
- X19 # shares/# owners (12/31/64)
- X20 capital notes or debentures
- X21 stock dividend
- X22 stock split
- X23 earnings retained/net operating earnings
- X26 eligible for Massachusetts savings bank investment
- X27 net indicated earnings.

- (2) To replicate and extend the principal prior study by David Durand, the log of price (X4) was regressed on the logs of earnings (X5), dividends (X6), and book value (X8) for the years 1960-1964 with the banks grouped according to geographic location. The two major conclusions reached were that geographic location no longer sharply distinguishes between banks and that the influence of book value and dividends had declined and that the influence of earnings had increased.
- (3) The following argument was an attempt to explain the variation in the price/earnings ratios for year-end 1960-1964. The argument was applied to the banks grouped alternatively according to growth in deposits, mean loan/assets ratios, and mean payout ratios. The log of the price/earnings ratio (X11) was tested as a function of: the logs of the variables (X7), (X9), (X10), (X12), (X13), (X14), (X17), (X19), (X20), (X21), (X22), and (X26). None of the tests achieved significant success. The highest average R^2 d.f. was .266 which was obtained by the payout scheme. The highest R^2 d.f. for a group was .444, achieved by the high payout group. Only four variables are considered important explainers. These are deposits (X9), the payout ratio (X17), average stock holdings (X19), and usually stock dividends (X21).
- (4) In an attempt to measure the influence of ownership concentration on the price/earnings ratio, this price-relative was regressed on the logs of the per cent of stock held by the

top 20 stockholders (X24) and the per cent of stock held by the largest owner (X25). Both natural and logarithmic functions were employed. Taking all banks as a group, neither function produced positive adjusted R^2 . Either control has no effect on the variation of price/earnings ratios or this argument was incapable of measuring it.

- (5) The final argument attempts to telescope the recent history of the banks to test the influence of growth and stability in the determinants upon the price/earnings ratios. The variables included were:

X76 average yearly growth rate in price

X77 average yearly growth rate in earnings

X78 average yearly growth rate in dividends

X87 log of standard error of estimate (S) of earnings

X89 log of standard error of estimate (S) of dividends

X90 log of net regression coefficient (b) of loans/assets

X91 log of standard error of estimate (S) of loans/assets

X98 log of net regression coefficient (b) of price/book value

X99 log of standard error of estimate (S) of price/book value.

This single regression explained less than half of the variation of the price/earnings ratios. Stability of earnings (X87), dividends (X89), loaning function (X91), and growth of the loaning function (X90) contributed nothing. Instability of the price/book value ratio (X99) displayed by far the greatest influence on and association with the price/earnings ratios.

Generally, this argument performed less efficiently than did many of the earlier tests.

Some of the major conclusions reached are as follows. Growth of deposits is not necessarily efficient as measured by the rate of return on assets, nor do high growth banks sell at the highest price-relatives. Banks with high percentages of assets in loans earned the lowest rates of return on both capital and assets. Their stocks were valued at the lowest multiples of both earnings and book value. The investing banks achieved the highest price multiples.

The grouping according to mean payout ratios yielded results most consistent with expectations. The high payout banks had the highest price multiples, while the low payout banks had the lowest multiples. The high payout group used the largest amount of debt, the fewest number of stock dividends, and earned the highest rate of return on assets. The low payout group used almost no debt, the largest number of stock dividends, and earned the lowest rate of return on assets. The payout scheme, then, succeeds best in isolating the value determinants and in relating these determinants to the major price-relative.

Since the over-all results of the arguments were disappointing, further investigation is warranted. Alternative approaches might include refinements in the present models, modifications in the statistical treatment, and the procurement of additional determinants. A final consideration is that relative prices of bank stocks result from non-quantifiable, subjective judgments on the part of the investing public.

*All symbols beginning with "X" are identification symbols.



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CHAPTER I

INTRODUCTION

Concern of the Study

The purpose of this study is to isolate the leading factors which have influenced absolute and relative levels of bank stock prices. Two basic hypotheses are tested in this paper. First, that the determinants of the market price of banks' common stocks vary according to geographic location. Second, that price/earnings ratios, as primary indicators of investment worth, are largely a function of the relative functional and productive efficiency of banks.

The hypotheses were tested in the following fashion. Chapter One will set forth assumptions basic to the study as well as enumerate and discuss problems endemic to research in the bank stock area. Also of concern in this chapter will be such topics as market psychology, the nature and relative performance of this investment medium, the phases of the industry's price activity, and the form and the success of previous price-explanation models.

The magnitude and financial impact of the sample will be discussed in Chapter Two. This section will, in addition, describe the sample over a ten-year study period employing the mean and standard deviation statistics generated by a series of cross-section, regression analysis. Observed associations between market price and the determinants, and between the price-relatives and these same determinants will be reported.

Chapter Three replicates and extends a significant prior work. An attempt is made to explain market price by using the three primary variables, earnings, dividends and book value per share. This argument is tested with the sample banks segregated into largely geographic groups. Of major concern is the homogeneity within groups and the consistency of variable influence between the prior and the current study.

Five separate models designed to explain the ratio of bid market price to net operating earnings are tested and analyzed in Chapter Four. The primary, efficiency model is applied to the sample banks grouped according to three non-geographic schemes. These schemes are the rates of growth in size, the allocation of credit, and the per cent of earnings disbursed in dividends. The fourth model tests the effect of control or ownership concentration on the price/earnings ratio. The final model is designed to measure the effects of certain growth and stability determinants upon the same major price-relative.

Chapter Five broadens and summarizes the conclusions concerning the efficiency of the models tested in explaining both price and the price-relatives. Alternative hypotheses are also presented for future investigation.

Psychology of the Market

In the past, attempts at an explanation of price and price-relatives at which common stocks are traded have been grounded on a premise of at least long-term rationality of the investors interacting in the market. This hypothesis is germane to the models which will be subsequently tested. Efficiency and productivity within the banking

industry will be defined and then compared with market values. However, it is possible that the common stocks of even the largest financial institutions are bought and sold for reasons other than those arising from a determination of future worth. Or it may be that future worth is so conceived in the minds of the investors as to defy measurement by means other than in-depth interviews.

An investigator must also remain aware of the element of crowd psychology evidenced frequently in stock market fashions as well as in cycles for common stocks as a group. To an extent, the market is governed by a law of action and reaction, a swing between an optimistic appraisal of certain performance factors and a pessimistic disregard of all information.

To exemplify the swings, in 1929, the optimists carried the day with a low level of short interest coupled with price/earnings ratios of 20 and a Dow Jones Average of 386. In 1932, on the other hand, the short interest was very intense while the Dow Jones Average was at 42. Because of the drastic fall in earnings, the price/earnings ratios in that year were so high as to be completely meaningless. The same extremes of reaction can be viewed when a comparison is made between the more recent periods of year-end 1961 and beginning 1962 when the Dow Jones Industrial Average was in the 720 to 735 range, and the pessimistic attitude which prevailed immediately after the sharp market fall off in May and June of 1962, when that same average had fallen to 535. Table 1-1 provides a record of price/earnings ratios while Table 1-2 supplies a history of price averages and ranges.

Just as stock market cycles are often the result of changing attitudes, whole industries as well as individual issues are plagued by the same fickleness. Aluminums were extremely popular from 1953 to 1957, only to decline much more than did the general market in 1957 and 1959. In spite of the long bull market in the 1950's, steel stocks did almost nothing until 1959. In late 1960 and January, 1961 a bear market for international oils was in evidence: Standard Oil of New Jersey sold at \$39, down from its near-term peak of \$69, and Royal Dutch sold at \$29, down from its peak of \$61. However, within just a few months after the sharp market break in May, 1962, the oils began to recover strongly.

A well-known selection from the electronic industry is another excellent example of changing investor evaluation. In 1960, Texas Instrument sold at \$256, or 66 times that year's earnings and 71 times 1959 earnings. However, by 1962, the stock declined to \$49, or 23 times 1962 earnings.

Examples of this swing behavior in the recreation industry are Brunswick and American Machine and Foundry. In 1961, Brunswick sold at \$75, only to fall to \$13 in 1962 and to \$12 in 1963. American Machine and Foundry was selling at \$66 in 1961, but fell to \$16 in 1962. The price pattern of this stock is largely the result of investor valuation of earnings which rose from \$0.83 in 1958 to \$1.70 in 1961, followed by a regression of only \$0.20 to \$1.50 in 1962.

Similar price patterns are in evidence for the banking industry as a whole. In 1927, Walter H. Woodward in the Foreward of his book, Profits in Bank Stocks, states: "This little book is the result of the

firm conviction that this type of security is second to none in the point of desirability for every class of investor."¹ Later, Mr. Woodward continues: "It is intensely gratifying to one who has spent a number of years in the bank stock business and who has made a rather close study of them and their values, to realize that the investing public is coming slowly but gradually to an understanding and appreciation of bank stocks."² Mr. Woodward's gratification was short-lived. The depression took its toll of thousands of banks and of the investments of hundreds of thousands of bank stockholders.

As the depositors lost their savings in the banks which closed, the owners suffered serious losses of their investments in the majority of banks which continued after the debacle. Of concern to this study is that bank stock prices did not recover for some 25 years. Two tables are supplied which describe this price history. Table 1-3 consists of the indexes of prices for 10 New York City bank stocks and for 16 banks located outside of New York City published by Standard and Poor's. Table 1-6 includes, among other statistics, Moody's weighted-average market price per share for 15 New York City banks. In 1931, Moody's average was less than a third what it was in 1929, and one year later, it had fallen to less than a sixth of the earlier figure.

If the investing public was slow to appreciate banks before 1929, it was far more hesitant during the next quarter century. In the Foreward to David Durand's Bank Stock Prices and the Bank Capital

¹Walter H. Woodward, Profits in Bank Stocks (New York: The MacMillan Company, 1927).

²Ibid., p.4.

Problem, R. J. Saulnier states:

"In 1952, bank deposits were growing at a rate of about 5 per cent per year, and the problem of expanding bank capital at a similar rate was forbidding. Bank earnings were not high enough to provide the indicated funds and leave much of a margin for dividends. Moreover, many bankers were loath to issue new stock, since so many bank stocks were selling below book value. In short, bankers found themselves in an anomalous position; they were operating an industry with proven growth potential, but were having difficulty raising capital because their stocks did not command the favored position of growth stocks."³

Since the termination date of the Durand statistics (1953), the levels of bank stock prices have changed considerably. As of the end of 1964, the prices of bank stocks were reaching new post-depression highs. The stocks of the 100 or so largest banks were selling at 50 to 100 per cent above their book values. However, whereas previously (1935-1955) bank stocks sold at price/earnings ratios generally higher than those of the industrial or utility groups, following 1955, bank stocks sold at price-relative levels consistently below those of the other two categories. Table 1-8 provides the price/earnings ratios and the yields of these three industry groups as published by Moody's.

For a period of two and a half decades bank stocks were largely ignored by the investing public. For a short span of six or seven years they were of interest to the investors, so much so that in 1961 they largely out-paced the other groups. Unusual expectations could not be fulfilled, however. Once again, bankers have found their securities ignored. The investor's acceptance cycle has once again gone full-turn.

³David Durand, Bank Stock Prices and the Bank Capital Problem (New York: National Bureau of Economic Research, Inc., 1957), p. xi.

Price Action of Other Stock Groups

This section is an attempt at delineating the market price movements as specified by certain statistical series. Tables 1-2, 1-3, 1-5, and 1-6 all present indicators of price changes. This discussion will serve as a framework into which the recent history of bank stock prices can later be inserted.

Reviewing the indicators over time, Table 1-5 reveals that Standard and Poor's 500 Composite Index moved from 11.02 as the average index for the year 1940, to 40.49 in 1955, to 81.37 in 1964. The Standard and Poor's 425 Industrial Index moved a bit faster; from 10.69 in 1940, to 42.40 in 1955, to 81.37 for 1964. This same services' 50 Utility Index began at 15.05 in 1940, a bit more than doubled to 31.37 by 1955, and showed even a faster rate of growth, reaching 69.99 in 1964. The champion of this series is the Life Insurance Index of 11 companies. This index actually increased 35-fold, moving from 9.43 in 1940, to 143.00 in 1955, and reaching a level of 339.00 in 1964.

Turning to the other major indicator of stock prices as given in Table 1-2, it is noted that the Dow Jones Average of 30 Blue Chip Industrials moved from 132 in 1940, to 438 in 1955, to a mean for the year 1964 of 829. The monthly high for the year 1964 was 891, the same level which prevailed at the end of August, 1965. While prices of the industrial stocks were multiplying, the utilities were also scoring notable gains. The Dow Jones Average of 15 utilities stood at 22 in 1940, moved up to 64 in 1955, and then more than doubled to 146 by 1964.

In a large measure, stock prices advanced in step with the general growth of the economy. Using Gross National Product, as supplied by Table 1-4, as an indicator of economic achievement, perceptible growth is in evidence. This measure stood at \$100 billion in 1940. By 1955, Gross National Product rose to \$397 billion, and reached \$622 billion by the end of 1964. Considering the long-term, over-all corporate earnings and stock prices have demonstrated a three per cent annual growth rate. Just over three per cent is the actual growth rate in constant 1959 dollars of Gross National Product during the period 1909-1962. The actual very long-term growth rate of GNP in terms of current dollars is around 5.4 per cent. Between 1955 and 1964, Gross National Product increased at a compound rate in the neighborhood of 4.5 per cent in actual dollars.

In addition to the general economic advance of the economy and the fear of inflation, other possible reasons can be found why stock prices have reached for the sky during the post-war period. Both the institutional and the individual investor was much enamored by the possibility of growth. The definition of growth was often nebulous, but generally meant a projected growth rate of at least seven to eight per cent a year compounded, or a doubling every nine or ten years. This rate would be somewhat more than double the three per cent long-term growth rate of over-all corporate earnings and stock prices.

The soaring price/earnings ratios of growth stocks acted as a strong incentive for the price/earnings ratios of a large number of the neutral or non-growth stocks. Table 1-8 supplies these ratios for various categories of stocks as derived from Moody's Investors Service.

In late 1961 and early 1962, it was an easy process to decide that average stocks were not out of line at 19 to 23 times earnings when growth stocks were selling in the range of 30 to 40 times earnings.

When talking about growth, very often what is really meant is merely growth in market price. Between 1955 and 1961, the Dow Jones Industrial Average moved from a low month of 388 to a high month of 734. Over this same period, the earnings per share of the Standard and Poor's 500 Composite Index showed an absolute increase of five cents. In 1955, earnings per share was \$3.62, while in 1962, it stood at \$3.67. The price/earnings ratios for Moody's Industrials ranged from 12.43 in 1955 to 20.80 in 1961. Quite obviously, growth can, on occasion, simply refer to changes in market price.

A discussion of prices in any particular market must also consider the quantity of items available for sale. It has been noted that powerful forces were exerting their influence on the demand for stock. Prices also rose because the supply of stock offered for sale yearly, even including new floatations, was far short of demand except at rising prices. Table 1-7 provides a history of new securities offered for sale from 1934 through 1964. It is estimated that between 1946 and 1964 only some \$30 billion of common stock and some \$10 billion of preferred stock was offered for sale in this country. However, as these figures are gross in the sense that they include issues for refunding purposes, the net new funds flowing into purchases of stock by both individuals and institutions during this period would total in the neighborhood of \$35 billion.⁴

⁴Douglas H. Bellemore, The Strategic Investor (New York: Simmons-Broadman Publishing Co., 1963), p. 54.

Looking at the supply of common shares from a different perspective, the recent annual turnover rate of shares listed on the New York Stock Exchange was only about 15 per cent. Since some shares were sold more than once, the turnover rate exaggerates the actual condition, so that more than 85 per cent of the stock held on January 1 of a particular year is maintained by the same owners on January 1 of the following year. Therefore, the increase in stock prices was also a result of the relative scarcity of stock, which in turn was caused by the small floating supply of outstanding shares and the comparatively small number of new issues.

The Bank Stock Market

Throughout this study, the term "bank stock market" is used. Actually, the market for bank stocks is not a separate entity, but rather just one shelf in a vast supermarket of equities. A share of a bank, or many banks, is just one choice of many open to the typical investor.

There is another consideration which restricts the employment of the term. That restriction must largely be one of size. To even allow the analysis which follows in later sections, the assumption must be made that the stocks of large banks are traded in markets possessing attributes similar to those indigenous in other equity markets. If this assumption does not hold, a rational model employing functional and productive determinants as explainers of relative prices may prove inefficient.

Viewing the banking industry as a whole, the market in which its ownership shares are traded is highly imperfect. A number of factors contribute to this imperfection. There is little information available



both of the corporation's financial and performance attributes and of the price at which others are willing to buy and sell.⁵ Because of the influence of control, the blocks of bank stock coming on the market are frequently large and can often be sold only at sizeable discounts. Especially for the smaller firms, artificial prices exist because the individual "making the market" is often the only buyer available to the seller. Bank capital is not necessarily mobile due to the usual "local only" market for the stock.

A 1964 report of the House Committee on Banking and Currency further describes the market imperfections.

1. The median number of shareholders for all banks is between 26 and 50.
2. Seventy-five per cent of all banks have less than 10,000 shares outstanding.
3. Except for the over \$100 million size class, over 75 per cent of all banks are over 51 per cent owned by local residents.
4. The total number of banks which have regularly published bid and asked quotations in the newspapers is only six per cent of all banks.
5. Of the 10,653 banks for which neither professional stock dealers nor an officer or director bought and sold securities for their own accounts, 25 per cent do not even use their good offices to help purchasers and sellers locate one another.
6. Less than 50 per cent of all banks publish an annual report.
7. Of the 48 per cent of all banks which do publish annual reports, 29 per cent of these do not give the size of any valuation reserves.

⁵"Bank Report Fracas - Critics Charge Bankers Obscure and Omit Vital Data for Stockholders," Wall Street Journal, June 4, 1965, p. 7.

8. Thirty-six per cent of all banks do not disclose before-tax earnings and 34 per cent of all banks do not disclose after-tax earnings.
9. Concerning the number of shares traded in 1962, of the 8,111 banks responding, 5,168 banks had less than 1,000 shares traded in that year.⁶

Another imperfection having implications for the relative prices of bank stocks is that of ownership concentration. A community of interest may exist both within and among banks which arises directly or indirectly from ownership ties. The only known study in this area was published by "The Patman Committee" in 1963.⁷ The general conclusion reached is that ownership of the largest member banks have characteristics similar to those found in the large industrial corporations. That is, management is generally not directly associated with ownership. As of the date of the study (June 30, 1962), in no case do the directors and officers hold more than 50 per cent of the stock in any of the top 200 banks. In fact, in 59 of the banks, the combined holdings of all directors and leading officers amount to less than 2.5 per cent of the stock. In 175 of the 200 leading member banks, the combined holdings of directors and officers amount to less than 17.5 per cent of the outstanding stock.

However, some variation is found among the largest member banks, both in the composition of the top stockholders and in the concentration

⁶U. S. Congress, House, Committee on Banking and Currency, Subcommittee on Domestic Finance, The Market For Bank Stocks, 88th Cong., 2nd. Sess., December 22, 1964, pp. 6-72.

⁷U. S. Congress, House, Committee on Banking and Currency, Chain Banking - Stockholder and Loan Links of 200 Largest Member Banks, 88th Cong., April 15, 1963, pp. 5-11.

of ownership. As regards concentration, in about half of the 200 largest banks, the top 20 stockholders as a group hold less than one-third of the outstanding stock. At the other extreme, in 21 of these 200 banks, the top 20 stockholders hold over 90 per cent of the stock. In another 14 of the top 200, the top 20 stockholders hold anywhere from 60 to 90 per cent of the stock, and for an additional 10 banks, the 20 largest stockholders hold from 50 to 60 per cent of the outstanding stock.

It does seem, however, that diffused ownership is a characteristic of the very largest banks. In each of the 10 largest member banks the 20 largest stockholders hold an aggregate of less than 35 per cent of the outstanding stock. Moreover, in nine of the top 10 banks, the 20 largest stockholders hold less than one-fourth of the stock.⁸

In 1929, stocks trading on the New York Stock Exchange included four individual bank stocks. The Bank of New York and Trust, the Corn Exchange Bank, The Equitable Trust, and The National Bank of Commerce. Since the depression, at best only one bank stock has been traded on that exchange. In 1965, The Chase Manhattan Bank received approval for listing on the New York Stock Exchange. At best, then, bank stocks are traded in the over-the-counter market. This fact in itself may explain some of the variation in market activity among the industry groups.⁹ It is entirely possible that more banks will request listing as a result

⁸ Ibid.

⁹ "The Investment Markets - Does the Over-the-Counter Market Hurt Bank Stocks?" Banking, January, 1965, p. 16.

of the Securities Act Amendment of 1964 which empowered both the Board of Governors of the Federal Reserve System and the Federal Deposit Insurance Corporation to issue Regulation F (effective January 1, 1965), calling for more complete stock trading disclosure and financial reporting by state member banks.¹⁰

To further indicate the paucity of bank stock price information, it is pointed out that of the banks with deposits in excess of \$10 million, less than one-third, or something under 900 of them have their month-end quotations publicly available in The Commercial and Financial Chronicle's Bank and Quotation Record. It is even more striking to find that of the 13,775 (12/31/64) commercial and stock savings banks in the United States, only some 200 of them have their stocks popularly quoted in such publications as The American Banker, The New York Times, Barron's, The Commercial and Financial Chronicle, and regional editions of The Wall Street Journal. Of the nation's top 300 banks, having year-end deposit totals in excess of \$100 million, less than half are quoted daily. In fact, there are 11 states with 30 of the top 300 banks, the stocks of which are not even quoted on a weekly basis.¹¹

In the light of these market facts, it is not surprising to learn that there is no regularly published national composite bank stock price average. The information consists of a daily index of New York City bank stocks published in the American Banker. In addition,

¹⁰"Banking's Investment Forum--New Disclosure Regulations Adopted," Banking, February, 1965, pp. 12-14.

¹¹Francis I. duPont and Company, Bank Growth Goals, (New York: Francis I. duPont and Co.), 1961, p. 10.

both Moody's and Standard and Poor's run separate, monthly, and yearly averages for both New York City banks and for a small group of out-of-town banks. These data are presented in Tables 1-6 and 1-3 respectively. A considerably more inclusive stock average has been computed for the sample utilized in this study and is presented in Table 1-9. While the computed averages are representative only of the years 1955 through 1964, it gains major significance because of its wide dispersion of both geographic and size attributes. This table also supplies the average yields, price/earnings ratios and price/book value ratios for the sample banks. These tables will be employed in subsequent analysis.

Bank Stock Performance

Because of the lack of a generally representative index of bank stock prices, a discussion of market performance can easily be biased by the little data which are available. However, the statistics presented in both Tables 1-3 and 1-8 seem to indicate that the bank share prices passed through at least two phases of market acceptance during the post-war period. The Durand study was a result of the recognition of the existence of the first phase. Because of data restrictions, subsequent analyses will largely be concerned with the changes and levels which occurred during stage two.

A. Phase One

The first decade or so of the post-war period witnessed bank stocks wallowing in a completely uninterested market. In 1946, the Standard and Poor's index of 10 New York City banks stood at 14.06. By 1953, this index had risen to only 14.97 after dropping as low as

11.48 during the interim. The Standard and Poor's index of 16 banks outside of New York City stood at 19.56 in 1946, while in 1953, its level was 30.79. During this same period, the Dow Jones Industrial Average rose from 187 to 274. A similar relation is obtained when viewing Moody's Weighted Average Market Price. In 1946, the 15 New York City banks included in the Moody average stood at \$58.78. By 1953, this average had only increased to \$63.60. During this period, Moody's Industrials rose from \$49.84 to \$87.05.

Proceeding into the later stages of phase one, the Standard and Poor's index for 10 New York City bank stocks rose from 14.97 in 1953 to 19.47 in 1957. The Standard and Poor's index of 16 banks outside of New York City increased from 30.79 to 38.40 over this same five year period. While bank stock prices were increasing only slowly, the Dow Jones Industrial Average jumped from 274 in 1953 to 470 in 1957. Again, looking at Moody's Weighted Average Market Price, an increase is noted of just under 20 per cent from \$63.60 in 1953 to \$76.13 in 1957 for the 15 New York City banks, while Moody's Industrials grew from \$76.05 to \$143.65, for an increase of just under 100 per cent.

Although the following comparison may extend a bit beyond the possible termination of phase one, viewing the decade of the 1950's as a whole, Moody's New York City bank average increased 82.0 per cent, for a compound yearly average growth rate of 6.2 per cent. Standard and Poor's 16 banks outside of New York City did somewhat better, demonstrating an absolute increase of 109.6 per cent, for a compound yearly average growth rate of 7.7 per cent. While the rates of growth for these bank stock groups are certainly above that of the economy as

a whole, they suffer in comparison with other stock price indicators. During this same decade, Moody's 125 Industrials increased 199.7 per cent at a compound rate of 11.6 per cent per year. The Dow Jones Industrial Average increased a total of 189.8 per cent at a rate of 11.2 per cent compounded yearly.

As further indication of the relative weakness of the bank stock market during at least the earlier 1950's, other attributes may be examined. Within certain rational bounds, price/earnings ratios are considered indicative of market acceptance of equity issues. During the full ten-year period, the price/earnings ratios of Moody's New York City banks actually decreased 15.6 per cent, falling from 14.74 in 1950 to 12.43 in 1960. While Standard and Poor's other banks did not do as badly, their price-relative ratios increased by only 12.6 per cent. As the bank stocks were wallowing in an uninteresting market, the price/earnings ratios of Moody's Industrials increased absolutely by 164.7 per cent, and those of the Dow Jones Industrial Average showed even a better gain of 171.8 per cent. The reason for this poor showing for the bank groups is that while stock prices were increasing slowly, their earnings-per-share were increasing at a much faster rate.

An examination of the earnings-per-share figures for the stock groups under discussion reveals a generally inverse relationship with the price/earnings ratios previously mentioned. The earnings of Moody's New York City banks increased 115.9 per cent for a compound rate of growth of 8.0 per cent during the 10-year period. Next in line was Standard and Poor's other banks with an absolute increase of 85.7 per cent for a compound yearly rate of 6.4 per cent. While bank earnings

were growing at a good rate, Moody's 125 Industrials demonstrated an absolute increase of only 13.8 per cent and the earnings of the Dow Jones Industrial Average grew absolutely only 5.4 per cent over the 10-year period.

In accord with expectations, even though dollar dividends increased throughout the period, the yields on market price decreased for the stock groups under examination. The ranking of the yield decrease is largely inverse to the ranking of the gains in price made by the groups. The yields of the New York City banks decreased 27.4 per cent, those of Moody's Industrials fell absolutely 46.5 per cent, while the yields of the Dow Jones Industrial Average decreased 54.0 per cent. An interesting note is that while the prices of the New York City banks increased only 82.0 per cent as compared to a price gain of 109.6 per cent for the Outside banks, the yields on the New York stocks held up better. Of more importance, however, is the fact that the earnings of the New York City banks increased 115.9 per cent as compared to a gain of only 85.7 per cent in the earnings of the Other banks. It would almost seem as if earnings were being penalized by the market.

B. Phase Two

The precise point at which the market price reactions of bank stocks actually entered the second post-war phase of activity is open to question. The writer personally feels that the year 1957 represents the true beginning. If this is true, some of the preceding analysis (1950-1960) includes the early stages of the latter phase. Nevertheless, it was well to cover the decade of the 1950's as a whole because other

industry studies are couched in the same temporal terms. Other writers believe that the turn did not come until 1960 when a broadening of institutional interest occurred.¹² While it is true that the greatest activity took place in late 1960 and early 1961, there was perceptible price appreciation during at least the two years preceding 1960. The following analysis will dichotomize phase two into two segments, 1957-1960 and 1960-1964.

So as to more effectively visualize the changes within phase two, certain data will be extracted from the tables in the Appendix and are presented below in Tables 1-10-A through 1-10-D.

TABLE 1-10-A

Levels of Price Indicators For Bank Groups

<u>Year</u>	<u>Average Price</u>	<u>Price Index</u>	<u>Earnings P.S.</u>	<u>Dividends P.S.</u>	<u>Yield</u>	<u>Price/Earnings</u>
<u>Moody's 15 N.Y.C. Banks</u>						
1957	\$ 76.13		\$ 6.34	\$ 3.61	4.70%	12.01
1960	101.42		8.16	3.97	3.90	12.43
1964	153.75		9.07	4.57	3.00	16.95
<u>Moody's 12 Banks Outside of N.Y.C.</u>						
1957	\$ 47.30			\$ 2.07	4.38%	
1960	65.22			2.29	3.51	
1964	96.98			2.70	2.78	
<u>Study Sample</u>						
1957	\$ 26.73		\$ 2.65	\$ 1.14	4.38%	10.40
1960	41.51		3.39	1.42	3.57	12.60
1964	63.30		3.99	1.82	2.97	16.30

¹²David C. Cates, "What's Wrong With Bank Stocks?" Paper read before the meeting of The Nashville Society of Security Analysts, Nashville, Tennessee, June 15, 1965.

TABLE 1-10-A (Continued)

Levels of Price Indicators For Bank Groups

<u>Year</u>	<u>Average Price</u>	<u>Price Index</u>	<u>Earnings P.S.</u>	<u>Dividends P.S.</u>	<u>Yield</u>	<u>Price/Earnings</u>
<u>Standard and Poor's 10 N.Y.C. Banks</u>						
1957		19.47				
1960		26.23				
1964		39.64				
<u>Standard and Poor's 16 Banks Outside of N.Y.C.</u>						
1957		38.40				
1960		53.10				
1964		77.54				

TABLE 1-10-B

Efficiency Levels For Bank Groups

<u>Year</u>	<u>R of R on Capital</u>	<u>Earning Power</u>	<u>R of R on Assets</u>
<u>All Insured Commercial Banks</u>			
1957	8.30% (21%)	1.10% (24%)	.64% (27%)
1960	10.03	1.37	.81
1964	8.86 (-12%)	1.13 (-18%)	.72 (-11%)
<u>Sample Banks</u>			
1957	10.20% (6%)		.76% (10%)
1960	10.80		.84
1964	10.25 (-5%)		.77 (-8%)

TABLE 1-10-C

Levels of Price Indicators For Industry GroupsDow Jones Price Averages

	<u>Industrials</u>	<u>Utilities</u>
1957	\$470	\$ 71
1960	625	92
1964	829	146

TABLE 1-10-C (Continued)

Standard and Poor's Indexes 1941-43 = 10

<u>Year</u>	<u>500</u>	<u>Industrial</u>	<u>Utility</u>	<u>Life Ins.</u>
1957	44.38	47.63	32.19	126.30
1960	55.85	59.43	46.86	146.10
1964	81.37	86.19	69.99	339.00

<u>Moodys</u>	<u>Industrials</u>		<u>Utilities</u>	
	<u>P/E</u>	<u>Yield</u>	<u>P/E</u>	<u>Yield</u>
1957	13.99	4.11%	14.49	4.92%
1960	18.00	3.48	16.95	3.84
1964	17.99	2.98	20.22	3.15

A number of observations may be made concerning the data supplied by the 1-10 Tables. Of major importance is the fact that over the full period of phase two, bank stocks enjoyed far larger price increases than were experienced during phase one. But rather than beginning their movement in 1960 as others have contended, bank stocks really became interesting as early as 1957. In fact, the computations for the sample banks demonstrate the greatest percentage increase for all the groups tested. Only Standard and Poor's Utilities did as well or better than did any of the bank groups. The other major indicators of stock price levels were all growing at slower rates than were the indicators of bank prices. An observation of special interest is that it was the banks not included in the publicized averages which were the ones growing at the fastest rates. This conclusion serves to underline the extreme need for a more comprehensive indicator of bank stock levels. Those presently supplied by the services are simply not representative of the industry as a whole.

TABLE 1-10-DAbsolute Percentage Changes:
1957-1960, 1960-1964

<u>Price Changes</u>	<u>1957-60</u>	<u>1960-64</u>
Moody's 15 N.Y.C. Banks	34% (5)	52% (3)
Moody's 12 Outside Banks	38 (3)	49 (5)
S & P's 10 N.Y.C. Banks	35 (4)	51 (4)
S & P's 16 Outside Banks	38 (3)	46 (6)
Sample Banks	55 (1)	52 (3)
D J I A	33 (6)	33 (8)
Dow Jones Utilities	30 (7)	60 (2)
S & P's 500	26 (8)	46 (6)
S & P's Industrials	25 (9)	45 (7)
S & P's Utilities	46 (2)	49 (5)
S & P's Life Ins.	16 (10)	132 (1)
<u>Yield Changes</u>		
Moody's 15 N.Y.C. Banks	-17% (4)	-26% (1)
Moody's 12 Outside Banks	-20 (2)	-21 (2)
Sample Banks	-19 (3)	-17 (4)
Moody's Industrials	-12 (5)	-14 (5)
Moody's Utilities	-22 (1)	-18 (3)
<u>P/E Changes</u>		
Moody's 15 N.Y.C. Banks	4% (4)	38% (1)
Sample Banks	22 (3)	29 (2)
Moody's Industrials	29 (2)	nc (4)
Moody's Utilities	30 (1)	19 (3)
<u>Earnings Changes</u>		
Moody's 15 N.Y.C. Banks	29% (1)	11% (2)
Sample Banks	28 (2)	18 (1)
<u>Dividend Changes</u>		
Moody's 15 N.Y.C. Banks	10% (3)	15% (3)
Moody's 12 Outside Banks	11 (2)	18 (2)
Sample Banks	25 (1)	28 (1)

As the prices of the banks were increasing during the 1957-1960 period so were earnings, dividends, rates of return on capital, and rates of return on assets. While it is true that dividends were

increasing, stock prices were probably responding to the larger increases in earnings during the earlier segment of phase two. In fact, it must have been the smallest banks which were demonstrating the very largest gains in operative efficiency while the larger banks were maintaining their already high levels of rates of return on assets and capital. These conclusions are based on the relative levels of return for all insured commercial banks as compared to those earned by the sample banks. As will be indicated in detail later, the sample banks are those generally listed as being within the largest 300 banks in the country.

Turning to the price changes which occurred during the 1960-1964 period, certain changes in the ranking among the groups become evident. While life insurance stocks were ranked last during the earlier period, they now occupy a very certain first place. The Dow Jones Utility Average has also gained in the standings and now ranks second. While the banks are still doing quite well, especially in relation to the major indicators as the Dow Jones Industrial Average and Standard and Poor's 500 and Industrials, the relative standings of banks grouped according to geographic area have now changed.

During the 1957-1960 period, both indicators of outside banks outperformed those of the New York City banks. During the latter period, the opposite of this is true. The New York City banks did better than those major banks situated in other parts of the country. These trends are even more dramatically indicated by the fact that the percentage increase for the sample banks was actually three points less for the 1960-1964 period than it was for the period of 1957-1960.

While the prices of all bank groups increased, the more recent price appreciation does not seem to be as nicely explained as that which occurred during the earlier period. Even though both earnings and dividends continued to increase, these increments are now somewhat out of proportion to the increments in stock prices. This is certainly evidenced by the drastic fall in yields and the perceptible increase in price/earnings ratios. What is truly of interest is that this major price appreciation in bank stocks took place at the very time that all insured commercial banks were experiencing a decrease in net income after tax as a per cent of capital and in net income both before and after tax as a per cent of assets. Whereas previously it had been the small banks which demonstrated the largest gains in efficiency, during the 1960-1964 period it is again the small banks which now experienced the largest decreases in efficiency. The sample banks suffered only a five per cent reduction in their rate of return on capital and an eight per cent reduction in their rate of return earned on assets. While the statistics generated by the subsequent analysis of the sample banks are more representative of the industry than are those supplied by the investor services, the comparative changes in the rates of return indicate that a sample including a greater number of small banks is needed to truly represent the total banking industry. Nevertheless, it is believed that this research provides at least a tentative step in the proper direction.

Previous Bank Stock Price Studies

The study of the relative prices of bank stocks is an area which has been generally neglected by investment analysts. In response to a question posed in a letter to him, David C. Cates, bank stock analyst of the firm of Salomon Brothers and Hutzler, states: "You are entirely right in your guess that the analysis of bank stocks has not been pursued at the theoretical level."¹³ The reasons posited by Mr. Cates for this lack of investigation consist of poor bank reporting practices, year-end distortions in financial statements, uninclusive capital funds totals, and illogical and unrefined ratios. Mr. Cates' criticism of available data may easily be pertinent, but need hardly be incapacitating. If the studies are few, all the more reason to make the attempt.

While attempts at explaining stock prices in other industries have been undertaken, only two price-explanatory studies dealing specifically with bank stocks have been uncovered.¹⁴ The two bank stock price studies were produced by John Collins and David Durand respectively.

A. The Collins Study

The Collins study dealt with mixed price determinants and through their use attempted to define a normal or intrinsic value.¹⁵ In this

¹³Letter from David C. Cates, Bank Stock Analyst, Salomon Brothers and Hutzler, to the author, New York, August 31, 1965.

¹⁴For a relatively complete coverage of price studies see: Myron Gordon, The Investment, Financing, and Valuation of the Corporation (Homewood, Illinois: Richard D. Irwin, Inc.), 1962.

¹⁵John Collins, "How to Study the Behavior of Bank Stocks," The Financial Analysts Journal, May, 1957, pp. 109-113.

study, Collins employed a random sample of 37 of the larger banks and regressed their year-end price on each of four variables, one variable at a time, for first 1955, and then the year 1954. For three of the four variables, the correlation proved to be higher in 1954 than was originally obtained for 1955. No attempt is made to explain the changes in the correlation from one period to the next.

The investigation continues by combining the variables and assigning weights to them through the use of an adjustment formula. The final equation took the form:

$$X1 = 2.668 + 6.554 X2 + 12.176X3 - 0.226X4 + 2.742X5$$

where X1 = normal price
 a = the Y intercept
 X2 = operating earnings per share
 X3 = annual dividend per share
 X4 = book value per share
 X5 = net profits per share.

Collins concludes that the formula will be predictive of the normal value of a bank stock until there is an appreciable change in the values of the independent variables.

Certain problems are evident in the use of this equation as a means of describing a normal stock value. First, an assumption is made that the year in which the weights were computed was a "normal" period for bank stocks as far as evaluation purposes are concerned. Second, that the market will continue to weigh the factors in a fashion similar to that which was obtained at this one point in time. Third, that the 37 observations truly comprise a homogeneous group. Finally, Collins seems to make the questionable assumption that intercorrelation, especially between operating earnings and net profits per share, will not affect the total validity of the future regressions.

An earlier work in which this writer took part using the Collins formula in the years following 1955 showed that it lacked any value as a predictor of bank stock prices.¹⁶ In fact, if anything, the movements of Collins' normal values were inverse to the movements of the actual prices. No further use will be made of the preceding analysis.

B. The Durand Study

This study provides a basis for a major segment of the present work. A replication and extension of the Durand analysis provides the substance for Chapter Three which follows. Because of the subsequent lengthy coverage, only a few comments will be attempted at this juncture.

The Durand Study was undertaken under the auspices of the National Bureau of Economic Research because of an interest in the level of bank stock prices in relation to book value and the implication of this relation on the adequacy of bank capital.¹⁷ Looking at the capital adequacy problem from the viewpoint of 1964, the terminal date of the present work, it would seem that the war has been fought and won. As of 1964, bank stock prices were high, relative to book value, earnings, dividends, and most other determinants. Other areas of banking are under discussion at present, such as the virtues of capital notes or debentures in specific capital structures and their possible effects on the earnings of the residual equity holders.

¹⁶Eugene Drzycimski, John Fikes, and William Pincoe, "Analysis of Determinant Factors in Bank Stock Analysis," Unpublished paper written for the Graduate School of Business Administration, Michigan State University, East Lansing, May 25, 1962.

¹⁷David Durand, Bank Stock Prices and the Bank Capital Problem (New York: National Bureau of Economic Research, Inc.), 1957.

Although the Durand Study was concerned with problems of possibly lesser import today, certain resultant conclusions do have implications which deserve further analysis and testing. In essence, then, this earlier work provides a well-founded point of embarkation for the analysis undertaken in the present study.

Summary

In this chapter, attempts have been made to function in a number of separate but related areas. The major hypotheses which will be subsequently tested have been defined. A discussion has been carried out concerning the psychology of the stock market in general along with specific instances of market reactions. It has been noted that bank stocks have been and are subject to investor's whims. Stock price movements as described by the major price indicators have been placed in historical perspective. The market for bank stocks themselves has been scrutinized and declared wanting. Following this exercise, bank stock price movements have been analyzed over time and then compared to the relative movements of other industry groups. Finally, the meager supply of previous bank stock price studies has been exhibited. The stage is now set for the present study to proceed along the lines set forth at the beginning of this chapter.

CHAPTER II

THE SAMPLE AND ITS PROPERTIES

The Purpose of This Chapter

This chapter will describe the group of financial institutions which provide the raw material for all phases of this study. The many aspects of the description will include a discussion of the financial impact of the banking industry and of the sample thereof as compared to the other financial sectors of the economy. The description will largely take the form of a comparison of the means and standard deviations of certain statistics over time, and an analysis of the inter-correlations between these statistics.

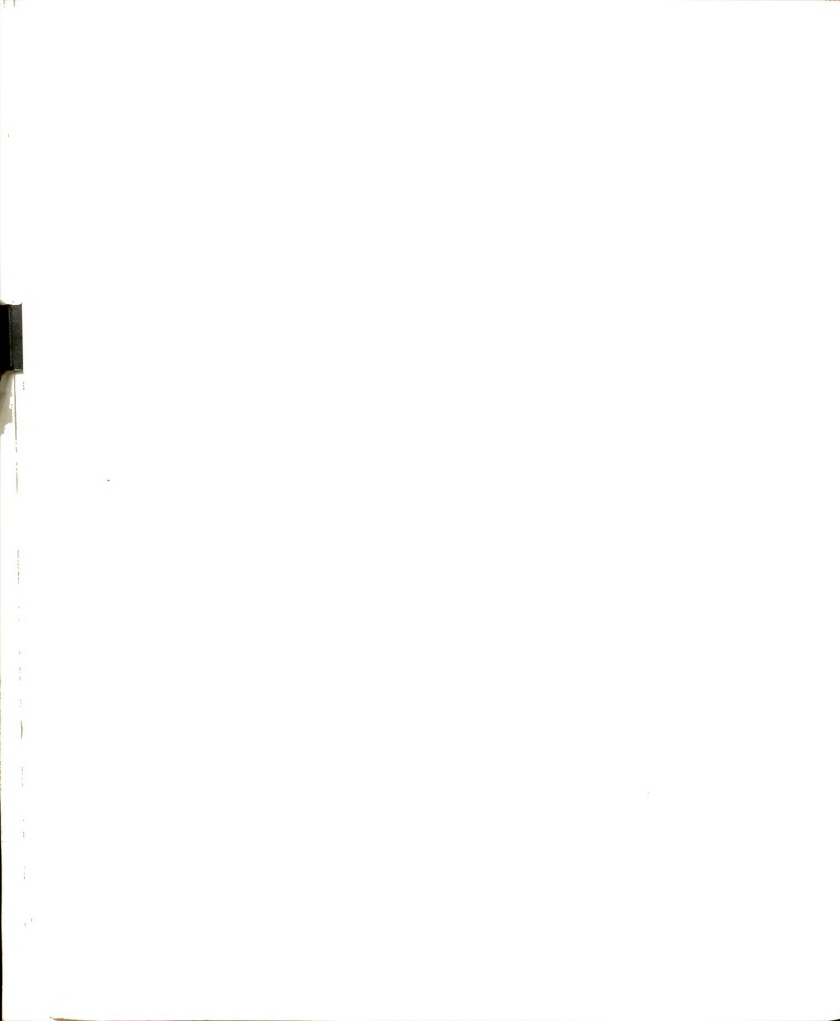
The Magnitude of the Banking Industry

When the commercial banking industry is considered as a whole, we are talking about 13,775 commercial and stock savings banks with total despoits of \$306,800 million as of December 31, 1964. Table 2-2 presents a tabulation of the financial assets of the various financial sectors of the economy from 1955 through 1964. Although the commercial banks have grown from \$185,400 million at year-end 1955 to over \$300 billion as of December 31, 1964, the standing of banks relative to the other financial institutions taken as a group has actually decreased. In 1955, the total footings of the non-bank financial institutions were 126 per cent of the footings of the commercial banks. By the end of 1964, this superiority had increased to 178 per cent. Over the ten years in question, the deposits of the commercial banks increased at a compound annual rate of

5.5 per cent, while those of the non-bank financial institutions increased at a compound rate of 8.0 per cent per year. Nevertheless, the deposits of the commercial banks as of December, 1964 were still almost as great (less \$11 billion) as the sum of the assets of all savings and loan associations, mutual savings banks, and life insurance companies. In spite of their relatively slower growth, commercial banks remain a financial force of paramount importance.

Financial Impact of the Sample

It would be highly desirable if the totality of the commercial banking industry could be considered in this study. This is not possible. The primary reason for the difficulty of such a venture is that the pertinent data are simply not available for the vast majority of these banks. It is necessary, therefore, to procure a sample, which, although not necessarily representative of all commercial banks, would describe those banks of such size as to be of interest to the investing public. Generally speaking, the banks under consideration are, with two exceptions, among the largest 300 banks in deposit size in the United States. Of the top 100 banks in deposit size as of December 31, 1964, 83 are included. Of the second 100 banks ranked according to deposit size, 28 are included. Because the data were available, two banks smaller than the 300th largest bank were also considered. In addition, data were procured for nine bank holding companies, eight of which represent banks which would be among the top 100 banks. The remaining holding company includes a bank which would fall within the top 110 commercial banks in deposit size. Exhibits 2-3-A through F give a listing of all the banks



and holding companies and the number of observations for each institution included in the sample.

Table 2-1 lists both the number and deposits of all the commercial banks in the United States and of those banks included in the study. This chapter will describe the levels and the relationships observed during the full ten-year period for those sample banks. Later chapters will concern themselves mainly with the period of the 1960's.¹

Table 2-1. Number of Commercial and Stock Savings Banks and Nondeposit Trust Companies and Their Deposits, By Year, for the Total United States and for Those Included in the Study
1955 - 1964
(Deposits in Millions of Dollars)

Year	Total United States Number	Deposits	Sample Banks Number	Deposits	Sample Bank Deposits As % of Total Deposits
1955	13,756	\$193,205	81	\$68,618	36
1956	13,680	198,547	86	73,497	37
1957	13,607	202,483	88	75,114	37
1958	13,540	217,291	96	84,437	39
1959	13,486	220,514	111	101,161	46
1960	13,484	230,532	122	114,236	50
1961	13,444	249,504	122	126,944	51
1962	13,441	263,060	122	136,273	52
1963	13,583	276,230	122	145,370	53
1964	13,775	308,427	121	154,624	50

Source: FDIC Annual Reports.

¹The reader may question the fact that the totals for 1964 include one less bank than those of the previous four years. During that year it was necessary to drop the observations of the Banc Ohio Corporation due to the unavailability of the determinant net indicated earnings. This decision will largely affect only the immediate general discussion since this holding company will be reinserted in subsequent operations. If Banc Ohio were presently considered, deposits would be increased by \$809 million to \$155,433 million. This inclusion would increase the factor "Sample Bank Deposits As % of Total Deposits" to nearly 51%.



Despite the fact that the sample includes just under 1% of the total universe, as far as numbers of banks are concerned, for the period 1960-1964, it does encompass a majority of dollars of deposits. The representation of the sample during the latter half of the 1950's is still substantially greater than a third of available deposits. As a further indication of the degree of financial concentration evidenced by the banking industry, the following figures are taken from a survey completed by the House Committee on Banking and Currency of the 88th Congress. As of June 30, 1962, the 100 largest member banks as a percent of all commercial banks in the United States held: 47% of total assets, 46.4% of total deposits, 49.3% of total demand deposits, 41.5% of total time deposits, 48.5% of total loans, and 40.9% of total investments.²

Geographic Representation

Even though this study does not pretend to be a capsule representation of all banks in the United States, an effort was made to include banks in as many states as possible. One major problem is that a number of states simply do not house institutions of interest to investors residing beyond the immediate municipal or county boundaries. Nevertheless, at least one bank or holding company has been included for each of 31 states, plus the District of Columbia. As would be expected,

²U.S., Congress, House, Committee on Banking and Currency, Chain Banking - Stockholder and Loan Links of the 200 Largest Member Banks, 88th Cong., April 15, 1963, p. 7.

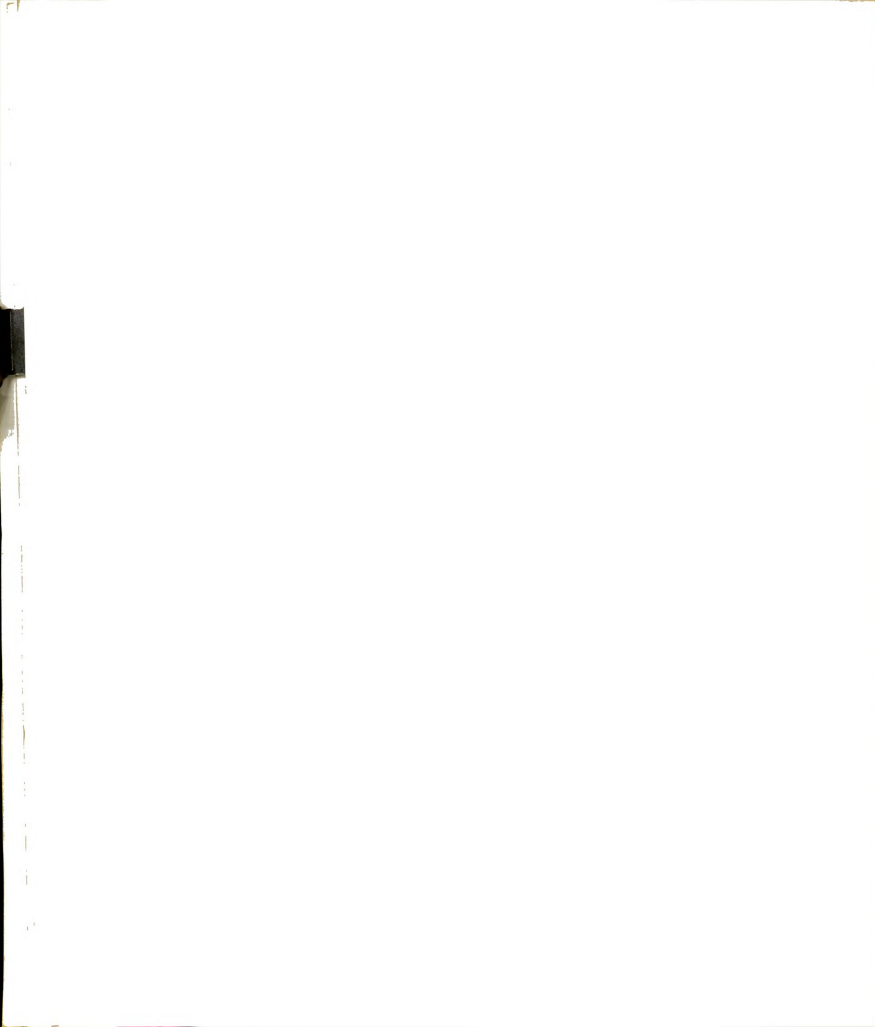


the State of New York leads with 19 banks and one holding company. Ohio follows with 11 banks and one holding company. The States of Washington, Alabama, Florida, Colorado, Kentucky, and Delaware each are represented by one bank, while Louisiana and Utah each have one holding company represented. Table 2-4 provides a listing of the states included and the number of institutions by which they are represented.

In spite of the efforts made to obtain a representative geographic inclusion, a certain imbalance remains evident. The middle northeastern states are weighed most heavily in terms of both number and financial impact. The north central states - specifically Ohio, Illinois and Michigan - also contribute a goodly number of banks whose financial impact is most important. These banks need not be specifically representative of the area due to the existence of large numbers of small unit banks in most of the states comprising the greater Midwest. The southeast and southwest enjoy some representation as far as financial impact is concerned, but suffer in terms of the actual number of banks in existence. The Pacific Coast states, especially California, may actually fare better than some other areas, particularly the Rocky Mountain states, because although represented by only nine observations, these observations are of the very largest banks in predominantly branch-banking states.

A Pragmatic Approach

While commercial banks and holding companies taken together are not necessarily homogeneous, they are more so than other industry groups. Therefore, it was decided to initially evaluate the totality of the

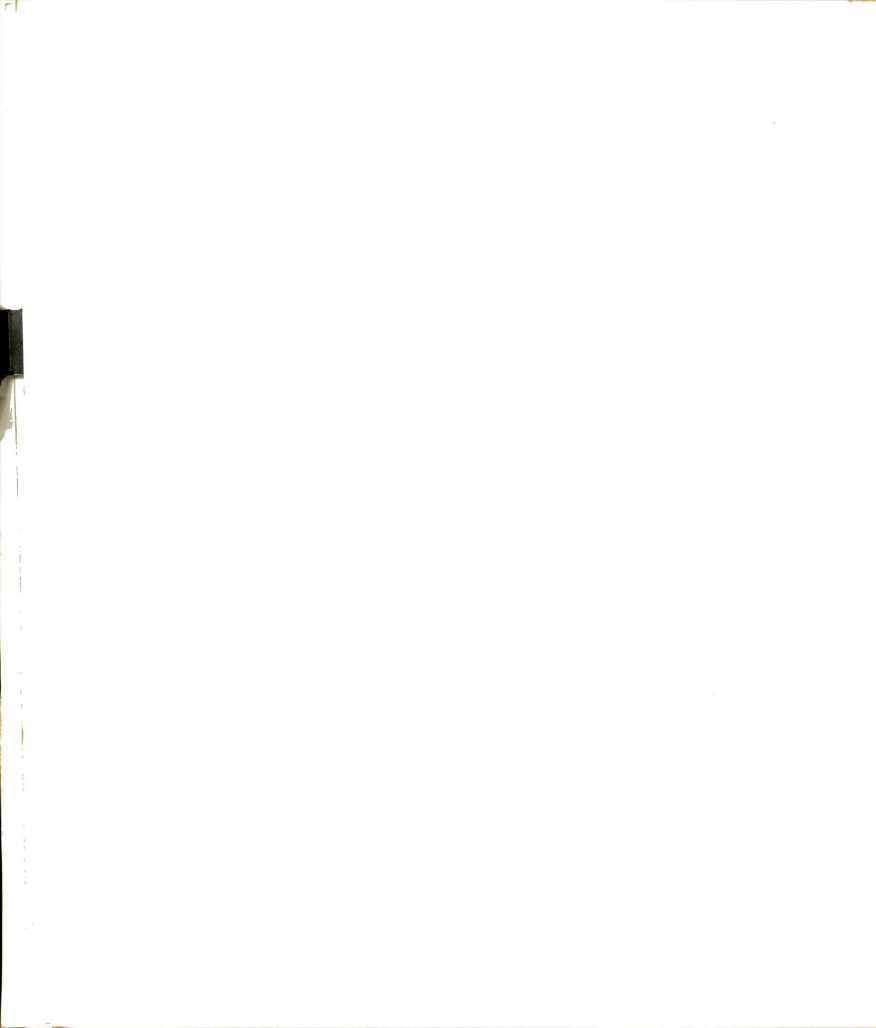


sample. This procedure will provide a basic structure against which later comparisons may be made when the observations are more rationally grouped and the determinants more specifically chosen.

The methodology by which certain descriptive statistics were obtained for the institutions under study was generally one of the least squares fits to arbitrary functions, i.e., the calculation of multiple regression. In running the regression at this point the assumption was made that market price as the dependent variable was a function of all determinants at one time. This hypothesis is not statistically true, but was necessary so as to produce the desired statistics. Tables 2-8-A and B provide a listing of all the variables obtained for each institution. To obtain a more complete picture of the information available for each institution for each year, Table 2-5 should be employed in conjunction with Tables 2-8-A and B, since Table 2-5 enumerates the actual number of observations for each variable for each year. This further breakdown was necessary since not all information was available for each institution for each year. All the variables are completely described in Appendix A.

The Averages of the Variables

Tables 2-6-A through D provide the simple mean values along with the relevant standard deviations for each of the variables considered for each of the study years. A few comments might provide assistance in interpreting these data.



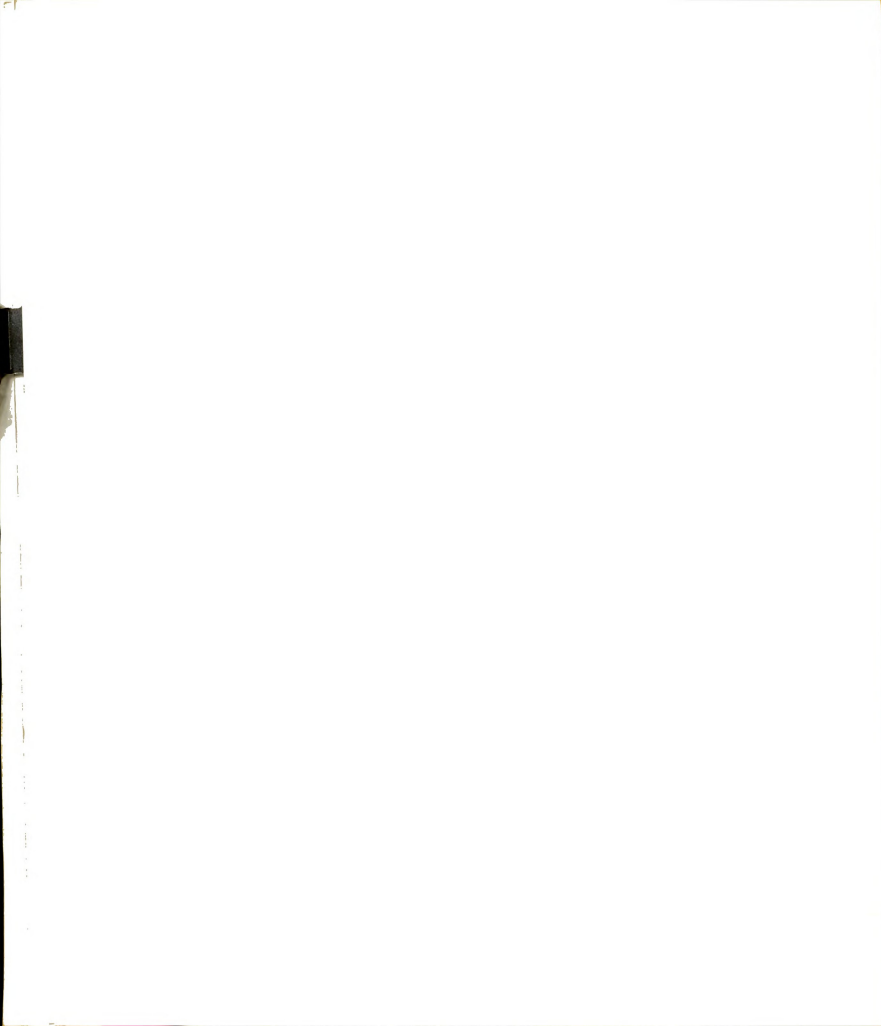
Price

Variable #4, price per share, was set forth in an earlier chapter as a broader indicator of bank stock price performance over the ten-year period 1955-1964. It can be seen that not until 1958 did bank stock prices begin to climb. This year of price increase was preceded by three years of relative price stability during which two of the price relatives, the price/earnings ratio and price as a per cent of book value, actually declined. The year 1961 witnessed the most perceptible advance in price, followed by a significant drop during the following year.

In terms of standard deviations around the market price average, about 66 per cent of the observations for the year 1955 should lie within the range of \$13.00 per share and \$43.48 per share. However, since the average presented is not weighed by the number of shares outstanding for each institution, its form is likely to be asymmetrical. In this case, it is probably asymmetrically skewed positively to the right because none of the stocks included sold for a negative figure. For the year 1964, 66 per cent of the stocks would have sold for \$63.30 plus and minus \$35.68, one standard deviation.

Earnings

Adjusted net operating earnings per share, Variable #5, increased rather consistently from \$2.18 in 1955 to \$3.99 in 1964. This change amounts to a yearly compound rate of increase of approximately 6.2 per cent. Although still uncomfortably high, the standard deviations have decreased over time so that for 1964 about 66% of the observations of earnings would fall between \$1.77 and \$6.21 per share.



Dividends

Adjusted dividends per share, Variable #6, increased from \$.98 per share with a standard deviation of \$.45 in 1955 to \$1.82 with a standard deviation of \$.88 in 1964. This change over time reflects a yearly compound rate of increase of 6.3 per cent.

Loans

Variable #7, loans and discounts as a per cent of total assets, demonstrates the recognized increased allocation of credit during these ten years. This measure of loan magnitude increased some 25 per cent during this period. Of special note is the fact that the standard deviation actually decreased. The explanation of this phenomenon in all likelihood is that more banks became more efficient in the allocation of credit via the loan desk.

Book Value

As we have seen, dollar dividends have increased at a slightly faster rate than earnings per share. The result of this difference is to allow only a 5.5 per cent compound rate of increase for book value between 1955 and 1964. Again, in this instance, the standard deviations for Variable #8 are uncomfortably large.

Deposits

The mean values for deposits, Variable #9, may be somewhat unrealistic, since in each of the ten years the relevant standard deviation is larger than the average value itself. The reason for this undesirable situation is the wide range in size of the various institutions. The size of the largest bank is about 12 times the value of the mean of the sample. Approximately 20 banks are larger than the mean,



while about 100 are smaller than the average value.

Capital

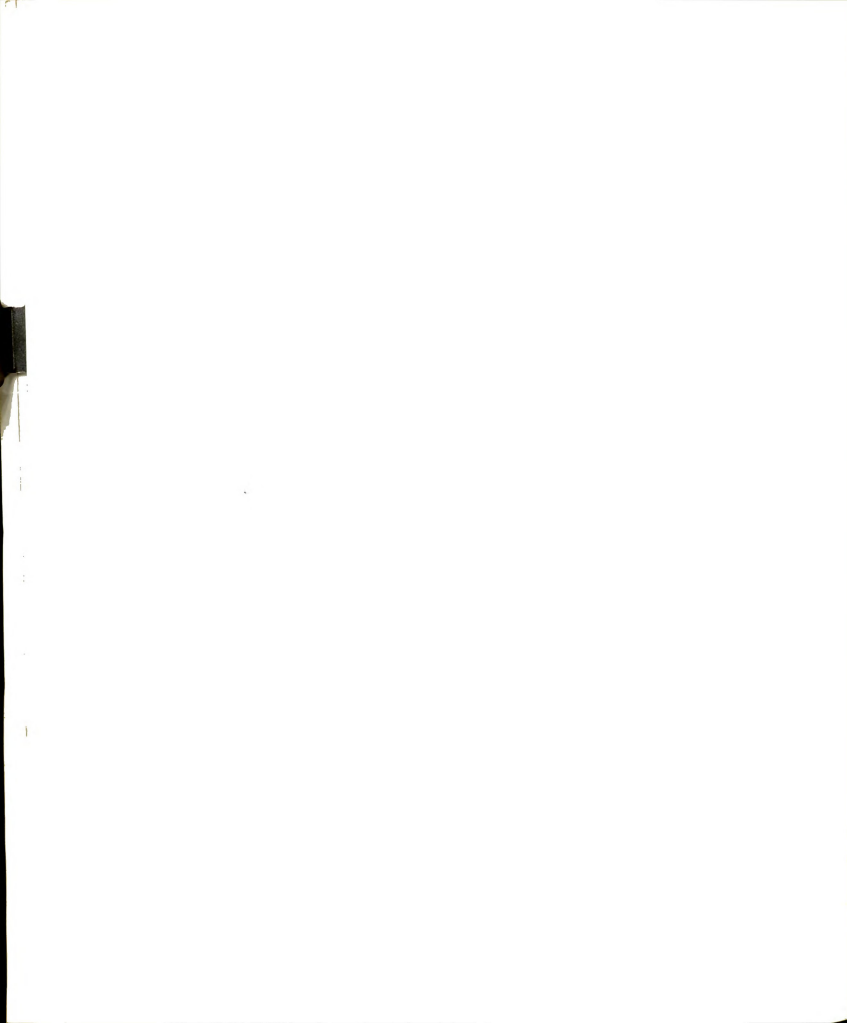
Capital as a per cent of risk assets, Variable #10, displays remarkable stability with low standard deviations from 1955 through 1961. Beginning in 1962, however, the ratio experienced a perceptible decline. This occurrence is consistent with the relatively low compound rate of increase in book value and the consistent increase of loans and discounts as a per cent of total assets.

Price/Earning Ratio

The activity of Variable #11, the price/earnings ratio, is consistent with the changes in the levels of both of its components. It definitely depicts the radical increase in price which occurred in 1961 and the relative relationship of the variables in subsequent years. Especially gratifying are the low standard deviations around the means.

Efficiency of Capital

One of the complaints consistently leveled against the banking industry has been, generally, its inability to earn as high a rate of return on its capital as have other industries; and specifically, the suffering of a declining rate of return throughout the 1960's. Although the banks in this sample may have earned a relatively lower rate of return than the firms in other industries, the sample banks have, in nine out of the ten study years, out-performed all the insured commercial banks taken as a group. Of special interest is the fact that although both series have declined from their recent highs of 1960, the sample banks moved from 9.78 per cent for 1963 to 10.25 per cent in 1964. On the other hand, the rate of return on capital, Variable #12, for all



insured commercial banks from the F.D.I.C. Annual Reports continued its decline from 8.86 per cent in 1963 to 8.65 per cent in 1964. It is far too early to so conclude, but perhaps the larger banks, which are represented in this sample, may finally be experiencing a payoff from their valiant efforts at automation. The data for all insured commercial banks are presented in Table 2-9.

Efficiency of Assets

The rate of return earned on assets, Variable #13, plots a course parallel to the rate of return earned on capital. In both instances, the standard deviations are desirably low, and do change in the proper direction.

Efficiency of Loans

Interest income on loans as a per cent of gross operating earnings is interesting, even though it was only computed for the period 1960-1964. Although the standard deviations are relatively very low, the mean value for 1964 is two-tenths of one per cent less than the 1960 value. The values during the three preceding years were even lower than during the last study year. These lower levels were encountered despite the fact that loans and discounts were actually increasing as a per cent of assets. Possible explanations for this phenomenon are the considerable stability evidenced by interest rates during the first half of the decade of the '60's and the fact that the industry has been making a concerted effort to tap revenue sources other than conventional loan income. Portfolio maintenance has become important, since investments have not had to be forced-sold during periods of increased credit demands.³

³Henry Kaufman, Commercial Bank Investments In the New Environment (New York: Solomon Brothers & Hutzler, 1965), p. 8.

Price/Book Value Ratio

Variable #15, bid market price as a per cent of book value, is largely predictable in its changes over the ten-year period. The standard deviations are well within acceptable limits. One point of interest, however, is the fact that at year-end 1957, the average bank was within six percentage points of being worth more dead than alive.

Earning Asset/Price Ratio

Dollars of earning assets for each dollar of year-end bid market price, Variable #16, has run a generally inverse course to price as a per cent of book value. On the average, the institutions involved owned \$2.71 less in earnings assets for each dollar of market price of their shares in 1964 than they did in 1955. If we were to hold potential earnings from these assets constant, it would simply mean that the investing public was capitalizing these earnings by a higher multiple. From this one measure alone it would seem that the purchaser of bank stocks in 1964 acquired less value than would have been the case in 1955.

Payout Ratio

Of considerable interest is the obvious stability of the payout ratio, Variable #17. We have already seen that mean dollar dividends have increased over the study period; yet, the mean payout ratio is three-tenths of one per cent less in 1964 than it was in 1955. This has occurred in spite of considerable agitation for increases in payout as a means of increasing the price of the equity shares. One redeeming factor, however, is the 16 per cent decrease in the standard deviation.



Yield

The decrease in yield, Variable #18, from 3.59 per cent in 1955 to 2.97 per cent in 1964, can largely be accounted for by the fact that mean stock prices rose at a compound rate of 8.5 per cent while mean dollar dividends increased at only 6.3 per cent compounded yearly. In actuality, the mean yield of the sample banks decreased at just under a 2.0 per cent yearly compound rate. During this same period, the mean yield of Moody's 15 New York City Banks decreased at a yearly compound rate of just under 3.0 per cent. It would seem as if the yields of the banks in our sample located outside of New York City have held up better than those from a sample of banks located only in that city.

Average Ownership

Variable #19, the adjusted mean average share ownership, behaves in an acceptable fashion from 1960 through 1962; however, the direction of change in this variable for 1963 and 1964 was unexpected. The standard deviation around the mean for these later years raises even more questions. A review of the raw observations was undertaken in an attempt to ascertain the reasons for the increase in the average holdings. For a large number of institutions, the stock was more dispersed during these later years. However, the heavy consolidation of ownership by the Western Bancorporation of the stock of the First National Bank of Arizona, and the drastic reduction in the number of owners of the First National Bank and Trust Company of Oklahoma City might have been of the magnitude sufficient to produce the increases in the average holdings. The mentioned changes certainly would have been sufficient to cause the large increase in the standard deviations.

The next three variables - #20, #21 and #22 - the existence of capital notes or debentures in the capital structure, the payment of a stock dividend during the year or immediately following the close of the year, and the existence of a stock split, are worthy of further interpretation. As explained earlier, a one denotes an occurrence, a zero a nonoccurrence. It is therefore possible to interpret the mean values as percentages. The standard deviations possess little meaning.

Leverage

Considering Variable #20, in 1955 only 3 per cent of the sample institutions were burdened by debt in their capital structures. A low level of debt existed until 1964, at which time 22 per cent of the observations reported the leverage effect of debt working for the common equity. In other words, of the 121 institutions included in the 1964 study year, some 26 of them have sold capital notes or debentures. This increase in debt is a direct result of the Comptroller of the Currency's 1962 ruling allowing national banks to sell debentures.

Stock Dividends

The payment of a stock dividend in lieu of or in addition to a cash dividend experienced a sizeable increase during the latter half of the 1950's and then stabilized in the 25-30 per cent range following 1960. The smallest number of banks paying occurred in 1956 when only 7 per cent paid, while the year in which the largest number paid a stock dividend was 1960, when 31 per cent chose this medium of payment.

Stock Splits

As one would expect, stock dividends, Variable #21, were far more popular than stock splits, Variable #22. In all study years, the



percentage of banks paying stock dividends was far above the percentage of banks undergoing stock splits. In most instances, the percentage of the former was many times that of the latter. The highest percentage for the latter, 7 per cent, was achieved both in 1961 and 1964.

Earnings Retention

Variable #23, the retention ratio, is the reciprocal of Variable #17, the payout ratio. The standard deviations of the two sets of means are identical. Of interest is the fact that both the payout ratio and, of course, the retention ratio of the sample have shown a greater degree of stability over the relevant time period than do the ratios of all the insured commercial banks taken as a group. In addition, since 1960 mean retention ratios have shown a somewhat moderate decrease over the values in existence toward the end of the latter 1950's.

Stock Demand

Variable #26, eligibility for Massachusetts savings banks investment, can be interpreted in exactly the same manner as Variables #20, #21 and #22. In 1955, 28 per cent of the institutions in the sample possessed eligibility. In 1964, this figure had risen to 56 per cent. Because of the pronounced effect of size on this variable, as the institutions have grown, so has the percentage of eligibility. Each of the study years witnessed an increase over the previous year. Among others, The Bank of California (San Francisco), The County Trust Company (White Plains, N.Y.), Manufacturers' National Bank (Detroit), and each of the holding companies are not legal investments for savings banks in Massachusetts.



Net Profits

Variable #27, net indicated earnings, approximates a net profits figure. Since only the mean value of the observations for one study year is available, little can be said about its level over time. As would be expected, the magnitude of this quantity is smaller than that reported as the mean value of net operating earnings. The standard deviation for this variable is relatively less than that for the more usable earnings indicator.

Price Growth

Variable #76 is the annual rate of growth in price per share. The average rate of price growth for all 122 institutions was 9.8 per cent. The average rate of growth in price for the 113 banks was 10.7 per cent, while the nine holding companies found their price increasing only at an 8.8 per cent rate.

Earnings Growth

Variable #77 is the annual rate of growth in net operating earnings per share. Over the study period the nine holding companies increased earnings at a rate of 6.7 per cent per year, while the sample of banks were able to generate earnings at a 6.5 per cent rate.

Dividends Growth

Variable #78 is the annual growth rate in dividends per share. We have seen that the mean values of the payout ratios themselves were in 1964 similar to the values they held in 1955. However, the mean dividend growth rate for the 122 observations was 8.1 per cent as compared to a mean growth rate in earnings of 6.6 per cent. The difference in expected results can be attributed to two methods of calculation



employed. Even though the average dividend growth rate was 8.1 per cent, the banks increased dividends at a 7.1 per cent rate, while the nine holding companies did better, growing at a 9.1 per cent rate.

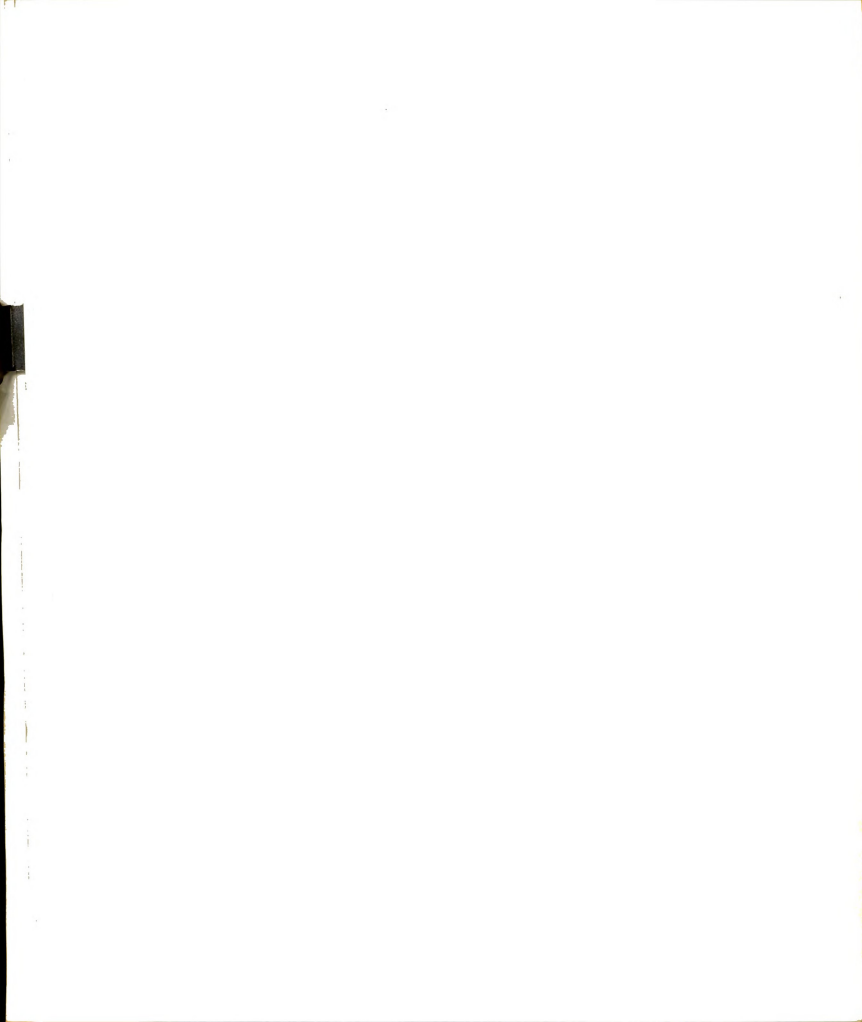
Growth In Size

Variable #79 is the annual growth rate in deposits. While the 113 banks were growing at an average rate of 5.7 per cent, the nine holding companies were advancing at the slightly faster rate of 6.0 per cent.

Simple Correlations Between the Variables

Our concern at this point will be with a measure of the degree of relationship between two variables, the Pearson product-moment correlation coefficient, often called the gross or zero-order correlation coefficient. A series of tables is presented in Appendix B listing the simple correlations between variables for each study year. Specifically, these are Tables 2-7-A through U.

The procedure employed in this section will be to examine alternative pairs of variables for each study year in order to determine the relevant degree of association between the paired variables. It is important to keep in mind that these associations are products of all the observations for each study year and are therefore subject to the greatest amount of heterogeneity. It is also well to note that the mere existence of a high correlation between two variables does not, of itself, assure the existence of a causal relationship. On the other hand, a nonsignificant correlation obtained after a causal relationship



has been postulated tends very strongly to disprove a hypothesis of linear correlation.

A. Associations with Market Price

The explanation of the market price of a common stock has been of concern to a large number of researchers, i.e., Durand, Collins, Gordon, etc.⁴ Following these leads, this study has also been concerned with the market price levels and changes in the market prices of the common stocks of individual commercial banks and bank holding companies. This concern will be most in evidence in a later chapter when an attempt will be made to replicate and extend an earlier study by David Durand. In addition, subsequent chapters will involve themselves with attempts at an explanation of some of the price-relative quantities. Presently, a discussion of those variables which one would expect to be associated with market price is in order.

Price - Earnings

Taking the year-end bid market price as the dependent variable, we have regress it in turn on a number of the other variables discussed so far. The correlation coefficient of price on earnings has been .92 or above for each of the ten study years. This relationship proves to be the strongest, either positive or negative, of price with any of the variables. The net indicated earnings are less strongly associated with market price than are net operating earnings. The correlation coefficient for the one study year is .83.

⁴Specific citations for these and others are supplies in the Bibliography.

Price - Dividends

Of somewhat less strength, but still strongly positive, is the relation between dividends and price. The simple correlation between these two variables ranges between .67 and .81. It should be remembered that the earnings series and the dividends series are not mutually exclusive. In fact, in a large measure, dividends are included in earnings. It would naturally be expected then that the two series would be inter-correlated. This proves to be the case, but the coefficients are only moderately significant - in the range of .68 to .76.

Price - Book Value

Bearing a relationship with price almost as strong as that evidenced by earnings is book value per share. For the ten study years, the correlation ranges between .91 and .95. In addition, the quantities earnings and book value are very strongly related. The coefficients range over the ten study years from .93 to .98.

Price - Loans

Contrary to what one would expect, the quantity loans and discounts as a per cent of assets demonstrates almost no association with price. In fact, during the last four study years, the correlation is slightly negative. Is it possible that the investing public has begun to feel that commercial banks have become too vulnerable because of the increase in the allocation of credit?

As a further check on this tentative hypothesis, the relationship between price and the quantity interest income on loans as a per cent of gross operating earnings was taken into account. Although these data are available for only the 1960-1964 period, we find an even stronger



negative relation between price and the productivity of loans than was found earlier between price and the relative amount of loans. It would seem that the investing public prefers the securities of a bank whose earnings are derived from investments and sources other than the loaning function, or it may simply be that investors do not care from where their earnings come.

In order to add credence to this apparent anomaly we find that there is an acceptable indication that a relative increase in loans results in a relative increase in earnings from that source. The coefficient between Variables #7 and #14 is positive and ranges from .49 to .67 over the five study years.

Price - Deposits

Total year-end deposits have been chosen as an indicator of bank size. It would seem logical to expect that price should have some significant degree of association with bank size if for no other reason than that size connotes past success. This does not seem to be the case. In all years the correlation is nonsignificant, while turning negative during the last two study years.

Price - Solvency

The purchaser of bank common stock is an investor, and while enjoying some measure of protection in this highly regulated industry, must still live with the possible threat of loss of his investment. A crude but usable measure of solvency is the quantity capital as a percent of risk assets.⁵ Admittedly, however, this quantity might serve

⁵Edward W. Reed, Commercial Bank Management (New York: Harper and Row Publishers, 1963), p. 526.



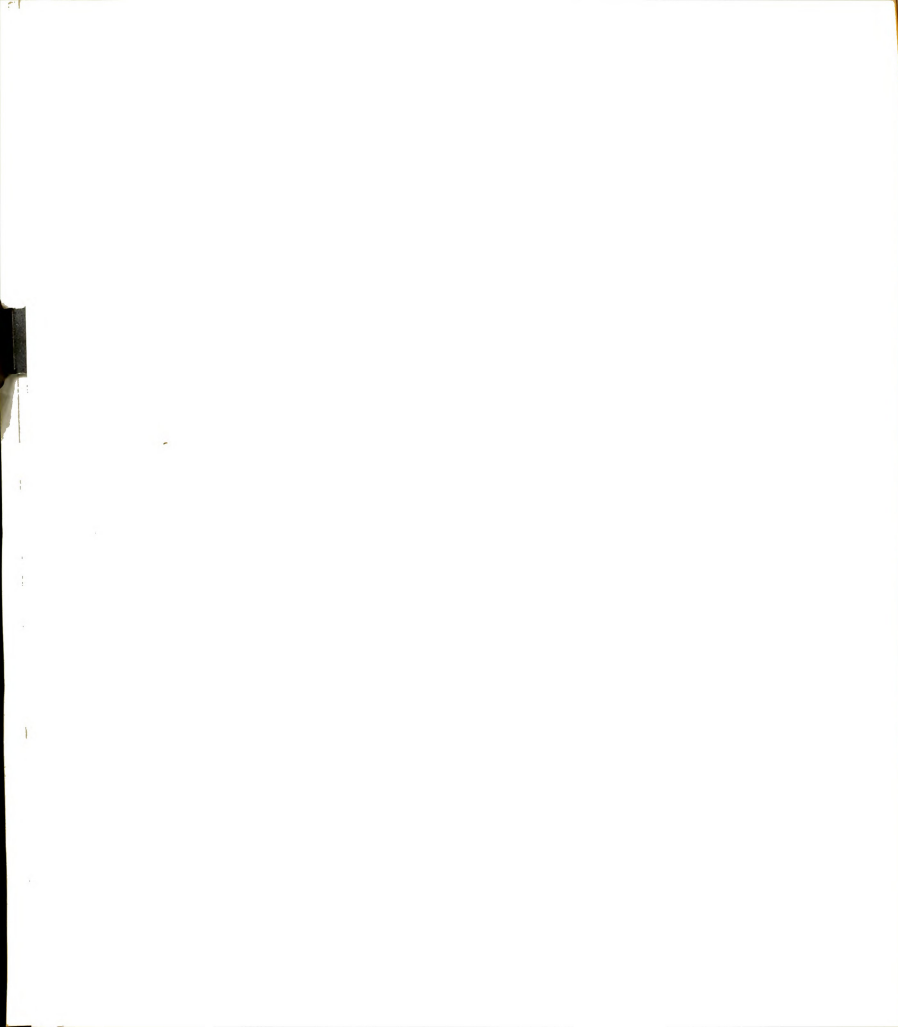
the depositor and his representative, the examiner, better than the investor as an indicator of safety. Operating under the going-concern concept, an alternative thesis might be posited which would contend that an investor would prefer less capital in relation to risk assets rather than more, because of the possibility of increased rates of return on his investment. The results for the total sample actually show very little association between price and the capital/risk asset ratio, although the coefficients are positive in each year. It would seem, then, that more heavily capitalized banks do sell at somewhat higher prices. The conclusion offered, then, is that the bank stock investor does not reach for increased returns at the expense of risk.

Price - Rates of Return

Returning to our earlier concern with the efficiency of the employment of resources as demonstrated by the rates of return on both capital and assets, we find absolutely no association between price and rate of return earned on capital. The high priced stocks do no better in this respect than do the lower priced equities. Concerning the rates of return on assets, however, there is a slight tendency for the stocks of the more efficient institutions to sell at higher prices. Of further interest is the fact that there is a consistently positive - though only marginal - association between these two measures of efficiency. Over the study years the coefficients range from .25 to .43.

Price - Earning Assets

The relationship between price and the number of dollars of earning assets for each dollar of price is exactly as was to be expected. We have seen that the mean value of Variable #16 has experienced an



almost constant decrease while average price has been rising. The result of this interaction has been a uniformly negative, nonsignificant to marginal, series of coefficients. Price has gone up, production value has gone down.

Price - Dividend Relatives

The following series of coefficients is of considerable interest. It seems that there is a slight, constant tendency for the higher priced stocks to be rewarded with a lower payout ratio. Dividends as a per cent of earnings is negatively correlated with market price while being strongly, positively correlated with yield (dividends as a per cent of price). In addition, price bears a consistent, slight, negative correlation with yield. It would seem, then, that the high priced stocks suffer both low payouts and low yields in spite of the relatively good correlation between price and dividends per share. Although other factors must be exerting an influence here, the results would seem to disprove the theory that in order to raise the price of a stock it is only necessary to increase the payout ratio. This hypothesis will be tested further.

Price - Market Strength

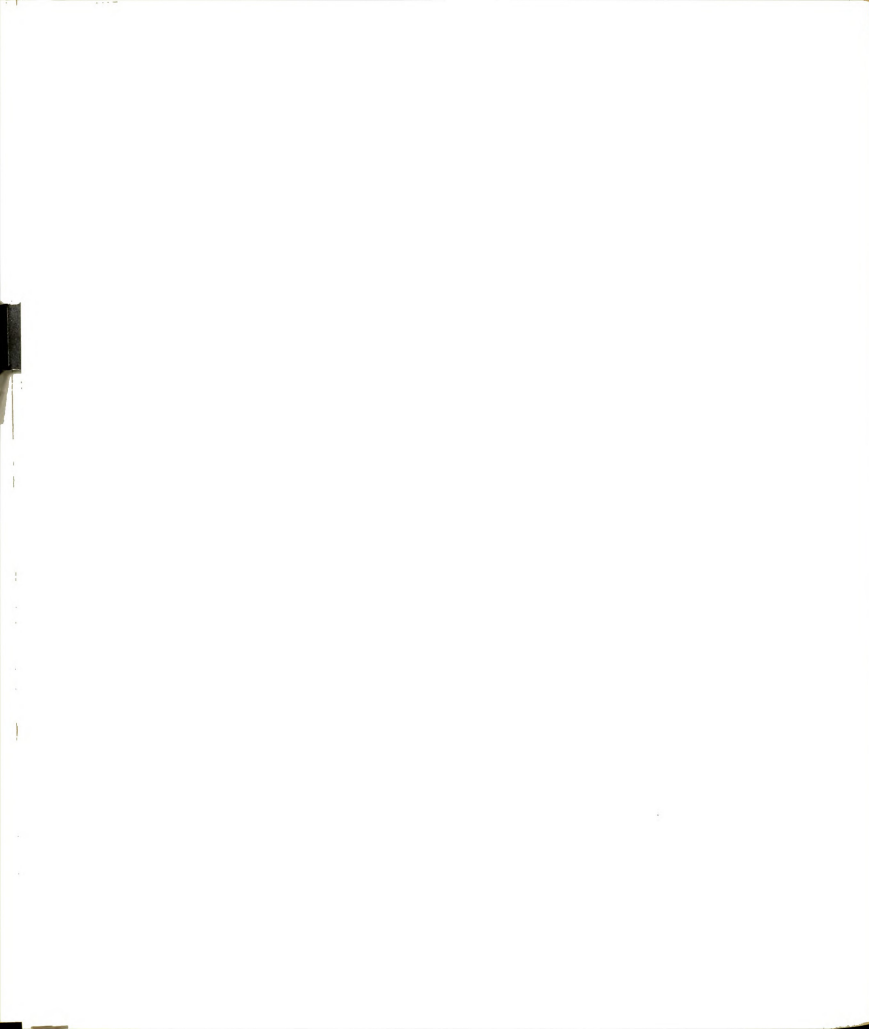
The next association is more in accord with accepted theory. One would expect that as the market for a particular stock broadens and becomes more disperse, the price of that stock increases. Although the tendency is rather slight, the coefficients do bear out this hypothesis. There exists a meager, consistently negative relationship between price and average stock holdings. Ownership of any single corporation is probably dollar dominated rather than dominated by the number of shares owned. However, another measure of strength of market,

the eligibility for Massachusetts savings bank investment, expresses a consistently decreasing relationship with price over the study years. It would seem that price is less and less a function of the stock's availability to that group of demanders. It is interesting to note that the relation between the average holdings and Massachusetts savings bank eligibility is completely nonsignificant.

Price - Debt

During the last 18 to 24 months a large number of banks - both small and large - have embraced the use of debt in their capital structures. Twenty-two per cent of the banks in this sample have employed this means of raising capital. Various reasons are posited for this increased use of "trading-on-the-equity." An enumeration of some of these reasons would consist of: the act of raising capital is less costly than by issuing an equivalent amount of stock, debt charges are tax deductible, the net cost of servicing the debt is less than cash dividends would be on a corresponding amount of equity, debt financing avoids dilution of equity interest, and the leverage should increase the return on stockholders' equity.⁶ All in all, it would be logical to expect an increase in efficiency, a betterment accruing to the equity holders, from the existence of debt. Unfortunately, the correlation coefficients obtained from a sample of all the institutions simply do not bear this out. Little significance should be attached to the

⁶David C. Cates, "Are Debentures Still a Luxury?", Address delivered before the 26th Annual Bank Study Conference of the Michigan Bankers Association, Ann Arbor, Michigan, December 3, 1964.



coefficients other than that for 1964, because so few banks possessed debt during the early years. However, a coefficient of $-.21$ for 1964 is just of sufficient magnitude to raise the question of whether price is favorably affected by the existence of debt. At any rate, a consistently negative relationship does exist between price and debt.

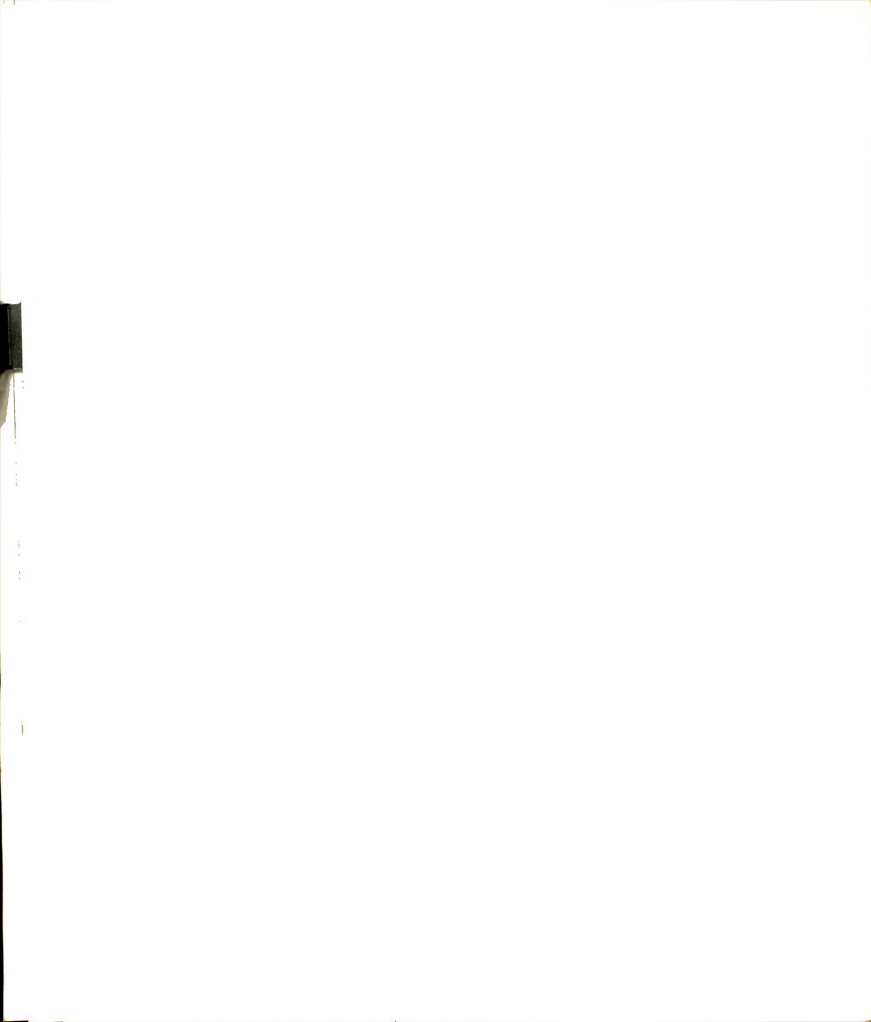
Price - Share Changes

Concerning the relation between price and the payment of stock dividends or stock splits, no consistent correlation is in evidence. These capital manipulations do not help to increase price; on the other hand, they do not seem to decrease the price, either. This is interesting, because one would expect something of a negative relation since one of the chief reasons for splits is a desired reduction in price. The ultimate effect of stock dividends on market price has not been firmly determined. What is reasonably certain, however, is that the change in market price depends heavily on the relative change in the cash dividend which accompanies the payment of the stock dividend. If the total dollars the individual investor receives as cash dividends are held constant, it would be logical to expect a reduction in price to be associated with stock dividends.⁷ Again, low-priced shares do not seem to be associated with the existence of stock dividends.

Summary of Price Associations

In summary, we have found bid market price to be highly, positively correlated with net operating earnings, with net indicated

⁷John Lintner, "Distribution of Incomes of Corporations Among Dividends, Retained Earnings, and Taxes," American Economic Review, 46 (May, 1956), pp. 97-113.



earnings, with dividends, and with book value. Price bears a nonsignificant or slightly positive relationship with the quantity capital as a per cent of risk assets, with the price/earnings ratios, and with the rates of return on assets. A nonsignificant or slightly negative association is evidenced with loans as a per cent of assets, with interest income as a per cent of total earnings, with deposits as an indication of size, with earning assets per dollar of price, with payout ratios and yields, with eligibility for investment by Massachusetts savings banks, with average stock holdings, and with debt. In addition, price has a completely nonsignificant correlation with rates of return on capital, with price/book value ratios, with stock dividends, and with stock splits.

B. The Relationship of Major Price-Relatives with Other Variables

Price - Relatives Compared

As indicated earlier, the two major price relatives included in this study are the ratio of price to net operating earnings and the ratio of price to year-end book value. It is interesting to note that after three years of strong, marginal correlation, the relation between Variable #11 and Variable #15 rose and stabilized around the .80 correlation level. The reason for the unusual performance during the early period is that the means of the variables were actually decreasing. In other words, the market was ignoring growth in earnings.

A word is probably in order as to the reason for utilizing two price-relatives. Why not simply use the price/earnings ratio as in other industries? It is certainly true that book value has been downgraded as an indicator of a bank's worth. However, this downgrading



is a recent occurrence. Bankers in the early postwar period saw themselves as conservators and rebuilders of capital values.⁸

Another reason for the preoccupation with residuals was that following the war, bank stocks were analyzed as close relatives of preferred stocks. The hand-hold of liquidating value provided an element of safety for the investor with the specter of the 1930's still fresh in his mind. It is little wonder that the price/book value ratio has been an important indicator of bank stock values.

As discussed in an earlier chapter, certain changes have taken place in the thinking of both bank management and bank investors, and in the makeup of these investors as a group. Today, the industry is viewed on a going-concern basis by the typical investor, be he a middle-income individual, or a pension fund, foundation, or other eleemosynary institution. Once the spotlight centers on a living entity rather than on a dead corpus, other measures of stock value become of much more importance. Specifically, the price/earnings ratio becomes the effective price-relative because it so readily lends itself to comparisons with other industries which are also customarily viewed on a going-concern basis.

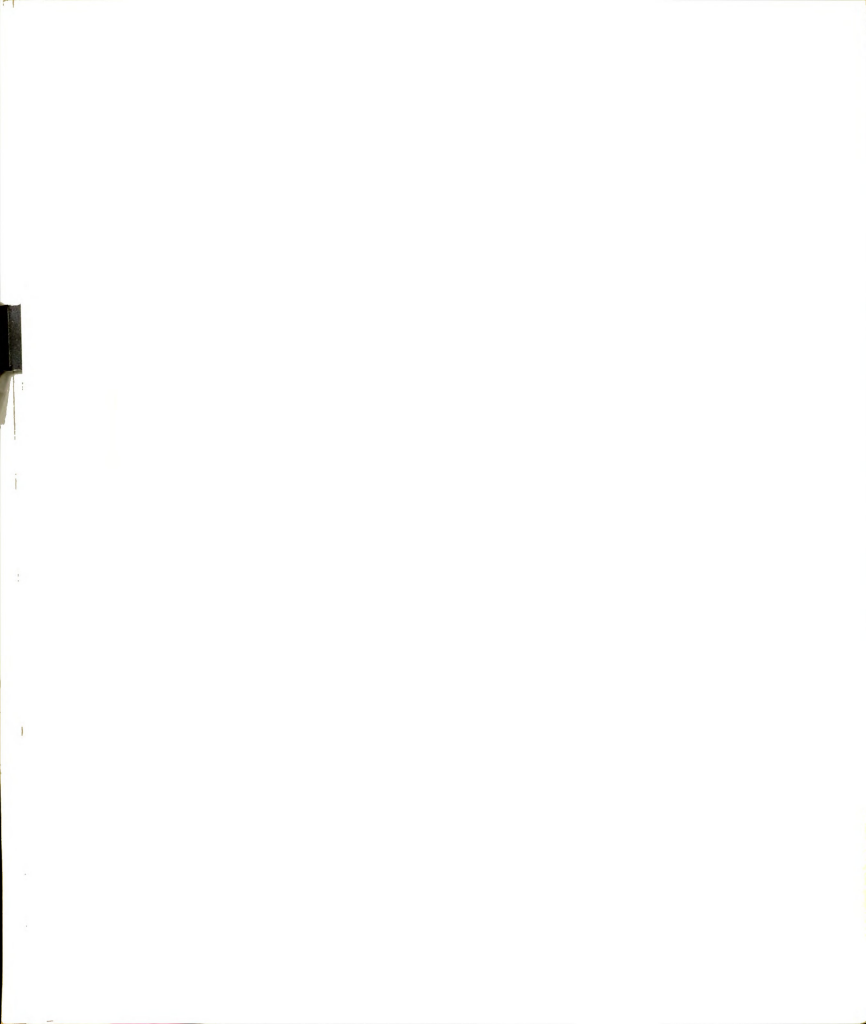
Variable Association with Price-Relatives

The more important relationships between these price-relatives and some of the other variables will be reviewed at this point.

⁸David C. Cates, "Book Value vs. Earning Power," Bankers Monthly, (January 15, 1966).

Couching the analysis in terms of the dividend-relatives, the payout ratio and yield, a consistently marginally positive, though decreasing relationship will be found to hold between the price/earnings ratios and the payout ratios. Banks selling at higher price/earnings multiples are those which pay out a moderately higher percentage of their earnings in dividends. However, despite the increased payout, the relatively higher price causes the yield to suffer. This is especially true during the last seven study years. Because of the consistently negative, moderately significant coefficients, the higher-multiple stocks yield relatively less on the investment. The same pattern emerges concerning the price/book value multiple. The negative relationship is less strong concerning the payout ratios, but is perceptibly stronger as far as the yield structure is concerned. Here is found an association in the range of $-.50$ to $-.60$. In summary, the stocks selling at higher price/earnings multiples have been those enjoying higher, though decreasing, payout ratios, and have been receiving relatively lower, and lessening, yields. The stocks selling at higher price/book value ratios have suffered generally lower payouts and consistently lower yields.

The basic inquiry of the study is into the reasons for the variation in price-relatives. There must be some static or dynamic conditions which are associated with a high price/earnings ratio, for instance. Certainly, management efficiency in the employment of resources would have some bearing. Not so, say the correlations. From 1955 through 1960 the rates of return on capital and on assets are negatively, marginally to nonsignificantly related to the price/earnings ratios.



Following 1960, they are positively, nonsignificantly related. High price/earnings ratios do not seem to be the result of management efficiency so expressed.

Turning to the price/book value relationships, theory appears more plausible. Although the relationship with rates of return on assets is at best marginally significant, the signs are at least correct. However, when the price/book value ratios are related to the rates of return on capital, the coefficients are not only positive, but they are well within such range (.40 - .60) as to be considered moderately significant. In essence, then, these measures of efficiency seem to be better expressed by the price/book value ratio than by the more logical price-relative, the price/earnings ratio.

Among the other logical questions which can be asked is whether the large banks sell at higher price-multiples. Although the signs are correct, the correlations are just a bit better than nonsignificant. Price/earnings ratios and price/book value multipliers are just barely associated with the surrogate for size, the dollar value of deposits. It would seem then, that for the corporation, relative price levels can be achieved and maintained even if its size is one-tenth or even one-twentieth that of the very largest banking institutions. Once some relevant size is reached (perhaps \$100 or \$200 million), price/earnings ratios cease to be a function of scale.

It has been stated previously that the prime function of the commercial bank centers around the loan desk. To test whether banks, more efficient in this respect, tend to sell at higher multiples of price, the relations with loans and discounts as a per cent of assets and



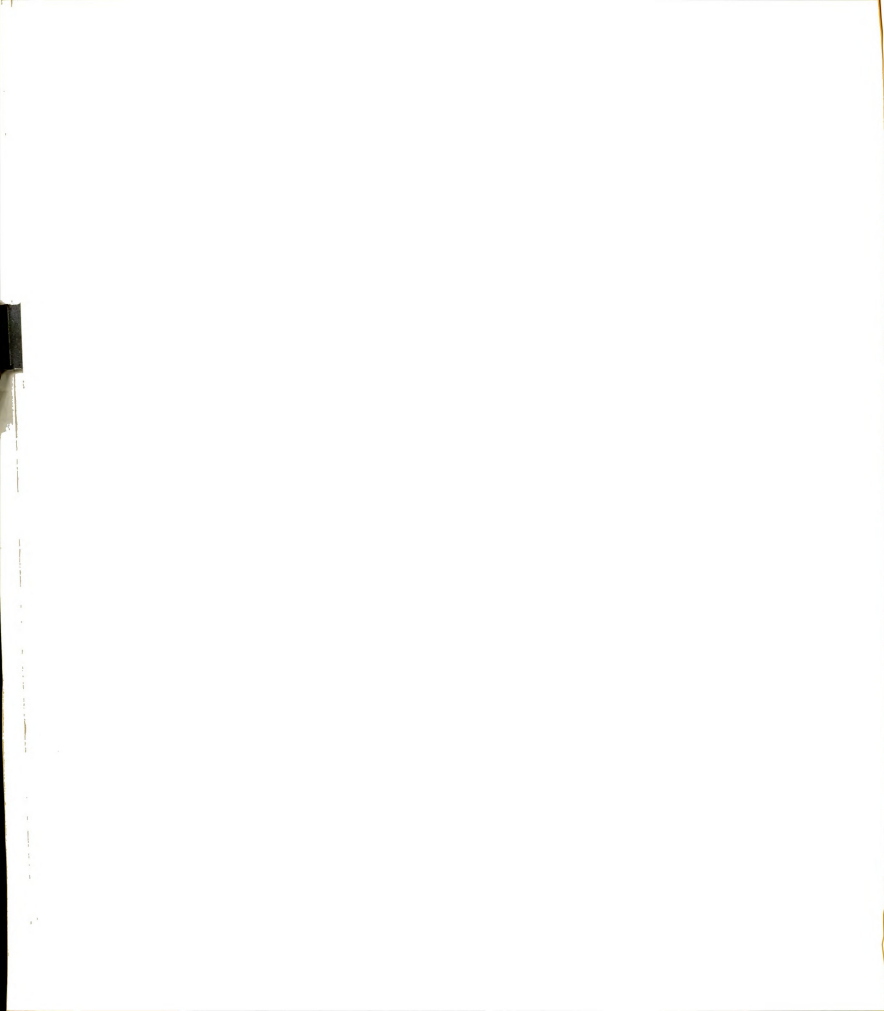
interest income as a per cent of gross operating earnings may be examined. The associations of both the price/earnings ratios and the price/book value multiples with loans and discounts as a per cent of assets are similar and unusual. In each case the correlations during the early years of the study were marginal though positive. That is, relatively more loans meant higher multiples. However, during the 1960's the coefficients declined so as to become negative in 1964. As for the relationship between interest income on loans as a per cent of gross operating earnings and the price-relatives, no discernible association is in evidence. It would seem, then, that higher price-multiples are not associated with efficiency in the loaning function.

Two additional relationships are marginally discernible among the correlations with the price/earnings ratios. Throughout the ten study years there appears a consistently negative, nonsignificant to marginal association between our major price-relative and book value per share. In other words, there was a slight tendency for the shares possessing higher book values to sell at lower price multiples. The second relationship is with the average stock holdings. Over the five years during which these data were available, a slight positive association is in evidence. This fact would seem to indicate that the more concentrated the holdings, the higher are the price-relatives. This is hardly what one would expect.

Summary

The purpose of this chapter has been to describe and place in juxtaposition a number of facets of the sample of banks and bank holding

companies throughout the ten-year period under study. Its major concern was with the price and price-relative variables and their relations with the various static and dynamic determinants. Other associations between these determinants could also have been discussed. However, it was felt that these would be of only peripheral value, given the intention of the study at this time. Some of these determinants will be included and analyzed in later chapters when a more rational statistical technique will be employed.



CHAPTER III

THE DURAND STUDY, REVISITED

Purpose of the Chapter

The object of this chapter is the replication and extension of the definitive work on bank stock prices. The amount of prior work on the subject of this study - bank stock prices and their determinants - has been small. About the only study which was founded on a clearly identifiable hypothesis and tested with empirical data was that of David Durand.¹ In general, the object of Durand's study was to "measure the relative importance of various factors that affect the market price of bank stocks and thereby influence the ability of banking institutions to raise capital funds by the sale of additional stock."² Specifically, its object was to "investigate the factors affecting the ratio of market price to book value, for the study assumes that the ability of institutions over the long-run to raise capital through stock flotation is vitally affected by this ratio."³ These quotations from Durand largely describe the two major directions of his investigations. He was concerned initially with finding and weighing the determinants of bank stock prices. His interest subsequently centered on isolating those

¹ David Durand, Bank Stock Prices and the Bank Capital Problem (New York: National Bureau of Economic Research, Inc., 1957).

² Ibid., p. 1.

³ Ibid., p. 1.

factors which tended to support the bank stocks at or above book value. Following these leads, this chapter will attempt to replicate and extend the Durand Study in these contexts. The replication will, of course, be limited in the sense that more recent data will be employed. In addition, the relevant sample groups will not be identical, given the natural attrition and mergers which have occurred within the industry since the termination of the primary study.

Durand's Methodology

The attempt to explain both the market price and the price to book value ratio entailed the use of multiple regression as the statistical technique. Data were collected for each of eight years (1945-1952) for 117 bank stocks located in various parts of the country. Most of the banks having total assets of \$100 million or more in the spring of 1952 were included.

The method used to reduce heterogeneity was a grouping of the banks into six groups. Five of the groups were geographically defined while the other was predicated on market interest. The groups so defined were:

Group 1 - 17 New York City Banks

Group 2 - 25 Banks of Major Investor Interest Outside of
New York City

Group 3 - 17 Northeastern Banks^a

Group 4 - 17 Midwestern Banks^b

Group 5 - 17 Southeastern Banks^b

Group 6 - 24 Southwestern and Western Banks^b

(^aOther than Groups 1 and 2; ^bOther than Group 2)



The regression function used by Durand was the exponential $P' = aB^bD^dE^e$, where B is book value per share at year's end, E is net operating earnings per share for the year, P is bid market price at the end of January or February of the following year, and D is dividends at the rate current at the time of the price quotation. In order to reduce the effect of scale, the logarithms of the variables were extracted. The use of logarithms assumes proportionality in the changes of the variables. The equation that was actually fitted had the form $\log P' = \log a + b \log B + d \log D + e \log E$. Other regressions were run in an attempt to find additional variables which might be explanations of bank stock prices. The most extensively used modification was $\log P' = \log a + b \log B + d \log D + e \log E + c_1 \log C + c_2 \log A/C + c_3 (\log A/C)^2$, where C is total capital and A is total assets.⁴

Major Conclusions of the Durand Study

The procedure employed in the study enabled Durand to reach a limited number of conclusions concerning his sample of bank stocks. A partial list of these includes:

1. Intergroup Variation. The influence exerted by the various factors on bank stock prices varied substantially from group to group; the persistence of these differences over the years leads to the conclusion that the groups are basically heterogeneous.

⁴Ibid., p. 52.

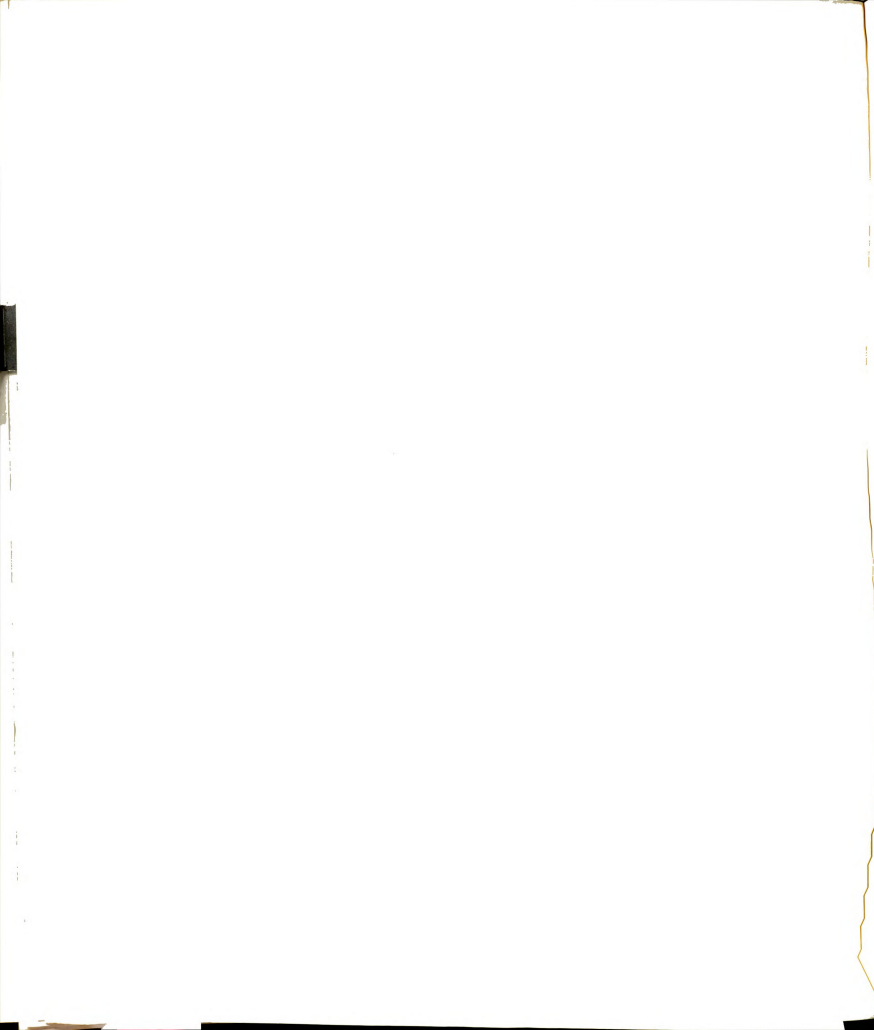


- a. Book value was the strongest determinant over all the study years for the New York City Banks and for the Southwestern and Western Banks. Its influence was second in the case of the Large Banks of Investor Interest Outside of New York City, the Midwestern Banks, and the Southeastern Banks. Book value possessed the smallest weight for only the Northeastern Banks.
- b. Dividends per share exerted the primary influence over all the study years for the Large Banks of Investor Interest Outside of New York City, the Northeastern Banks, the Midwestern Banks, and the Southeastern Banks. It ranked second for the New York City Banks, and third for the Southwestern and Western Banks.
- c. Earnings per share was not primary for any of the groups over all the study years. It ranked second for only the Northeastern Banks and the Southwestern and Western Banks. Earnings possessed the least weight for the four remaining groups. Table 3-5 provides a synthesis of two tables presented by Durand in his earlier works.⁵ This table describes both the raw and coded net regression coefficients by group and year.

⁵David Durand, "Bank Stocks and the Analysis of Covariance," Econometrica, XXIII (January, 1955), p. 33.



2. Intragroup Variation. In addition to the intergroup variation of the weights, there was also some indication of intragroup variation. In other words, the weights did not display a consistent influence over years, within groups.
 - a. For the New York City Banks, dividends varies from -.06 to .40, while earnings ranged from .06 to .64.
 - b. For the Southeastern Banks, book value showed a variation from -.05 to .44 between 1945 and 1947, while earnings went from a .28 to a -.10 over the same period.
 - c. Table 3-5 shows that for the Northeastern Banks, dividends exerted the greatest influence during five years, secondary influence for two years, and the least influence for 1948. For this same group, earnings exerted the largest amount of influence during the opening and closing years of the study, while taking second or third place during the intervening years. Nevertheless, Durand did not consider the intragroup variation incapacitating, nor did he conclude that this variation destroyed the homogeneity of the groups.
3. Price Explainers. The study was preoccupied with the analysis of three factors, book value, dividends, and earnings, whose effect on bank stock prices could be estimated statistically. Although substantial efforts were made to identify other determinants, these efforts



yielded only negative results. The conclusion reached, therefore, is that "other factors exert a substantially smaller influence on bank stock prices than do book value, dividends, and earnings."⁶

a. Additional factors tested include: total capital as a surrogate for size, the assets/capital funds ratio, the risk assets/capital funds ratio, the ratio of current dividends to average past dividends, the average annual rate of increase in earnings, and a measure of the stability of earnings. A considerable effort was also made to test whether stock prices were related to inside information such as hidden reserves and net indicated earnings.

4. Explainers of Price Relatives. Another conclusion of major importance reached by Durand was that "only two primary factors, dividends and earnings, seemed to play a systematic and easily demonstrable role in determining ratios of bank stock prices to book value."⁷ The assumption is that the price/book value ratio is only affected by the earnings/book value ratio (rate of return on capital) and the dividends/book value ratio (yield on book value).

a. Attempts were made by Durand to depict the relationship between the variables through the use of scatter

⁶Durand, Bank Stock Prices and the Bank Capital Problem, p. 17.

⁷Ibid., p. 5.



diagrams. One such diagram shows a slightly perceptible tendency for stocks with low yields on book value to sell at lower ratios of price to book value than those stocks paying a higher return on book value.⁸

- b. An alternative investigation measured the effect of various payout ratios on the price to book value ratio.⁹ The conclusion to be drawn from this scattergram is that there existed a pronounced tendency for the stocks of the 25 Large Banks Outside of New York City which had the highest payout ratio to sell at higher prices relative to book value than those stocks granting a lesser percentage of earnings in dividends. A conclusion ancillary to the one preceding is that a change in rates of return earned on capital exerts a greater effect on the price/book value ratio when it is accompanied by a change in dividends (the payout ratio) in the same direction.

5. Conclusions on Growth. Employing a tripartite analysis of percentage changes over time for the primary price determinants, a new set of net regression coefficients was computed which measured the market's appraisal of changes in the three factors during the three periods.

⁸Ibid., p. 27.

⁹Ibid., p. 30.



The hypothesis tested is that high weights for increased book value would have indirectly reflected the importance of retained earnings as a price determinant. A statistical testing of the regression coefficients found them to be totally unreliable. Durand's tentative conclusion is either that bank stock investors as a class are not particularly interested in growth, or that they look for growth elsewhere and buy bank stocks for income.

- a. Leaving the investor and looking at the investment medium itself, Durand concludes that bank stocks were not growth stocks. From the early 1930's through the mid-1950's, bank stocks were unable to maintain a consistent position at or above book value. He cites the fact that the high weights for dividends occur so frequently as an indication of a general market preference for immediate returns and a skepticism about the long-run growth potential of retentions.
6. A Measure of Solvency. In spite of the fact that this relation was ultimately found to be undetectable, Durand did hypothesize that a moderate capitalization ratio would have the most favorable effect on price. The expected nonlinearity was tested by employing the ratio assets/capital funds to the log of the base ten squared. In other words, he felt that the bank stock investor was not willing to embrace additional risk in order to

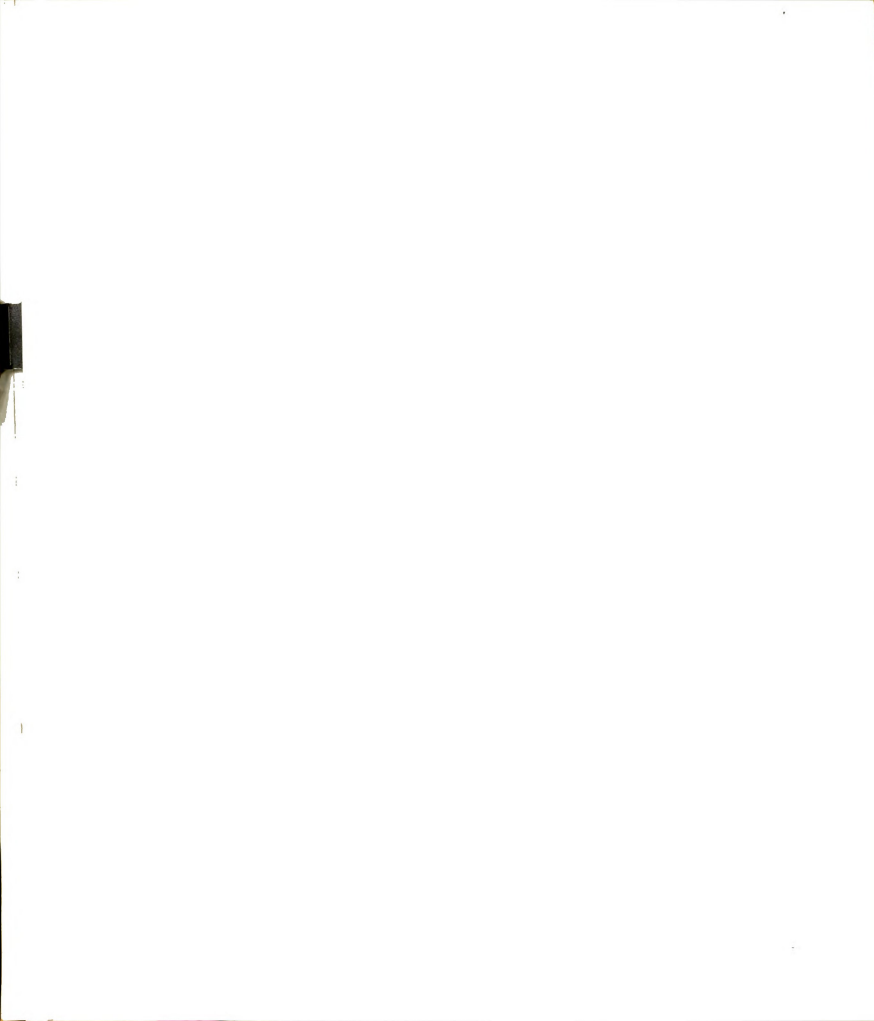


obtain a higher rate of return on his total investment.

The Partial Replication

The Sample

Whereas Durand used a sample of 117 banks for his eight-year study, the present analysis employs only 113. The nine holding companies are not considered at this time. In spite of the fewer number of observations included in the current study, its financial impact is probably greater than that achieved by the earlier analysis due to the impact of mergers on the major banks. Some examples of the consolidations which have occurred are: the uniting of the First National Bank and the National City Bank into the First National City Bank of New York, J.P. Morgan and Co. joined with Guaranty Trust to form the Morgan Guaranty Trust, a disputed merger occurred between the Hanover Bank and Manufacturers Trust to form the Manufacturers Hanover Trust, and there are more in all areas of the country. Tables 3-1-A, B, and C provide a complete list of the institutions presently included along with a designation of whether they were in the Durand Study or are unique to the current effort. If a bank were originally included, it is placed in its original group. However, if a bank is unique, a judgment was first made to determine whether it belongs in Group 2, Banks of Major Investor Interest. The criteria for inclusion were largely the bank's size and the number of shares outstanding. If it failed in these subjective judgments, it was placed into one of the other groups solely on the basis of location. These procedures resulted in groups of different size from those of the original study. It is believed,



however, that the resultant groups possess a higher degree of geographical balance than those considered earlier.

The Methodology

As in the earlier study, the basic tool of analysis consists of the regression of price on the three primary variables - namely, earnings, dividends, and book value. The equation takes the form:

$$X_{34} = a_{34,35,36,38} + b_{34,35,36,38}X_{35} + b_{34,36,35,38}X_{36} + b_{34,38,35,36}X_{38}$$

where X_{34} is the log of price, $a_{34,35,36,38}$ is the X_{34} intercept in space, the b's represent the rate of change of the dependent variable per unit change in each of the independent variables when the other independent variables are held constant, X_{35} is the log of net operating earnings per share, X_{36} is the log of dividends per share, and X_{38} is the log of book value per share.¹⁰

Whereas Durand computed a total of 48 regressions, this analysis is concerned with only 30 groups of data (six groups for five study years, 1960-1964). This number should prove sufficient to test whether the conclusions of the earlier study remain valid into the 1960's. The conclusions which will be examined are those relating to the intergroup variation of the regression coefficients and the weights within groups

¹⁰The b's are generally termed net regression coefficients. They are net in the sense that the regression of the dependent variable on the particular independent variable is measured while holding the values of the other independent variables constant. In contrast, the coefficients of simple correlation, the r's, are called the coefficients of gross regression because no allowance is made for indirect influences on the regression - Robert Ferber, Statistical Techniques in Market Research, (New York: McGraw-Hill Book Co., 1949), p. 347.



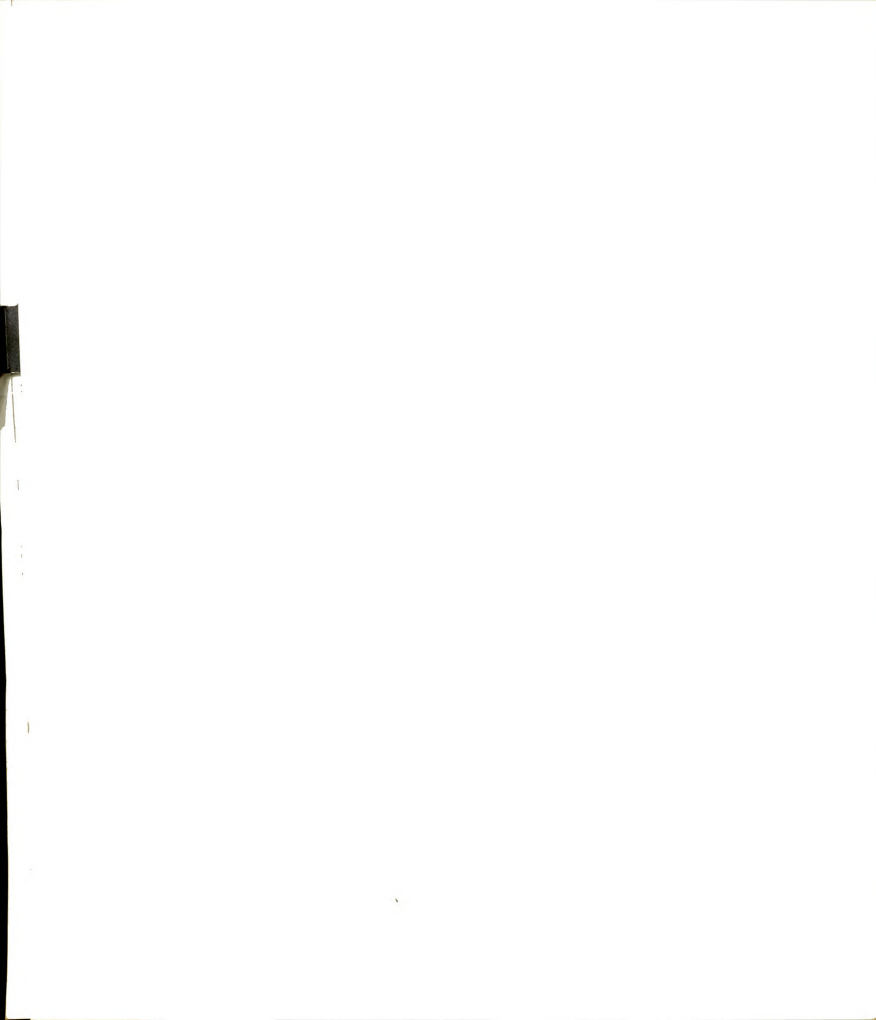
of these coefficients as well as their intragroup variation. The testing of other determinants will be attempted in subsequent chapters. A number of the Durand conclusions will also be investigated at that time. Specifically, the regression will consider, among others, those questions raised by Durand involving the relation between the price-relatives, and the yields, rates of return, payouts, and solvency indicators.

The Analysis

1. Intergroup Variation - Net Regression Coefficients. One of the primary statistical touchstones of the Durand Study was the implications drawn from an interpretation of the computed geometric weights, the net regression coefficients. Table 3-5 provides the b's from the earlier work. In this table, these coefficients are identified by the lower case letters, e, d, and b for the major variables, earnings, dividends, and book value per share. Table 3-3, on the other hand, depicts the statistics obtained from the current computation.¹¹

Actually, the analysis of the intergroup variation will proceed on three levels. Since Durand employed the b's, major comparisons will be made on this basis. However, for purposes of clarification, the Beta Weights (B's) as presented in Table 3-4 and the direct and indirect effects of the independent variables included in Tables 3-7-A to F will also be utilized.

¹¹ Both tables have been coded to aid identification of the strongest variable within groups and both within years and over years. The smallest code number signifies the highest weight.



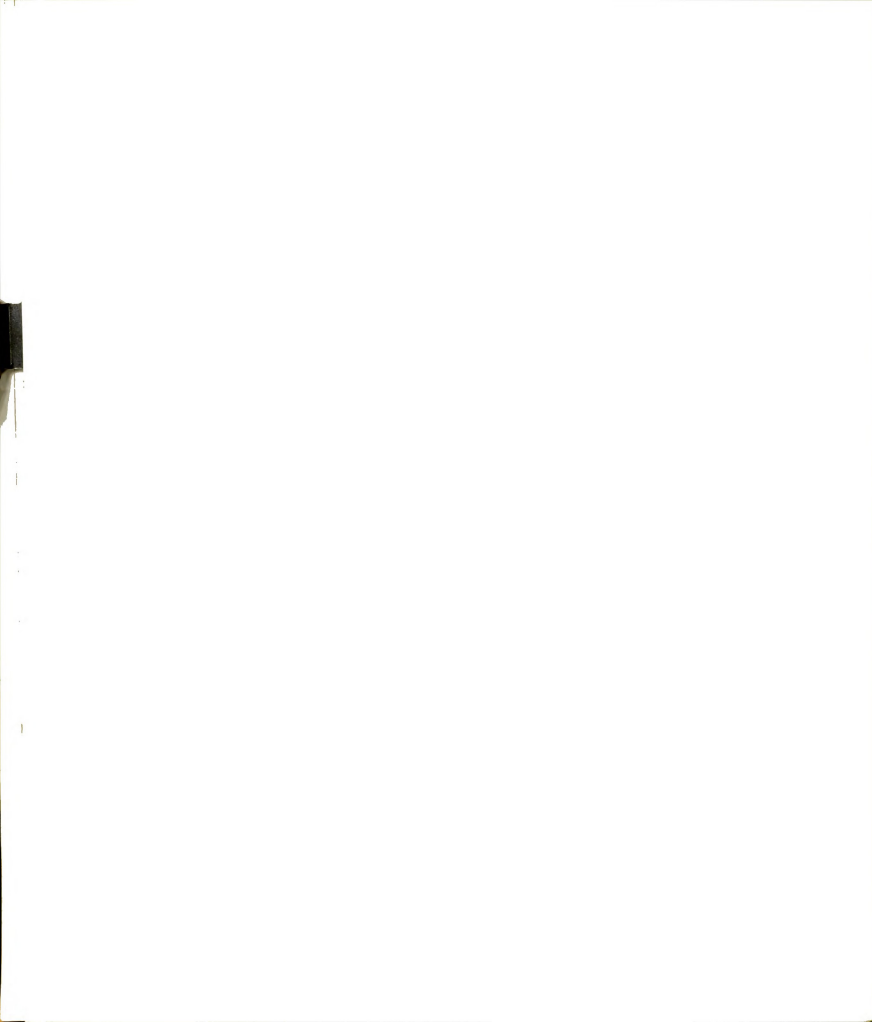
a. Majority Results

The most striking characteristic of the net regression coefficients (b's) presented in Table 3-3 is a pronounced relative uniformity in all but Group 5, the Southeastern Banks. This uniformity is in direct contrast with the Durand findings. We find that the investors in 101 of the 113 banks seem to weigh earnings most strongly over each of the study years. For Durand, earnings were not strongest for any group while being secondary for only two groups.

The performance for dividends and book value among the groups follows the same pattern. For all groups, except the Southeastern, dividends rank second and book value ranks third. The placements within years are consistent and stable. The relative weights of the determinants have certainly changed. The Durand Study found only one negative weight for book value, while currently, 20 of the 30 study years showed negative coefficients for book value. On the basis of the geometric weights it is difficult indeed to find reason to conclude that five of the six groups display such uniqueness as to be considered heterogeneous. It is possible that criteria for grouping, other than geographic, may lead to some indication of heterogeneity. This will be the concern of a later chapter.

b. Southeastern Group.

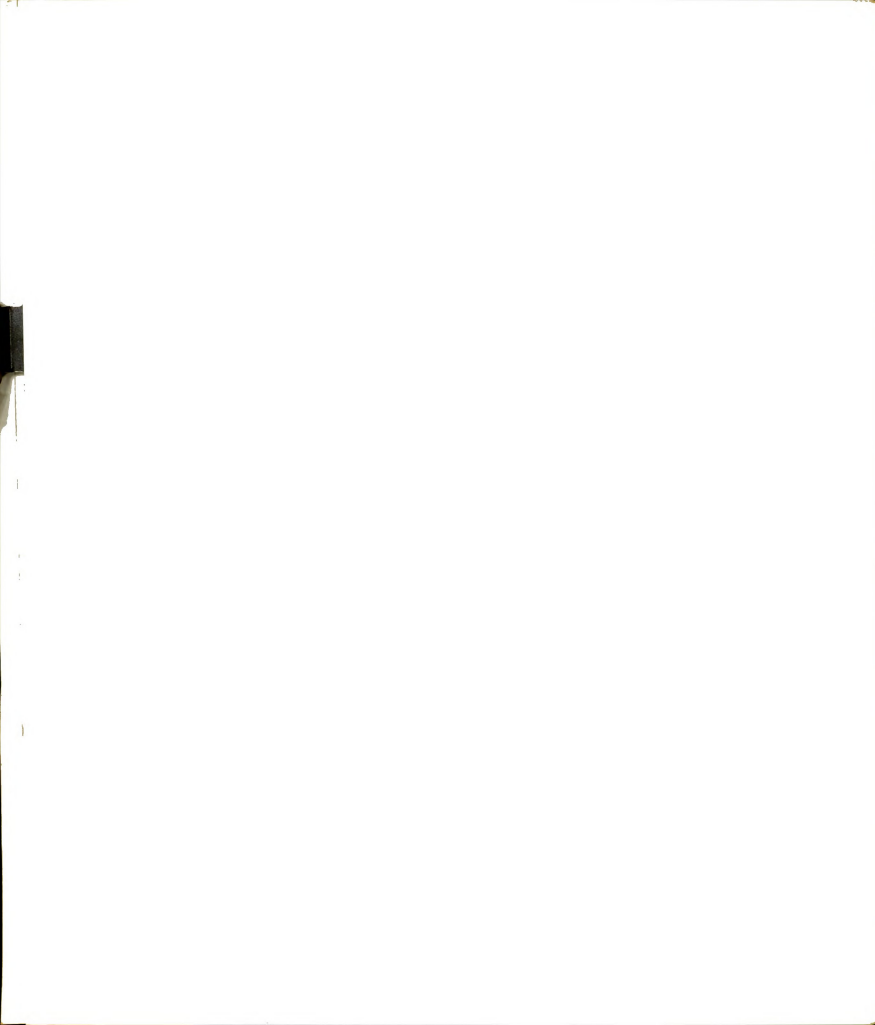
It is interesting to note that the relative ranking of the independent variables for the Southeastern Banks is identical to the ranking perceived in the earlier study. Dividends rank first, book value second, and earnings third, although there is a barely discernible tendency for



earnings to gain and book value to retreat in the later years. This relative consistency prevails despite the fact that eight of the banks in the original study were not included in the later regression. In addition, 25% of the banks which were subsequently included were "new" banks.

Although precise reasons for the unique reactions of the group of Southeastern Banks are not immediately available, some indication may be obtained by a capsule comparison of the variable means of that group (Table 3-2-I) with the means of the total sample of 122 institutions as presented in Table 2-6-C. What is immediately evident is that price, although starting from an average lower by some 20% in 1960, increased at a greater compound rate than that of the total sample, so that as of year-end 1964 the average price for the Southeastern Banks was actually higher than the average price for the sample. This same quality is also evidenced by both earnings and dividends, although their rates of growth were not as dramatic since the terminating values for both indicators were still below the averages of the sample. During this same period, book value per share remained consistently below the averages. According to expectations, the price-relatives, the price/earnings and price/book value ratios, were perceptibly higher for all study years.

As a further indication of performance, we find that during the last four study years these banks earned a higher rate of return on their capital despite the fact that during 1962, '63, and '64 they had moderately more capital relative to risk assets than did the average banks. This latter phenomenon is expected, since the quantity loans



and discounts as a per cent of total assets was moderately lower for all years than were the overall averages. Yet, while actually making fewer loans, these banks were able to achieve a higher quantity interest income from loans as a per cent of gross operating earnings over all years.

An additional determinant of some importance is that over the full time-span of the study, with the exception of 1964, the payout ratio for the Southeastern Banks was higher than that of the average. Yet, because of the sharp slope of the market price curve, their yields were below those of the averages, with the spread widening during the last three study years.

The preceding analysis has concerned a group of institutions, which, although performing with considerable excellence, have demonstrated a uniqueness which tended to weigh book value greater than earnings, and dividends greater than both. It is entirely possible, however, that this uniqueness is only indirectly a trait of these banks. It is this writer's belief, that as the South increases its participation in the mainstream of the totality of American life, this metamorphosis will be reflected in the attitudes of that region's bank stock investors. We feel that the first such leanings are haltingly evidenced by the net regression coefficients of Table 3-3. For Group 5, year-end 1964 found book value with a negative weight.

2. Intergroup Variation - Beta Weights. While the preceding analysis of the net regression coefficients was fully valid, as well as parallel with that undertaken in the earlier study, the expose could also have been couched in terms of the Beta coefficients. The additional



value of these B's is that, unlike the b coefficients, the effect of each variable on the dependent variable is indicated by the relative size of its B coefficient. A small B is a sign of insignificant variation in the dependent variable explained by variation of the specific independent variable. Table 3-4 presents the Beta weights for the primary independent variables by groups over time.¹²

As indicated, the value of the B's is that the amounts of the weights assume a relativity to each other. Such conversion is not mandatory for the present regression, but will become so in subsequent computations. Presently, all the variables are the logs of dollars per share. Later, some of the variables will consist of percentages, ratios, and absolute numbers, in addition to a common dollar denominator.

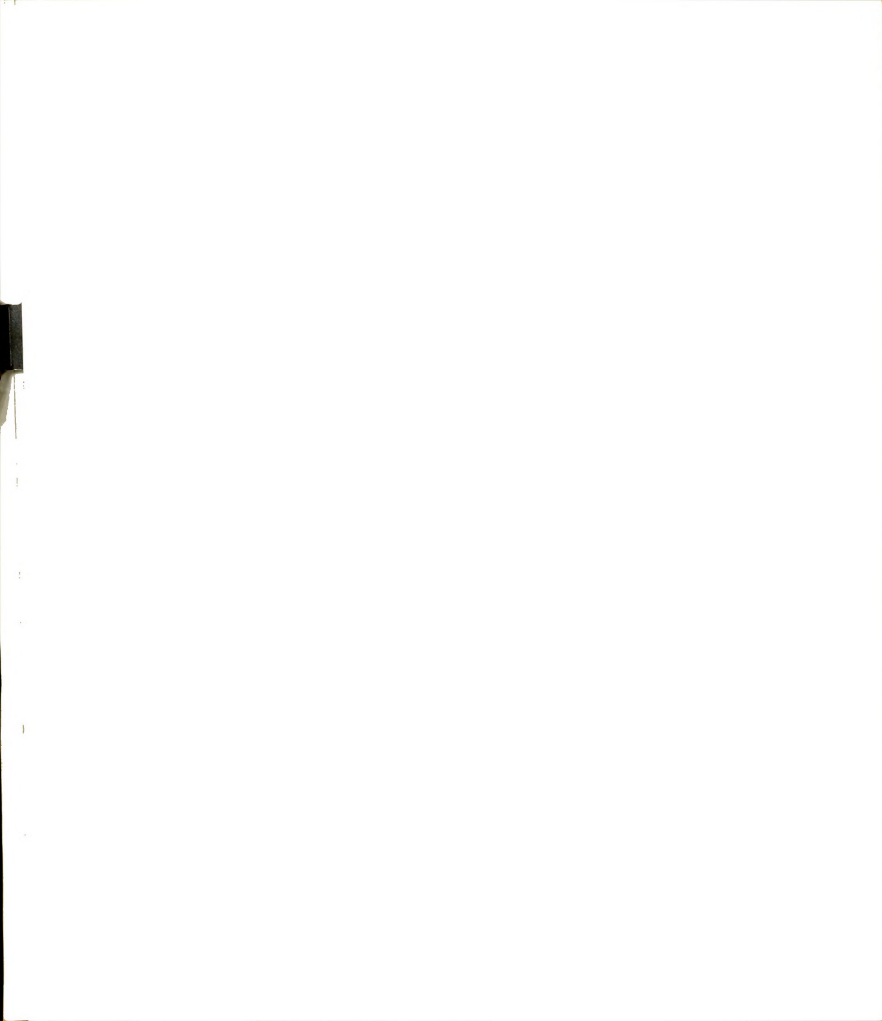
Even for the present regression, however, the B's take on added importance when they are further dissected into the direct and indirect effects of the independent variables on the dependent variable. These statistics are presented in Tables 3-7-A to F. What is of concern at this time is the extent of the contribution each variable makes to the statistic R^2 , i.e., the proportion of the total variance that has been explained by the regression. The R^2 is known as the coefficient of the multiple determination. These statistics and their square roots, the coefficients of multiple correlation (R's) are enumerated in Table 3-6.

¹²Ferber, *op.cit.*, p.364. In essence, the B's are the b's transposed to standard, comparable units with a mean of zero, a standard deviation of one, and a zero intercept (a). The general formula for the B's is $B_{1i} = b_{1i} S_i / S_1$, i.e., the net regression coefficient is multiplied by the ratio of the standard deviation of the specified independent variable to the standard deviation of the dependent variable.

A review of the simple, or zero-order, correlation coefficients (not supplied) would indicate a very high relationship between earnings and book value and a moderately high relationship between earnings and dividends and between dividends and book value for most group study years. Obviously, a degree of intercorrelation is in evidence among the independent variables. This intercorrelation acts to dampen the price-explaining function of the variables when taken as a group. It is this dampening effect which has been isolated in the present analysis. Specifically, the direct influence is exerted when an independent variable affects the multiple relationship solely through its own variation. The indirect, or joint, effects arise when some of the variation in the dependent variable is explained by the coordinated influence of several independent variables.¹³

A good example of the application of these techniques is given in Table 3-7-B. Looking at Group 2 for 1960, we find that the direct effect for earnings is .7705, for dividends .0172, and for book value .0097. Obviously, the contribution of earnings to R^2 carries the day, as it does for largely all the other group study years with the exception of those for the Southeastern Banks. The addition of dividends to the equation moderately increases the explanation of the variation in the dependent variable. However, the addition of book value serves to

¹³Ferber, op.cit., p.363. Direct effects are the $B_i's^2$. They are never negative, but can be zero. Indirect or joint effects can be positive or negative and in general can be defined as $2B_{1i}B_{1j}r_{ij}$.



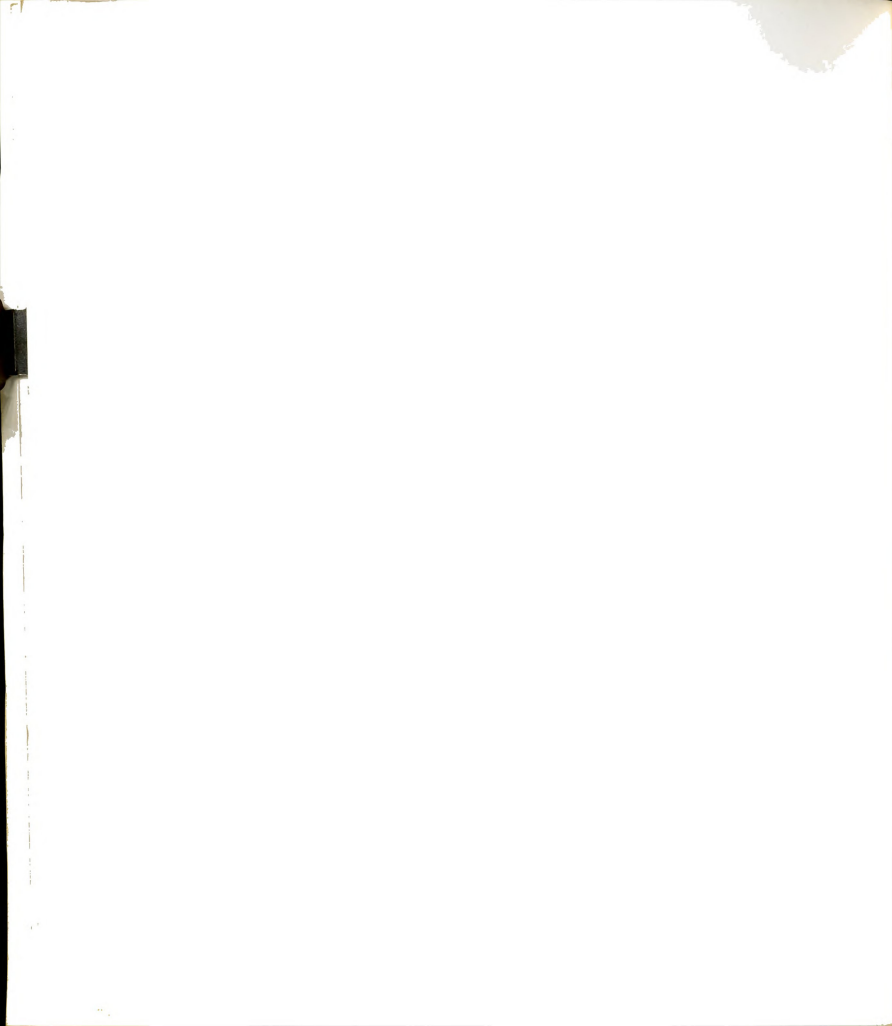
reduce the explanatory quality of both earnings and dividends. Therefore, despite the fact that book value seemed to have a very slight positive influence, its interaction with the other variables serves to reduce the overall explanation of the variation of the dependent variable.

A further comment is in order concerning the 3-7 Tables. Although the quantities of the direct effects are believed to be correct, there is some doubt about the true values of the indirect effects, even though their signs are as expected. This is the case since the restraint imposed on these quantities is that their algebraic sums should equal R^2 uncorrected for degrees of freedom. This restraint does hold for Group 2, 1960, where R^2 equals .8038, while the total effect equals .81.

In order to perfect a multiple regression designed to explain the variation in a particular dependent variable, it would seem desirable for the direct effects of the independent variable to be greater than zero, and for the indirect effects among the variables at least to be positive. While the first criterion generally holds for the replication of the Durand Study, the second criterion is largely not met. It is possible to conclude, then, that other variables could be more efficaciously used to explain price and its relatives.

3. Intragroup Variation. By viewing the net regression coefficients, Durand concluded that "there was some suggestion of variation from year to year within groups."¹⁴ The b's also display an element of intragroup variation in the current study. It would seem, in fact,

¹⁴Durand, op.cit., p. 4.



that there is more than just "some" variation. Whether this amount of variation can only be considered "random" is a question left unanswered. To obtain a better picture of the amount of absolute variation, the direct effects of the 3-7 Tables should really be consulted. The direct effect of earnings more than halves from 1962 to 1964 for the New York City Banks, and is reduced by some 83% over this same time period for the Banks of Major Investor Interest. The direct weight for earnings for the Midwestern Banks, on the other hand, almost doubles during these same two years. For the Southeastern Banks, the direct effect of book value decreased by a multiple of ten between 1960 and 1964, while that of earnings doubled. The direct effect of dividends for the Western and Southwestern Banks for the five-year period decreased considerably, moving from .2790 to .0019.

The conclusion to be reached concerning the intragroup variations of the weights is that, although usually maintaining their relative positions, they were erratic to such a degree as to be deemed lacking in internal homogeneity.

One further indication of the wandering behavior of the determinants is in order. The following table provides the simple correlations (r 's) between the quantity price as a per cent of book value and the rate of return on capital over the study period for these bank groups chosen at random. The lack of any degree of uniformity is obvious.

TABLE 3-8

SIMPLE CORRELATION BETWEEN P/B & NOB/CAP
FOR GROUPS 1, 2, & 5

	<u>Group 1</u>	<u>Group 2</u>	<u>Group 5</u>
1960	.89	.41	.43
1961	.91	.50	.41
1962	.83	.59	.47
1963	.91	.26	.81
1964	.65	.35	.78

Summary

In large measure, all the secondary analysis and the resultant conclusions of the Durand Study were based on the premise that the six-group, geographic breakdown succeeded in producing homogeneity within the banks so arrayed. In addition, that study operated under the hypothesis that earnings, dividends, and book value all contributed toward the total explanation of market price. There is doubt as to whether these assumptions are valid for the study of the later period. The present study lends considerable weight to the belief that a differentiation of banks on a largely geographic basis is not sufficient to isolate whatever unique qualities exist within the individual institutions. Other grouping attempts will be made in the following chapters.

Additionally, the present study concludes that the indiscriminate use of the primary variables as price explainers not only does not differentiate between the posited groups, but also very likely reduces the total explanation of the variation of the dependent variable. Later

analysis will refine the familiar determinants as well as introduce additional explainers.

We must also conclude that given the present breakdowns, the intragroup variations were pronounced and of such magnitude as to raise additional questions concerning the homogeneity of the groups.

Although the evidence produced by this extension of the Durand method to more recent periods does seem to suggest some conflict, it is quite possible that the two findings are logically in agreement. In valuation theory, as applied to corporate equities, it has sometimes been said that liquidating value furnishes a floor to price, but that above this floor, price is determined by earnings and dividends or some combination of the two.¹⁵ During the period covered by Durand, bank stock prices were generally below book value. In banking, with its conservative recording practices, book values can be considered a fair estimate of liquidating value in most circumstances. In other words, during that period valuation by earnings might have suggested an even lower value, except for the supporting influence of book value. In the period covered by our replicated extension, earnings had risen (more importantly, expectations of earnings growth may also have become brighter) so that the floor was passed and earnings took over as the element dominant in valuation.

¹⁵ Walter K. Gutman, "Book Value - Market Value Patterns," Readings In Financial Analysis and Investment Management, ed. Eugene M. Lerner (Homewood, Illinois: Richard D. Irwin, Inc., 1963), p. 307.

CHAPTER IV

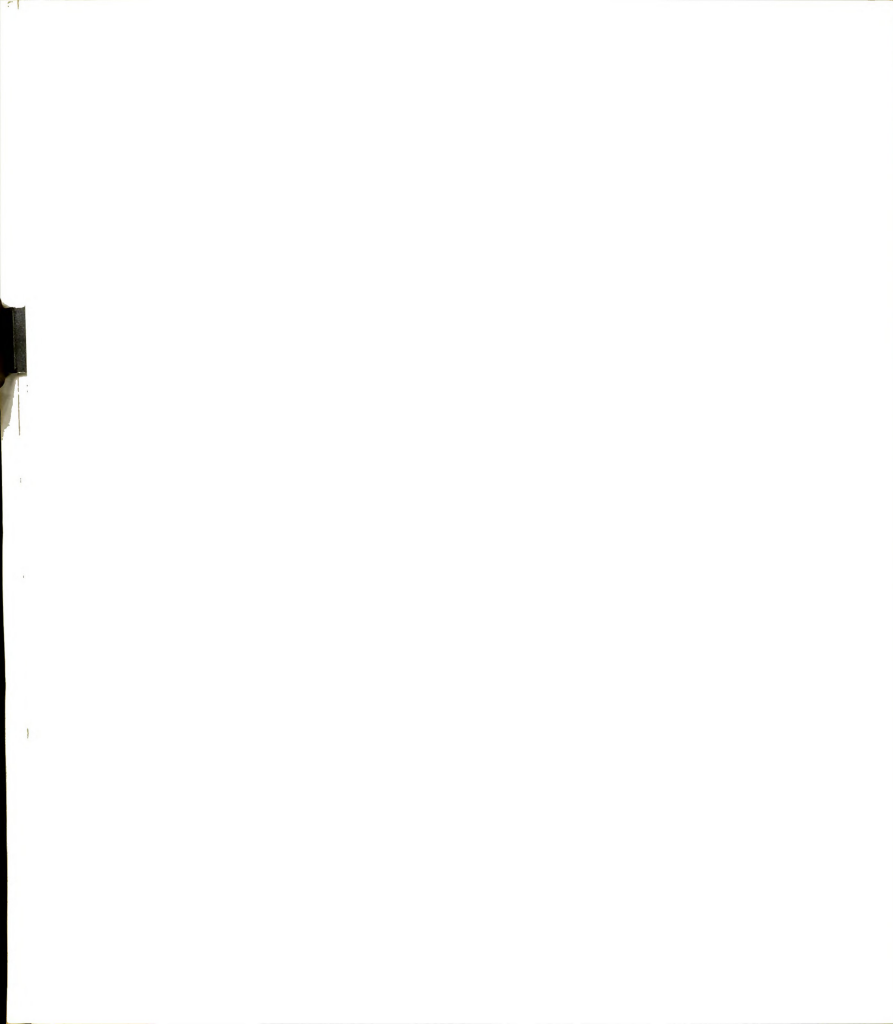
EXPLANATIONS OF A MAJOR PRICE-RELATIVE

Purpose of This Chapter

This chapter is concerned with a series of attempts at explaining the major price-relative, the ratio of year-end bid market price of a share of bank stock to the net operating earnings derived during that year by the corporation for that share of stock. Indigenous to the analysis is an exploration of various assumptions concerning qualities expected in high growth institutions, banks paying out large percentages of earnings, and those members of the sample actively participating in the loaning activity.

In earlier sections of this study, the actual dollar market price itself was viewed as the factor to be explained. This tack resulted from the attempt made to replicate and extend the landmark work by Durand. Studies by other researchers of other industries also viewed dollar market value as the dependent variable in their respective explanatory equations. While price may be of interest to a purchaser, its magnitude in and of itself tells little of the relative value embodied in the purchase. All that can be said is that a stock selling at eighty dollars required more dollars of outlay than one selling at twenty dollars. What is needed is a relative indicator of worth.

This requirement was recognized by Durand, when in Chapter 3 of his monograph he shifted emphasis from price itself to the ratio of

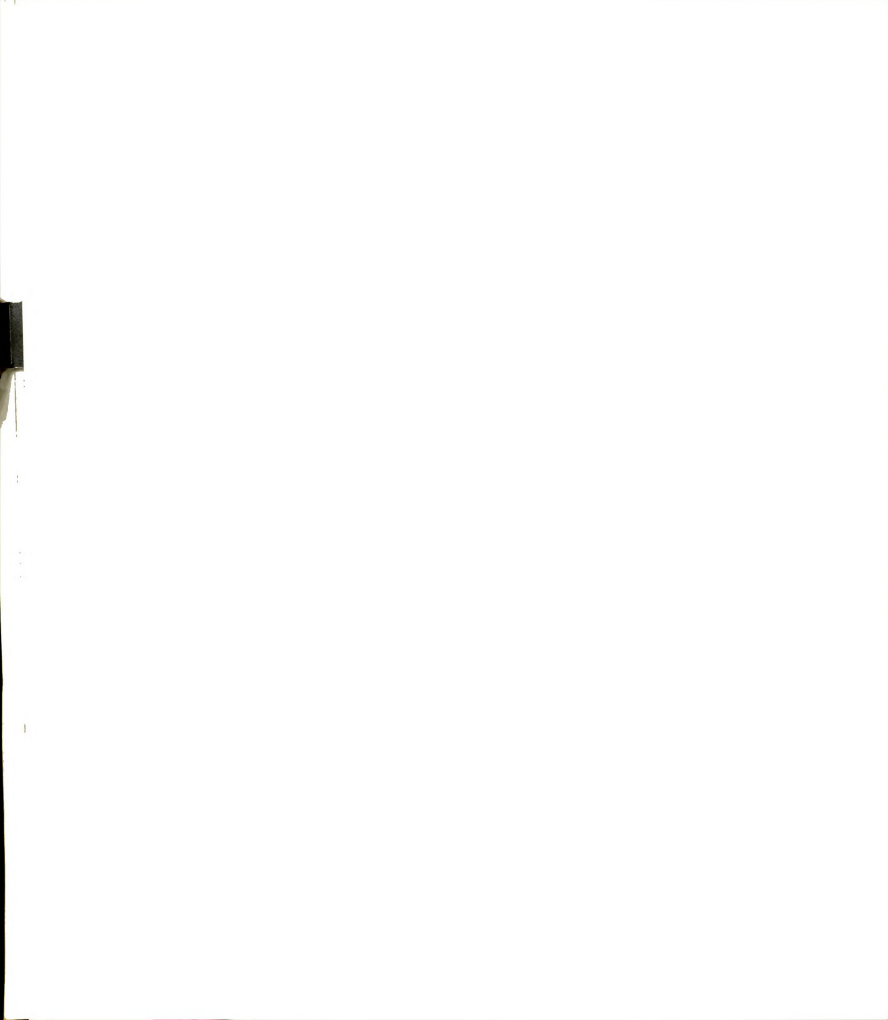


price to book value. His contention was that this ratio is affected by only two primary factors: specifically, the ratio of earnings to book value, and the ratio of dividends to book value.¹ The Durand study concerns itself with the years of the early post-war period. During this time book value was a legitimate bench mark for price since most bank stocks were selling at discounts from book value. Following 1955, however, price appreciated at a much faster rate than did the additions to capital with the result that all major bank stocks subsequently sold at substantial premiums over book. In addition, value obtained a dynamic aura based on earnings rather than the static character as defined by book value. Therefore, so as to appraise bank stocks in a fashion similar to that used to study the stocks of industrial and utility corporations, this section will concern itself with an evaluation and explanation of the price/earnings ratios of the stocks of the sample financial institutions.

Juxtaposition of Price/Earnings Ratios

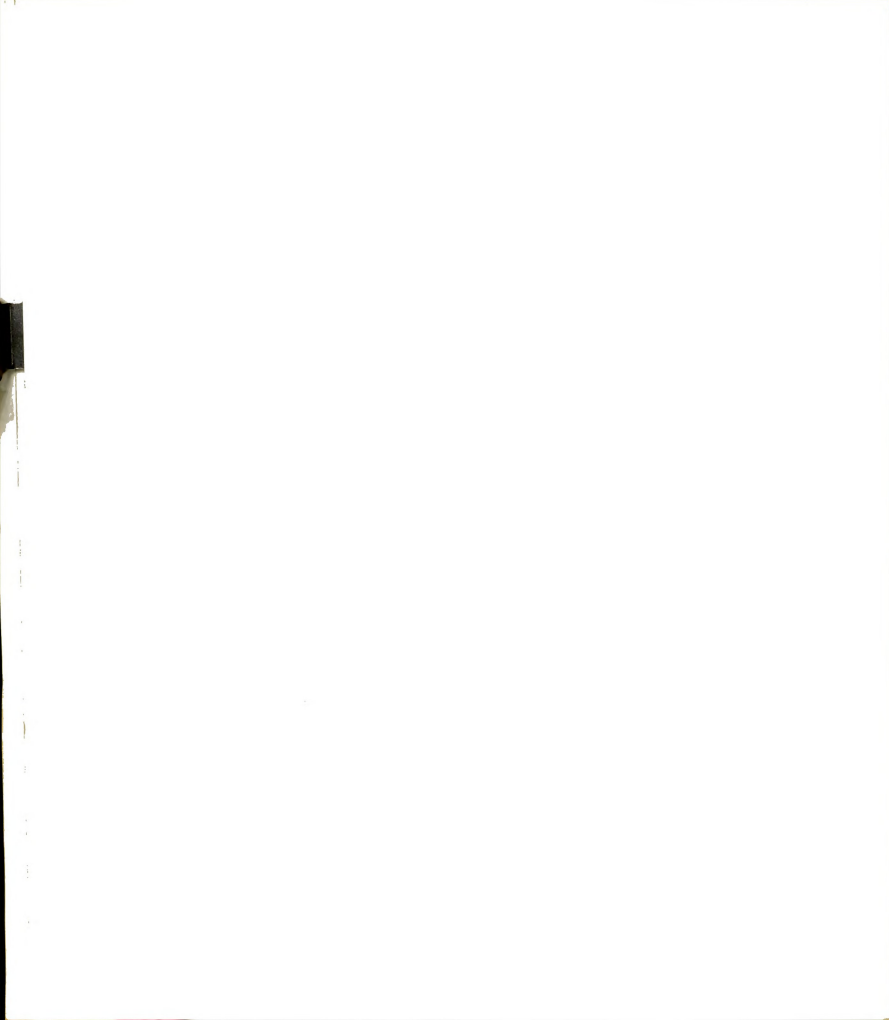
In order to describe both the absolute and relative levels of the price/earnings ratios over time, certain tables are supplied in the appendix. Table 1-8 provides a comparison of these ratios since 1929 for Moody's New York City banks, their industrials, and their utilities. Tables 2-6-A through D provide, among other information, the mean of this ratio (Variable #11) with its standard deviation for our sample of 113 banks and nine holding companies over the ten sample

¹ David Durand, Bank Stock Prices and the Bank Capital Problem (New York: National Bureau of Economic Research, Inc., 1957), p. 41.



years. From Table 1-8 it is noted that only as of year-end 1960 and 1961 was the mean price/earnings ratio of the larger sample greater than that of the New York City banks. This would seem to indicate that the bank stock price appreciation which occurred at this time was perceptibly greater for those banks located outside of New York City. Not since 1955 have the price/earnings ratios of either bank group been larger than those of the industrial or the utility groups. This is in spite of the fact that during the previous 26 years, dating back to 1929, the New York City banks actually showed the highest ratios at the end of 13 of those years and had ratios greater than those of the industrial category for 18 of those years. Regardless of the recent efforts of the banking community, the stocks of these financial institutions are not being valued as highly in relation to earnings as these other industry groups.

Having made this inter-industry comparison, our attention turns to the prime area of concern of this study - the explanation of the variation of the year-end price/earnings ratios between the banks. Although not supplied in this study, an analysis of the raw data at any relevant point in time indicates that a wide range of these ratios exists among the banks in the sample. An example of this variation would be the spread between the year-end 1964 price/earnings ratio of the Central National Bank of Cleveland of 13.0 and that of the Valley National Bank of Arizona of 25.3. While other comparisons might easily be made, one is deemed sufficient to denote the degree of variation within the sample. The task, then, is to devise machinery which will serve to explain the levels of these value indicators.



The subsequent analysis will consist of five separate arguments. Three of these arguments, although differing in the composition of the observations, will share a similar group of determinants. The fourth argument will consider all the observations for 1964 as a group, while the majority of the banks for 1962 will be taken as a group in the fifth argument.

The Design of the Arguments

1. Banks Grouped by an Indication of Growth. An earlier chapter found that geographic groupings yielded little definitive information. One attempt at rectifying this situation is to group the sample banks according to the measure of growth most accepted by the industry itself - that of the growth rate of deposits.² To obtain this measure it was necessary to first regress year-end deposits for the individual institutions on time. The growth rate is therefore defined as the net regression coefficient of deposits (b) per year divided by the mean value of deposits for the number of sample years available. In this fashion we are able to limit the influence of both the beginning and ending deposit values.

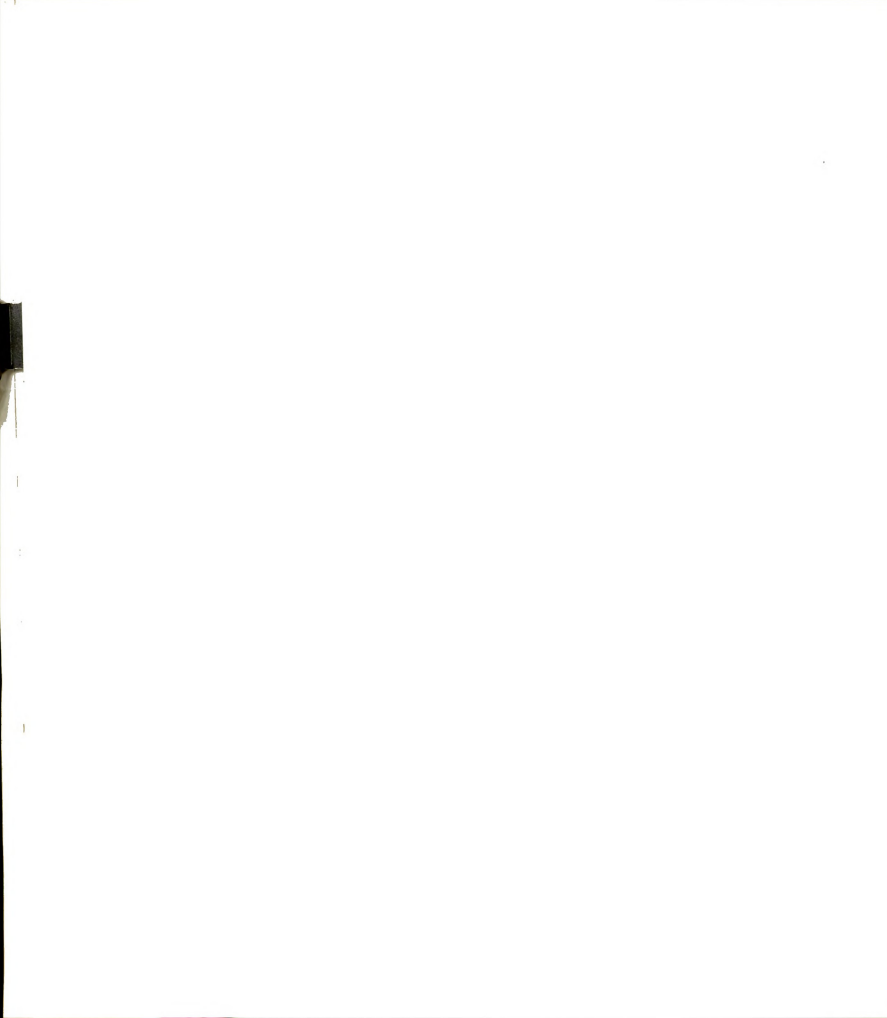
The groups are defined as follows:

Group 1. 3.5% and below, n = 21

Group 2. 3.6%-5.5%, n = 40

Group 3. 5.6% - 7.5%, n = 28

²George G. Kaufman and Bruce C. Cohen, "Factors Determining Bank Deposit Growth by State," Paper read before the meeting of the Midwest Economic Association, Chicago, Illinois, April 17, 1964.



Group 4. 7.6% and above, n = 24

Group 5. Bank Holding Companies, n = 9

Table 4-1 presents the banks included in the various groups.

2. Banks Grouped by an Indication of Banking Function. It has been argued in this study that the prime function of commercial banking is the judicious but sufficient allocation of credit.³ Holding that this contention is valid, an assumption can be made that the relative value of the ownership securities of a bank will reflect how well this function is performed. A second rational approach then is to group the institutions according to how well management has embraced the loaning function. Rather than choose a specific point in time, the mean over all the sample years of the per cent loans and discounts are of total assets has been calculated for each institution.

This procedure yields the following groups:

Group 1. 42% and below, n = 27

Group 2. 43% - 49%, n = 55

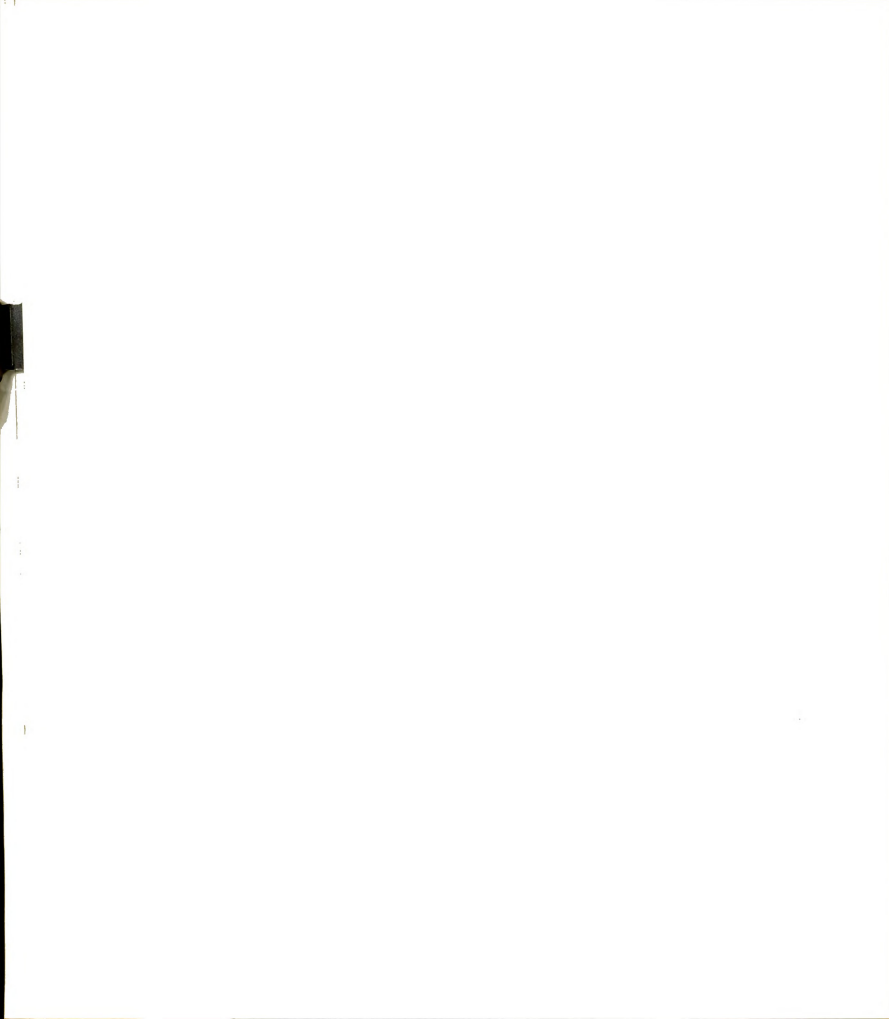
Group 3. 50% and above, n = 31

Group 5. Bank Holding Companies, n = 9

Table 4-2 presents the banks included in the various groups.

3. Banks Grouped by Mean Payout Benefits to Owners. The third hypothesis to be tested is one which has achieved considerable stature during the past few years. The core of the position is that a more liberal payout ratio will result in higher bank stock prices, and, holding earnings constant, in higher price/earnings ratios. The

³Howard D. Crosse, Management Policies For Commercial Banks (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1962), pp. 2-3.



contention is that the higher payout ratios are made possible by the potential of debentures in the capital structure. Debt would serve as capital, thereby reducing the dependence upon retained earnings. The posited result of these parallel actions is to reduce the cost of capital to the banking firm.⁴

The test of this hypothesis results in grouping the institutions in the following fashion:

Group 1. 39% and below, n = 24

Group 2. 40% - 54%, n = 66

Group 3. 55% and above, n = 23

Group 5. Bank Holding Companies, n = 9

The banks are grouped according to the mean payout ratio over all sample-years for the individual banks. The individual observations within groups are supplied by Table 4-3.

The three grouping schemes described above were investigated employing a cross-sectional analysis to each of the five years 1960-1964.

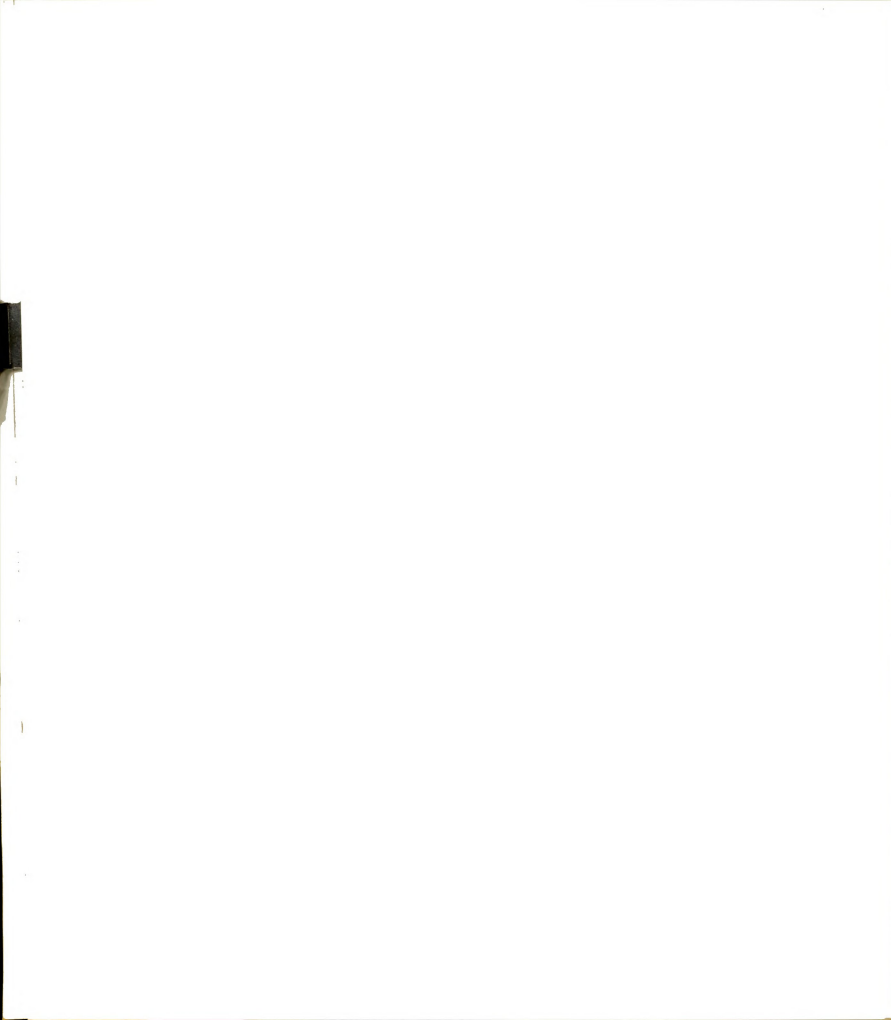
For each group-year the following argument was tested: The log to the base 10 of the price/earnings ratio (#41) is a function of --

the log of loans and discounts as a percent of assets (#37) - a measure of the prime banking function

the log of dollar deposits (#39) - surrogate for size

the log of capital as a per cent of risk assets (#40) - a measure of solvency

⁴Wesley Lindow, "Bank Capital and Risk Assets," The National Banking Review, 1 (September, 1963), p. 39.



the log of the rate of return on capital (#42) - a measure of the efficiency of capital

the log of dividends as a per cent of net operating earnings (#47) - payout benefit to stockholders

the log of the number of shares outstanding divided by the number of stockholders (#49) - the average size of holdings

the log of the rate of return on assets (#43) - a measure of the efficiency of assets

the log of interest income from loans as a per cent of gross operating income (#44) - a measure of the productivity of loans

the absolute value (1 or 0) of the existence of a stock dividend (#21) - an indication of a pseudo-immediate benefit

the absolute value (1 or 0) of the eligibility of a bank's stock for investment by Massachusetts savings banks.

In addition, where possible for the year 1964, two additional variables were included in a separate regression. These variables were: the absolute value (1 or 0) of the existence of capital notes or debentures in the capital structure (#20) and the absolute value (1 or 0) of the existence of a stock split (#22) during that period.

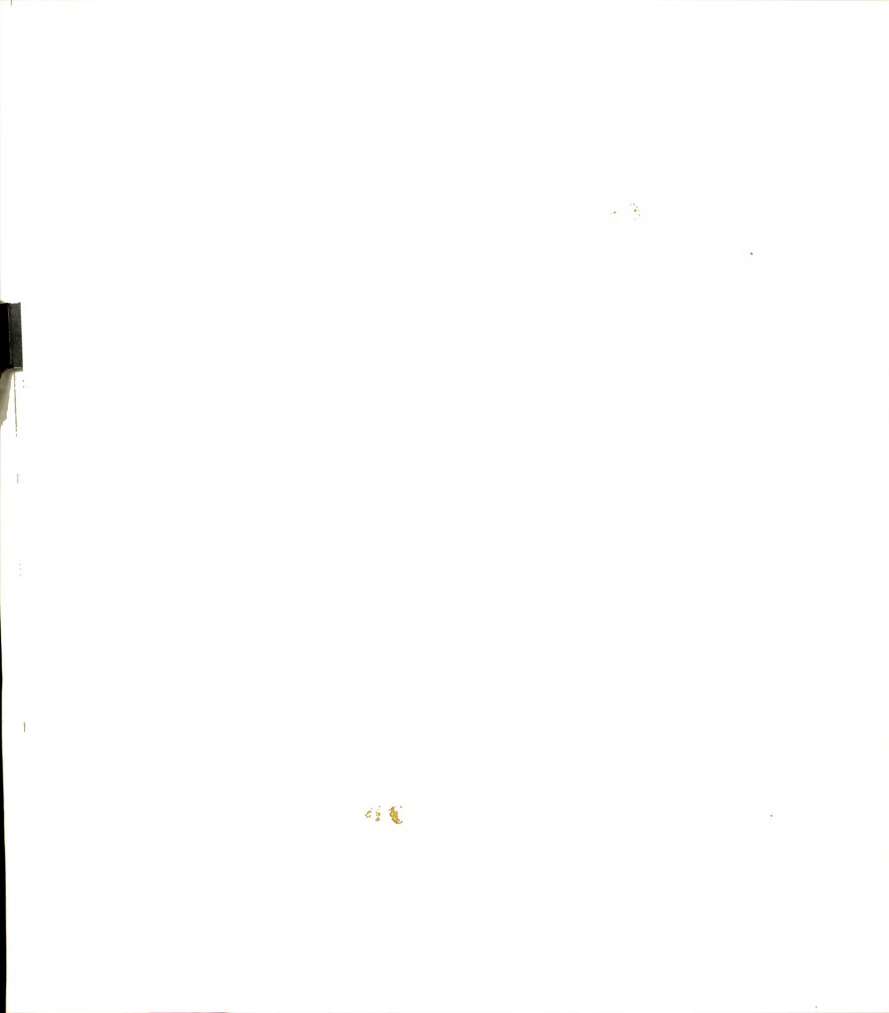
4. A Test of the Effect of the Growth and Dispersion of Determinants. While the absolute values of variables at a point in time can be realistically assumed to influence the ratio of price to earnings at that same point in time, it can also be argued that the investor considers the past performance of certain attributes. To test this hypothesis, statistics were generated for a number of variables by regressing the individual variables on time for the various institutions. Those

statistics of immediate concern are the means of the variables over time, the net regression coefficients of the variables for each study year, and the standard error of estimate of the value of the variables around the trend line.

The means of the variables are used in the same fashion as they were to generate the rate of growth in deposits, i.e., the net regression coefficients were divided by the means of the variables over time to produce the rate of growth of the variables. The net regression coefficients themselves are the yearly increments in the variable set forth in the same values as the variables. That is to say, if the original variable is in dollars per share, the net regression coefficient (b) is dollars per share for each sample year. Further, if the variable was in terms of percentages, as they are for the yield measurement, the net regression coefficient (b) is also expressed as a yearly per cent change for each of the study years.

The standard error of estimate (S) is a measure of the dispersion of the actual values around the regression line. This statistic can be interpreted in a fashion similar to that afforded the standard deviation around the mean. Its value is also expressed in the same terms as the original dependent variable.⁵

⁵For example, the regression of book value per share on time for a particular bank over the ten-year period produced a net regression coefficient (b) of \$1.47 (yearly increase in book value) and a standard error of estimate (S) of 91 cents. Therefore, in a normal bivariate population, 68.27 per cent of the observations would be contained within the area bounded by the regression line plus and minus one standard error of estimate (91 cents).



The test of whether variable growth and scatter effectively influenced the price/earnings ratio considered only the observations for the year 1964. It would have made no sense to apply variables containing information of subsequent years to price/earnings ratios of prior years. The argument tested took the following form:

the log to the base 10 of the price/earnings ratio (#41) is a function of --

the average yearly growth rate in bid market price (#76) - a test of whether a "growth stock" simply means one whose price has appreciated greatly for some reason

the average yearly growth rate in net operating earnings (#77)

the average yearly growth rate in dividends (#78)

the log to the base 10 of the net regression coefficient (b) of loans and discounts as a per cent of assets (#90)

the log of the standard error of estimate (S) of loans and discounts as a per cent of assets (#91)

the log of the net regression coefficient (b) of the ratio of market price to book value (#98)

the log of the standard error of estimate (S) of the ratio of market price to book value (#99)

the log of the standard error of estimate (S) of net operating earnings per share (#89).

In general, the variables listed above attempt to telescope the recent history of the corporation so as to test, both totally and individually, whether the pattern of the changes of these variables exert an influence on the price/earnings ratio at a subsequent point in time.

5. A Test of the Influence of Breadth of Market. An April, 1963, report from the House Committee On Banking and Currency supplied statistics for the vast majority of the sample banks.⁶ The four banks deleted from the following analysis are #108, #160, #301, and #302. These deletions result in a sample of 109 banks. The purpose of the analysis is to attempt to measure the influence of concentration of stock holdings on the level of the price/earnings ratios. Since the two variables employed are measures taken as of June 30, 1962, the dependent variables are those price/earnings ratios in existence at year-end 1962.

The argument in this instance takes the form that the log to the base 10 of the price/earnings ratio (#41) is a function of --

the log of the value the per cent of stock held by the top 20 stockholders (#54)

the log of the value the per cent of stock held by the largest stockholder (#55).

The concern of this argument is whether price/earnings ratios react favorably to wider dispersion of holdings. The assumption is that the more perfect the market, the less the element of control can wash the effects of the more usual value determinants.⁷

⁶U.S., Congress, House, Committee on Banking and Currency, Chain Banking - Stockholder and Loan Links of the 200 Largest Member Banks, 88th Cong., April 15, 1963.

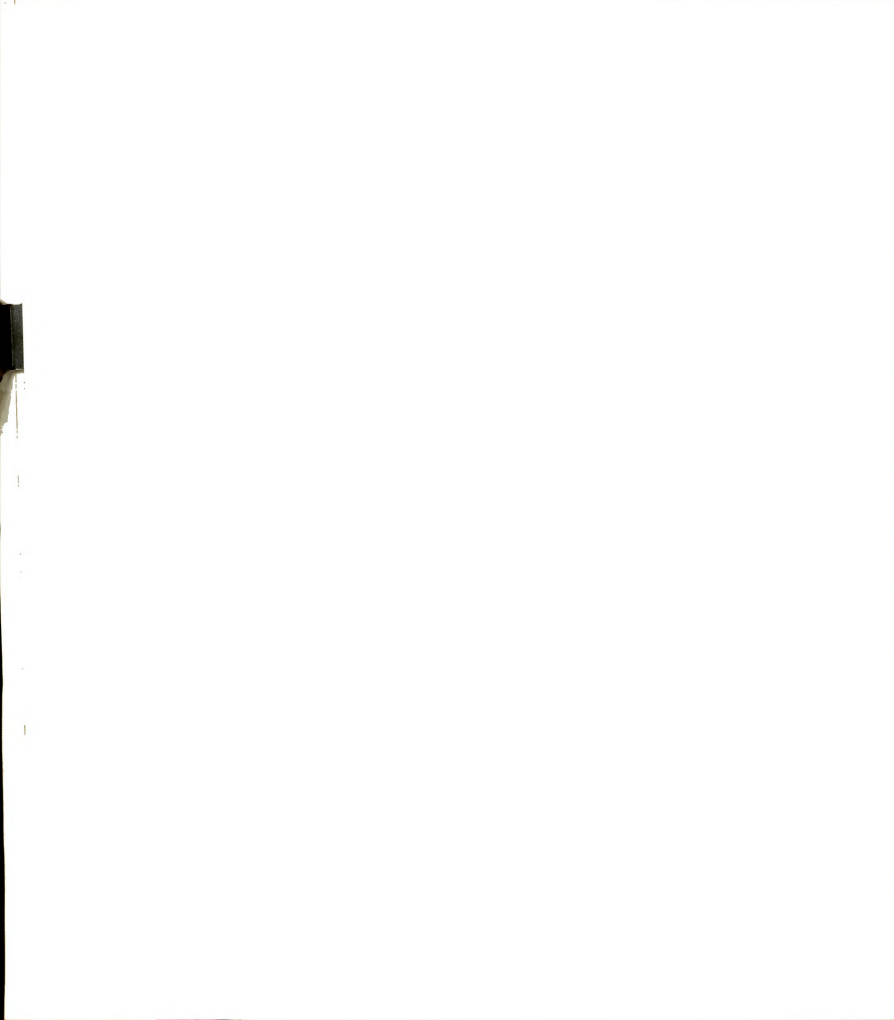
⁷Eugene M. Lerner and Donald P. Jacobs, "Why We Need a Better Market For Bank Stocks," Banking, (September, 1960), p. 77.

The Analysis

The Statistics Employed

The analysis of the arguments will proceed on a number of fronts. The intergroup variation within grouping schemes will be examined largely through the comparison of the means of selected variables. Tables 4-4 through 4-8 provide the means of the variables with banks grouped by deposit growth, as well as a coding of those means for 1964. Tables 4-10 through 4-12 provide the means of the variables with banks grouped according to the mean over time of loans and discounts as a per cent of assets, plus a coding of those means for 1964. Tables 4-14 through 4-16 provide the means of the variables with banks grouped according to the mean payout ratio over time. The coding of the group means for 1964 is also supplied.

The efficiency of the model taken as a whole will be determined by a comparison of the statistic R^2 adjusted for degrees of freedom. These comparisons will be made between groups within schemes and between schemes. The concern here is with the proportion of the variance of the dependent variable (log of P/E ratio) which has been explained by the multiple regression. The coefficients of multiple determination (R^2) for each group for each scheme are presented in Tables 4-18 through 4-28. These tables also contain certain other statistics to be used in the analysis. The simple correlation coefficients (r_{ij}) and the partial correlation coefficients ($r_{ij \cdot kl}$) will be used to determine which independent variables are most closely related to the dependent variable when the independent variables are taken either singularly or in the



model. The standardized net regression coefficients (B) are supplied so that the relative weights of the independent variables may be ascertained. Of additional interest are the statistics entitled R^2 Deletes which are also supplied in the tables.⁸ All of these statistics will be employed on a selective basis throughout the analysis.

The Differences in the Means

1. Deposit Growth. The banks which have experienced the fastest growth in deposit size (7.6% and above) are those whose per share attributes (price, earnings, dividends, and book value) are actually the smallest. In spite of the rapid rate of growth, their average deposit size was the second smallest as of year-end 1964. However, as of year-end 1960, this group of banks was the smallest. It seems, then, that during the five-year period under study, it was the smallest sample banks which were growing fastest. The positioning of the other growth-groups remained the same as it was at the beginning of the study period.

The low per share values of the fastest growing banks could be explained if these banks were in the habit of increasing the number of shares of their stock outstanding. Although we have no knowledge of stock sales, this group ranked lowest in the number of stock splits, while ranking second highest, below Group 3, in stock dividends. It also ranked fourth, below the slowest growth group in the average number of shares held per owner. Since, as we found earlier, there is no relationship at all between size and the per share attributes (Tables

⁸ The R^2 Deletes are defined as the coefficient of multiple determination (R^2) which would have been obtained had the independent variable not been included in the regression equation.



2-7-A through E), the low per share ranking is to be explained either through sales or stock dividends. It would seem that the stock dividends are the most reasonable, because the large average holdings would indicate that most owners had the funds to exercise the pre-emptive rights if the per share attributes were decreased through the recurrence of stock sales.

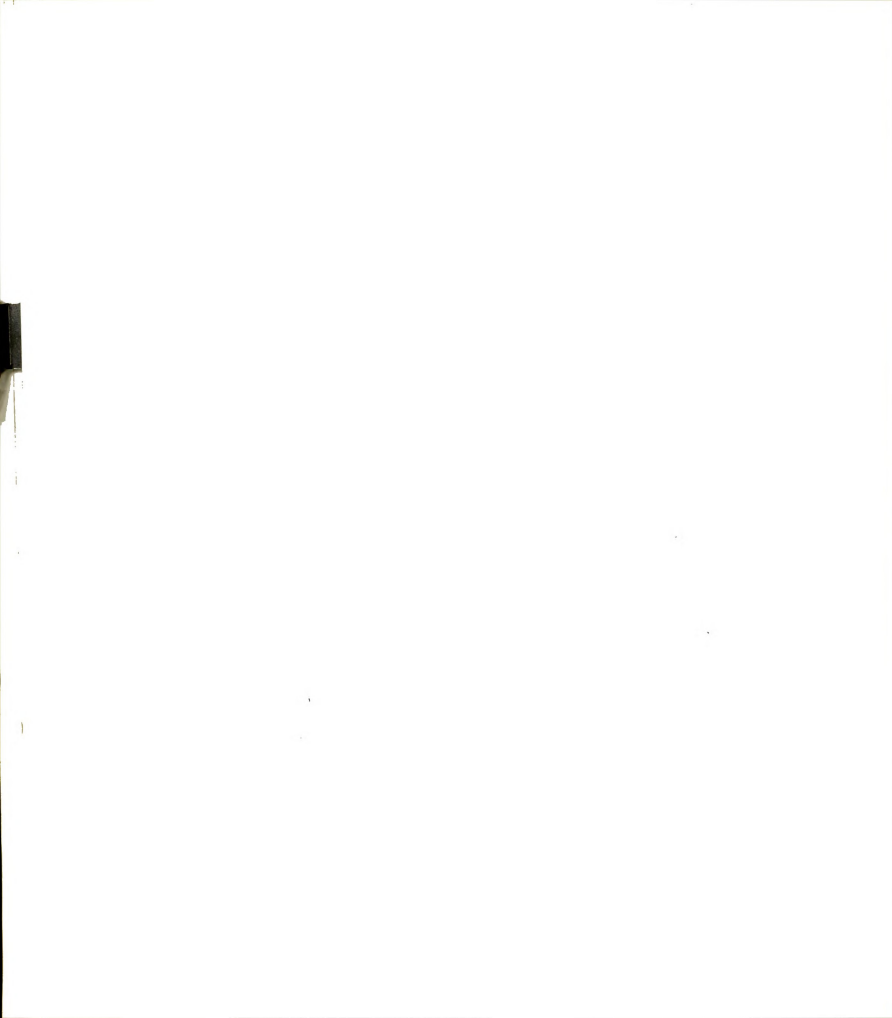
The cause of the rapid growth in deposits is as expected. Loans and discounts as a per cent of total assets is the highest of the five groups. Not only do these banks have relatively more loans, but these loans prove their worth in producing income. Income from loans as a per cent of gross operating earnings is highest for the fastest growing group. The income production is demonstrated again through the rate of return on capital which is highest among the groups. This efficiency may be a result of relatively less capital rather than extraordinary earnings as this group has the least capital in relation to risk assets, while achieving only the lowest rate of return on total assets.

In spite of the relatively poor efficiency of assets, however, the market seems to value growth. The mean price/earnings ratio occupies the penultimate position. The highest mean value for this ratio is achieved by the next lowest growth group which also had a higher rate of return on assets than did the highest growth group. This valuation occurred regardless of the fact that both the payout ratio and the yield are the lowest mean values among the groups. Of special significance is the fact that the fastest-growing group is the one which employs by far the largest amount of debt in the respective capital structure.

Generally speaking, the group of 24 banks which comprise the fastest-growing segment of the sample behaves in many ways as would be expected. They have been willing to perform the prime industry function, and were able to do so with such efficiency that the results appeared as high earnings relative to capital. As in other growth situations, the capital base is relatively thin, as it had been throughout the full study period. The thin capital base has been the cause of a payout ratio a full eight percentage points below that of the group with the highest payout. The group has been willing to use debt in an attempt to increase the capital base, and has employed stock dividends in an attempt to compensate the investors for the low cash dividends.

The prime area of questionable performance concerns the relatively low rate of return earned on total assets. In fact, it is the slowest growing groups which have earned the highest rates of return on assets, despite the fact that these groups had relatively less loans and discounts, the income from which was also relatively low. It would seem, then, that growth, while highly desirable from a management point of view, is a somewhat costly undertaking because it serves to reduce the efficiency of the total asset structure which may in turn reduce the relative prices at which stock is sold.

In order to determine whether the banks represented by the fastest growth group resided in specific areas of the country where personal income or population has been growing faster than the country as a whole, the banks were classified according to state of location. While it is true that New York and California accounted for nine of the 24 banks in the group, the remaining 15 banks did represent 11

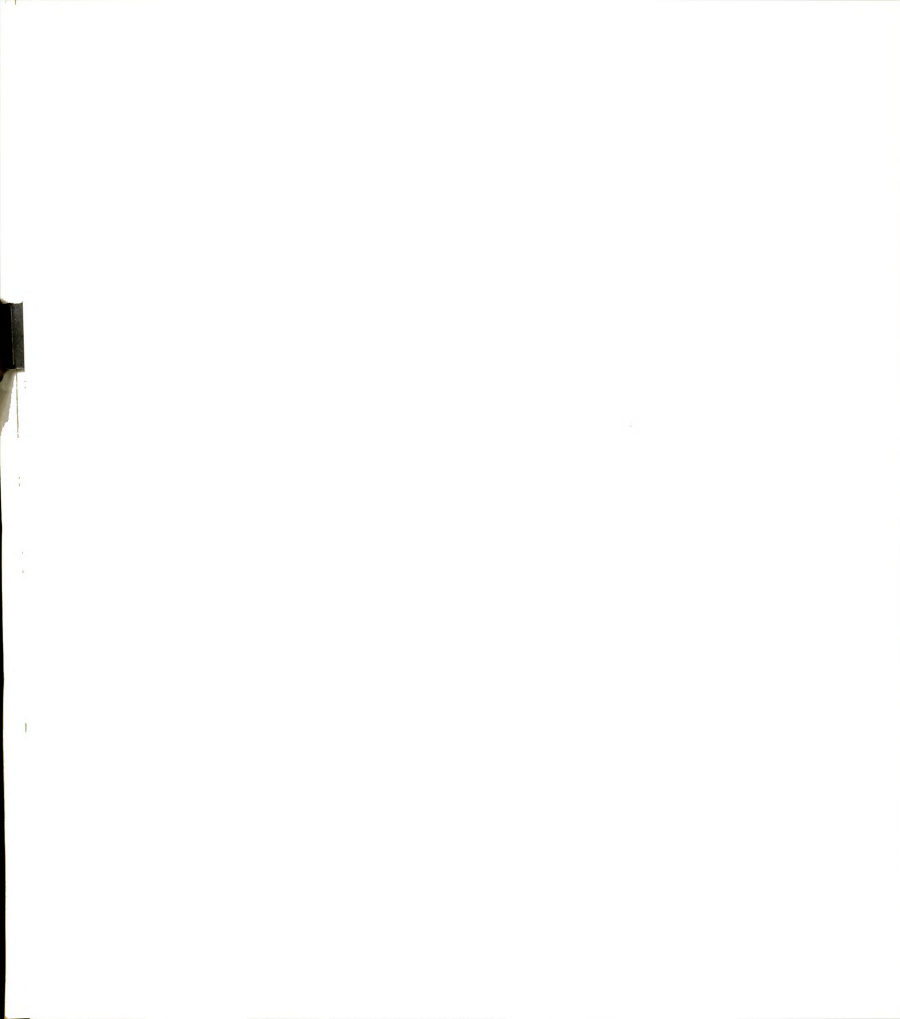


other states whose growth rates were sufficiently dispersed so that it seems logical to conclude that bank growth is a result of overt management action and not solely a result of the nature of the economic environment in which the bank operates. Table 4-35 provides the percentage changes in population, personal income and deposits for the states relevant to this study for the period 1950-1960.

2. Loans vs. Securities. Throughout this study the stand has been taken that the allocation of credit is one of the prime functions of the banking industry. The proper fulfillment of this duty should be rewarded initially by high productivity of inputs and subsequently by a generous appraisal of the relevant securities by the investing public. In this vein, then, the 31 banks comprising Group 3, possessing the highest mean value of loans and discount as a per cent of assets, will be analyzed and compared with the other groups in the scheme.

With the exception of the holding company group, the loaning group has the lowest per share attributes of price, earnings, and book value. However, the mean value dividends per share now ranks highest of the four groups. This becomes more understandable when we see that the payout ratio is also the highest. These banks have embraced the loaning function and have reaped the reward of obtaining the highest value of interest on loans as a per cent of gross operating earnings. Rather than plow-back the income, these banks have decided to immediately benefit their owners by paying out large percentages of their operating income.

But how efficient have these banks been in the utilization of their inputs? Unfortunately, in spite of the concentration of loans,



this group earned - as of 1964 - the lowest rates of return on both assets and capital. This performance might be accepted if the group had "too much" capital. This does not seem to be the case, however. Capital as a per cent of risk assets was second lowest for this group, only two-tenths of one per cent lower than the value of the holding company group. It seems that although the "high return" activities, the loaning activities, do account for a large proportion of the total gross operating earnings, these receipts do not flow into net income.

In an earlier chapter we saw that there existed only a slight positive but decreasing relationship between size and this measure of efficiency (loan/asset ratio). Of the 31 banks in this sample-group, fully 10 of them are included in the top 20 largest banks in the country as of the end of 1964. It might be possible to conclude, therefore, that although the larger banks are performing the banking function, other services are rendered on a less-than-cost basis. The net result is that the earning efficiency of the total institution is reduced both absolutely and relatively. The market is well aware of this lack of efficiency. The loaning banks suffer under both the lowest price/earnings ratio and the lowest ratio of price to book value.

Looking at the other side of the distribution, to the banks which by all counts could be considered investment institutions, we find them to be the smallest in size. In fact, the difference in the mean deposits between these two extreme groups is over one billion dollars. While operating under a higher ratio of capital to risk assets, these banks succeeded in earning rates of return on both capital and assets two steps higher than the loaning group. While paying the smallest



percentage of earnings in dividends, they achieved the largest ratios of price to earnings and price to book value. The investors valued these banks more highly despite the fact that fewer banks in this security group were eligible for investment by the Massachusetts savings bank than were those banks in the loaning group. It can be said that this grouping scheme did a creditable job of differentiating between the banks located in the tails of the distribution. This scheme also seemed to indicate that loaning banks are not necessarily "efficient" institutions, nor are they necessarily valued as such by the investing public.

3. Payout Benefit to Owners. Earlier in the study mention was made of the fact that some authorities contend that increased payouts will result in more generous relative pricing on the part of the "new" investor in bank stocks. The statement is also made that the larger disbursements will be facilitated through the use of capital notes or debentures. In this fashion, adequate capital ratios will be maintained without the heavy reliance on earnings retention. The capital maintenance will also be aided because the enlightened payout policy will enable new equity issues to command higher prices. The final grouping scheme enables us to test these hypotheses while the groups themselves are being analyzed.

The mean payout ratio over time of the 23 banks included in Group 3 of this scheme is 55 per cent or above. This can be compared with a total sample mean of 46.6 per cent, a sample median value of 47.2 per cent, and a mean value for the years 1960-1964 for all insured commercial banks of 45.6 per cent. In essence, then, this group includes banks which have been disbursing a perceptibly larger proportion of

earnings than has the average institution. The payout ratios of the high payout group can also be compared with those of Group 1, whose mean ratios all fall below 40 per cent for the respective 25 observations.

Looking first at the relative amount of capital available between the two, we find that both groups have relatively more capital than do either the middle group of 66 banks or the nine holding companies. The methods of achieving it are different, however. The high payout group has embraced the use of debt to the greatest degree, while the low payout group has only negligible amounts. Since the solvency variable relates capital to risk assets, it must be pointed out that both groups are relatively low when loans and discounts are related to total assets. This relation also holds when income from loans as a per cent of gross operating income is considered. Nevertheless, that both groups have been able to attract and hold capital is further borne out by the fact that the high payout group suffers under the lowest rate of return on capital, while the low payout group occupies the second lowest position. The gap between these two rates (10.09%-10.25%) is of such magnitude, however, that one is led to conclude that either the high payout policy has not hampered the obtaining of capital or the high payout banks are actually quite inefficient. This latter alternative is clearly not the case. A review of the rates of return earned on assets proves that at least by this measure the high payout banks are indeed efficient, earning the highest rate of return.

How does the market value this high degree of generosity? Both price-relatives, the price/earnings ratio and the ratio of price to book value, are highest for the high payout banks and, not considering

the holding companies, lowest for the low payout banks. The market does seem to welcome the larger payout, while either disregarding the poor rate of return on capital or else believing that the rate of return on assets is the more valid indicator of operating efficiency.

It is interesting to note that even as the payout ratio is high, so, too, is the value of dividends per share. It is the low payout group which now has the high per share values of price, earnings, and book value. The high payout and/or high dollar dividends have resulted in the highest incidence of investment by the Massachusetts savings banks. The investor interest is further abetted by the maintenance of high yields which exist in spite of the high ratios of price to earnings.

During the early part of the analysis, the intra-group differences have been analyzed through the use of the mean values of the variables. In general, the conclusion is reached that the extreme groups do possess significant differences within schemes. This conclusion will be tested further by attempting to determine whether the regression "weights" behave in a fashion compatible with the conclusions reached on the basis of the means.

Patterns Among the Betas

Considerable effort was expended in pattern definition among the standardized net regression coefficients (B's). The replication and extension of the Durand study, working with limited variables, defined a consistency of strength in the earnings variable for five of the six groups tested. The present series of group regressions does not allow such clear-cut consistency in the standardized weights within groups over time. The analysis of the weights for individual years



between groups within schemes also yields negligible results. Considering these statistics on an individual basis, few conclusions can be drawn. In the main, the weight of the individual variables not only displays relatively large changes in magnitude, but also experiences changes in signs within groups over time. While this is disquieting from the point of view that definitive answers are not forthcoming, it does underline the fact that the market for bank stock underwent a very rapid advance in the early 1960's, and was followed by a precipitous decline in 1962. Since that time, a slight recovery took place, which was then followed by a pronounced weakness continuing to the present. Value determinants such as rates of return or capital ratios can have easily fluctuated in importance in the mind of the investor over the period under study. However, these fluctuations within groups over time may have important implications which will be considered later.

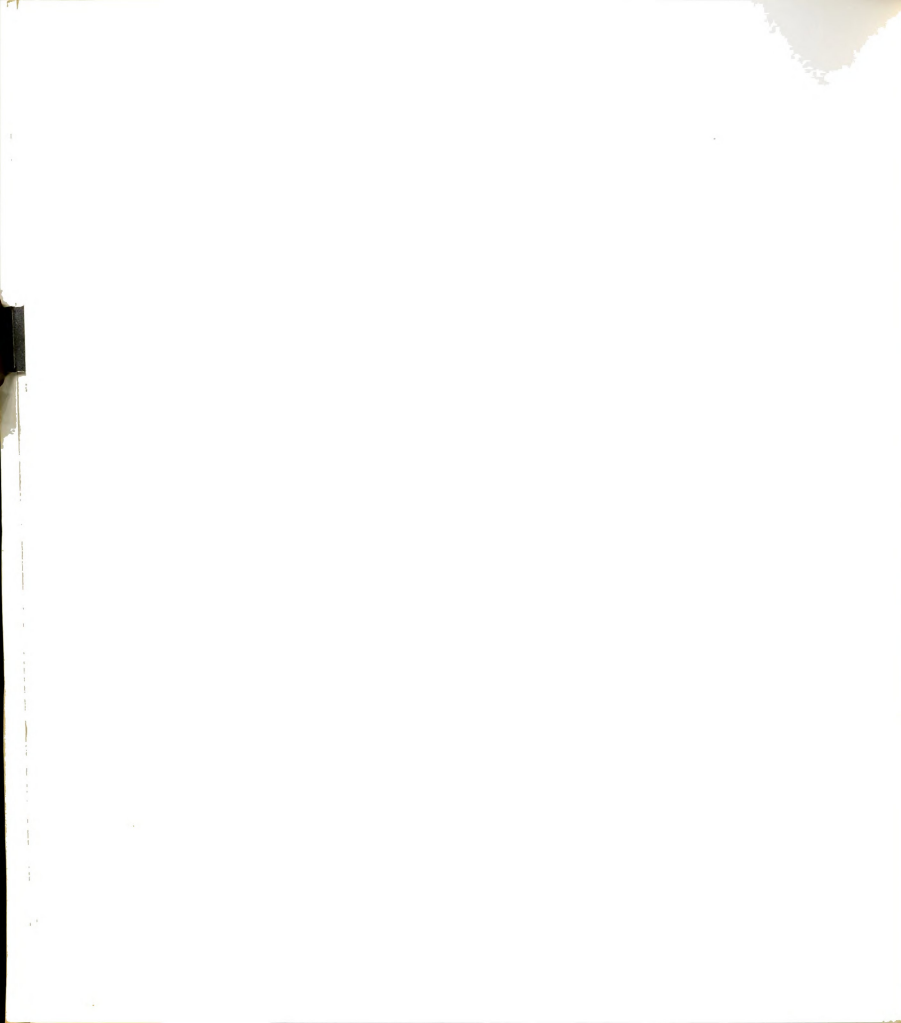
1. Means of the Betas. Recognizing the dangers inherent in such action, an attempt was made to consolidate the Beta values into averages which might have a degree of explanatory power. Table 4-29 provides the means of the Beta weights for each group within schemes over time. From this table it can be seen that there are only three variables --

(39) log of dollar deposits

(47) log of the payout ratio

(49) log of the average number of shares per owner --

which display a consistent positive value over all groups over all schemes.



a. Size

Looking at deposits (39), among the growth groups, a declining trend is in evidence. A tentative conclusion could take the form that absolute size is of more importance in explaining the price/earnings ratios of the slow-growth banks than it is for the fast-growth groups. The same kind of rationale can be posited for the existence of the relatively high weight given by the "investment" banks, while the "loaning" banks attached far less weight to size. As for the banks grouped according to the mean payout ratio, size is undeniably of importance in the regression. What is not clear is why it seems to carry less weight for the "average" payout banks than it does for either extreme group, especially that of the high payout group. Whatever the reason may be for the last phenomenon, it is probably safe to conclude that size as measured by the log of dollar deposits is of importance in this argument in explaining the activity of the ratio of price to earnings.

b. Ownership

Another factor bearing considerable explanatory value is the log of the average holdings of the individual stockholder (49). Correlations discussed earlier over all the banks between price/earnings ratios and average holdings displayed a consistent positive relation. This finding is sustained in the correlations within groups which will be discussed shortly. We had hoped that the average holdings would have explanatory value, but in something of an inverse direction. The original thesis was: the more dispersed the stock, the more perfect the market, the less control would be a pervasive force in the establishment of price and its relatives. That average holdings occupies

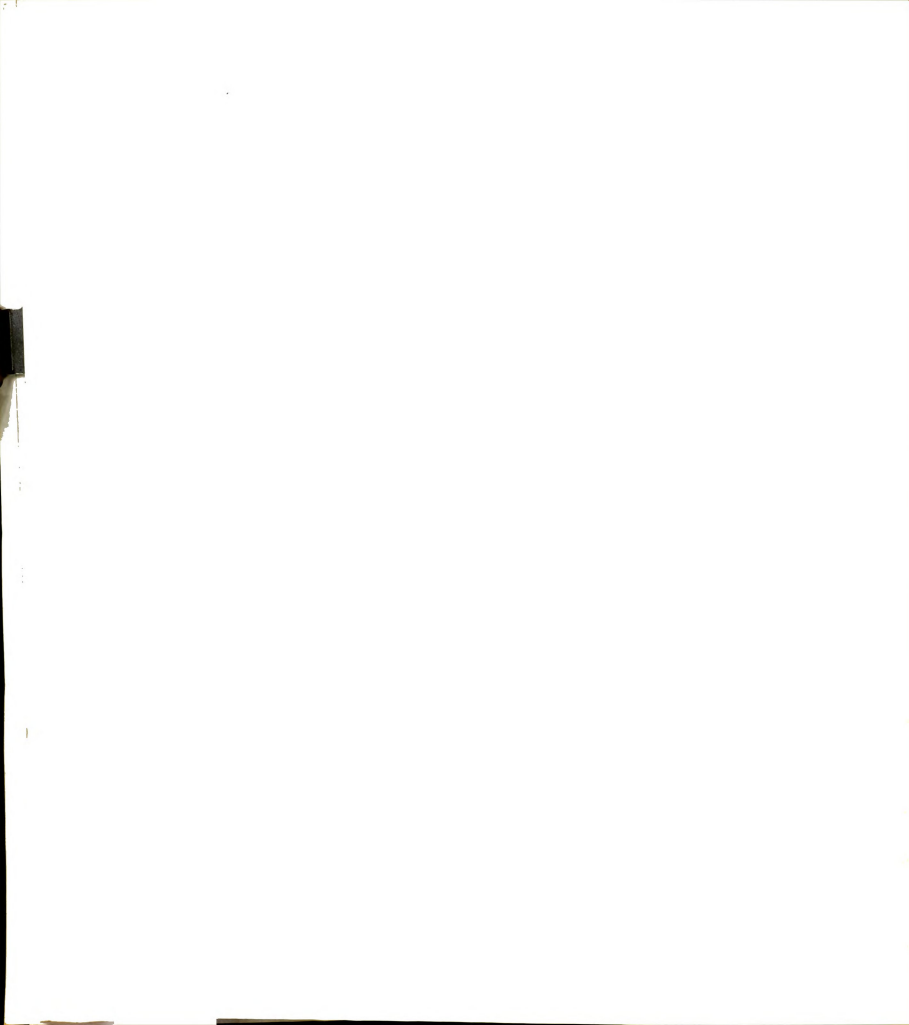
an important place in the regression there is no doubt. The two groups which seem to consider this variable of least importance, on the average, are the highest growth group and the group with the lowest payout. This is especially interesting inasmuch as the low payout group has the highest average holdings, while the high growth group has the second highest value. In general, the importance of the average holdings increased as the payout increased and decreased as the growth rate decreased.

c. Payout

The third determinant which expressed an average consistently positive Beta value was the log of the payout ratio. As expected, the importance of this factor in the regression increased as the mean payout ratio over time increased. That is, for the low payout group, the price/earnings ratio is largely determined by other factors in the equation. On the other hand, the high payout group enjoys high price/earnings ratios largely because of the high payout and despite the low rate of return on capital.

In contrast to the changes within the payout groups, the importance of the payout ratio largely decreases as we move from the "investing" group to the "loaning" group. It would seem that the level of payout contributes less to the explanation of the ratio of price to earnings for those banks where loans and discounts are a high percentage of assets than it does in instances where securities are the major component of the assets.

The mean value of the payout weights over the growth groups behaves in the expected fashion for the three highest growth groups,



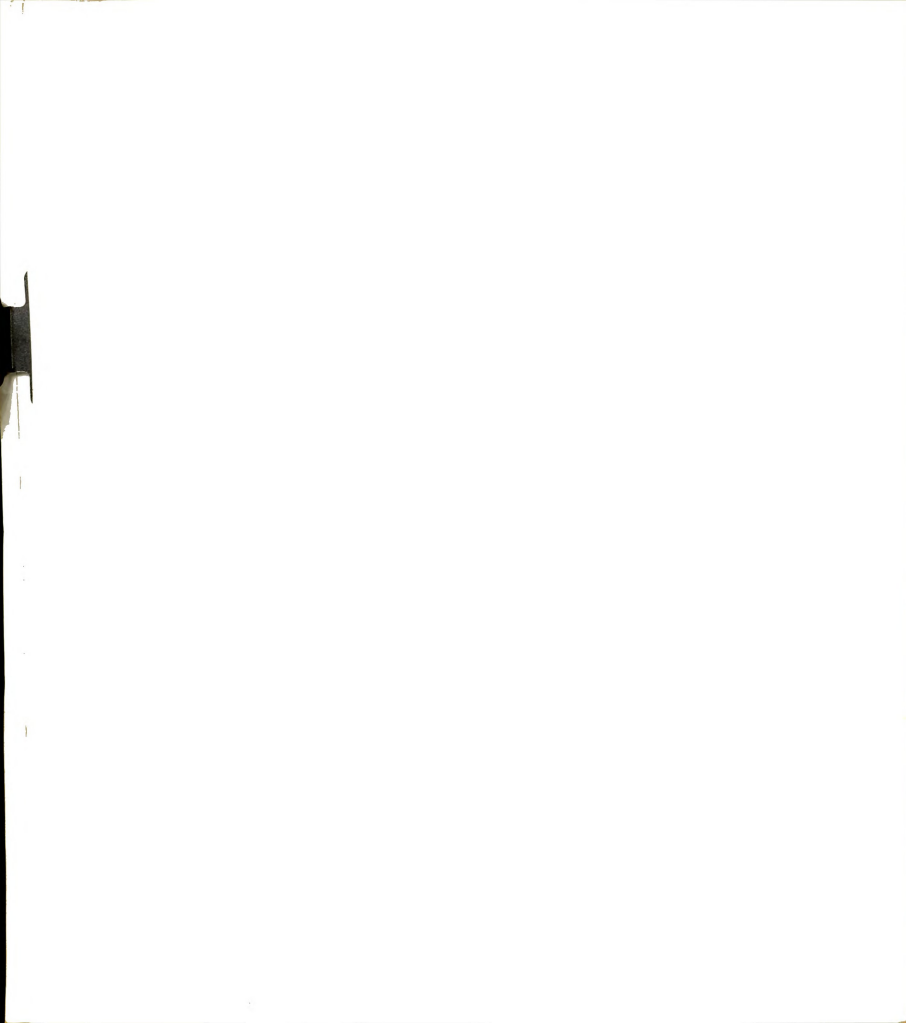
i.e., its importance decreases as growth increases. However, the value of this weight for the lowest growth group behaves in a perverse manner. Its value is actually smallest (.12) over all the groups with the exception of the low payout group. This occurrence is in direct conflict with the thesis that non-growth firms should disburse large portions of their earnings rather than allowing them to be reinvested.⁹ At present, no explanation is forthcoming for the unimportance of this variable in this instance.

d. Stock Dividends

Another variable which displays a positive influence in eight of the ten scheme-groups is the existence of a stock dividend (21). The two groups where sizeable negative beta weights are encountered are the lowest and highest growth groups respectively. While it is understandable that stock dividends might possess a negative influence for a low growth bank, it is not at all clear why this is the case for a high growth institution. This is also an area in need of further study.

A further point can be made utilizing the stock dividend variable. Because of the pattern of bank stock prices during the study period, the importance of variable influence may change from one year to the next. An example of these changes occurs for stock dividends within the large payout group. For three of the five study-years, stock dividends displayed little influence or association (in the .20's). However, in 1961, the year of large price appreciation, stock dividends became

⁹As implied from: David Durand, "Growth Stocks and the Petersburg Paradox," Elements of Investments, ed. Hsiu-Kwang Wu and Alan J. Zakon (New York: Holt, Rinehart and Winston, Inc., 1965), pp. 179-193.



much more valuable, rising into the .60's. On the other hand, in 1964, following three years of poor market performance, the value of stock dividends was a negative figure for the high payout banks. In that year, this variable contributed nothing to the coefficient of multiple determination (R^2).

Conclusions based on an interpretation of the average standardized weights of the other variables would be tenuous at best. The erratic and oftentimes sluggish quality of bank stock prices during the study period negate the premise that in the investor's mind the value determinants evidenced a consistency which would allow no variance in the influence exerted upon the regression equation. Rather, the need at this time is to attempt to determine which, if any, of the grouping schemes are best able to describe the posture of the price/earnings ratios, given the present form of the explanatory equation.

The Efficiency of the Schemes

As indicated previously, the purpose of this section is to attempt to explain the levels of the price/earnings ratios by using the specified equation applied to various schemes. What is of interest, then, is how "good" a job has the equation done, and is one scheme superior to the other two?

The procedure used to answer these questions presents certain difficulties. First, the sample was in no fashion a random sample. Second, intercorrelation exists between the variables which is difficult to measure and exerts either a positive or negative influence upon the explanation. Third, and of grave import, the groups are not of the same size or number within schemes. Nevertheless, recognizing these



statistical pitfalls, answers will be attempted.

It is recognized that the more efficient a particular regression is, the smaller will be the unexplained variance. Therefore, what is of interest is the proportion of the sum of the squared deviations from the mean of the dependent variable accounted for by the independent variables. This proportion is, of course, the coefficient of multiple determination, the R^2 . However, since the computations were burdened by groups of varying size, the coefficients must be adjusted for the degrees of freedom lost in applying the variables. Therefore, we shall take as our criterion of regression efficiency the coefficients of multiple determination (R^2) adjusted for degrees of freedom. Both the coefficients of correlation (R) and the coefficients of multiple determination (R^2), adjusted and unadjusted, are supplied in Tables 4-18 through 4-28 in the Appendix. The means of the group and scheme values over time of the R^2 s are presented below in Table 4-30.

TABLE 4-30

Means of R^2 Over Time for Groups
and Schemes (adjusted)

<u>Mean of</u> <u>Means</u>	<u>Group 1</u>	<u>Group 2</u> <u>Deposit Growth Schemes</u>	<u>Group 3</u>	<u>Group 4</u>
.547 (.240)	.434 (.022)	.586 (.432)	.564 (.331)	.603 (.336)
		<u>Mean of Loans/Assets Scheme</u>		
.461 (.235)	.553 (.273)	.314 (.158)	.516 (.274)	
		<u>Mean of Payout Scheme</u>		
.515 (.266)	.514 (.140)	.334 (.213)	.697 (.444)	

Table 4-30 provides a confirmation of a suspicion which may have existed concerning the overall explanatory value of the regression equation. Generally speaking, over all group-schemes, the application of the equation leaves unexplained a goodly amount of scatter of the price/earnings ratios. In fact, the adjusted coefficients of determination was actually a negative figure in five group years. Specifically, two of three explanatory failings pertain to the group of lowest growth banks, while two others occur in the lowest payout group. In both of these groups the mean value of the price/earnings ratio was lowest over all the bank groups. In addition, for both of these groups, the mean values of the average stock holdings was the highest. Also, the Beta weights for the log of the average holdings (49) exerted relatively heavy influence. These considerations can easily lead to the conclusion that the relative prices of the stocks of these banks are determined by factors like control, which cannot be classified according to the value criteria used in formulating the variables included in the model.

In a moderate measure, the negative values of R^2 in the low growth and low payout groups serve to reduce the values of the means of the coefficients within these schemes. If the model explained the scatter of the price/earnings ratios as well for these groups as it did for the other groups within schemes, the averages of the adjusted coefficients would have been increased to .366 for the growth scheme and to .324 for the payout scheme. Even under this assumption, the result is a most mediocre performance. Without this recalculation, the adjusted R^2 values stand at .240 and .266 respectively. The loaning



scheme produces an even lower value, that of .235. Based on this analysis, the explanatory model performed best when applied to the banks grouped according to their mean payout ratios over the study period. Within that scheme, the model was most efficient when applied to the high payout banks. In fact, with the exception of 1962, which was a year of drastic fall in bank stock prices, the model explained on the average better than 50 per cent of the variation in the price/earnings ratios. It may be, then, that given a more rational market period, the present model consisting of value determinants does have the potential of explaining a larger proportion of the squared deviations of the price/earnings ratios.

Influence of the Variables

The relative influence of the variables in terms of Beta weights has been previously discussed. It was found that such determination was elusive and often insignificant. An additional analysis of influence can be carried out in terms of the statistics termed R^2 Deletes, presented in Tables 4-18 through 4-28. These values represent the proportion of scatter of the price/earnings ratio explained by the model if a particular variable were not included in the regression. The R^2 Deletes are highly affected by the amount of the standard errors of estimate of the relevant net regression coefficients. Therefore, a Beta weight with a large value may still only contribute a small amount to the coefficient of multiple determination (R^2). An attempt at summarizing the R^2 Deletes for 1964 is presented in Table 4-31 in the Appendix. Each variable has been coded from 1-10 according to its contribution to the total coefficient of multiple determination. The



smaller the code number, the larger the contribution.

As with the Beta weights, there is little consistency displayed by the R^2 Deletes, both within schemes and between schemes. Although these statistics are not summarized, the R^2 Deletes also demonstrate sizeable inconsistencies within groups over years. With the one notable exception of the average holdings, no one variable explains what could be termed a "large" degree of the variation in the dependent variable. The actual amount of explanatory power is not indicated in Table 4-31. For that reason, this Table's interpretation must be circumscribed. An example of actual performance can be had by studying Table 4-27 which presents the R^2 Deletes for the average payout group. The regression on the 1964 data results in an R^2 Delete for Variable #49 (log of average holdings) of .122 against an unadjusted R^2 of .274. Therefore, Variable #49 contributes .152 to the total R^2 of .274. In other words, it contributes more than all the other variables combined. The log of the payout ratio itself (#47) ranks second in contributory power. Yet this variable only contributes .035 to the explanation of the full model. Many of the other group years evidence similar relationships in the power of the variables.

There is additional value to be obtained from Table 4-31, however, for it puts in juxtaposition each variable in the model for an individual group year. For instance, the payout ratio (#47) is again demonstrated to have little or no value in explaining price/earnings ratios of high growth banks. Unfortunately, it also leaves the question unanswered as to why it has so little value for the low growth group. In accord with previous conclusions, the rate of return on



capital (42) proved to be of paramount value for the high growth banks which also had the highest mean value of this determinant. While possessing the lowest mean capital/risk asset ratio (40), this group also received negligible value from this variable's operation within the regression. Similar comparisons can be made between the tentative conclusions drawn earlier on the basis of the means or the Beta weights and those possible from an analysis of the R^2 Deletes. In general, these statistics serve to add credence to the earlier statements.

Relation Between the Dependent and Independent Variables

Throughout the major part of the analysis to this point, the concern has been with the amount of the variation in the dependent variable explained by the independent variables operating within the structure of the model. The current investigation will center on the degree and direction of the relationship between the individual independent variables and the price/earnings ratio. Two sets of statistics are presented in Tables 4-18 through 4-28, which describe these associations. The first are the simple correlations (r_{ij}), which impose no restrictions on anything else which may also have an association with the dependent variable. The second set consists of the partial correlation coefficients ($r_{ij.kl - n}$), which measure the direct relationship between the dependent variable and each independent variable, while removing the possible indirect effects of all the other independent variables. There exist two areas of interest here. One is the relative amount of association demonstrated between the price/earnings ratios and the several determinants. The other is the changes which occur in the associations when the indirect effects of the other



determinants are removed. As with other statistics analyzed, the correlations display inconsistencies both within groups over time and between groups within schemes. An attempt has been made to present the average relations and the changes in the average relations within groups and between schemes. Table 4-32 presents the mean values of the simple correlations (r_{ij}) and the mean values of the partial correlations ($r_{ij \cdot k1 - n}$).

As would be expected from prior analysis, none of the variables appears to be strongly correlated with the ratio of price to earnings. A large number of the variables display insignificant associations on the average. Possible exceptions to these generalizations would be the factors of deposit size (39), the payout ratio (47), the size of the average stock holdings (49), and the payment of stock dividends (21). Of particular concern is the fact that both the rate of return measurements (42) and (43) and the primary function measurements (37) and (44) demonstrate such trifling relationships. What correlations do exist are generally in accord with the conclusions reached previously during the discussions of the influence of the variables upon the regression.

Inasmuch as the payout scheme seemed to be the more efficient based on prior analysis of the adjusted coefficients of determination (R^2), the means of the group means of the variables have been computed. These values also are supplied in Table 4-32. These statistics are of value in determining the changes in the correlations which occur when the indirect effects of the other variables are removed. The changes in certain variables will be discussed at this time.



For banks grouped according to the mean payout ratio over time, the simple relation between price/earnings ratios (41) and loans and discounts as a per cent of assets (37) is slightly negative. When the indirect effects of the other variables are removed, the relation becomes even more negative. The reaction is reverse when deposit size (39) is related to the price/earnings ratios. In this case, the average correlation jumps from .20 to .28, with the high payout group increasing from .01 to .34, upon elimination of the indirect effects. The low payout group, on the other hand, displayed consistency in the size to price-relative association. In this case, the change from the simple to the partial correlations was only from .34 to .37. As concluded earlier, size was a relevant factor for this group. It would seem, then, that at least for the high payout group, the interaction of the other variables served to reduce a pronounced correlation between the dependent variable and the measure of size.

The fact that the partial correlation is greater than the simple correlation, which was witnessed in the case of the size variable, is also encountered for the payout ratio (47), the average stock holdings (49), and the existence of stock dividends (21). The average partial correlations for these variables are .25, .43, and .27, respectively. The remaining variables, capital as a per cent of risk assets (40), rate of return on capital (42), eligibility for Massachusetts savings bank investment (26), rate of return on assets (43), and interest on loans as a per cent of gross operating earnings (44) display little or no average association, either positive or negative, with the price/earnings ratios.



The Influence of Control

An attempt to measure the influence of stock control on the price/earnings ratio resulted in an additional regression. In this case, control was measured by two variables which were interrelated. The variables were the per cent of common stock held by the top 20 stockholders (24) as of June 30, 1962, and the per cent of stock held by the largest stockholder (25) as of the same date. The log to the base 10 of these measures are numbered 54 and 55 respectively. The regression was run in both forms to test whether the log transformations actually were more explanatory. The regression was run separately because these values were not available for four of the sample banks. Also, additional variables added to the original model would have untowardly reduced the degrees of freedom for the smaller size groups within the schemes. Although stock ownership in banks is probably not as volatile as in industrials, it was believed that the ownership pattern would exert its greatest influence upon the price/earnings levels taken at the subsequent date nearest to the date of the control indicators. For this reason, only the year-end 1962 price/earnings ratios were regressed on these measurements.

Generally speaking, the regression did little to explain the variation in the price/earnings ratios. The results of the two regressions are supplied below in Table 4-33.

While neither regression performed at all well, the transformed expression did explain a bit more of the scatter than did the raw statement; i.e., $R^2 = .013$ as compared to $R^2 = .006$. However, the loss of even the two degrees of freedom reduced the percentage of the variation



TABLE 4-33

Statistics for Control Variables

<u>Variable</u>	<u>b</u>	<u>Beta</u>	<u>r</u>	<u>Partials</u>	<u>R² Del</u>
<u>Transformed</u>	X(41) = F(X(54),X(55))				
54	-.08	-.19	-.09	-.11	.002
55	.03	.12	-.04	.07	.009
	R ² = .013		R ² d.f. = -.006		
<u>Raw</u>	X(11) = F(X(24),X(25))				
24	-.03	-.12	-.04	-.07	.001
25	.04	.13	.03	.08	.000
	R ² = .006		R ² d.f. = -.013		

explained to negative figures in both cases. Because of the intercorrelation between the two independent variables, the partial correlations are greater in all cases than are the simple correlations. In fact, since the simple correlation between the two percentages of ownership are .80 or greater, the per cent held by the largest stockholder might conceivably be dropped from the regression with little reduction in the overall results. The performance of this additional calculation would in no way change the conclusion that the determinants as presently conceived and applied are completely ineffectual as explainers of price/earnings ratios.

Influence of Growth and Stability

The explanatory hypotheses used in the preceding analyses were largely couched in terms of static or at least period determinants. Obvious examples are that the size of the bank was measured at the same point in time as the price/earnings ratio was computed, and the rate of return earned on capital consisted of the earnings for the



calendar year divided by the sum of the capital accounts in existence at the same date that the price/earnings ratio was computed. While this is the usual procedure giving rise to perfectly valid measuring devices, it was also deemed advisable to measure the effect of the past upon a subsequent price-relative. The major question being asked is, how much of the variation in the price/earnings ratios of the sample of 113 banks as of year-end 1964 is explained by the following determinants taken as a group?

- rate of growth in price per share (76)
- rate of growth in net operating earnings per share (77)
- rate of growth in dividends per share (78)
- log of standard error (S) of earnings on time (87)
- log of standard error (S) of dividends on time (89)
- log of net regression coefficient (b) of L+D/A on time (90)
- log of standard error (S) of L+D/A on time (91)
- log of net regression coefficient (b) of price/book on time (98)
- log of standard error (S) of price/book on time (99)

The rationale behind the inclusion of the variables can take the following form. Price growth has on occasion fed upon itself. A "growth stock" can simply mean one whose price is increasing faster than some indicator of price or economic growth. Variable #76 was included to test the influence and the association between the rate of growth in price and the levels of the price/earnings ratios. It can be hypothesized that institutions enjoying high rates of growth in earnings and/or high levels of stability of those earnings around the trend line

would benefit by achieving relatively high price/earnings ratios. Variables #77 and #87 were included to test this hypothesis. The same reasoning is responsible for the inclusion of Variables #78 and #89, which measure the growth and stability of dividends.

A continuation of the assumption that credit allocation is the primary function of banking accounts for the placement of Variables #90 and #91 in the regression. The latter is a test of consistent loaning reputation, while the former tests the increase in commitment to that function. Variables #98 and #99 were included to test the proposition, embraced by earlier writers, that the ratio of price to book value was a proxy for stock value. If this is the case, the absolute average growth and stability of this ratio should have implications as far as the more realistic proxy for value is concerned. It is most interesting to note that as of this writing, March, 1966, a number of banks, both within the sample and out, are selling once again below book value.¹⁰ Table 4-34 supplies the results of the regression.

Again, the conclusion must be reached that the argument tested does not do a creditable job of explaining a significant amount of the variation occurring in the price/earnings ratios. The application of the regression reduced the scatter in the dependent variable from .084 to a standard error of estimate (S) of .064. Hardly a noteworthy reduction. The unadjusted percentage of variation explained was only .467 (R^2). Actually, more than 50 per cent of the group years of the earlier 3-scheme arguments had R^2 larger than this figure. The adjusted

¹⁰David C. Cates, Bank Stock Weekly, (New York: Solomon Brothers & Hutzler, March 4, 1966).



TABLE 4-34

Statistics for Growth and Stability

<u>Variable</u>	<u>Beta</u>	<u>S of Beta</u>	<u>r</u>	<u>Partial r</u>	<u>R² Deletes</u>
76	.55	.16	.38	.32	.408
77	-.41	.12	.13	-.31	.409
78	-.23	.11	.18	-.20	.446
87	-.08	.08	-.18	-.09	.463
89	.07	.08	-.06	.09	.463
90	-.07	.08	-.07	-.09	.463
91	.05	.08	.04	.07	.465
98	.27	.12	.44	.22	.441
99	.50	.08	.43	.53	.264

$$R^2 = .467 \quad R^2 \text{ d.f.} = .421 \quad S = .064$$

<u>Variables</u>	<u>Means</u>	<u>St. Deviations</u>
41	1.21	.084
76	10.74	4.57
77	6.52	3.17
78	7.10	3.44

proportion explained (R^2 d.f.) of .421 was exceeded in 14 of the 50 earlier regressions. This record occurred in spite of their much smaller size, which served to reduce the degrees of freedom available.

Table 4-34 presents data sufficient to allow at least tentative judgments as to why the model performed so poorly. Variables #87, #89, #90, and #91 contributed almost nothing to the explanation. In addition, the standard errors of these Beta coefficients are as large or larger than the weights themselves. We can conclude, therefore, that these indicators of earning and dividend stability exert no influence on the levels of the price/earnings ratios. The conclusion must also be reached that the measures of growth and stability of loans and discounts as a per cent of assets have no effect on that price-relative. Of the four partial correlations, only one seems to have the expected



sign. It seems that higher price/earnings ratios are slightly associated with lower amounts of scatter (S) in net operating earnings. On the other hand, higher price/earnings ratios seem to be compatible with more scatter in dividends and in the loaning function. These conclusions are certainly not in accord with accepted stock valuation theory.

In an earlier chapter, a statement was made to the effect that there existed a strongly positive, increasing association between price/earnings ratios and price/book value ratios for the total sample of banks. Our analysis now shows that the qualities of slope (98) and scatter (99) of the pattern of that ratio over time have implications for the price/earnings ratio at a subsequent point in time. As expected, the larger the growth (slope) of P/B, the larger would be the subsequent ratio of price to earnings. What is not understood, however, is why a bank whose price/book value ratios have displayed great instability should be rewarded subsequently with a high price/earnings ratio. If this is true, then, the more volatile stock has been in relation to liquidation value, the higher premium the market is willing to pay in relation to earnings. This tentative conclusion injects an aura of speculation into a market which many assume to be largely governed by investment criteria. It is, in fact, the standard error of estimate (S) of the price/book value ratio (99), when this variable is regressed on time, that explains the largest amount of R^2 obtained by the present argument. This determinant also demonstrates the strongest association with our chosen price-relative.

Three other variables display a degree of influence in the explanatory model. Price (76) has grown at an average rate of 10.74



per cent, earnings (77) at 6.52 per cent, and dividends (78) at a slightly greater 7.10 per cent per year. The relation between these rates of growth is of value in understanding the signs of the statistics in Table 4-34. Since both the Beta weights (derived from the net regression coefficients (b)) and the partial correlation coefficients are net in the sense that the respective values of the other variables are held constant at their means, both earnings and dividends have negative signs because price had increased at a faster rate than did the other two. As dividends increased faster than did earnings, its negative values are smaller than are those of earnings. The Beta and partial values of price are large, and of course positive. Fortunately, the gross associations (r) between the rates of growth and the price/earnings ratios are positive.

As alluded to in Chapter 2, however, the simple correlations between price/earnings ratios and the absolute, temporal values of these determinants did not assume the same posture. The correlations between price and price/earnings were consistently, insignificantly positive. On the other hand, price/earnings ratios were generally rather significantly (-.25) negatively correlated with both earnings and dividends per share. The fact that stocks achieving high earnings and/or paying high dollar dividends are somewhat associated with relative low price/earnings ratios probably finds its solution in concept of scale. That is, an expensive stock may easily be viewed as being worth relatively less than a stock selling in the more usual price range. The fact that in the present case price/earnings ratios are a positive function of the growth variables is obvious from the means of



these variables. As long as the average rate of growth in price is greater than the average rate of growth in earnings, allowing both to vary as simple correlation does, as you move along the growth scale the ratio of price to earnings must also rise. The two sets of simple correlations are compatible.

Turning to the partial correlations, the signs change for the growth rates of earnings and dividends. There seems to be some theoretical basis for the negative earnings coefficient, but the negative dividends value is puzzling. If the rate of growth in earnings is allowed to change while the rates of growth of price and dividends are held constant at their means, the result must be a decrease in the price/earnings ratio. However, if we hold constant the rates of growth in price and earnings, etc., while allowing the rate of growth of dividends to vary, as dividends grow the price/earnings ratio decreases according to the present statistics. Yet, if while the rate of growth in earnings is held constant the rate of growth in dividends is increased, the payout ratio must increase. We would expect, that over some relevant range...say, to 70 per cent...the price/earnings ratio would actually benefit rather than fall. The only way in which a decrease can be explained is that by holding the rates of growth of price and earnings constant at their mean values, the price/earnings ratio, stated in absolute values, must fall because mean price growth is greater than mean earnings growth. Here is one case where the simple correlations seem to contain fuller and more accurate information than do the partial correlations.

The signs and levels of the various statistics representing the growth rates in price are as expected. The reason why this variable

has as high an R^2 Delete as .408 is found in the standard error of the Beta (S) of .16. Sufficient scatter exists in this standardized regression coefficient to substantially limit its explanatory capability.

Summary

The major purpose of this chapter was to attempt an explanation of the variation in the price/earnings ratios of our sample banks. In large measure, the attempt was met with failure. Yet, there exist certain by-products of this failure which have implications for a deeper understanding of investor attitudes in the market for bank stocks.

Although many of the chosen variables seemed to possess no explanatory value, even some of these may have performed well for a given group of banks over a period of a few years. And, even the "best" of the variables did not exert influence or association for each group-year. It was Walt Whitman who said, "Consistency is the hobgoblin of little minds." In retrospect, perhaps it is a mistake to expect a consistency of price determinants. Is it not more logical to expect to find the variables changing in importance to the investor from one year to the next as price appreciation makes the public giddy with success and, therefore, willing to cut the ties binding price to value? If this is true, a prolonged period of sluggish market action may cause these same investors to cast their eyes downward, only seeing liquidation value as their bridge to worth.

In addition to the changing influence of the variables over time, is it not logical to expect that the variables would have different levels of importance conditioned by the nature of the groups being



analyzed? A good example of such a condition is expressed by the average partial correlations of the payout ratio with the price/earnings ratio for banks grouped by the mean payout ratio over time. The low payout banks demonstrate an average coefficient level of only .07. For the average payout group, this value increases to .25. On the other hand, the high payout group, which is also highly influenced by this variable, demonstrates an average association value of .43 between the payout ratio and the price/earnings ratio.

The market sentiment as expressed in the price/earnings ratios may also be predicated on a search for the unusual. Again considering the high payout group, we had seen that this group had the highest rate of return on assets in 1964. But, having the highest mean value does not imply that this variable (43) exerts a consistently important influence in the regression. In fact, as the rates of return on assets decreased from 1960 to 1964 over all groups, the influence of this variable (all statistics) changed from negative to positive values and subsequently increased. It can probably be concluded that, when rates of return on assets were relatively high for the industry, this efficiency was an accepted fact with little value in explaining the price/earnings ratios. However, as the rates fell on the average, the market became cognizant of the trend and began to search for and to reward those institutions which were out-performing the industry. Hence, the contributory value of this variable increased.

A considerable amount of analytical investigation was undertaken in attempting to explain the major price-relative. The observations which have been made are based on statistical fact. The conclusions,



on the other hand, are a result of a searching interpretation of the facts. While the data presented are open to further interpretation, there is one additional tentative conclusion which may be made. Although most difficult to substantiate, it is felt that while all three models did poorly, they performed best when applied to banks which were most similar to growth industrials. That is, the models were designed to measure basic efficiencies. Therefore, it was the price/earnings ratios of those banks which were serving their public through loans, their owners through dividends, or themselves through growth which were most able to be explained.



CHAPTER V

SUMMARY AND CONCLUSIONS

In general, this study had two basic analytical objectives. The first objective was to re-test, with more recent data, the results of an earlier bank stock price explanation model proposed by David Durand. The second objective was to test a number of other functional or productive determinants believed to have value in explaining the variation in the price/earnings ratios of large commercial banks. A subsidiary objective was the analysis of groups of banks segregated according to certain operational criteria.

Conclusions of Price Explained by Geographic Groups

Aside from the fact that the determinants within the model demonstrated high levels of intercorrelation, thereby reducing the reliability of the results, the influence of the variables themselves had changed from the values found in the earlier study. Geographic location no longer sharply distinguishes groups of banks. During the 1960-1964 period, earnings per share exerted a stronger influence. Book value and dividends were no longer as influential in this simple price-explanation model.

This is not to say, however, that the Durand study did not achieve a modicum of success in spite of the statistical and conceptual difficulties

enumerated earlier. It may rather be correct to hold that the broad picture of bank stock valuation painted for the early post-war period was relatively accurate. Immediate cash payouts and residual values were more highly regarded than were earnings due to the immanence of the past depression and the uncertainty of the future compounded by the release from a war economy.

On the other hand, the results of the replication and extension can be considered consistent with recent investment practices. A more sophisticated and better informed investing public may have reacted to earnings advances, and commenced to value banking institutions on a going-concern basis in a fashion similar to the appraisal afforded other industry groups. For the majority of the sample institutions, then, earnings became the "primum mobile" for common stock prices within the defined function.

This plausible concordance between the two sets of results is consistent with the observation that the sample of banks grouped according to geographic criteria is largely homogeneous. That is to say that the stock prices of banks located in various sections of the country were similarly affected by the primary variables of earnings, dividends, and book value during the 1960-1964 study-period. One group, then, was not significantly different from any other.

Conclusions of the Relative-Price Explanatory Schemes

This study provides the first known inquiry into the rationale behind the relative levels of price/earnings ratios among commercial banks. The results are both disappointing and intriguing. Models using efficiency,



productivity, and value determinants grouped in various ways achieved only limited success in explaining a high proportion of the variation in the ratio of price to earnings among the sample-groups at specific points in time. The failure of these determinants will hopefully prompt future investigations into this area of importance to a sizeable universe of equities.

The following statements summarize the pertinent parts of the analysis.

The creation of the models anticipated consistency within the influence of the variables. This did not prove to be the case, nor upon reappraisal, should a consistent level of influence have been expected. Both for the sample as a whole and for individual groups, the determinants exerted substantially different influences at different points in time. In addition, the variables demonstrated different levels of importance depending on the "kind" of banks being analyzed. It would seem from these observations that both the relative industry price levels and the nature of the institution have implications for the design of explanatory models. Different things are important at different times for different bank stocks.

Of the first model tested, only four variables displayed any degree of importance in explaining the price/earnings ratios. These variables were the size measure, (deposits (39), the payout ratio (47), the average number of shares owned (49), and usually, the existence of stock dividends (21). Specifically, deposits were more important for slow growth and investment banks than for fast growth and loaning banks. This is as expected. Absolute size becomes of value where other utilities



are not in evidence. The importance of the payout ratio decreases as the move is made from the investing to the loaning group. Its importance also decreases as the growth rate of deposits increases except that the slowest growth group attaches the least importance to this variable. With this puzzling exception, then, high growth banks favor earnings retention. As expected, the payout ratio for each study-year is of more importance for the high mean payout group than it is for the low mean payout group. Considering the average stock holdings, the importance of this variable increases as the mean payout increases and decreases as the growth rate decreased. Stock dividends demonstrate a measurable influence for all groups with the exception of the lowest and highest growth groups.

Taking the first model as a whole, the banks grouped according to the mean payout ratio over time achieved the highest explanatory value of $R^2_{d.f.} = .266$. Comparing the efficiency of all groups within all schemes, the high mean payout group performed best with a mean value for $R^2_{d.f.}$ of .444.

Turning to the second or ownership concentration model, there seems to be little doubt that the two variables tested had little value in explaining the variation in the price/earnings ratios. The variables concerned were the per cent of stock owned by the top 20 stockholders (24) and the per cent of stock held by the largest stockholder (25). The logarithmic function (54 and 55) performed slightly better ($R^2 = .013$) than did the raw data ($R^2 = .006$), but neither produced positive values of R^2 adjusted for degrees of freedom. The adjusted R^2 for the logarithmic function was $-.006$, while that for the untransformed function



was -.013. It would seem, then, that concentration of ownership so measured has little value in explaining the relative prices of bank stock.

The final model tested was designed to measure the influence of growth and stability of certain variables upon subsequent price/earnings ratios. In spite of the larger number of banks analyzed, this model performed less well than did the best group previously tested. The adjusted R^2 for this single regression achieved a value of .421. Of the nine variables included, the scatter (S) of earnings (87), dividends (89), and loans and discounts as a per cent of assets (91) and the growth (b) of loans and discounts as a per cent of assets (90) contributed almost nothing to the explanation. While the Beta values of the growth rate of price (76), earnings (77), and dividends (78) were relatively large, their contributions to R^2 were severely limited because of large amounts of scatter in the standardized regression coefficients. The same is also true for the mean absolute growth (b) of the price/book value ratio. The variable possessing both the greatest influence and the highest partial relationship to the price/earnings ratios is the standard error (S) of the price/book value ratio (99). Why instability in the price/book value ratio should be of value in explaining the price/earnings ratio is not immediately evident.

A Profile of Growth

Growth in size is prized by both management and the investing public. Viewing the 24 banks in the sample whose rate of growth of deposits was 7.6 per cent or above, it is noted that the mean price/earnings



ratios are not the highest. Rather, the high growth group ranks second in this market appraisal to the next highest growth group. A plausible reason for this performance is that the high growth group actually earned the lowest rate of return on assets, while it was the slowest growing group which succeeded in earning the highest rate of return on assets. While it is true that the high growth group earned the highest rate of return on capital, it did so because it had the least capital in relation to risk assets. In fact, there is a rather consistent inverse relation between growth rates of deposits and the rates earned on assets. High rates of growth are not necessarily associated with either high factor efficiency or high relative prices.

Results of the Loaning Activity

Of our sample of 113 banks, 31 of these displayed mean percentages which loans and discounts are of assets of 50 per cent or above. The hypothesis tested was that credit allocation was the prime function of banking and its fulfillment would result in high levels of efficiency which would be rewarded by the investing public. This does not seem to be the case. The loaning banks earned the lowest rates of return on both assets and capital. The low rate of return on capital was not a result of "too much" capital, since these banks had the second lowest value of capital as a per cent of risk assets. This disappointing performance was recognized by the market, since it valued these stocks at the lowest multiples of both earnings and book value.

The 27 investment banks, on the other hand, earned rates of return on both capital and assets which were two steps higher than those

earned by the loaning banks. This more efficient performance was recognized by the market by rewarding the investing banks with the highest price values in regards to both earnings and book value.

Results of the Analysis of Payout

The grouping of sample banks according to mean payout ratios over time yielded results most consistent with theory. The hypothesis tested is that the nature of bank stock investors has changed over the past decade so that the market does respond with higher relative prices to increases in the ratio of dividends to earnings. The 23 banks disbursing over 55 per cent of their earnings received the highest price/earnings and price/book value ratios. The 24 banks payout out 39 per cent or less of their earnings received the lowest earnings and book value multiples. While the high payout banks suffer from the lowest rates of return on capital, they do so largely because they have the most capital relative to risk assets. However, it must also be pointed out that the high payout banks have the second lowest value for loans and discounts as a per cent of total assets.

As prognosticated earlier, one of the reasons for the ability to pay out high percentages of earnings may be that this group is willing to use the largest amount of debt of all groups. The low payout group, on the other hand, uses almost no debt. In spite of high price-relatives, the cash payout is sufficient to result in investors receiving the highest yields, which, of course, makes these banks highly acceptable for investment by the Massachusetts savings banks.



Stock dividends were sometimes used by management in the place of cash dividends by sample banks. The low payout banks employ the largest amount of stock dividends, while the high payout group employs the least.

A final comment on efficiency should be made. While having slightly less loans and discounts as a per cent of assets than does the average payout group, the high payout group earned, by a good margin, the highest rate of return on assets of all the groups.

A comparison of the three grouping schemes leads to the conclusion that only the payout scheme performs as expected. Neither the rate of growth in deposits, nor loans as a per cent of assets fully succeed both in isolating the value determinants between banks and in relating these determinants to the major price-relative.

Guidelines For Future Investigation

An analysis of the results of the present study indicates that additional inquiry is warranted. Future investigation of the relative prices of bank stocks might take at least three directions. One course of action would entail both refinements in the present models and alternative statistical treatment. A second tack might be inward, employing a more detailed investigation of the activities and nature of the institutions themselves and of the political and economic environment in which they operate. A third attack is outward in direction and is more nebulous in nature. However, while this opinion is totally unsubstantiated, this final approach may ultimately prove the more fruitful.



The first alternative allows manipulation of the available data in at least two separate directions. Initially, the criteria for grouping may be changed. Suggestions for grouping might include arrangements according to the percentage increase in either personal income of the state of residence or of the bank stock prices themselves. A further variant for defining groups might be to employ the average size of the stock holding as the criteria for inclusion. It can be hypothesized that banks with predominantly small stockholders may be subject to dividend and perhaps other pressures quite different than those applied to banks owned mainly by large holders.

In addition to rearranging the banks into different groups, the existing determinants might be handled by other statistical techniques. One technique of possible value is the use of an exponentially weighted average of some of the independent variables. In this way, the most current value would be allotted only partial weight with earlier values or perhaps the mean of the earlier values obtaining the remainder of the total weight. This is one method used to account for influence of past performance upon the present value of the price-relative. The payout ratio or the rates of return might lend themselves to such treatment.

Future investigations might also consider the testing of lead-lag relations between the determinants chosen and the price-relative under the theory that instantaneous market reactions do not hold in the case of bank stocks. Prices may react either to the prognostications of anticipated results or may only slowly adjust to the actual facts.

The second approach is in reality a searching for other determinants of relative stock value. While there is much evidence that the



price/earnings ratio, or perhaps, the short-term average price/earnings ratio, is a proper and effective indicator of relative price, other may also be efficacious. It may be that investors in bank stocks still view the price/book value ratio as the useable guidepost. Another alternative is the dollars of earning assets available for each dollar of market price. This latter factor, however, seems to look at the source rather than at the result of productivity. At any rate, the investigator is free to choose some other indicator of relative worth. Within the confines of availability, choices are also open as to the determinants themselves. While this study chose what were believed to be the most powerful explainers, the investing public may weigh many other internal and external facets of a bank to arrive at a valuation.

A number of factors of varying importance might be worthy of further investigation. Two of a critical nature are the variations in the product mix and the composition of and the price paid for liabilities.

Speaking of the first of these two, corporations have become less dependent upon banks for additions to working capital. Also, many smaller businesses have been turning to other outlets for working funds. Further research would be interested in how the reduction of loans to traditional borrowers has been replaced. Additional variables might take the form of the percentage of total loans consisting of consumer credits, mortgage or real estate loans, and term loans. It may be hypothesized that the loans and discounts as a per cent of assets is too blunt an instrument to adequately differentiate between the loaning function of banks and its relationship with the price/earnings ratios.

The earnings of many banks have been assisted by the shifting product mix from low yielding assets to higher yielding loans and investments. But the cost of handling these assets has also increased. Bank earnings have also been offset by the effect of inflation and its affect on operating costs. For these reasons, other variables might include the per cent of total expenses paid in salaries and wages, the per cent of assets held as cash balances, and, because of the tax feature, the per cent of assets consisting of securities other than Treasury issues.

The second critical area looks more keenly at the sources of a bank's funds. There has been a major shift in recent years in the composition of resources, with the time and savings deposits becoming a prime source of funds. Some 20 years ago commercial bank time deposits were less than half the reported \$76 billion in demand deposits. As recently as 1959 time and savings deposits were only \$65.4 billion compared with demand deposits of \$116.1 billion. As of the close of 1964, the values of time and demand deposits for all United States banks were virtually equal. By 1963, interest costs on time deposits replaced wage and salary payments as the largest single item of expense.

The effects of interest rate changes vary among banks and quite likely in their affects on the relative prices of the stocks of those banks. They are different for example, between banks with a large proportion of savings and time deposits and those with a considerably smaller proportion thereof. They are different as between big New York City banks and the smaller country banks. They are different in timing as well as in their effects. Competition between banks and non-bank



lenders is also involved. For these reasons, it would be well to differentiate between study-banks on the basis of the per cent of time deposits to total deposits and the per cent of total expenses allocated to servicing these time deposits. Also, some measure of competition, not immediately obvious, could be developed.

Other factors exist which might be important in explaining relative prices. Banks have been notorious in not fully revealing their capital accounts. If available, the extent and composition of "hidden reserves" could also have some explanatory power. These could be added to the more usual accounts to obtain more exact totals with which to compute rates of return and capital/risk asset ratios.

A feature of influence, which this study could not obtain, is the intensity of interest of the brokerage houses specializing in the stocks of the various banks. The contention can be made that the better the selling effort, the higher should be the relative prices, holding other things equal. In the same vein, the number of institutions owning the outstanding shares of a particular bank would affect the price foundation for the stock of that bank.

Other variables of possible value might be the quality of management as measured by dollars of risk assets per officer or the number of employees per officer. Management may also be evaluated according to its philosophy and practice of financial disclosure. Just as customers view certain bankers as being "tight fisted" in regards to loans and customer relations, potential stockholders may be alienated by paucity of financial information.

Two other areas of concern seem to possess price implications. The economic and political environment in which a bank operates will in at least the long-run limit its operational alternatives. For this reason, the qualities of the trade area (state) may be measured by the growth in population or in personal income over some reasonable period of time. Since banks are so highly regulated, investment worth may be correlated with freedom to assume risks and service the community. A measure of these alternatives might be demonstrated by the freedom to establish branches.

The final attack looks outside the productive efficiency of a bank and attempts to come to grips with the "glamour" of the industry. The conceivable determinants of value in this approach would be much more difficult to measure. In fact, at this time, only a few observations can be made.

The stock of small banks is often purchased for reasons having no relation to the productivity or efficiency of the enterprise itself. Stock is often acquired because in this way the owner supports the community and is, therefore, a "good citizen." It may be purchased so as to obtain a reliable source of borrowed funds to support some other venture. It may be purchased so as to keep the stock of the community bank in "local hands." Or, sizeable purchases may be made and retained to achieve the prestige of a seat on the board and thereby to be looked up to as a "banker."

There is no doubt that the stock of smaller banks is purchased for these reasons. It was expected that the large banks comprising the sample would have their price levels determined largely by the

productivity and efficiency determinants employed. Since this proved not to be the case, the conclusion must be reached that either different statistical techniques should be employed, or other, more precise financial determinants would be more effective explainers, or that even large banks are subject to these difficult to measure, outside influences on the prices of their stocks.



A P P E N D I C E S



APPENDIX A

DEFINITION OF THE VARIABLES

Variable #1 is a three-digit number assigned to each institution. With the exception of banks numbered 301 and 302 and the nine holding companies numbered 401 through 409, this number is the rank in deposit size of all commercial banks in the United States as of December 31, 1964.

Variable #2 is a two-digit number assigned to the state in which the home office of the institution is located.

Variable #3 is a two-digit number referring to the year of a particular observation.

Variable #4 is an adjusted market price per share as of the end of each study year. As of December 31, 1964, it is the actual market price per share. For all other study years the market price has been adjusted for all subsequent stock dividends and stock splits. Practically speaking, then, for years prior to 1964, variable number four is the year-end market price per share which would have existed if the number of shares outstanding as of year-end 1964 were outstanding at each prior year-end.

Variable #5 is net operating earnings per share, adjusted for the number of shares outstanding as of year-end 1964. Whether or not net operating earnings express the true quality of bank earnings, it is a widespread indicator of bank performance; furthermore, it is basic



to Regulation F developed jointly by the Federal Reserve Board and the Federal Deposit Insurance Corporation. The criticism of net operating earnings centers on the fact that it omits treating security profit-and-loss and net loan loss as components of bank performance.

Variable #6 is dollar dividends per share adjusted for the number of shares outstanding as of year-end 1964. An example of this type of adjustment would be: if \$2.00 dividends were paid during 1964 when 800,000 shares of stock were outstanding and \$2.00 dividends were also paid in 1962 when there were only 400,000 shares of stock outstanding, variable #6 would reveal only \$1.00 dividends as having been paid in 1962.

Variable #7 is a per cent which the asset loans and discounts are of total assets as of the end of each study year.

Variable #8 is book value per share adjusted for the number of shares outstanding as of year-end 1964. As with all variables where adjustments were necessary, the data for 1964 are actual figures, while those for prior years are reduced to account for the additions made to shares outstanding prior to the terminal date of the study. In order to achieve comparability of figures, the book value per share is taken as excluding reserves. In actuality then, book value is a minimum figure, resulting in an overstatement of rates of return on capital and an understatement of capital as a per cent of risk assets.

Variable #9 is simply the dollar value of deposits in millions of dollars as of the end of each study year. In most cases the bank number is a relative reflection of the size variable, deposits.



Variable #10 is an attempt at measuring the solvency of a banking institution by calculating the per cent the capital accounts are of risk assets. The capital accounts include par value capital, excess over par surplus, retained earnings called undivided profits, and capital notes or debentures, if any. Risk assets are defined as total assets less United States Government's and cash assets. The capital/risk asset ratio is probably the most useful of the various unsophisticated measures of bank solvency.

Variable #11 for the banking industry is a useful although relatively new indicator of market acceptance of a particular institution's securities. It is the ratio of year-end bid market price to the net operating earnings for the year. The higher the ratio, the lower is the cost of equity capital to the firm and the less immediate value a new investor receives upon present purchase of the relevant security.

Variable #12 is net after tax operating earnings as a per cent of the year-end capital accounts, excluding capital notes or debentures. It is a measure of the efficiency of owners' equity, a rate of return on capital. This measure is not only useful for intra-industry comparisons at points in time and over time, but also is indicative of comparative performance when applied on an inter-industry basis.

Variable #13 is net after tax operating earnings as a per cent of the year-end asset accounts. This variable is a measure of the productivity of the assets employed in the banking business. It is the rate of return on assets and differs from the usual measure of earning power in that the latter is calculated by employing before tax net operating income as the numerator.



Variable #14 looks beyond the allocation of assets to the loaning function and attempts to measure the efficiency of the loaning operation itself. The quantity interest on loans as a per cent of gross operating earnings is computed and serves as a workable indication of the efficiency of management in one of the most critical areas of operations. Loan income can be viewed as the point at which trade area features and deposit expansion start to become earnings. This variable is available for all institutions only for the years 1960-1964.

Variable #15, year-end bid market price as a per cent of year-end book value per share, possesses considerable historical significance for the banking industry. Today, book value and its price relative are not as useful a bench mark in appraising the value of the investment-grade banks. Essentially, the new emphasis on dynamic earning power vs. static book value results from the growing investment interest of big institutions who freely and objectively compare bank stock values against other common stock groups. This variable was included for two specific reasons: first, to ascertain its relationship with other variables, particularly the price/earnings ratios; and second, because other germane studies have employed this relative in their analyses.

Variable #16 is the number of dollars of earning assets at year-end per dollar of year-end bid market price of the outstanding stock. The definition employed for earning assets is total assets less cash and real estate assets. One indication of values embodied in bank common stock would be the amount of loans and investments attributable to each share. But since it is not enough merely to have the greatest indicated portfolio values per share, the relative market prices of the



shares are also brought into account.¹

Variable #17 is dollar dividends paid during the year as a per cent of net operating earnings for the year. This quantity is more commonly known as the payout ratio. This ratio is a measure of the immediate benefit received from earnings by the existing stockholders.

Variable #18 is dollar dividends paid during the year as a per cent of year-end bid market price per share. This quantity is more commonly known as the yield of the stock.

Variable #19 is the adjusted average number of shares of stock held by each stockholder at year-end, 1960-1964. The figure is adjusted inasmuch as the number of stockholders each year was divided into the number of shares of common stock outstanding as of December 31, 1964. In this fashion, the number of shares was held constant from stock dividends and splits while the number of stockholders was allowed to change naturally in parallel fashion with the adjustments made in price, earnings, dividends, and book value.

Variable #20 is included to denote the existence of capital notes or debentures in the capital structure of a particular institution. The quantity one signifies borrowed capital; zero means the capital structure is pure equity.

Variable #21 employs the figure one to signify that the institution paid a stock dividend during a particular study year. Stock dividends usually mean a disbursement of less than 25% of the original number of outstanding shares. It also means that some portion of

¹Douglas A. Hayes, Investments: Analysis and Management (New York: The Macmillan Company, 1961), pp. 440-456.



undivided profits had been capitalized. For the purposes of this study a stock dividend was anything that was so-called by the investor services. The decision was also made to include the payment in a prior study year if such payment was announced at the annual meeting shortly after the close of that study year.

Variable #22 is structured in a fashion similar to Variable #21. The presence of the figure one signifies the existence of a stock split, while zero signifies the absence of a split. If the bank publication or the investor services called a change in the number of shares outstanding a split, the study accepted the fact as such. Changes occurring shortly after year-end were considered to have taken place during the study year.

Variable #23, the retention ratio, is the reciprocal of Variable #17, the payout ratio. Computationally speaking, it is the addition to undivided profits from a particular year's net operating earnings divided by those net operating earnings.

Variable #24, along with Variable #25, will not be analyzed in this chapter because the quantities were not available for all study banks. However, they will be employed on a limited basis in Chapter Four. Both of these variables are measures at only one point in time, namely, June 30, 1962. Nevertheless, because of the nature of the variables, they would be expected to change only slowly over periods of time spanning but a few years. Variable #24 is the per cent of outstanding common stock held by the top 20 stockholders.

Variable #25 is a measure similar to Variable #24 and represents the per cent of stock held by the largest stockholder. Actually,



Variable #25 is included in Variable #24, but provides a more specific indication of control.

Variable #26 is a measurement of the breadth of the market for a particular stock. Larger banks with total capital accounts in excess of \$40 million are considered legal for investment purposes by Massachusetts savings banks. The quantity one signifies that the securities of a particular institution are legal for investment by this particular public. A zero simply means that this demand does not exist.

Variable #27 is a quantity designated net indicated earnings per share. These data are available only for the year 1964. Generally speaking, the figure is net operating earnings adjusted for changes in capital, surplus, and undivided profits, plus dividends declared. Specifically, net indicated earnings approximates a net profits figure by adding or subtracting security profit or loss, transfers to loan loss or other reserves, and income taxes applicable to both operating and non-operating transactions. The major purpose of the inclusion of this variable is to determine its relation to the more commonly used net operating earnings per share.

Three additional kinds of variables have also been generated. The use of these will be postponed until Chapter Four. These variables were obtained by regressing many of the variables previously discussed on time for each of the 122 financial institutions.

The net regression coefficients (b) of a variable on time is the average absolute amount of change in that variable for each study year. These coefficients appear in the same terms as the variable being regressed.



The standard errors of estimate (S) is an indication, similar to a standard deviation, around a mean, of the deviation of the actual values around the regression line. Its value is also in the same terms as the variable being regressed.

The rates of growth of the variables are actually compound rates per year. They were generated by dividing the net regression coefficients (b) by the mean of the variable over time. This procedure allows all values to contribute rather than just the beginning and ending amounts. The four variables so treated became; price (76), net operating earnings (77), dividends (78), and deposits (79).

The net regression coefficients (b) and standard errors of estimate (S) on time were computed for the following variables: price per share (60 and 61), net operating earnings (62 and 63), dividends (64 and 65), loans and discounts as a per cent of assets (66 and 67), book value per share (68 and 69), deposits (70 and 71), price/earnings ratio (72 and 73), and the price/book value ratio (74 and 75).

Finally, where possible, the variables were transformed into logarithms to the base ten to accommodate a number of the arguments which appear in subsequent chapters. The purpose of the transformations was to attempt to eliminate the influence of scale on a number of the determinants. The numbers which the variables assume when transformed appear in Tables 2-8-A and B.



A P P E N D I X B

SUPPLEMENTARY TABLES

TABLE 1-1

Price/Earnings Ratios of Moody's 15 New York City Banks and
Standard and Poor's Composite 500 and Dow Jones Industrials
1930 - 1963

	Moody's 15 NYC	<u>S & P Composite 500 P/E Ratio</u>			DJIA P/E Based on
		Based on Annual Mean Price	Based on Annual		Annual Mean Price
Year	P/E Ratio		High	Low	
1930	30.09	21.7	26.7	14.8	20.5
1931	17.55	22.4	29.7	12.6	32.3
1932	11.44	138.9	186.6	95.4	--
1933	10.72	20.4	27.7	12.5	37.6
1934	12.31	21.4	25.6	18.3	25.1
1935	15.31	16.3	20.6	12.4	19.3
1936	18.32	15.0	17.1	13.0	16.3
1937	18.74	12.8	15.5	8.4	13.4
1938	15.12	21.3	25.5	19.1	21.4
1939	17.28	14.7	16.1	12.4	15.2
1940	16.31	10.6	12.8	8.8	12.1
1941	15.30	8.7	9.6	7.4	10.3
1942	11.84	9.5	10.7	8.2	11.5
1943	13.61	13.9	15.2	11.8	13.6
1944	14.07	14.8	15.8	13.7	14.2
1945	15.15	17.2	20.0	15.0	16.4
1946	14.92	17.3	21.6	15.8	13.8
1947	14.08	9.4	10.0	8.5	9.3
1948	13.12	6.8	7.4	6.0	7.8
1949	13.82	6.4	7.0	5.7	7.7
1950	14.74	6.5	7.2	5.8	7.0
1951	14.31	9.1	9.7	8.4	9.7
1952	13.10	10.2	11.0	9.5	11.1
1953	12.90	9.3	10.0	8.5	10.1
1954	13.35	10.8	13.0	8.9	12.0
1955	14.93	11.4	13.9	10.4	12.2
1956	13.13	13.9	14.8	12.8	14.7
1957	12.01	13.5	15.1	11.9	13.0
1958	13.31	16.3	19.3	14.1	18.3
1959	14.25	16.9	19.8	17.5	18.3
1960	12.43	17.1	18.4	16.0	19.4
1961	16.77	20.8	22.8	18.0	21.1
1962	16.29	16.8	19.3	14.2	17.3
1963	17.29	17.3	18.4	15.6	19.4
1964	16.95				

Source: Moody's and Douglas H. Bellemore, The Strategic Investor (New York: Simmons-Broadman Publishing Co., 1963).

TABLE 1-2

Dow Jones Stock Price Averages and Yearly Ranges
30 Industrials and 15 Utilities; 1926-1964

Year	Industrials			Utilities			S & P Industrials 10 X High For the Year
	Average	Range		Average	Range		
1926	151	166	- 135				
1927	178	202	-- 153				
1928	246	300	191				
1929	290	381	- 199	105	145	- 65	
1930	224	294	158	82	109	55	
1931	134	194	74	52	73	31	
1932	65	89	41	26	36	16	
1933	79	108	50	29	38	19	
1934	98	110	86	24	31	17	
1935	122	148	97	22	30	14	
1936	164	185	143	32	36	28	
1937	154	194	114	29	38	20	
1938	179	158	99	20	25	15	
1939	138	155	121	24	27	21	
1940	132	152	111	22	26	18	124
1941	120	133	106	17	20	13	106
1942	106	119	92	12	14	10	99
1943	132	145	119	18	22	14	125
1944	143	152	134	24	26	21	121
1945	173	195	151	33	39	26	170
1946	187	212	163	38	43	33	185
1947	175	186	163	35	37	32	158
1948	179	193	165	34	36	31	169
1949	181	200	161	37	41	33	165
1950	216	235	196	41	44	38	206
1951	257	276	239	44	47	41	243
1952	274	292	256	50	52	47	269
1953	274	293	255	50	53	47	269
1954	342	404	279	57	62	52	372
1955	438	488	388	64	66	62	495
1956	491	521	462	66	71	61	532
1957	470	520	419	71	74	68	532
1958	510	583	436	80	91	68	589
1959	626	679	574	90	94	85	653
1960	625	685	566	92	100	84	650
1961	672	734	610	117	135	99	766
1962	630	726	535	117	130	103	752
1963	707	767	646	137	144	129	792
1964	829	891	766	146	155	137	865

Source: Standard and Poor's Industry Survey Statistics

TABLE 1-3

Standard and Poor's Index Range and Average Index
10 New York City Banks and 16 Banks Outside N.Y.C.; 1941-43 = 10,
1926 - 1964

Year	<u>10 N.Y.C. Bank Stocks</u>		<u>16 Banks Outside of N.Y.C.</u>		
	Average	Range	Average	Range	
1926	20.25	21.26	19.52		
1927	24.98	28.92	21.35		
1928	34.16	41.58	29.44		
1929	57.76	72.86	42.39		
1930	39.05	49.59	25.06		
1931	21.69	28.45	12.28		
1932	12.01	14.88	7.97		
1933	10.87	13.75	8.58		
1934	11.01	12.23	9.73		
1935	11.14	13.99	9.58		
1936	14.08	15.24	12.97		
1937	14.67	18.35	10.15		
1938	10.02	10.74	9.45		
1939	11.11	12.12	10.13		
1940	11.06	12.01	9.87		
1941	10.41	11.33	8.79	9.81	10.31 9.42
1942	8.45	9.05	7.36	8.54	9.44 7.50
1943	11.14	11.62	9.50	11.65	12.74 9.79
1944	12.69	13.97	11.80	14.22	16.56 12.96
1945	14.23	15.26	13.48	18.24	21.23 16.76
1946	14.06	15.37	12.80	19.56	20.87 18.06
1947	11.90	13.37	10.85	17.40	18.87 16.40
1948	11.48	12.00	10.91	17.02	17.87 16.02
1949	11.58	12.50	11.01	18.47	20.32 16.73
1950	12.82	13.41	12.07	24.05	26.02 20.61
1951	13.08	13.68	12.64	26.19	27.46 25.10
1952	14.10	15.52	13.32	29.14	31.06 27.66
1953	14.97	15.76	13.92	30.79	33.34 28.69
1954	15.86	18.64	14.42	35.67	40.74 32.73
1955	19.35	20.59	18.25	41.70	44.43 39.29
1956	19.80	21.07	18.55	41.03	42.21 39.49
1957	19.47	20.75	18.13	38.40	41.51 35.51
1958	21.42	23.80	18.91	42.30	48.73 37.46
1959	26.28	29.90	24.12	52.51	57.04 49.30
1960	26.23	29.63	24.93	53.10	56.98 50.76
1961	33.75	40.85	26.92	70.78	85.04 56.36
1962	33.75	40.04	28.28	66.19	78.84 55.06
1963	36.75	39.40	34.45	74.81	78.44 67.98
1964	39.64	41.75	37.06	77.54	81.20 75.90

Source: Standard and Poor's Industry Survey Statistics

TABLE 1-4

Gross National Product, National Income, National Personal Income
Index of Consumer Prices, and Money Supply Unadjusted for Velocity

1929-1964

(Amounts In Billions of Dollars)

<u>Year</u>	<u>GNP</u>	<u>N.I.</u>	<u>N.P.I.</u>	<u>Consumer P. Index: 57-59=100</u>	<u>Money Supply</u>
1929	\$104.4	\$ 87.8	\$ 85.7		
1930	91.1	75.7	76.9		
1931	75.9	58.8	65.7		
1932	58.3	41.7	50.1		
1933	56.0	40.2	47.2		
1934	64.9	48.7	53.6		
1935	72.5	57.1	60.2		
1936	82.5	64.7	68.5		
1937	90.2	73.6	73.9		
1938	84.7	67.4	68.6		
1939	91.3	72.6	72.9		
1940	100.6	81.6	78.5	49	\$ 42.3
1941	125.8	103.8	96.3	51	48.6
1942	159.1	137.1	123.5	57	62.9
1943	192.5	169.7	151.4	60	79.6
1944	211.4	183.8	165.7	61	90.4
1945	213.6	181.3	171.2	63	102.3
1946	210.7	180.3	179.3	68	110.0
1947	234.3	198.7	191.6	78	115.9
1948	259.4	223.5	207.4	84	114.3
1949	258.1	217.7	208.3	83	113.9
1950	284.6	241.9	228.5	84	119.2
1951	329.0	277.7	256.7	81	125.8
1952	347.0	292.2	273.1	93	130.8
1953	365.4	305.6	283.1	93	132.1
1954	363.1	301.8	289.8	94	135.6
1955	397.5	330.2	310.2	93	138.6
1956	419.2	349.4	330.5	95	140.3
1957	442.8	366.9	351.4	98	139.3
1958	444.5	367.4	360.3	101	144.7
1959	482.7	400.5	383.9	102	145.6
1960	503.4	415.5	400.8	103	144.7
1961	518.7	427.8	416.4	104	149.4
1962	553.9	457.5	442.5	105	151.6
1963	583.9	481.1	464.7	107	157.4
1964	622.6	514.4	495.0	108	156.4

Source: U. S. Income and Output, Survey of Current Business, and Statistical Abstract

TABLE 1-5

Standard and Poor's Index Range and Average Index
500 Composites, 425 Industrials, 50 Utilities,
and 11 Life Insurance Companies;
 1941-43=10 : 1926-1964

Year	500 Composite		Industrial	Utility	Life Insurance
	Average	Range	Average	Average	Average
1926	12.59		10.04	24.11	
1927	15.34		12.53	27.63	
1928	19.95		16.92	36.86	
1929	26.02		21.35	59.33	
1930	21.03	25.92 - 14.44	16.42	53.24	
1931	13.66	18.17 - 7.72	10.51	37.18	
1932	6.93	9.31 - 4.40	5.37	20.65	
1933	8.96	12.20 - 5.53	7.61	19.72	
1934	9.84	11.82 - 8.36	9.00	15.79	
1935	10.60	13.46 - 8.06	10.13	15.15	
1936	15.47	17.69 - 13.40	14.69	22.47	
1937	15.41	18.68 - 10.17	14.97	19.07	
1938	11.49	13.79 - 8.50	11.39	14.17	
1939	12.06	13.23 - 10.18	11.77	16.34	
1940	11.02	12.77 - 8.99	10.69	15.05	
1941	9.82	10.86 - 8.37	9.72	10.93	9.43
1942	8.67	9.77 - 7.47	8.78	7.74	9.14
1943	11.50	12.64 - 9.84	11.49	11.34	11.41
1944	12.47	13.29 - 11.56	12.34	12.81	12.35
1945	15.16	17.68 - 13.21	14.72	16.84	15.27
1946	17.08	19.25 - 14.12	16.48	20.76	16.82
1947	15.17	16.20 - 13.71	14.85	18.01	14.65
1948	15.53	17.06 - 13.84	15.34	16.77	15.51
1949	15.23	16.79 - 13.55	15.00	17.87	19.61
1950	18.40	20.43 - 16.65	18.33	19.96	25.96
1951	22.34	23.85 - 20.69	22.68	20.59	34.16
1952	24.50	26.59 - 23.09	24.78	22.86	42.05
1953	24.73	26.66 - 22.71	24.84	24.03	51.87
1954	29.69	35.98 - 24.80	30.25	27.57	86.67
1955	40.49	46.41 - 34.58	42.40	31.37	143.00
1956	46.62	49.74 - 43.11	49.80	32.25	128.50
1957	44.38	49.13 - 38.98	47.63	32.19	126.30
1958	46.24	55.21 - 40.33	49.36	37.22	130.40
1959	57.38	60.71 - 53.58	61.45	44.15	152.20
1960	55.85	60.39 - 52.30	59.43	46.86	146.10
1961	66.27	72.64 - 57.57	69.99	60.20	226.10
1962	62.38	71.13 - 52.32	65.54	59.16	247.70
1963	69.87	75.02 - 62.69	73.39	64.99	302.00
1964	81.37		86.19	69.99	339.00

Source: Standard and Poor's Industry Survey Statistics

TABLE 1-6

Moody's Weighted Average Market Price Per Share
Earning Per Share, and Dividends Per Share
 N.Y.C. Banks, Banks Outside N.Y.C., and Industrials
 1929-1964

Year	<u>15 New York City Banks</u>			<u>Industrials</u>	<u>S&P 500</u>	<u>12 Banks Outside</u>	
	<u>Price</u>	<u>EPS</u>	<u>DPS</u>	<u>Price</u>	<u>EPS</u>	<u>New York City</u>	
1929	\$306.11	\$7.45	\$4.87	\$ 65.45	\$.97		
1930	174.53	5.80	4.69	49.26	.97	<u>Price</u>	<u>DPS</u>
1931	91.26	5.20	4.26	29.99	.61		
1932	49.31	4.31	3.27	15.43	.05		
1933	43.62	4.07	2.62	22.31	.44		
1934	46.28	3.76	2.57	26.47	.49		
1935	47.93	3.13	2.24	30.09	.77		
1936	59.71	3.26	2.10	42.40	1.03		
1937	61.09	3.26	2.12	42.04	1.19		
1938	42.19	2.79	2.10	32.35	.63		
1939	47.18	2.73	2.08	34.12	.87		
1940	47.15	2.89	2.06	31.76	1.06		
1941	43.92	2.87	2.07	28.70	1.18		
1942	36.11	3.05	1.95	25.70	1.00		
1943	47.77	3.51	1.94	34.18	.93		
1944	54.16	3.85	1.93	36.57	.94		
1945	59.84	3.95	2.00	43.94	.98		
1946	58.78	3.94	2.20	49.84	1.03		
1947	51.96	3.69	2.32	46.10	1.63		
1948	50.39	3.84	2.33	47.50	2.28		
1949	51.00	3.69	2.36	46.88	2.32		
1950	55.71	3.78	2.50	57.83	2.83		
1951	56.38	3.94	2.64	70.72	2.42		
1952	60.25	4.60	2.65	75.63	2.40		
1953	63.60	4.93	2.83	76.05	2.52		
1954	67.70	5.07	3.04	95.81	2.76		
1955	78.85	5.28	3.19	130.66	3.62		
1956	78.12	5.95	3.39	149.41	3.40		
1957	76.13	6.34	3.61	143.65	3.38	\$47.30	\$2.07
1958	84.39	6.34	3.76	149.81	2.89	52.47	2.11
1959	103.00	7.23	3.82	186.26	3.06	65.46	2.18
1960	101.42	8.16	3.97	173.18	3.27	65.22	2.29
1961	132.33	7.89	4.21	199.90	3.19	87.75	2.43
1962	129.85	7.97	4.30	189.95	3.67	80.50	2.50
1963	141.60	8.19	4.46	218.24	4.02	93.08	2.57
1964	153.75	9.07	4.57	258.55		96.98	2.70

Source: Moody's Bank and Finance Manual and S & P's "Statistics."

TABLE 1-7

All New Securities Offered for Cash Sale in the U. S.
Includes Issues for Refunding Purposes and Retirement
 (Estimated gross proceeds in billions of dollars)
 1934-1964

<u>Year</u>	<u>All Issue</u>	<u>Bonds, Debentures, Notes</u>		<u>Private Corporations</u>	
		<u>Non Corporate</u>	<u>Private Corporate</u>	<u>Common Stock</u>	<u>Preferred Stock</u>
1934	\$ 4.9	\$ 4.5	\$.4	\$neg.	\$neg.
1935	6.7	4.4	2.2	neg.	.1
1936	10.0	5.4	4.0	.3	.3
1937	5.3	3.0	1.6	.3	.4
1938	5.9	3.8	2.0	neg.	.1
1939	5.7	3.5	2.0	.1	.1
1940	6.6	3.9	2.4	.1	.2
1941	15.2	12.5	2.4	.1	.2
1942	35.4	34.4	.9	neg.	.1
1943	44.5	43.3	1.0	neg.	.1
1944	56.3	53.1	2.7	.2	.4
1945	54.7	48.7	4.9	.4	.8
1946	18.7	11.8	4.9	.9	1.1
1947	19.9	13.4	5.0	.8	.8
1948	20.2	13.2	6.0	.6	.5
1949	21.1	15.1	4.9	.7	.4
1950	19.9	13.5	4.9	.8	.6
1951	21.3	13.5	5.7	1.2	.8
1952	27.2	17.7	7.6	1.4	.6
1953	28.8	19.9	7.1	1.3	.5
1954	29.8	20.2	7.5	1.2	.8
1955	26.8	16.5	7.4	2.2	.6
1956	22.4	11.5	8.0	2.3	.6
1957	30.6	17.7	10.0	2.5	.4
1958	34.4	22.8	9.7	1.3	.6
1959	31.1	21.4	7.2	2.0	.5
1960	27.5	17.3	8.1	1.7	.4
1961	35.5	22.4	9.4	3.3	.4
1962	30.0	19.2	9.0	1.3	.4
1963	31.6	19.4	10.9	1.0	.3
1964	37.1	23.2	10.9	2.7	.4

Source: Standard and Poor's Industry Survey Statistics



TABLE 1-8

Moody's 15 New York City Banks, Industrials, Utilities
And 12 Banks Outside of N.Y.C. Price/Earnings Ratios
and Yields: 1929-1964

Year	N.Y.C. BANKS		INDUSTRIALS		UTILITIES		12 BANKS Outside New York
	P/E Ratio	Yield	P/E Ratio	Yield	P/E Ratio	Yield	
1929	41.09	1.65%	16.28	3.84%	26.27	2.10%	City Yield
1930	30.09	2.81	22.09	4.93	23.46	3.45	
1931	17.55	5.01	35.28	6.37	18.37	5.20	
1932	11.44	6.96	-	7.28	15.83	7.53	
1933	10.72	6.09	35.98	3.71	22.03	5.81	
1934	12.31	5.59	26.47	3.43	22.82	5.86	
1935	15.31	4.77	18.35	3.52	17.66	5.11	
1936	18.32	3.53	17.03	3.36	20.04	3.66	
1937	18.74	3.59	14.70	4.79	16.06	5.40	
1938	15.12	4.98	22.78	3.86	17.09	6.27	
1939	17.28	4.43	15.72	3.85	15.40	5.31	
1940	16.31	4.45	12.26	5.30	14.17	5.99	
1941	15.30	4.74	9.73	6.33	11.42	8.02	
1942	11.84	5.42	10.89	6.44	9.23	9.75	
1943	13.61	4.07	14.24	4.54	12.17	6.84	
1944	14.07	3.57	13.40	4.56	11.94	6.28	
1945	15.15	3.35	16.15	4.00	15.28	4.99	
1946	14.92	3.75	14.12	3.75	15.55	4.22	
1947	14.08	4.47	8.67	5.06	13.64	5.32	
1948	13.12	4.62	6.76	5.87	12.32	5.85	
1949	13.82	4.63	7.10	6.82	12.02	5.86	
1950	14.74	4.49	6.84	6.51	11.92	5.66	
1951	14.31	4.68	9.60	6.29	13.34	5.77	
1952	13.10	4.49	10.53	5.55	13.54	5.39	
1953	12.90	4.46	9.86	5.51	13.60	5.33	
1954	13.35	4.51	11.43	4.70	15.07	4.81	
1955	14.93	4.04	12.43	3.93	15.34	4.50	
1956	13.13	4.34	14.44	3.89	14.81	4.68	
1957	12.01	4.74	13.99	4.11	14.49	4.92	4.38%
1958	13.31	4.47	18.03	3.88	15.97	4.33	4.02
1959	14.25	3.71	18.91	3.12	17.37	3.94	3.33
1960	12.43	3.91	18.00	3.48	16.95	3.84	3.51
1961	16.77	3.18	20.80	3.04	20.91	3.10	2.77
1962	16.29	3.31	17.11	3.39	19.34	3.25	3.11
1963	17.29	3.15	17.55	3.20	21.09	3.12	2.76
1964	16.95	2.97	17.99	2.98	20.22	3.15	2.78

Source: Moody's Bank and Finance Manual

TABLE 1-9

Mean Price/Earnings Ratios, Yields, Price Per Share and Price
As a Per Cent of Book Value - All Sample Institutions
 1955-1964

<u>Year</u>	<u>Number of Observations</u>	<u>P/E</u>	<u>Yield</u>	<u>Mean Price</u>	<u>P/BV</u>
1964	121	16.3	2.97%	\$63.30	166%
1963	122	17.1	2.89	59.85	168
1962	122	15.5	3.11	51.99	153
1961	122	18.3	2.64	59.65	184
1960	122	12.6	3.57	41.51	137
1959	111	13.4	3.49	39.99	138
1958	96	13.3	3.67	35.68	126
1957	88	10.4	4.38	26.73	105
1956	86	11.9	3.81	28.73	118
1955	81	13.2	3.59	28.24	124

(All prices are adjusted year-end bid prices)



TABLE 2-2

Financial Assets of The Financial Sectors of The Economy
Amounts Outstanding at End of Year; In Billions of Dollars
 1955-1964

	<u>1955</u>	<u>1956</u>	<u>1957</u>	<u>1958</u>	<u>1959</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>
A. Commer- cial Banks	185.4	191.4	197.3	212.0	217.3	226.4	243.4	264.1	283.6	306.8
B. Non Bank Financial Institu- tions	233.3	251.7	268.4	298.1	326.5	351.7	391.3	416.4	462.2	507.1
1. Savings & Loan	37.7	42.9	48.1	55.1	63.5	71.5	82.1	93.6	107.6	119.3
2. Mutual Savings Banks	31.3	33.4	35.2	37.8	38.9	40.6	42.8	46.1	49.7	54.2
3. Life Insur- ance Com- panies	87.9	93.2	98.3	104.3	110.1	115.9	122.8	129.2	136.9	144.8
4. Non Insured Pension Plans	17.7	20.2	22.5	28.3	33.1	36.9	44.9	45.8	53.8	62.3
5. Other Insurance Companies	21.0	21.8	22.1	24.8	27.1	28.2	31.6	32.1	35.2	37.5
6. Finance Companies	17.3	18.1	19.6	19.3	22.8	25.0	25.6	28.2	32.3	36.3
7. Security Brokers & Deal- ers	6.7	6.2	6.3	6.8	6.9	7.4	8.3	9.2	9.7	9.9
8. Open end Invest- ment com- panies	7.8	9.0	8.7	13.2	15.8	17.0	22.9	21.3	25.2	29.1

Source: Federal Reserve Bulletin, November, 1965

TABLE 2-3-A

Banks and Holding Companies Included In the Study

		<u>Year</u>
001	Bank Of America, N.T.&S.A. 300 Montgomery St., San Francisco, California	10
002	Chase Manhattan Bank, 1 Chase Manhattan Plaza, New York, New York 10015	10
003	First National City Bank, 55 Wall Street, New York, New York 10015	10
004	Manufacturers Hanover Trust, 44 Wall Street, New York, New York	5
005	Chemical Bank New York Trust Company, 20 Pine Street, New York, New York	6
006	Morgan Guaranty Trust Company, 23 Wall Street, New York, New York 10008	6
007	Continental Illinois National Bank & Trust Company, 231 S. LaSalle Street, Chicago 90, Illinois	10
008	Security First National Bank, 6th & Spring Streets, Los Angeles, California	10
009	Bankers Trust Company, 16 Wall Street, New York, New York	10
010	First National Bank, 38 S. Dearborn Street, Chicago, Illinois	10
011	Wells Fargo Bank, 464 California Street, San Francisco, 20, California	6
012	Crocker-Citizens National Bank, 1 Montgomery Street, San Francisco 29, California	9
013	Irving Trust Company, 1 Wall Street, New York, New York 10015	10
014	United California Bank, 600 Spring Street, Los Angeles, California	(out)
015	Mellon National Bank & Trust Company, Mellon Square, Pittsburgh 30, Pennsylvania	10
016	National Bank of Detroit, Woodward at Fort Streets, Detroit 32, Michigan	10
017	First National Bank, 67 Milk Street, Boston, Massachusetts	10
018	Cleveland Trust Company, Euclid Avenue at E. 9th Street, Cleveland, Ohio	10
019	First Pennsylvania Banking & Trust Company, 15th & Chestnut, Philadelphia 1, Pennsylvania	10
020	Republic National Bank, Dallas 22, Texas	10
021	Franklin National Bank of Long Island, 199 Second Street, Mineola, New York	5
022	Manufacturers National Bank, 151 W. Fort Street, Detroit, Michigan	10
023	Harris Trust & Savings Bank, 111 W. Monroe Street, Chicago 90, Illinois	10
024	Detroit Bank & Trust Company, Fort & Washington Streets, Detroit, Michigan 48231	10
025	First National Bank, 1401 Main Street, Dallas, Texas	10



TABLE 2-3-B

		<u>Year</u>
026	Seattle-First National Bank, 2nd Ave. at Cherry Street, Seattle, Washington 98124	10
027	Philadelphia National Bank, Broad & Chestnut Streets, Philadelphia, Pennsylvania	10
028	First National Bank of Oregon, 400 S.W. 6th Avenue, Portland, Oregon	10
029	Pittsburgh National Bank, 5th Avenue & Wood Street, Pittsburgh, Pennsylvania	6
030	Union Bank, 8th & Hill Streets, Los Angeles, California	10
031	U.S. National Bank of Oregon, 6th at Stark, Portland, Oregon	10
032	Bank of California, N.A., 400 California Street, San Francisco 20, California	10
033	(See #401)	
034	Northern Trust Company, 50 S. LaSalle Street, Chicago, Illinois	10
035	National City Bank, 623 Euclid Ave., Cleveland 14, Ohio	10
036	(See #401)	
037	Valley National Bank of Arizona, 141 N. Central Ave., Phoenix, Arizona	10
038	Wachovia Bank & Trust Company, Winston-Salem, North Carolina	10
039	First City National Bank, 921 Main Street, Houston, Texas	9
040	Girard Trust Bank, Broad & Chestnut Streets, Philadelphia, Pennsylvania	6
041	(See #404)	
042	Mercantile Trust Company, N.A., Locust-Eight & St. Charles Streets, St. Louis, Missouri	10
043	Central National Bank, 123 W. Prospect Ave., Cleveland, Ohio	10
044	Texas National Bank of Commerce, 712 Main St., Houston, Texas	(out)
045	Meadow Brook National Bank, Jamaica, Long Island, New York	8
046	Michigan National Bank, Michigan National Tower, Lansing Michigan	10
047	Fidelity-Philadelphia Trust Company, 135 S. Broad Street, Philadelphia 9, Pennsylvania	10
048	First National Bank, 305 N. Broadway, St. Louis, Missouri	10
049	Citizens & Southern National Bank, 22 Bull Street, Savannah, Georgia	6
050	Bank of New York, 48 Wall Street, New York, New York 10001	10



TABLE 2-3-C

		<u>Year</u>
051	Maryland National Bank, Baltimore & Light Streets, Baltimore 3, Maryland	5
052	Marine Bancorporation, P. O. Box 3966, Seattle, Washington 98124	(out)
053	North Carolina National Bank, 204 S. Tryon Street, Charlotte, North Carolina	5
054	County Trust Company, 235 Main Street, White Plains, New York	10
055	First Western Bank & Trust Company, Los Angeles, California	(out)
056	(See #402)	
057	Manufacturers & Traders Trust, 15 Genesee, Buffalo, New York 14240	10
058	Riggs National Bank, 1503 Pennsylvania Ave. N.W., Washington, 13, D.C.	10
059	State Street Bank & Trust Company, 111 Franklin Street, Boston 1, Massachusetts	5
060	Indiana National Bank, 3 Virginia Avenue, Indianapolis, Indiana	10
061	Provident National Bank, P.O. Box 7648, Philadelphia, Pennsylvania 19101	8
062	(See #403)	
063	Industrial National Bank of Rhode Island, 111 Westminster Street, Providence, Rhode Island	10
064	American National Bank & Trust, LaSalle at Washington, Chicago 90, Illinois	9
065	Hartford National Bank & Trust Company, Main & Pearl Streets, Hartford, Connecticut	10
066	First National Bank, Marietta & Peachtree Streets, Atlanta, Georgia	10
067	Lincoln Rochester Trust Co., 183 E. Main Street, Rochester, New York	10
068	American Fletcher National Bank & Trust Company, 10 E. Market, Indianapolis, Indiana	6
069	Connecticut Bank & Trust Company, 760 Main Street, Hartford, Connecticut	10
070	(See #407)	
071	Society Corporation, 127 Public Square, Cleveland, Ohio	(out)
072	Fidelity Union Trust Company, 765 Broad Street, Newark 1, New Jersey	10
073	Bank of the Southwest, N.A., 900 Travis Street, Houston 1, Texas	10
074	National State Bank of New Jersey, 810 Broad Street, Newark, 1, New Jersey	10
075	National Shawmut Bank, 40 Water Street, Boston, Massachusetts	10



TABLE 2-3-D

		<u>Year</u>
076	Union Planters National Bank, Madison & Front Streets, Memphis 1, Tennessee	10
077	Western Pennsylvania National Bank, 5th Avenue at Smithfield, Pittsburgh, Pennsylvania	(out)
078	First National Bank, 4th & Walnut Streets, Cincinnati, Ohio	10
079	First National Bank, 165 Madison Ave., Memphis, Tennessee	10
080	(See #405)	
081	State Bank of Albany, 69 State Street, Albany, New York	10
082	Commerce Trust Co., Tenth & Walnut Streets, Kansas City, Missouri	10
083	Bank of the Commonwealth, Griswold & Fort Streets, Detroit, Michigan	7
084	First National Bank of Arizona, Phoenix, Arizona	7
085	Mercantile National Bank, 1704 Main Street, Dallas 22, Texas	10
086	American Security & Trust Co., 15th Street & Pennsylvania Avenue N.W., Washington, D.C.	5
087	First National Bank of Maryland, Light & Redwood Streets, Baltimore, Maryland	10
088	First & Merchants National Bank, 9th & Main Streets, Richmond, Virginia	(out)
089	First Union National Bank of North Carolina, Charlotte, North Carolina	(out)
090	First National Bank, 1st Avenue & 20th Street, Birmingham, Alabama	10
091	New England Merchants National Bank, Devonshire & Milk Streets, Boston, Massachusetts	5
092	(See #403)	
093	National Commercial Bank & Trust Co. of Albany, 60 State Street, Albany 1, New York	7
094	National Newark & Essex Bank, 744 Broad Street, Newark 1, New Jersey	10
095	Union Commerce Bank, 917 Euclid Avenue, Cleveland 1, Ohio	10
096	National Bank of Washington, 14th & G Streets N.W., Washington, D.C.	9
097	First National Bank, 100 S. Biscayne Blvd., Miami, Florida 33131	10
098	First American National Bank, Fourth Ave. & Union Streets, Nashville 2, Tennessee	5
099	First National Bank, Denver, Colorado	7
100	Virginia National Bank, Main & Atlantic Streets, Norfolk, Virginia	(out)



TABLE 2-3-E

		<u>Year</u>
101	First National Bank & Trust Co., 5th & Boston Streets, Tulsa 2, Oklahoma	10
102	Rhode Island Hospital Trust Co., 15 Westminister Street, Providence, Rhode Island	10
103	Fifth Third Union Trust Co., Fourth & Walnut Streets, Cincinnati 1, Ohio	10
108	Bank of Hawaii, Bishop & King Streets, Honolulu, Hawaii	6
110	Old Kent Bank & Trust Co., 72 Monroe Avenue N.W., Grand Rapids, Michigan	9
111	First National Bank, Main & Mill Streets, Akron 8, Ohio	10
113	Central Trust Co., Fourth & Vine Streets, Cincinnati 1, Ohio	10
115	Fort Worth National Bank, Fort Worth, Texas	10
116	Citizens Fidelity Bank & Trust Co., Louisville, Kentucky	10
118	National Bank of Westchester, 31 Mamaroneck Avenue, White Plains, New York	6
120	First National Bank, 10th & Baltimore Streets, Kansas City 6, Missouri	10
125	Wilmington Trust Co., 10th & Market Streets, Wilmington, Delaware	10
126	Central-Penn National Bank of Philadelphia, Broad & Walnut, Philadelphia, Pennsylvania	10
127	New Jersey Bank & Trust Co., 129 Market Street, Paterson, New Jersey	7
128	First National Bank & Trust Co., Oklahoma City, Oklahoma	10
129	Toledo Trust Co., Toledo, Ohio	10
132	Security National Bank of Long Island, 350 Main Street, Huntington, New York	6
134	First National Bank of Hawaii, King & Bishop Streets, Honolulu 1, Hawaii	5
135	First National Bank, 1 Burnett Plaza, Fort Worth 1, Texas	10
140	Merchants National Bank & Trust Co., 11 S. Meridian Street, Indianapolis, Indiana	6
145	First National Bank, 1 Exchange Place, Jersey City 3, New Jersey	6
147	First National Bank of Passaic County, 125 Ellison Street, Paterson 27, New Jersey	7
151	Huntington National Bank, 17 S. High Street, Columbus, Ohio	10
152	National Bank of Tulsa, 320 S. Boston Street, Tulsa 3, Oklahoma	10
160	Empire Trust Co., 20 Broad Street, New York, New York 10005	10



TABLE 2-3-F

		<u>Year</u>
181	City National Bank & Trust Co., 20 East Broad Street, Columbus, Ohio	5
192	Worcester County National Bank, 446 Main Street, Worcester, Massachusetts	10
193	United States Trust Co., 45 Wall Street, New York, New York 10005	10
301	Third National Bank of Hampden County, Springfield, Massachusetts	10
302	First National Bank, Erie, Pennsylvania	10
401	Marine Midland Corp., Marine Trust Adm. Bldg., 241 Main Street, Buffalo 5, New York	6
402	Northwest Bancorporation, 1215 Northwestern Bank Bldg., Minneapolis, Minnesota 55440	7
403	First Bank Stock Corp., First National Bank Bldg., Minneapolis 2, Minnesota	10
404	First Wisconsin Bankshares Corp., 735 North Water Street, Milwaukee 2, Wisconsin	7
405	BancOhio Corp., 51 North High Street, Columbus 15, Ohio	10
406	First Security Corp., 79 S. Main Street, Salt Lake City, Utah	5
407	Whitney Holding Corp., Whitney Building, New Orleans, Louisiana	10
408	Marshall & Ilsey Bank Stock Corp., 721 N. Water Street, Milwaukee 2, Wisconsin	6
409	Marine Corporation, One Marine Plaza, Milwaukee 2, Wisconsin	6



TABLE 2-4

NUMBER OF BANKS AND HOLDING COMPANIES PER EACH STATE

<u>State Number</u>	<u>State</u>	<u>Number of Banks - Holding Co.</u>	
01	New York	19	1
02	California	6	
03	Illinois	5	
04	Pennsylvania	9	
05	Michigan	6	
06	Massachusetts	6	
07	Ohio	11	1
08	Texas	7	
09	Washington	1	
10	Oregon	2	
11	Arizona	2	
12	North Carolina	2	
13	Missouri	4	
14	Georgia	2	
15	Maryland	2	
16	Washington, D.C.	3	
17	Indiana	3	
18	Rhode Island	2	
19	Connecticut	2	
20	New Jersey	6	
21	Tennessee	3	
22	Alabama	1	
23	Florida	1	
24	Colorado	1	
25	Oklahoma	3	
26	Hawaii	2	
27	Kentucky	1	
28	Delaware	1	
29	Louisiana		1
30	Minnesota		2
31	Wisconsin		3
32	Utah	—	<u>1</u>
	Total	113	9



[illegible]



TABLE 2-6-A

Simple Means of All Variables For All Banks
and Holding Companies
1955 - 1959

Variable No.	1955	1956	1957	1958	1959
4	28.24	28.73	26.73	35.68	39.99
5	2.18	2.46	2.65	2.73	3.07
6	.98	1.05	1.14	1.25	1.32
7	40.9	42.9	44.2	42.4	46.9
8	23.61	24.79	26.24	29.23	30.08
9	847.	855.	854.	880.	911.
10	14.3	14.3	14.6	14.9	14.1
11	13.2	11.9	10.4	13.3	13.4
12	9.40	9.99	10.20	9.45	10.25
13	.64	.71	.76	.71	.80
14					
15	124.	118.	105.	126.	138.
16	9.41	9.26	9.97	8.58	7.74
17	47.2	45.3	45.1	47.8	45.4
18	3.59	3.81	4.38	3.67	3.49
19					
20	.03	.02	.02	.02	.02
21	.11	.07	.14	.27	.26
22	.04	.04	.02	.02	.06
23	52.8	54.7	54.2	52.2	54.6
26	.28	.34	.36	.39	.41
27					
Number of Observations	81	86	88	96	111

TABLE 2-6-B

Standard Deviations of All Variables
For All Banks and Holding Companies
1955 - 1959

<u>Variable</u>	<u>1955</u>	<u>1956</u>	<u>1957</u>	<u>1958</u>	<u>1959</u>
# 4	15.24	15.94	14.18	23.53	25.49
5	1.27	1.49	1.65	1.76	2.03
6	.45	.49	.54	.67	.73
7	7.3	7.2	6.9	6.9	6.5
8	13.08	13.80	14.97	18.12	18.51
9	1406	1408	1434	1481	1470
10	3.5	3.4	3.4	3.4	3.2
11	2.4	2.1	2.2	2.9	3.5
12	2.04	1.95	1.91	1.52	1.39
13	.16	.15	.15	.14	.16
14					
15	32	26	22	30	40
16	2.77	2.50	2.55	2.50	2.46
17	12.6	12.9	12.3	12.2	12.4
18	.86	.97	1.11	.92	1.01
19					
20	.16	.15	.15	.14	.13
21	.32	.26	.35	.45	.44
22	.19	.19	.15	.14	.24
23	12.6	12.9	12.3	12.2	12.3
26	.45	.48	.48	.49	.49
27					



TABLE 2-6-C

Simple Means of All Variables for All Banks
And Holding Companies
1960 - 1964

<u>Variable</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>
# 4	41.51	59.65	51.99	59.85	63.30
5	3.39	3.36	3.45	3.61	3.99
6	1.42	1.50	1.57	1.67	1.82
7	46.9	46.2	47.3	50.0	51.5
8	31.49	33.93	35.73	38.05	40.12
9	936	1041	1117	1192	1278
10	14.3	14.3	13.4	12.6	12.4
11	12.6	18.3	15.5	17.1	16.3
12	10.80	10.07	9.88	9.78	10.25
13	.84	.78	.75	.75	.77
14	63.6	61.6	61.0	62.1	63.4
15	137	184	153	168	166
16	7.57	5.76	7.06	6.52	6.70
17	43.8	46.5	47.0	47.7	46.9
18	3.57	2.64	3.11	2.89	2.97
19	518	475	457	499	514
20	.03	.02	.01	.04	.22
21	.31	.27	.24	.30	.28
22	.03	.07	.03	.06	.07
23	56.2	53.5	53.0	52.3	53.1
26	.45	.48	.53	.56	.56
27					3.51
Number of Observations	122	122	122	122	121



TABLE 2-6-D

Standard Deviations of All Variables for All Banks
And Holding Companies
1960 - 1964

<u>Variable</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>
# 4	28.63	36.96	29.24	32.79	35.68
5	2.26	2.08	2.04	2.05	2.22
6	.76	.76	.77	.80	.88
7	6.6	6.0	6.6	6.3	5.8
8	19.42	20.69	21.81	24.60	26.28
9	1496	1663	1771	1948	2064
10	3.1	3.1	3.1	2.9	2.8
11	2.9	4.2	3.0	3.7	3.3
12	1.6	1.7	1.6	1.6	1.5
13	.15	.15	.16	.15	.16
14	7.2	7.3	7.6	7.6	7.5
15	38	54	38	46	42
16	2.14	1.89	2.26	2.00	1.88
17	11.7	11.9	11.5	10.5	10.6
18	.98	.77	.82	.79	.79
19	372	322	306	902	981
20	.16	.13	.09	.20	.41
21	.47	.45	.43	.46	.45
22	.18	.26	.18	.23	.26
23	11.7	11.9	11.5	10.5	10.6
26	.50	.50	.50	.50	.50
27					1.65



TABLE 2-7-A

Simple Correlations of Market Price (#4) With Other Variables For All Banks and Holding Companies

[illegible]



[illegible]



TABLE 2-7-C

Simple Correlations of Dividends Per Share (#6) With
Other Variables for All Banks and Holding Companies

<u>Variable</u>	<u>1955</u>	<u>1956</u>	<u>1957</u>	<u>1958</u>	<u>1959</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>
# 7	.11	.18	.06	.06	.11	.05	-.06	-.10	-.06	-.12
8	.76	.75	.74	.83	.77	.75	.73	.72	.75	.71
9	.20	.19	.14	.06	.09	.10	.10	.07	.06	.04
10	.20	.18	.25	.15	.22	.18	.24	.21	.21	.20
11	.01	.07	-.02	.01	.00	-.13	-.13	-.16	-.26	-.13
12	-.20	-.23	-.27	-.18	-.18	-.05	-.17	-.13	-.17	-.16
13	.20	.18	.21	.11	.19	.21	.11	.13	.13	.18
14						-.14	-.13	-.18	-.18	-.27
15	-.18	-.17	-.26	-.12	-.11	-.16	-.19	-.21	-.29	-.19
16	-.12	-.14	-.12	-.15	-.10	-.06	-.04	.01	.04	-.03
17	.31	.35	.40	.27	.33	.32	.34	.32	.28	.35
18	.33	.33	.40	.23	.30	.38	.39	.39	.40	.37
20	-.21	-.17	-.15	-.12	-.11	-.17	-.13	-.05	-.03	-.20
21	-.21	-.07	-.14	-.12	-.15	-.09	-.25	-.17	-.17	-.24
22	-.03	.15	-.02	.07	.00	-.11	.00	.07	-.04	-.18
23	-.31	-.35	-.39	-.27	-.33	-.32	-.34	-.32	-.28	-.35
26	.35	.31	.29	.17	.22	.21	.19	.17	.17	.15
27										.82
19						-.40	-.40	-.40	-.18	-.17



[illegible]



[illegible]

[illegible]

[illegible]



[illegible]

TABLE 2-7-I

Simple Correlations of Net Operating Earnings as a Per Cent
of Capital (#12) With Other Variables For All Banks
And Holding Companies

[illegible]

TABLE 2-7-J

Simple Correlations of Net Operating Earnings As a Per Cent
of Assets (#13) With Other Variables For
All Banks And Holding Companies

[illegible]



TABLE 2-7-K

Simple Correlations of Interest Income as a Per Cent of
Gross Operating Earnings (#14) With Other Variables
For All Banks And Holding Companies

[illegible]

TABLE 2-7-L

Simple Correlations of the Ratio of Bid Market Price
To Book Value (#15) With Other Variables
For All Banks And Holding Companies

[illegible]



TABLE 2-7-0

Simple Correlations of Yield, Dividends/Price (#18), With Other Variables For All Banks and Holding Companies

[illegible]

TABLE 2-7-P

Simple Correlations of The Adjusted Average Number
of Shares Owned (#19) With Other Variables
For All Banks and Holding Companies

[illegible]

TABLE 2-7-Q

Simple Correlations of Notes or Debentures in The
Capital Structure (#20) With Other Variables
For All Banks and Holding Companies

[illegible]



TABLE 2-7-R

Simple Correlations of Payment of Stock Dividend (#21) With Other Variables For All Banks and Holding Companies

[illegible]

TABLE 2-7-S

Simple Correlations of Stock Splits (#22) With Other Variables For All Banks and Holding Companies

[illegible]

TABLE 2-7-T

Simple Correlations of the Retention Ratio (#23) With Other Variables For All Banks and Holding Companies

<u>Variable</u>	<u>1955</u>	<u>1956</u>	<u>1957</u>	<u>1958</u>	<u>1959</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>
#26 27	-.36	-.24	-.21	-.18	-.24	-.22	-.26	-.31	-.40	-.33 .09

TABLE 2-7-U

Simple Correlation of the Eligibility For Investment
By Massachusetts Savings Banks (#26) With Net
Indicated Earnings Per Share (#27) For
All Banks and Holding Companies

[illegible]

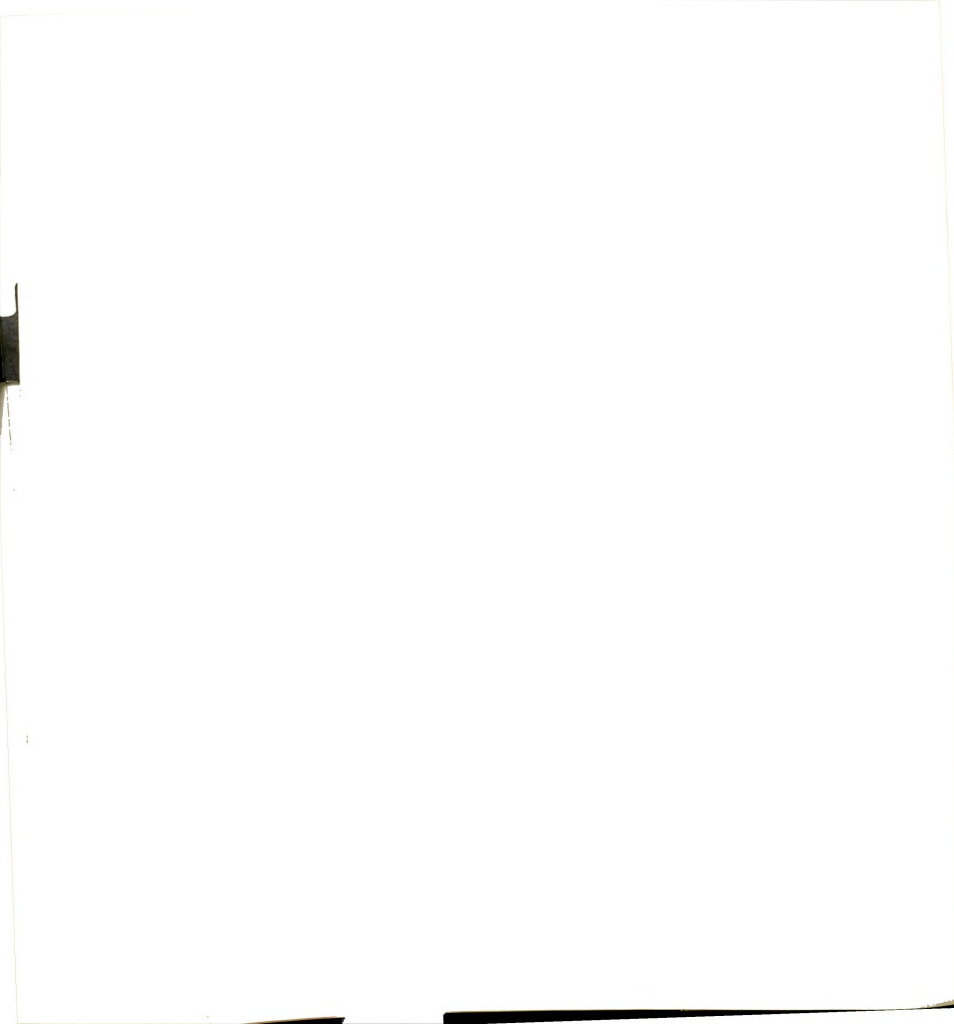


TABLE 2-8-A

Data Card #1 Format

<u>Column</u>	<u>Variable</u>	<u>Variable Number</u>	<u>Log</u>
1 2 3	Bank Number	1	
4 5	State Number	2	
6 7	Year	3	
8 9 10.11	Price	4	34
12 13.14 15	Net Operating Earnings Per Share	5	35
16.17 18	Dividends Per Share	6	36
19 20.21	Loans & Discounts/Assets	7	37
22 23 24.25 26	Book Value Per Share	8	38
27 28 29 30 31	Deposits (000 omitted)	9	39
32 33.34	Capital/Risk Assets	10	40
35 36.37	Price/Net Operating Earnings	11	41
38 39.40 41	Net Operating Earnings/Capital	12	42
42.43 44	Net Operating Earnings/Assets	13	43
45 46.47	Interest/Gross Operating Earnings	14	44
48 49 50	Price/Book Value	15	45
51 52.53 54	Earning Assets/Price	16	46
55 56.57	Dividends/Net Operating Earnings (Payout Ratio)	17	47
58.59 60	Dividends/Price (Yield)	18	48
61 62 63 64	# shares/# owners 12/31/64 (average Holdings)	19	49
65	Capital Notes or Debentures (1=yes, 0=no)	20	
66	Stock Dividend (1=yes, 0=no)	21	
67	Stock Split (1=yes, 0=no)	22	
68 69.70	Retention Ratio	23	53
71 72.73	% of stock held by top 20 stock- holders 6/30/62	24	54
74 75.76	% of stock held by largest stock- holder	25	55
77	Eligible for Massachusetts Savings Bank investment (1=yes, 0=no)	26	
78.79 80	Net Indicated Earnings Per Share 1964	27	



TABLE 2-8-B

Data Card #2 Format

<u>Column</u>	<u>Variable</u>	<u>Variable Number</u>	<u>Log</u>
1 2 3	Bank Number	1	
5 6.7	b..Net Regression Coefficient (4) Price	60	84
9 10.11	S..Standard Error Of Estimate (4) Price	61	85
13.14 15	b.. of (5) Net Operating Earnings	62	86
17.18 19	S.. of (5) Net Operating Earnings	63	87
.21 22	b.. of (6) Dividends	64	88
.24 25	S.. of (6) Dividends	65	89
27.28	b.. of (7) Loans & Discounts/Assets	66	90
30.31	S.. of (7) Loans & Discounts/Assets	67	91
33.34 35	b.. of (8) Book Value	68	92
37.38 39	S.. of (8) Book Value	69	93
41 42 43	b.. of (9) Deposits	70	94
45 46 47	S.. of (9) Deposits	71	95
49.50	b.. of (11) Price/Net Operating Earnings	72	96
52.53	S.. of (11) Price/Net Operating Earnings	73	97
55 56	b.. of (15) Price/Book Value	74	98
58 59	S.. of (15) Price/Book Value	75	99
61 62.63	% change in Price for each bank	76	80
64 65.66	% change in N.O. Earnings for each bank	77	81
67 68.69	% change in Dividends for each bank	78	82
70 71.72	% change in Deposits for each bank	79	83

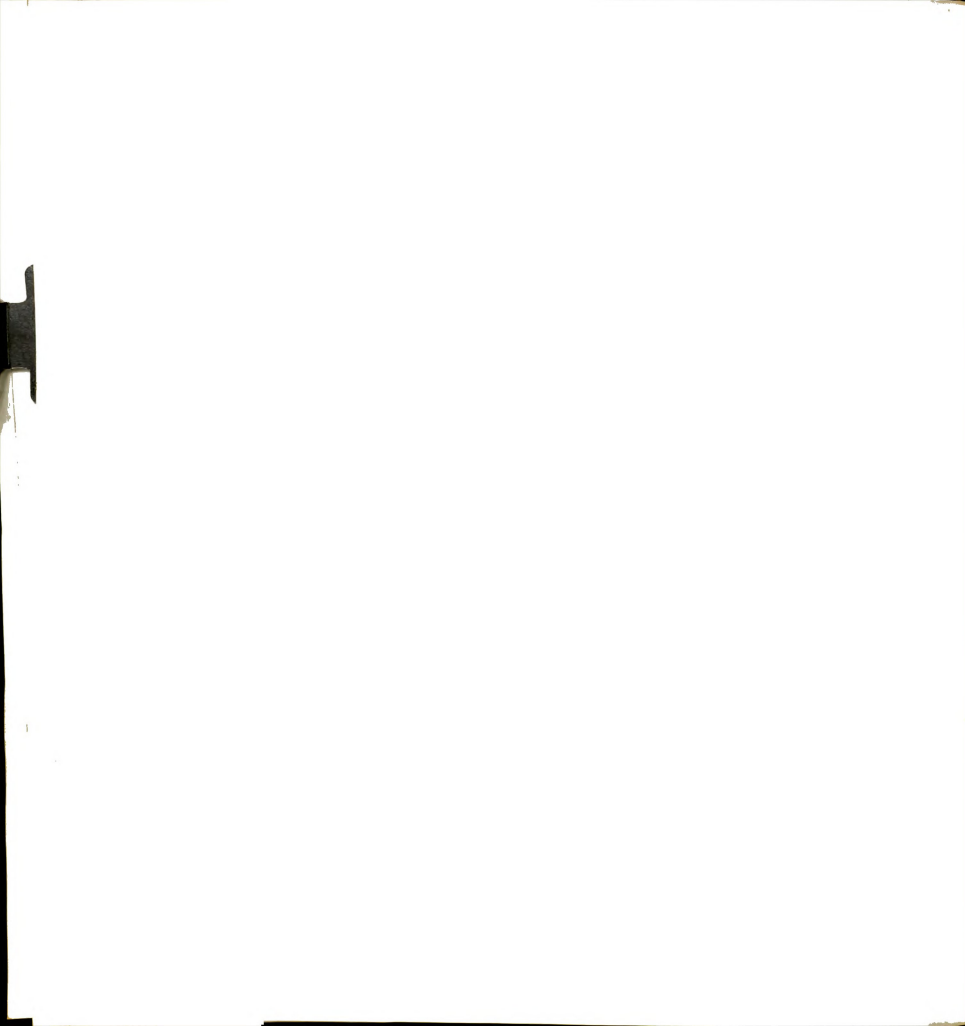


TABLE 2-9

Yields, Solvency Ratios, and Profitability Ratios:
All Insured Commercial Banks
1935 - 1964

<u>Year</u>	<u>Capital Accounts As % of Equities</u>	<u>Net Income After Tax As % of Capital (R of R on Capital)</u>	<u>Cash Dividends As % of Capital (Div. Yield on Capital)</u>	<u>Operating Revenue As % of Assets</u>	<u>Net Income Before Tax As % of Assets (Earning Power)</u>	<u>Net Income After Tax As % of Assets (R of R on Assets)</u>
1935		3.35%		3.08%		
1936		8.35		2.92		
1937		5.97		2.97		
1938		4.68		2.87		
1939		5.99		2.68		
1940		6.08		2.45		
1941	9.20%	6.72	3.75%	2.35	.69%	.62%
1942	8.31	6.34	3.28	2.14	.62	.53
1943	7.01	8.82	3.23	1.90	.74	.62
1944	6.27	9.78	3.28	1.80	.77	.61
1945	5.74	10.87	3.29	1.71	.83	.62
1946	5.93	10.01	3.32	1.88	.81	.59
1947	6.43	8.20	3.31	2.09	.73	.53
1948	6.60	7.49	3.33	2.26	.68	.49
1949	6.88	7.98	3.40	2.38	.76	.55
1950	6.92	8.51	3.55	2.47	.86	.59
1951	6.86	7.82	3.61	2.60	.87	.54
1952	6.83	8.07	3.60	2.74	.94	.55
1953	6.97	7.93	3.66	2.96	.98	.55
1954	7.12	9.50	3.76	2.98	1.15	.68
1955	7.23	7.90	3.87	3.15	.96	.57
1956	7.42	7.82	3.96	3.45	.97	.58
1957	7.71	8.30	4.10	3.74	1.10	.64
1958	7.76	9.60	4.09	3.72	1.30	.75
1959	7.89	7.94	4.14	4.07	1.00	.63
1960	8.09	10.03	4.16	4.35	1.37	.81
1961	8.37	9.37	4.20	4.35	1.34	.79
1962	8.28	8.83	4.15	4.45	1.19	.73
1963	8.12	8.86	4.09	4.52	1.13	.72
1964	8.11	8.65	4.12	4.62	1.05	.70

Source: Federal Deposit Insurance Corporation, Annual Report.



TABLE 3-1-A

List of Bank Stocks Included In
The Durand Phase of the Study

Group 1: New York City Banks #11

002	Chase Manhattan Bank	org
003	First National City Bank	org
004	Manufacturers Hanover Trust	org
005	Chemical Bank New York Trust	org
006	Morgan Guaranty Trust	org
009	Bankers Trust	org
013	Irving Trust	org
021	Franklin National Bank of Long Island	new
050	Bank of New York	org
160	Empire Trust	org
193	United States Trust	org

Group 2: Banks of Major Investor Interest #28

001	Bank of America, San Francisco	org
007	Continental Illinois National Bank & Trust, Chicago	org
008	Security First National Bank, Los Angeles	org
010	First National Bank, Chicago	org
015	Mellon National Bank & Trust, Pittsburgh	new
016	National Bank of Detroit, Detroit	org
017	First National Bank, Boston	org
018	Cleveland Trust, Cleveland	org
019	First Pennsylvania Banking & Trust, Philadelphia	new
020	Republic National Bank, Dallas	org
022	Manufacturers National Bank, Detroit	org
023	Harris Trust & Savings Bank, Chicago	org
024	Detroit Bank & Trust, Detroit	org
027	Philadelphia National Bank, Philadelphia	org
029	Pittsburgh National Bank, Pittsburgh	new
031	U.S. National Bank of Oregon, Portland	org
034	Northern Trust, Chicago	org
035	National City Bank, Cleveland	org
038	Wachovia Bank & Trust, Winston-Salem	new
039	First City National Bank, Houston	new
040	Girard Trust Bank, Philadelphia	new
043	Central National Bank, Cleveland	org
045	Meadow Brook National Bank, Jamaica, Long Island	new
047	Fidelity-Philadelphia Trust, Philadelphia	org
048	First National Bank, St. Louis	org
072	Fidelity Union Trust, Newark	org
075	National Shawmut Bank, Boston	org
087	First National Bank of Maryland, Baltimore	org



TABLE 3-1-B

List of Bank Stocks Included In
The Durand Phase of the Study

Group 3: Northeastern Banks (Other than Group 2) #24

054	County Trust, White Plains, N.Y.	org
057	Manufacturers & Traders Trust, Buffalo	org
059	State Street Bank & Trust, Boston	new
061	Provident National Bank, Philadelphia	org
063	Industrial National Bank of Rhode Island, Providence	new
065	Hartford National Bank & Trust, Hartford	org
067	Lincoln Rochester Trust, Rochester	org
069	Connecticut Bank & Trust, Hartford	new
074	National State Bank of New Jersey, Newark	org
081	State Bank of Albany, Albany	org
091	New England Merchants National Bank, Boston	new
093	National Commercial Bank & Trust, Albany	new
094	National Newark & Essex Bank, Newark	org
102	Rhode Island Hospital Trust, Providence	new
118	National Bank of Westchester, White Plains, N.Y.	new
125	Wilmington Trust, Wilmington	new
126	Central-Penn National Bank of Philadelphia, Philadelphia	org
127	New Jersey Bank & Trust, Paterson	new
132	Security National Bank of Long Island, Huntington, N.Y.	new
145	First National Bank, Jersey City	new
147	First National Bank of Passaic County, Paterson	new
192	Worcester County National Bank, Worcester, Mass.	org
301	Third National Bank of Hampden County, Springfield, Mass.	new
302	First National Bank, Erie, Penn.	new

Group 4: Midwestern Banks (Other than Group 2) #16

046	Michigan National Bank, Lansing	org
060	Indiana National Bank, Indianapolis	org
064	American National Bank & Trust, Chicago	org
068	American Fletcher National Bank & Trust, Indianapolis	org
078	First National Bank, Cincinnati	org
083	Bank of the Commonwealth, Detroit	org
095	Union Commerce Bank, Cleveland	org
103	Fifth Third Union Trust, Cincinnati	org
110	Old Kent Bank & Trust, Grand Rapids	org
111	First National Bank, Akron	org
113	Central Trust, Cincinnati	org
116	Citizens Fidelity Bank & Trust, Louisville	new
129	Toledo Trust, Toledo	org
140	Merchants National Bank & Trust, Indianapolis	new
151	Huntington National Bank, Columbus	org
181	City National Bank & Trust, Columbus	new



TABLE 3-1-C

List of Bank Stocks Included In
The Durand Phase of the Study

Group 5: Southeastern Banks (Other than Group 2) #12

049	Citizens & Southern National Bank, Savannah	org
051	Maryland National Bank, Baltimore	new
053	North Carolina National Bank, Charlotte	new
058	Riggs National Bank, Washington, D.C.	org
066	First National Bank, Atlanta	org
076	Union Planters National Bank, Memphis	org
079	First National Bank, Memphis	org
086	American Security & Trust, Washington, D.C.	org
090	First National Bank, Birmingham	org
096	National Bank of Washington, Washington, D.C.	new
097	First National Bank, Miami	org
098	First American National Bank, Nashville	org

Group 6: Southwestern & Western Banks (Other than Group 2) #22

011	Wells Fargo Bank, San Francisco	org
012	Crocker-Citizens National Bank, San Francisco	org
025	First National Bank, Dallas	org
026	Seattle-First National Bank, Seattle	org
028	First National Bank of Oregon, Portland	org
030	Union Bank, Los Angeles	org
032	Bank of California, San Francisco	org
037	Valley National Bank of Arizona, Phoenix	org
042	Mercantile Trust, St. Louis	new
073	Bank of the Southwest, Houston	new
082	Commerce Trust, Kansas City	org
084	First National Bank of Arizona, Phoenix	new
085	Mercantile National Bank, Dallas	org
099	First National Bank, Denver	new
101	First National Bank & Trust, Tulsa	org
108	Bank of Hawaii, Honolulu	new
115	Fort Worth National Bank, Fort Worth	org
120	First National Bank, Kansas City	org
128	First National Bank & Trust, Oklahoma City	org
134	First National Bank of Hawaii, Honolulu	new
135	First National Bank, Fort Worth	org
152	National Bank of Tulsa, Tulsa	org

TABLE 3-2-A

Replication of Durand Study
Group 1, Mean Values of All Variables
New York City Banks

<u>Variable</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>
# 4	71.1	97.7	81.9	87.3	93.3
5	5.36	5.11	5.05	5.22	5.70
6	2.10	2.15	2.22	2.29	2.50
7	47.8	46.5	46.2	48.5	50.2
8	48.20	51.05	53.74	56.99	59.89
9	3049	3527	3762	4054	4308
10	15.6	15.2	14.5	14.1	13.2
11	12.8	19.5	16.6	16.9	16.4
12	11.23	10.42	9.93	9.69	9.79
13	.99	.88	.84	.82	.83
14	59.6	56.9	56.1	57.0	58.2
15	143	196	160	164	161
16	5.74	4.43	5.61	5.75	6.10
17	47.6	50.2	51.0	51.1	51.0
18	3.73	2.56	3.07	3.02	3.11
19	263	259	262	260	258
20	.0	.0	.0	.18	.18
21	.55	.46	.46	.46	.46
22	.0	.0	.09	.09	.09
23	52.4	50.0	49.0	48.9	49.0
26	.73	.73	.73	.82	.82
34	1.74	1.91	1.84	1.86	1.88
35	.63	.62	.62	.63	.67
36	.28	.29	.31	.32	.36
38	1.59	1.61	1.63	1.65	1.67

TABLE 3-2-B

Replication of Durand Study
Group I Standard Deviations of All Variables

<u>Variable</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>
# 4	70.3	80.4	61.7	69.7	75.2
5	5.12	4.59	4.28	4.46	4.93
6	1.07	1.05	1.08	1.09	1.25
7	6.0	5.3	3.6	3.4	3.2
8	41.31	45.30	48.94	53.14	57.60
9	2777	3105	3349	3749	3927
10	4.6	4.4	4.6	4.3	4.4
11	1.3	1.5	1.6	1.3	1.9
12	2.39	2.38	1.80	1.64	.63
13	.22	.22	.28	.26	.31
14	11.1	11.0	11.8	11.9	12.7
15	27	29	23	28	23
16	1.37	.95	1.43	1.41	2.06
17	13.5	13.5	13.7	13.9	13.9
18	.97	.66	.80	.79	.81
19	101	103	104	106	104
20	.0	.0	.0	.41	.41
21	.52	.52	.52	.52	.52
22	.0	.0	.30	.30	.30
23	13.5	13.5	13.7	13.9	13.9
26	.47	.47	.47	.41	.41
34	.29	.25	.24	.24	.26
35	.27	.26	.25	.25	.26
36	.19	.19	.19	.19	.20
38	.28	.29	.28	.28	.28

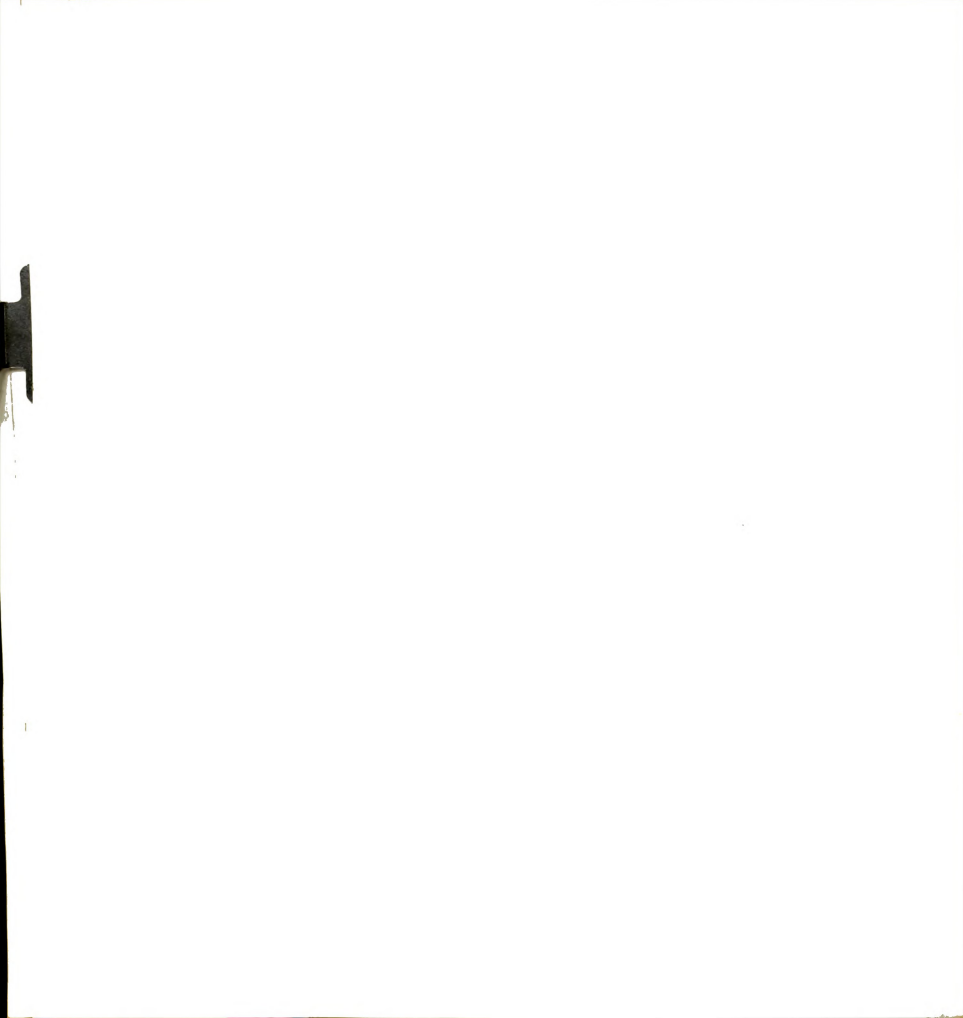


TABLE 3-2-C

Replication of Durand Study
Group 2, Mean Values of All Variables
Banks of Major Investor Interest

<u>Variable</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>
# 4	44.5	65.8	55.1	61.8	64.3
5	3.71	3.65	3.60	3.75	4.19
6	1.56	1.64	1.68	1.83	1.97
7	46.8	45.3	46.8	49.9	51.8
8	33.36	35.56	37.46	39.57	42.07
9	1448	1583	1691	1804	1923
10	14.6	14.7	13.4	12.5	12.0
11	12.3	18.4	15.5	17.2	16.0
12	11.09	10.29	9.70	9.48	10.02
13	.90	.83	.77	.75	.78
14	63.4	61.1	60.4	61.5	63.3
15	138	192	155	163	159
16	7.15	5.29	6.85	6.44	6.80
17	43.5	46.4	47.8	50.4	48.9
18	3.64	2.62	3.15	3.04	3.13
19	531	497	479	452	434
20	.04	.0	.0	.0	.11
21	.36	.14	.18	.29	.25
22	.07	.11	.04	.04	.07
23	56.5	53.5	52.2	49.6	51.0
26	.93	.93	.93	.93	.93
34	1.61	1.78	1.71	1.76	1.78
35	.53	.53	.52	.54	.58
36	.15	.18	.19	.23	.26
38	1.48	1.51	1.54	1.56	1.59

TABLE 3-2-D

Replication of Durand Study
Group 2, Standard Deviations of All Variables

<u>Variable</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>
# 4	19.5	28.6	22.1	23.8	24.2
5	1.71	1.64	1.46	1.58	1.75
6	.59	.61	.61	.65	.71
7	6.9	6.5	6.6	6.6	5.2
8	14.83	15.71	16.54	17.54	18.99
9	1977	2125	2239	2454	2590
10	2.8	3.0	2.7	2.3	1.9
11	2.7	3.7	2.7	4.5	3.5
12	1.59	1.38	1.25	1.20	1.20
13	.14	.14	.14	.12	.12
14	7.1	7.4	7.7	7.7	6.6
15	36	50	37	39	33
16	1.89	1.49	2.01	1.65	1.84
17	10.2	11.1	10.6	10.0	11.0
18	.99	.79	.81	.74	.69
19	418	381	363	326	305
20	.19	.0	.0	.0	.32
21	.49	.36	.39	.46	.44
22	.26	.32	.19	.19	.26
23	10.2	11.0	10.6	10.0	10.9
26	.26	.26	.26	.26	.26
34	.19	.18	.17	.16	.17
35	.19	.18	.17	.19	.19
36	.21	.19	.19	.18	.18
38	.19	.19	.18	.18	.19



TABLE 3-2-E

Replication of Durand Study
Group 3, Mean Values of All Variables
Northeastern Banks

<u>Variable</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>
# 4	36.2	49.4	46.2	52.0	55.8
5	3.17	3.13	3.32	3.51	3.91
6	1.53	1.59	1.70	1.75	1.94
7	49.2	48.4	49.1	50.9	52.4
8	29.60	31.68	33.05	34.51	36.37
9	322	345	376	391	426
10	13.2	13.2	12.5	11.6	11.4
11	12.2	16.6	14.6	15.4	14.7
12	10.74	10.04	10.05	10.16	10.77
13	.83	.78	.75	.76	.78
14	62.7	61.4	60.8	62.3	63.1
15	133	170	148	158	160
16	8.37	6.61	7.76	7.50	7.62
17	48.9	51.3	52.3	51.1	50.1
18	4.17	3.21	3.67	3.45	3.48
19	331	283	269	255	249
20	.08	.08	.04	.04	.17
21	.33	.25	.33	.33	.42
22	.04	.13	.0	.0	.08
23	51.1	48.7	47.7	48.9	49.4
26	.29	.29	.42	.42	.42
34	1.53	1.67	1.64	1.68	1.71
35	.46	.46	.48	.51	.55
36	.13	.15	.19	.20	.24
38	1.43	1.46	1.48	1.50	1.52



TABLE 3-2-F

Replication of Durand Study
Group 3, Standard Deviations of All Variables

<u>Variable</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>
# 4	13.1	16.9	16.6	21.2	23.8
5	1.45	1.30	1.41	1.50	1.67
6	.69	.72	.73	.72	.86
7	7.0	6.2	7.2	5.5	5.5
8	13.28	13.89	13.99	14.72	15.65
9	128	133	144	151	165
10	2.6	2.9	3.1	2.7	2.7
11	3.1	3.3	2.4	3.0	3.0
12	1.21	1.42	1.36	1.20	1.10
13	.13	.13	.14	.15	.15
14	5.7	6.2	6.6	6.5	6.6
15	42	48	36	45	45
16	2.63	2.17	2.41	2.25	2.12
17	11.4	12.2	12.6	11.3	11.3
18	1.00	.87	.83	.80	.73
19	234	127	111	102	97
20	.28	.28	.20	.20	.38
21	.48	.44	.48	.48	.50
22	.20	.34	.0	.0	.28
23	11.4	12.2	12.6	11.3	11.2
26	.46	.46	.50	.50	.50
34	.17	.15	.16	.17	.18
35	.21	.19	.20	.20	.19
36	.24	.23	.22	.21	.21
38	.20	.20	.19	.19	.20

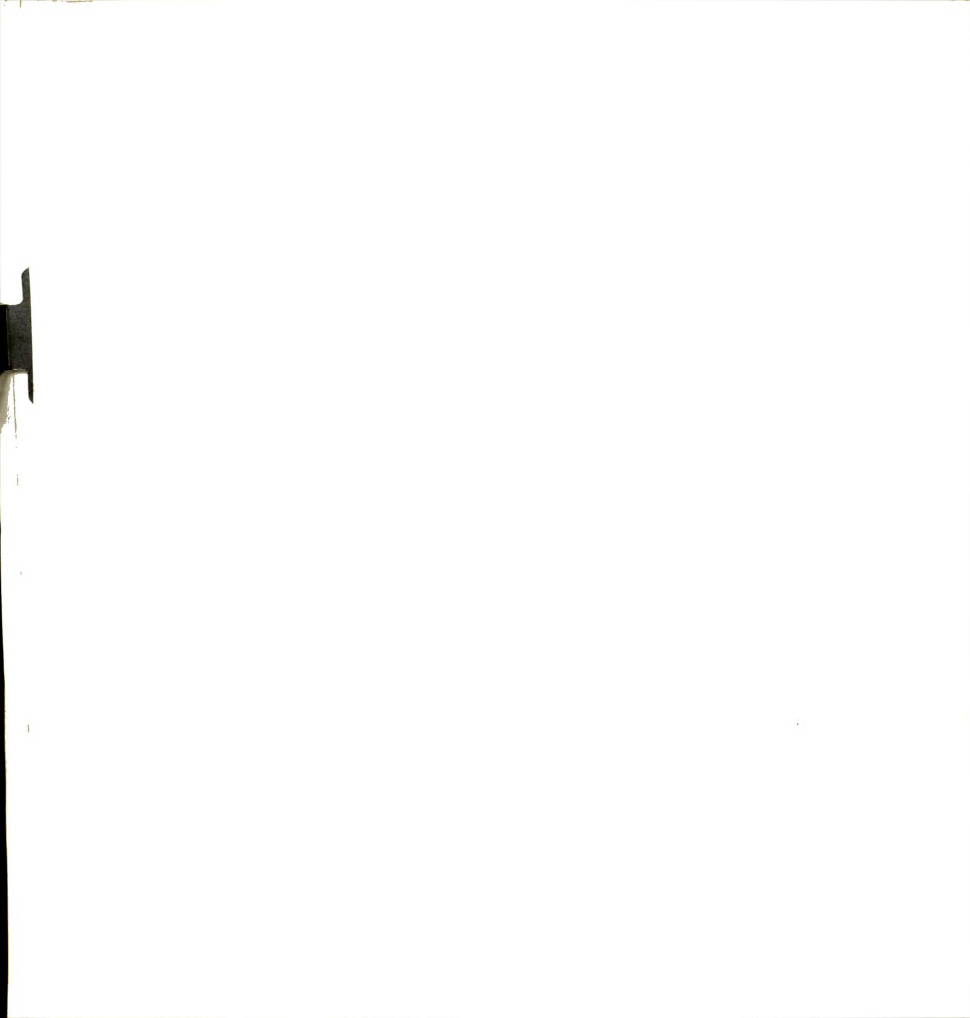


TABLE 3-2-G

Replication of Durand Study
Group 4, Mean Values of All Variables
Midwestern Banks

<u>Variable</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>
# 4	33.8	47.4	43.8	53.1	58.0
5	3.06	3.09	3.24	3.48	3.81
6	1.05	1.14	1.22	1.30	1.43
7	43.0	43.6	44.0	47.9	49.4
8	28.18	31.23	32.82	35.10	37.12
9	325	348	383	394	427
10	15.5	15.6	14.5	13.7	13.0
11	11.1	15.4	13.7	15.5	15.5
12	10.91	10.17	10.19	10.21	10.53
13	.82	.78	.75	.79	.78
14	60.6	58.5	58.3	60.0	61.1
15	121	157	139	161	164
16	8.94	6.78	8.15	7.12	6.92
17	36.0	38.3	38.8	38.1	38.4
18	3.28	2.50	2.88	2.52	2.58
19	706	631	570	501	459
20	.0	.0	.0	.0	.06
21	.31	.38	.19	.13	.25
22	.0	.19	.06	.06	.13
23	63.9	61.7	61.2	61.8	61.5
26	.19	.25	.25	.25	.25
34	1.50	1.65	1.62	1.71	1.75
35	.46	.47	.49	.53	.57
36	-.02	.02	.06	.09	.13
38	1.43	1.47	1.49	1.52	1.55

TABLE 3-2-H

Replication of Durand Study
Group 4, Standard Deviations of All Variables

<u>Variable</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>
# 4	12.2	16.4	12.5	13.0	14.9
5	1.00	.93	.91	.95	.99
6	.45	.49	.49	.47	.46
7	8.2	8.1	8.3	9.0	8.5
8	9.13	10.51	10.62	11.13	11.40
9	108	112	122	126	143
10	3.3	3.9	3.6	3.3	3.1
11	1.6	3.1	2.1	2.3	3.4
12	1.66	2.24	2.26	2.16	1.96
13	.16	.15	.16	.17	.14
14	8.3	8.6	8.9	9.7	9.7
15	29	49	37	55	53
16	2.23	2.33	3.38	2.87	1.78
17	13.6	14.4	12.3	10.6	9.7
18	1.09	.79	.93	.77	.86
19	572	436	387	276	245
20	.0	.0	.0	.0	.25
21	.48	.50	.40	.34	.45
22	.0	.40	.25	.25	.34
23	13.7	14.4	12.3	10.5	9.7
26	.40	.45	.45	.45	.45
34	.16	.16	.13	.12	.12
35	.15	.14	.13	.12	.12
36	.19	.19	.18	.16	.14
38	.15	.16	.15	.14	.14

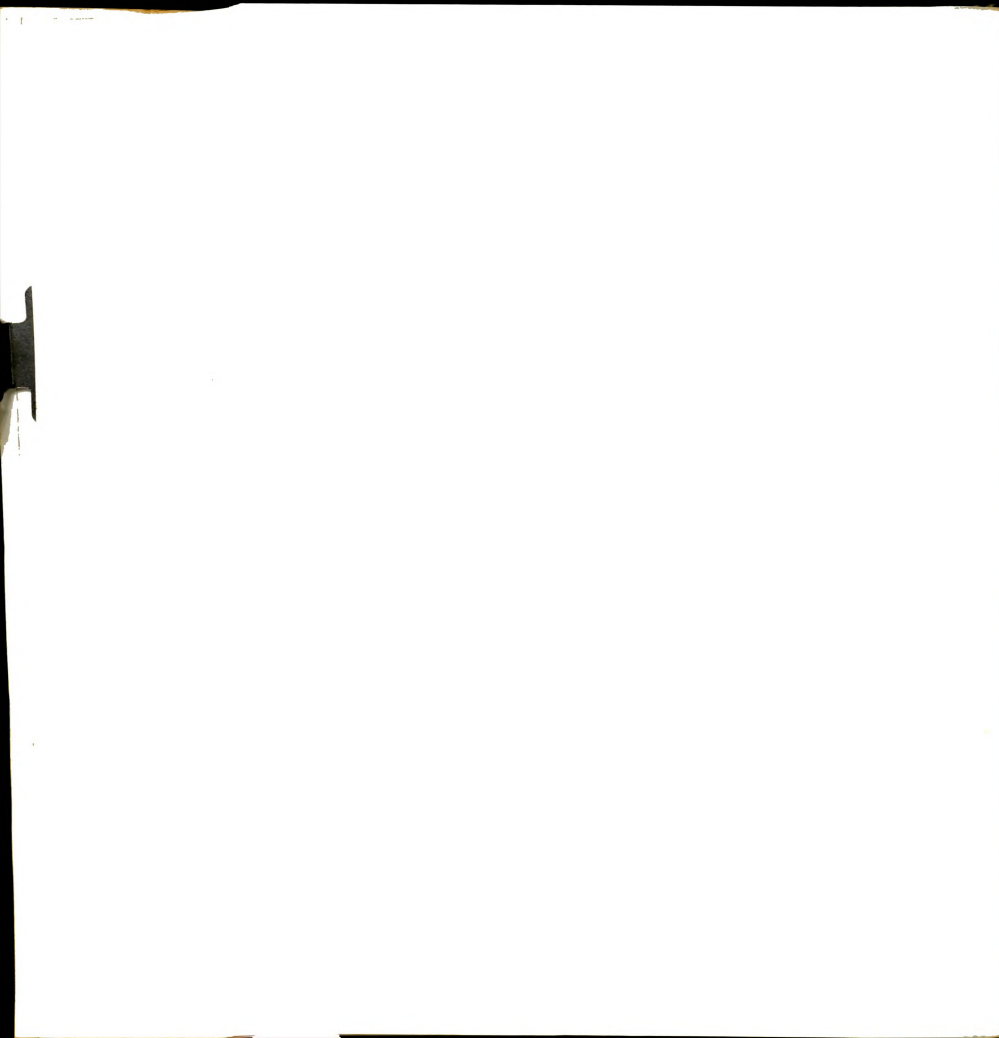


TABLE 3-2-I

Replication of Durand Study
Group 5, Mean Values of All Variables
Southeastern Banks

<u>Variable</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>
# 4	34.4	51.9	48.1	56.2	64.4
5	2.47	2.69	2.85	3.02	3.42
6	1.16	1.30	1.38	1.47	1.60
7	45.5	45.8	46.6	48.6	49.6
8	24.21	27.23	28.87	30.80	32.98
9	397	434	474	494	539
10	14.2	14.2	13.5	12.7	13.0
11	14.3	19.9	17.3	18.9	19.1
12	10.49	10.25	10.20	10.08	10.66
13	.77	.77	.74	.72	.76
14	64.7	63.1	62.4	62.9	63.7
15	143	194	169	190	202
16	6.99	5.04	5.95	5.37	5.28
17	48.0	48.7	48.4	47.8	46.5
18	3.47	2.51	2.89	2.54	2.46
19	575	540	549	498	471
20	.0	.0	.0	.0	.25
21	.17	.17	.17	.08	.25
22	.0	.0	.0	.17	.08
23	52.1	51.1	51.6	52.3	53.5
26	.08	.17	.25	.50	.50
34	1.52	1.70	1.67	1.74	1.80
35	.37	.41	.44	.46	.52
36	.05	.09	.12	.15	.18
38	1.37	1.42	1.44	1.47	1.50

TABLE 3-2-J

Replication of Durand Study
Group 5, Standard Deviations of All Variables

<u>Variable</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>
# 4	10.7	16.2	14.1	13.9	17.5
5	.77	.91	.86	.87	.99
6	.34	.45	.47	.48	.50
7	5.6	5.8	6.2	6.7	6.7
8	6.45	8.25	8.36	9.53	11.03
9	102	104	107	97	107
10	2.5	1.6	1.7	1.2	2.5
11	3.6	4.5	3.5	2.1	2.3
12	1.93	1.85	1.65	1.64	1.56
13	.12	.13	.11	.09	.10
14	5.6	4.9	5.5	6.0	6.6
15	32	38	30	28	36
16	1.73	1.16	1.05	1.01	1.04
17	8.8	8.6	5.3	3.0	4.1
18	.66	.44	.43	.27	.29
19	171	209	263	208	196
20	.0	.0	.0	.0	.45
21	.39	.39	.39	.29	.45
22	.0	.0	.0	.39	.29
23	8.8	8.5	5.3	3.0	4.1
26	.29	.39	.45	.52	.52
34	.14	.14	.12	.11	.12
35	.13	.15	.13	.13	.13
36	.13	.14	.14	.14	.14
38	.12	.13	.13	.14	.15

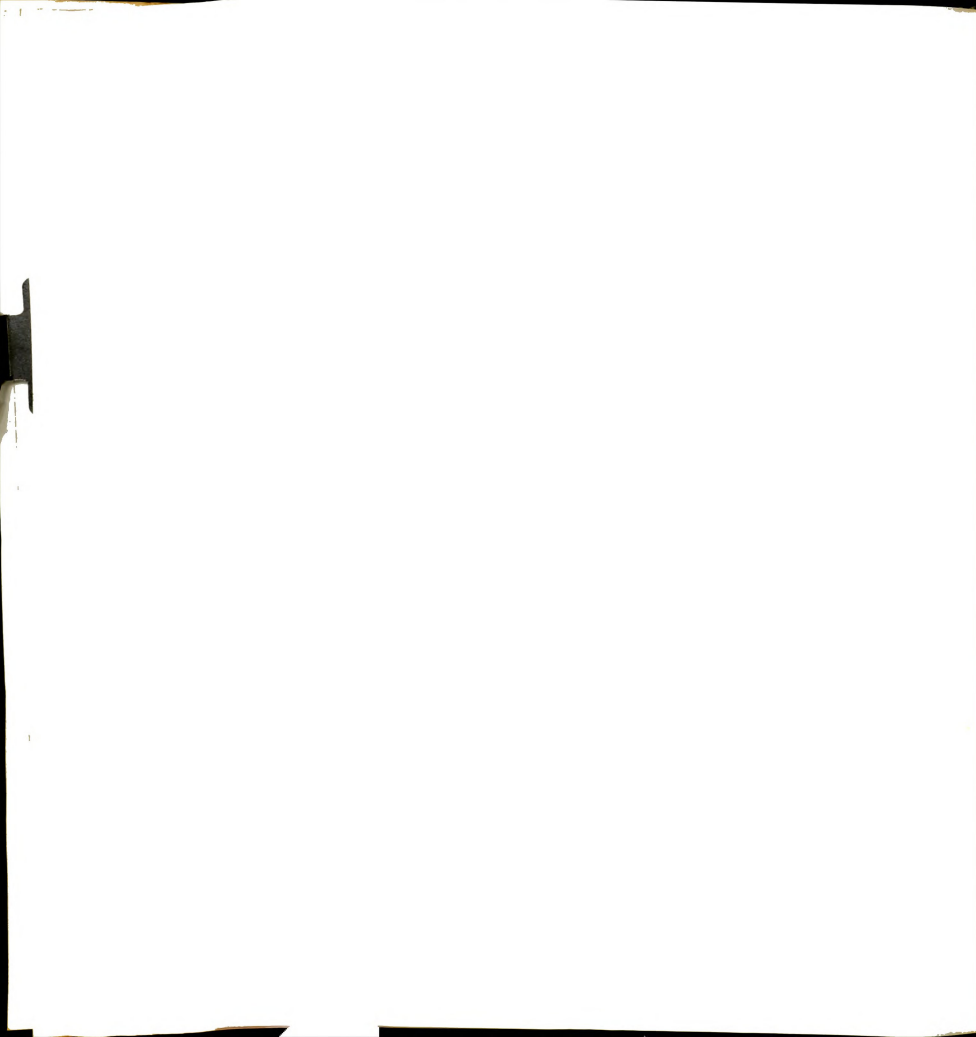


TABLE 3-2-K

Replication of Durand Study
Group 6, Mean Values of All Variables
Banks of West and Southwest

<u>Variable</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>
# 4	39.9	60.3	49.8	62.0	63.7
5	3.14	3.05	3.19	3.30	3.59
6	1.29	1.35	1.37	1.52	1.65
7	47.4	47.0	48.8	52.0	53.1
8	30.53	32.63	34.46	37.97	39.96
9	618	686	741	808	867
10	13.9	13.7	13.1	12.7	13.1
11	13.6	20.8	16.5	19.7	18.0
12	10.52	9.54	9.50	9.36	9.72
13	.79	.72	.71	.72	.72
14	68.6	65.9	65.0	65.9	67.5
15	144	202	158	184	175
16	7.19	5.44	6.71	5.73	6.04
17	41.7	45.3	44.5	46.1	45.2
18	3.17	2.27	2.74	2.42	2.58
19	690	635	611	976	1128
20	.0	.0	.0	.09	.50
21	.18	.32	.23	.50	.23
22	.05	.0	.0	.05	.05
23	58.3	54.7	55.5	53.9	54.8
26	.41	.50	.59	.59	.59
34	1.54	1.72	1.64	1.75	1.75
35	.42	.42	.43	.46	.50
36	.03	.06	.07	.12	.15
38	1.40	1.44	1.47	1.50	1.52

TABLE 3-2-L

Replication of Durand Study
Group 6, Standard Deviations of All Variables

<u>Variable</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>
# 4	29.5	43.4	35.2	41.3	47.0
5	2.59	2.44	2.67	2.43	2.44
6	1.03	1.01	1.00	1.13	1.20
7	5.0	3.9	5.6	5.0	4.7
8	24.04	24.80	25.73	32.88	34.17
9	526	597	655	785	844
10	3.1	2.7	3.0	3.2	2.8
11	3.8	5.7	4.0	4.1	3.0
12	1.39	1.49	1.68	1.56	1.70
13	.12	.15	.14	.15	.13
14	4.5	4.7	4.8	4.4	3.5
15	51	78	50	61	48
16	1.63	1.71	1.69	1.20	1.26
17	9.5	10.2	10.2	8.6	9.3
18	.72	.60	.70	.61	.69
19	331	318	309	2026	2184
20	.0	.0	.0	.29	.51
21	.40	.47	.43	.51	.43
22	.21	.0	.0	.21	.21
23	9.5	10.2	10.2	8.6	9.3
26	.50	.51	.50	.50	.50
34	.21	.22	.21	.18	.18
35	.23	.23	.23	.21	.20
36	.25	.24	.24	.23	.23
38	.25	.24	.24	.24	.24

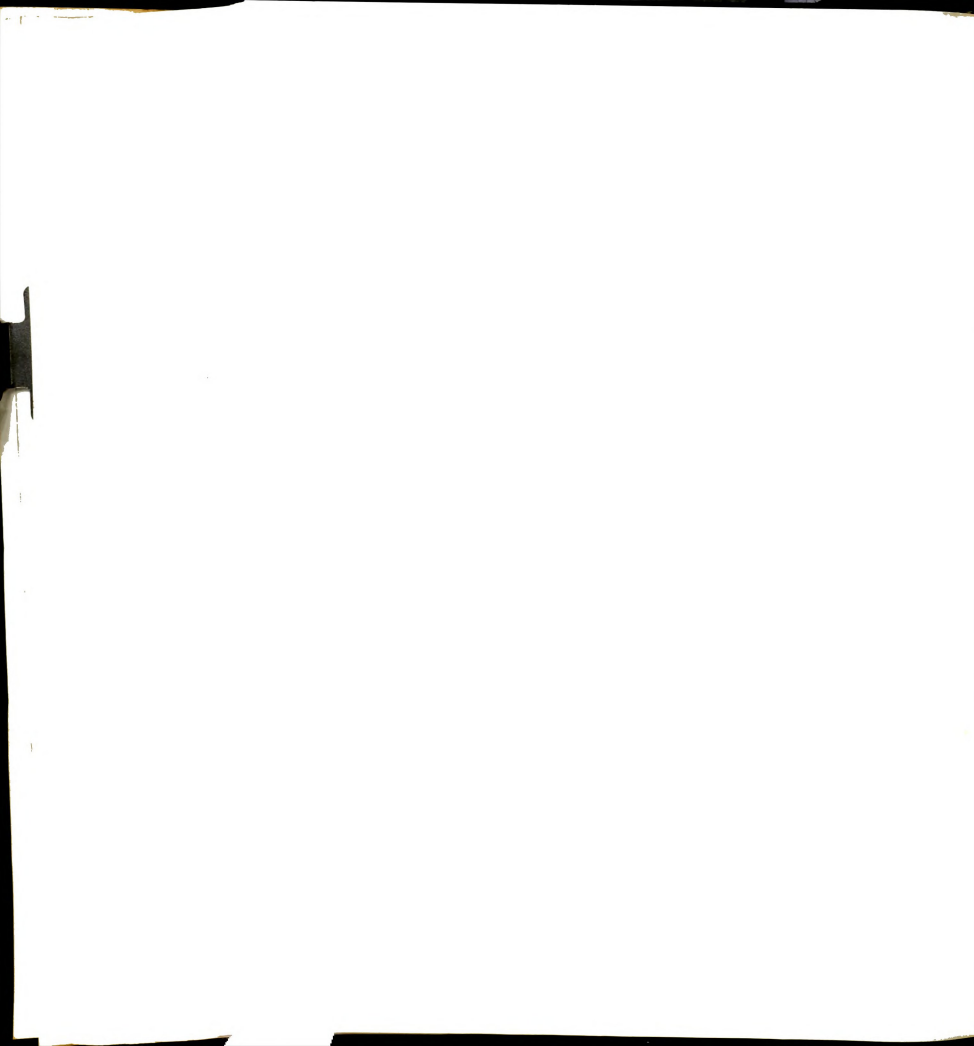


TABLE 3-3

Replication of Durand StudyNet Regression Coefficients (b's) For the Natural Log
of Net Operating Earnings, Dividends, and Book
Value Per Share as Price Explainers

<u>Variable</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>Total Coded</u>
Group 1: New York City Banks #11						
Earnings (35)	.90	.93	1.09	.89	.79	5
Dividends (36)	.15	.09	.14	.09	.16	10
Book Value (38)	.09	-.02	-.20	.03	.11	15
Group 2: Banks of Major Investor Interest #28						
Earnings (35)	.84	1.08	1.16	.66	.44	5
Dividends (36)	.12	.03	.11	.07	.23	10
Book Value (38)	-.10	-.25	-.36	.04	.17	15
Group 3: Northeastern Banks #24						
Earnings (35)	.83	1.22	1.08	1.59	1.23	5
Dividends (36)	.09	.10	.11	.31	.36	10
Book Value (38)	-.25	-.61	-.47	-1.12	-.74	15
Group 4: Midwestern Banks #16						
Earnings (35)	1.43	1.19	.86	1.09	1.07	5
Dividends (36)	.24	.32	.05	.04	-.00	10
Book Value (38)	-.65	-.39	.02	-.31	-.27	15
Group 5: Southeastern Banks #12						
Earnings (35)	.28	.13	-.36	.30	.35	12
Dividends (36)	.23	.53	.86	.35	.55	7
Book Value (38)	.45	.20	.28	.10	-.10	11
Group 6: Southwestern & Western Banks #22						
Earnings (35)	.49	1.13	.76	.76	.89	5
Dividends (36)	.44	.38	.34	.22	.03	10
Book Value (38)	-.12	-.64	-.26	-.18	-.05	15

TABLE 3-4

Replication of Durand Study

Beta Weights (B's) For the Natural Log of Net Operating
Earnings, Dividends, and Book Value per Share
As Price Explainers

<u>Variable</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>Total Coded</u>
Group 1: New York City Banks #11						
Earnings (35)	.84	.97	1.13	.91	.77	5
Dividends (36)	.10	.07	.11	.07	.13	10
Book Value (38)	.08	-.02	-.23	.04	.12	15
Group 2: Banks of Major Investor Interest #28						
Earnings (35)	.88	1.11	1.17	.76	.49	5
Dividends (36)	.13	.03	.12	.08	.26	10
Book Value (38)	-.10	-.26	-.39	.04	.19	15
Group 3: Northeastern Banks #24						
Earnings (35)	1.06	1.51	1.35	1.80	1.32	5
Dividends (36)	.14	.15	.16	.38	.44	10
Book Value (38)	-.30	-.79	-.56	-1.26	-.82	15
Group 4: Midwestern Banks #16						
Earnings (35)	1.34	1.02	.83	1.15	1.02	5
Dividends (36)	.29	.38	.06	.05	-.00	10
Book Value (38)	-.61	-.38	.02	-.38	-.30	15
Group 5: Southeastern Banks #12						
Earnings (35)	.27	.14	-.37	.36	.39	12
Dividends (36)	.22	.54	.96	.47	.67	7
Book Value (38)	.39	.19	.29	.14	-.12	11
Group 6: Southwestern & Western Banks #22						
Earnings (35)	.55	1.19	.83	.88	.96	5
Dividends (36)	.53	.42	.39	.27	.04	10
Book Value (38)	-.15	-.72	-.30	-.24	-.06	15



TABLE 3-5

Durand's Cross Section Net Regression Coefficients (b's):
Six Groups of Bank Stocks Over Eight Years

Log Price = log a + e log Earnings + d log Dividends + b log Book Value*

Year	Group 1. 17 New York City Banks				Group 2. 25 Banks of Major Investor Interest Outside NYC			
	a	e	d	b	a	e	d	b
1945	.54	.19	.27	.58	1.00	.28	.49	.27
1946	.56	.06	.40	.55	1.11	.27	.63	.13
1947	.60	.24	.33	.45	.92	.07	.77	.26
1948	.29	.00	.29	.71	.90	.16	.70	.24
1949	.43	.16	.21	.63	.84	.12	.66	.31
1950	.53	.17	.23	.57	.81	.06	.74	.33
1951	.65	.64	-.02	.40	.87	.09	.74	.29
1952	.48	.50	-.06	.56	.96	.21	.70	.22

Year	Group 3. 17 Northeastern Banks				Group 4. 17 Midwestern Banks			
	a	e	d	b	a	e	d	b
1945	1.26	.54	.44	.03	1.27	-.16	.81	.25
1946	.82	.27	.38	.36	1.19	.19	.58	.17
1947	.90	.38	.47	.21	1.20	.10	.69	.16
1948	.56	.40	.21	.43	1.06	-.15	.84	.28
1949	.83	.06	.61	.35	1.05	-.06	.77	.25
1950	.89	.34	.54	.22	1.19	.15	.78	.09
1951	1.11	.19	.73	.12	.98	.05	.67	.27
1952	1.07	.54	.38	.09	.74	.06	.52	.43

Year	Group 5. 17 Southeastern Banks				Group 6. 24 Southwestern & Western Banks			
	a	e	d	b	a	e	d	b
1945	1.51	.28	.76	-.05	.74	.28	.37	.43
1946	.98	.00	.70	.35	.65	.37	.27	.44
1947	.81	-.10	.74	.44	.46	.21	.29	.59
1948	1.17	.03	.90	.13	.59	.21	.39	.48
1949	.97	.11	.76	.23	.71	.40	.29	.36
1950	.93	.17	.64	.26	.56	.32	.24	.49
1951	.85	.16	.59	.32	.67	.38	.26	.40
1952	.95	.19	.69	.24	.83	.43	.29	.30

*Earnings (net operating earnings) refers to the indicated year, book value to the end of the indicated year, price to the end of January or February in the following year, dividends to the current rate at the time of the price quotation.

Table #1, p. 33. "Bank Stocks and The Analysis of Covariance," David Durand, Econometrica, Vol. 23, No. 1, January 1955.

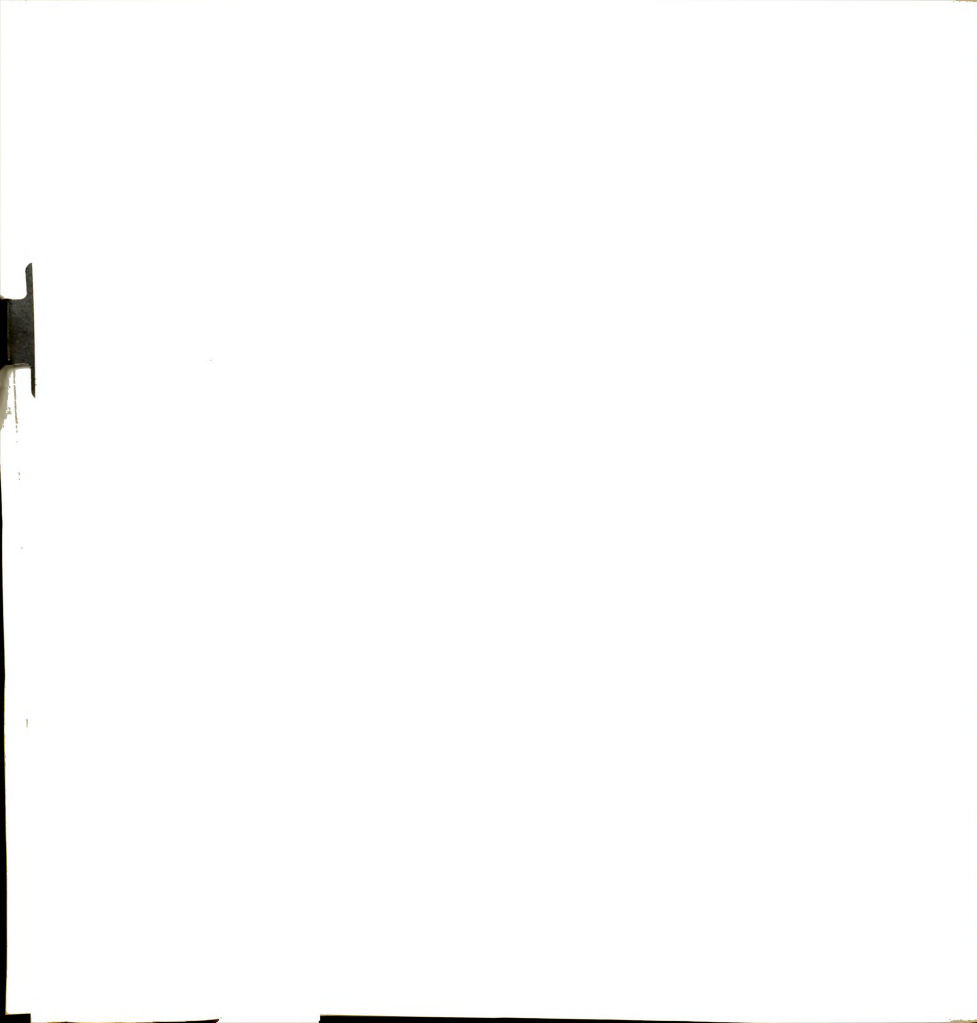


TABLE 3-6

Replication of Durand Study
Multiple Correlation Coefficients (R) and Coefficients of
Multiple Determination (R^2) For Six Bank Groups 1960-1964
 (Degrees of Freedom Corrected)

	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>
Group 1 - R	.99	.99	.99	.99	.98
R^2	.99	.98	.97	.98	.96
Group 2 - R	.88	.88	.90	.86	.89
R^2	.78	.78	.81	.74	.80
Group 3 - R	.88	.88	.94	.92	.91
R^2	.77	.77	.88	.85	.82
Group 4 - R	.92	.84	.83	.85	.72
R^2	.84	.70	.69	.72	.51
Group 5 - R	.75	.78	.84	.93	.92
R^2	.56	.61	.70	.87	.84
Group 6 - R	.90	.89	.89	.90	.92
R^2	.80	.78	.79	.81	.85

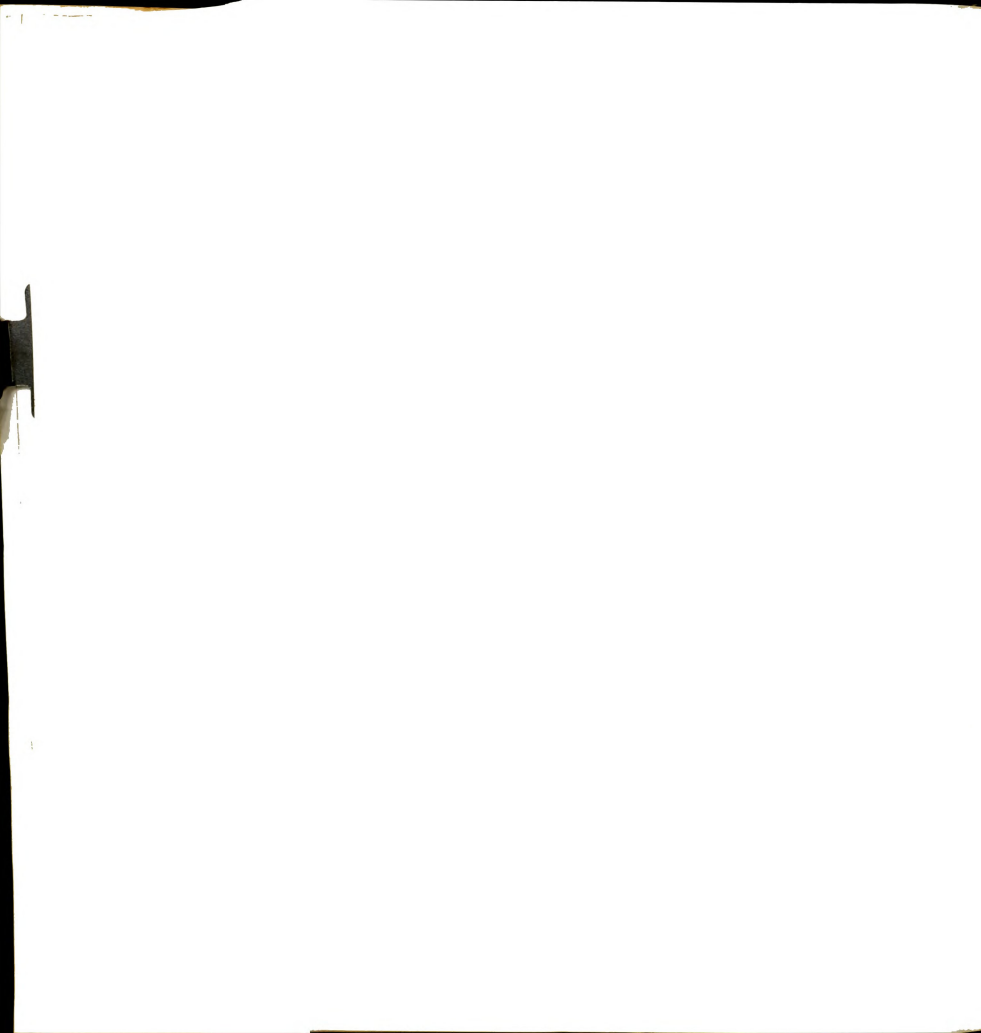


TABLE 3-7-A

Direct and Indirect Effects of the Independent Variables
Group 1

<u>Effect</u>	<u>Earnings</u>	<u>Dividends</u>	<u>Book</u>	
Direct 1960	.7045	.0103	.0069	
Indirect E-D	.1208	.1208		
E-B	.1336		.1336	
D-B		.0137	.0137	
Net Effect	.9589	.1448	.1542	1.2579
Direct 1961	.9349	.0045	.0006	
Indirect E-D	.0933	.0933		
E-B	-.0437		-.0437	
D-B		-.0026	-.0026	
Net Effect	.9845	.0952	-.0457	1.0340
Direct 1962	1.2772	.0126	.0535	
Indirect E-D	.1850	.1850		
E-B	-.5082		-.5082	
D-B		-.0409	-.0409	
Net Effect	.9540	.1567	-.4956	.6151
Direct 1963	.8218	.0043	.0015	
Indirect E-D	.0859	.0859		
E-B	.0685		.0685	
D-B		.0040	.0040	
Net Effect	.9762	.0942	.0740	1.1444
Direct 1964	.5982	.0158	.0137	
Indirect E-D	.1415	.1415		
E-B	.1793		.1793	
D-B		.0221	.0221	
Net Effect	.9190	.1794	.2151	1.3135



TABLE 3-7-B

Direct and Indirect Effects of the Independent Variables
Group 2

<u>Effect</u>	<u>Earnings</u>	<u>Dividends</u>	<u>Book</u>	
Direct 1960	.7705	.0172	.0097	
Indirect E-D	.1933	.1933		
E-B	-.1649		-.1649	
D-B		-.0221	-.0221	
Net Effect	.7989	.1884	-.1773	.8100
Direct 1961	1.2334	.0011	.0667	
Indirect E-D	.0599	.0599		
E-B	-.5452		-.5452	
D-B		-.0149	-.0149	
Net Effect	.7481	.0461	-.4934	.3008
Direct 1962	1.3791	.0142	.1498	
Indirect E-D	.2337	.2337		
E-B	-.8665		-.8665	
D-B		-.0792	-.0792	
Net Effect	.7463	.1687	-.7959	.1191
Direct 1963	.5824	.0062	.0020	
Indirect E-D	.1059	.1059		
E-B	.0649		.0649	
D-B		.0061	.0061	
Net Effect	.7532	.1182	.0730	.9444
Direct 1964	.2403	.0654	.0369	
Indirect E-D	.2139	.2139		
E-B	.1807		.1807	
D-B		.0842	.0842	
Net Effect	.6349	.3635	.3018	1.3002

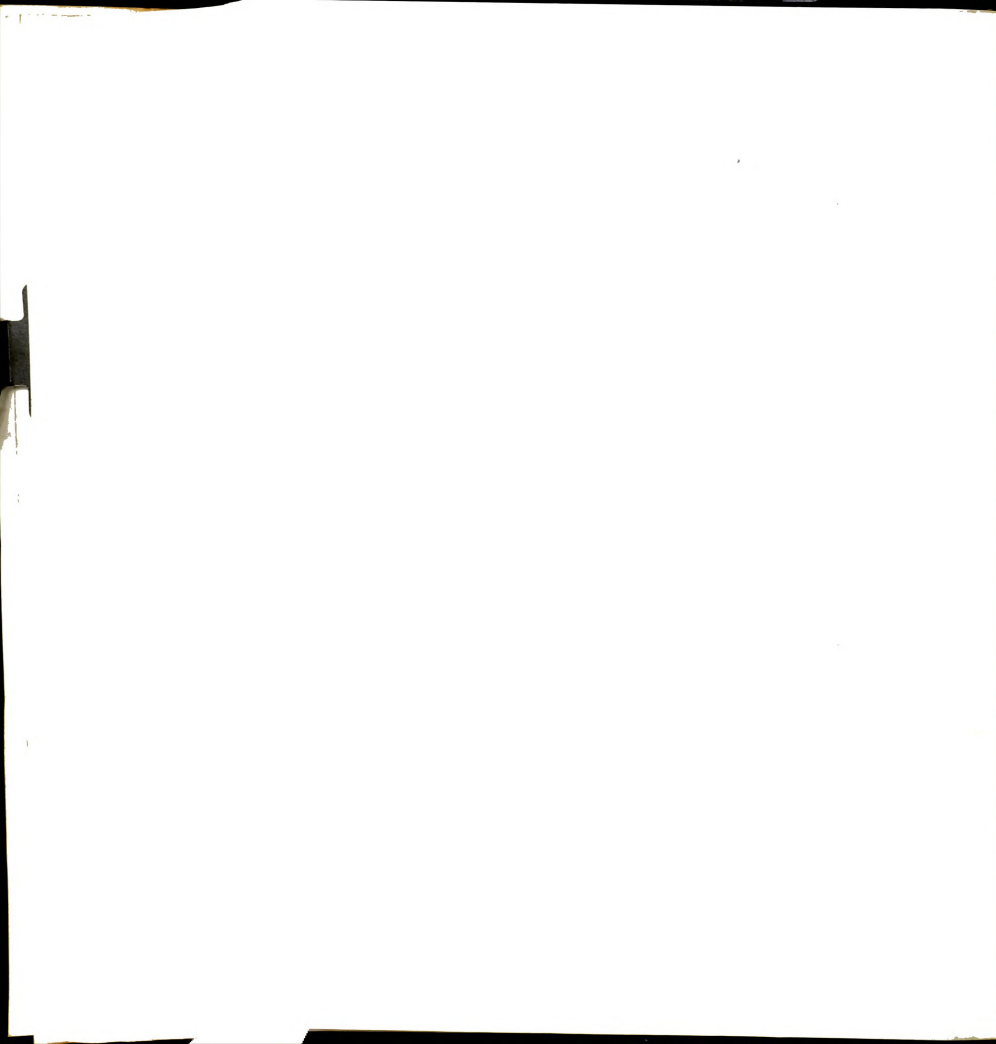


TABLE 3-7-C

Direct and Indirect Effects of the Independent Variables
Group 3

<u>Effect</u>	<u>Earnings</u>	<u>Dividends</u>	<u>Book</u>	
Direct 1960	1.1270	.0185	.0874	
Indirect E-D	.2497	.2497		
E-B	-.6136		-.6136	
D-B		-.0722	-.0722	
Net Effect	.7531	.1960	-.5984	.3507
Direct 1961	2.2647	.0231	.6251	
Indirect E-D	.3788	.3788		
E-B	-2.2829		-2.2829	
D-B		-.2128	-.2128	
Net Effect	.3606	.1891	-1.8706	-1.3209
Direct 1962	1.8136	.0244	.3168	
Indirect E-D	.3434	.3434		
E-B	-1.4539		-1.4539	
D-B		-.1528	-.1528	
Net Effect	.7031	.2150	-1.2899	-.3718
Direct 1963	3.2240	.1409	1.5758	
Indirect E-D	1.1162	1.1162		
E-B	-4.3450		-4.3450	
D-B		-.8399	-.8399	
Net Effect	.0048	.4172	-3.6091	-3.1871
Direct 1964	1.7538	.1927	.6762	
Indirect E-D	.9577	.9577		
E-B	-2.1164		-2.1164	
D-B		-.6175	-.6175	
Net Effect	.5951	.5329	-.8227	.3053



TABLE 3-7-D

Direct and Indirect Effects of the Independent Variables
Group 4

<u>Effect</u>	<u>Earnings</u>	<u>Dividends</u>	<u>Book</u>	
Direct 1960	1.8003	.0850	.3702	
Indirect E-D	.3055	.3055		
E-B	-1.4752		-1.4752	
D-B		-.2142	-.2142	
Net Effect	.6306	.1763	-1.3192	-.5123
Direct 1961	1.0422	.1456	.1412	
Indirect E-D	.2685	.2685		
E-B	-.6439		-.6439	
D-B		-.1956	-.1956	
Net Effect	.6669	.2185	-.6983	.1871
Direct 1962	.6812	.0037	.0003	
Indirect E-D	.0452	.0452		
E-B	.0239		.0239	
D-B		.0015	.0015	
Net Effect	.7503	.0504	.0257	.8624
Direct 1963	1.3151	.0026	.1431	
Indirect E-D	.0656	.0656		
E-B	-.7181		-.7181	
D-B		-.0289	-.0289	
Net Effect	.6626	.0393	-.6039	.0980
Direct 1964	1.0372	.0000	.0888	
Indirect E-D	-.0007	-.0007		
E-B	-.5149		-.5149	
D-B		-.0003	-.0003	
Net Effect	.5216	-.0010	-.4264	.0942

TABLE 3-7-E

Direct and Indirect Effects of the Independent Variables
Group 5

<u>Effect</u>	<u>Earnings</u>	<u>Dividends</u>	<u>Book</u>	
Direct 1960	.0728	.0468	.1482	
Indirect E-D	.0986	.0986		
E-B	.1542		.1542	
D-B		.1556	.1556	
Net Effect	.3256	.3010	.4580	1.0846
Direct 1961	.0182	.2921	.0374	
Indirect E-D	.1281	.1281		
E-B	.0419		.0419	
D-B		.1960	.1960	
Net Effect	.1882	.6162	.2753	1.0797
Direct 1962	.1401	.9210	.0858	
Indirect E-D	-.6762	-.6762		
E-B	-.1869		-.1869	
D-B		.5002	.5002	
Net Effect	-.7230	.7450	.3991	.4211
Direct 1963	.1300	.2179	.0190	
Indirect E-D	.3289	.3289		
E-B	.0891		.0891	
D-B		.1168	.1168	
Net Effect	.5480	.6636	.2249	1.4365
Direct 1964	.1549	.4452	.0152	
Indirect E-D	.5043	.5043		
E-B	-.0892		-.0892	
D-B		-.1481	-.1481	
Net Effect	.5700	.8014	-.2221	1.1493

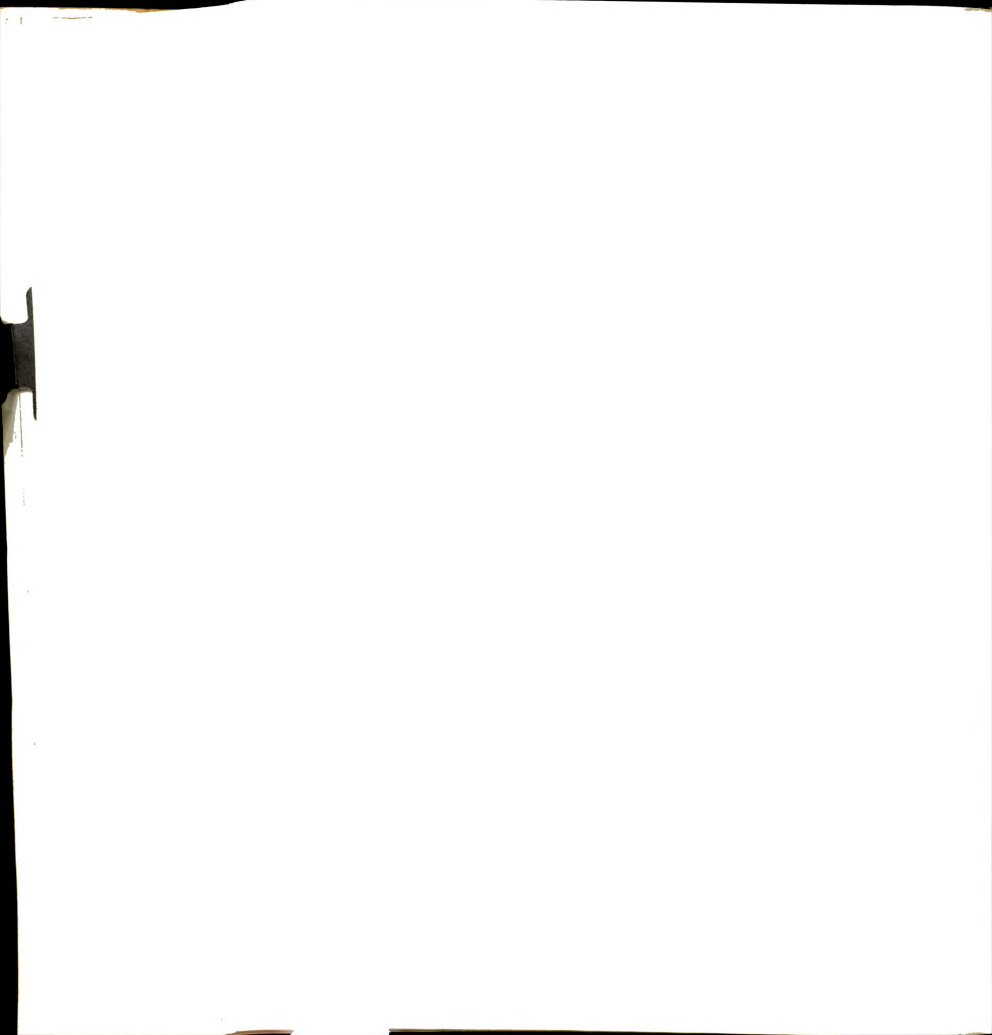


TABLE 3-7-F

Direct and Indirect Effects of the Independent Variables
Group 6

<u>Effect</u>	<u>Earnings</u>	<u>Dividends</u>	<u>Book</u>	
Direct 1960	.2997	.2790	.0220	
Indirect E-D	.5267	.5267		
E-B	-.1586		-.1586	
D-B		-.1369	-.1369	
Net Effects	.6678	.6688	-.2735	1.0631
Direct 1961	1.4042	.1752	.5229	
Indirect E-D	.8881	.8881		
E-B	-1.6599		-1.6599	
D-B		-.5162	-.5162	
Net Effects	.6324	.5471	-1.6532	-.4737
Direct 1962	.6883	.1525	.0925	
Indirect E-D	.5797	.5797		
E-B	-.4907		-.4907	
D-B		-.1994	-.1994	
Net Effects	.7773	.5328	-.5976	.7125
Direct 1963	.7670	.0746	.0561	
Indirect E-D	.4444	.4444		
E-B	-.4001		-.4001	
D-B		-.1078	-.1078	
Net Effects	.8113	.4112	-.4518	.7707
Direct 1964	.9161	.0019	.0041	
Indirect E-D	.0758	.0758		
E-B	-.1184		-.1184	
D-B		-.0046	-.0046	
Net Effects	.8735	.0731	-.1189	.8277

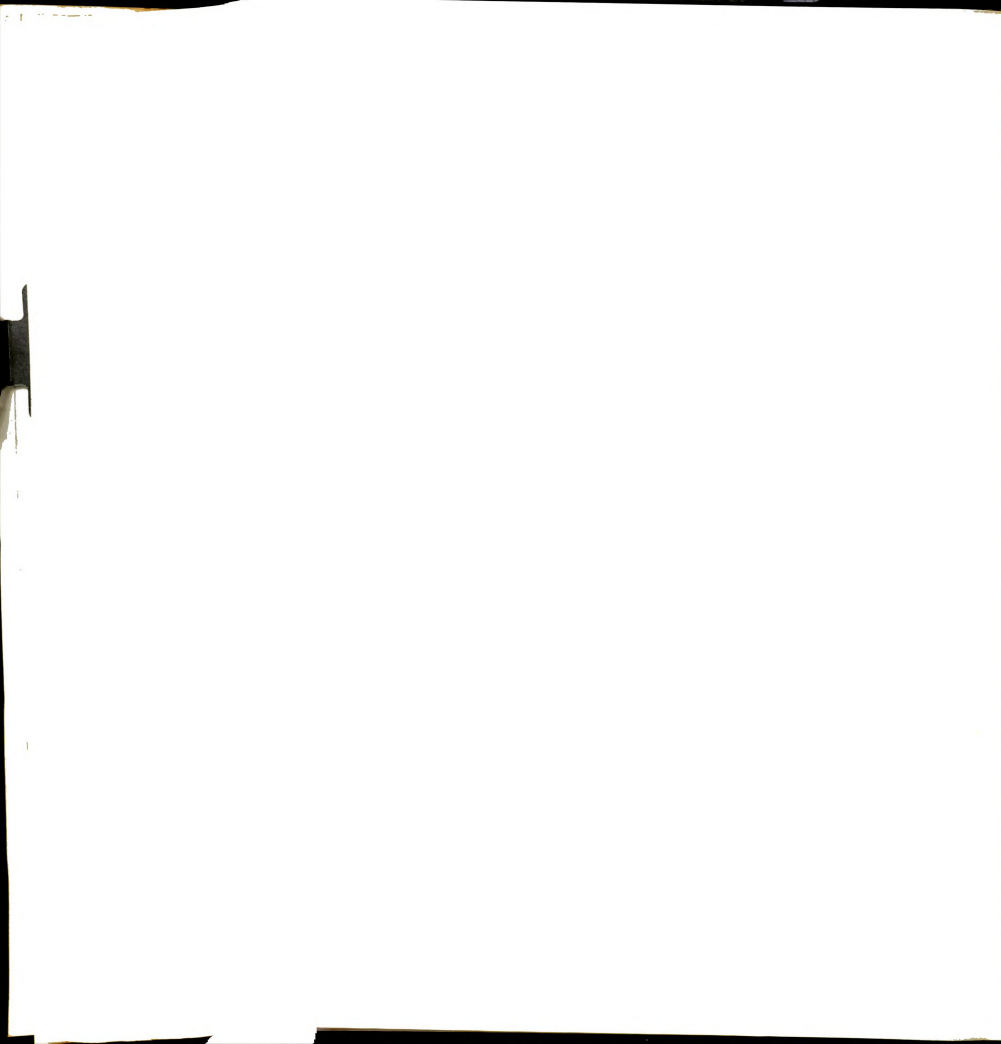


TABLE 4-1

Banks Grouped By Rates of Growth in Deposits (79)
 $\% = b/\bar{y}$, Mean = 5.7%, Median = 5.4%

<u>Group 1</u> <u>3.5% & Below=21</u>	<u>Group 2</u> <u>3.6-5.5%=40</u>	<u>Group 3</u> <u>5.6-7.5%=28</u>	<u>Group 4</u> <u>7.6% & Above=24</u>
16	1	2	4
17	10	3	12
18	15	5	21
24	19	6	23
27	22	7	30
48	25	8	32
49	26	9	37
63	28	11	38
68	29	13	45
72	31	20	47
75	34	43	51
78	35	46	53
82	39	64	54
103	40	67	74
115	42	73	79
120	50	76	83
128	57	81	84
129	58	87	86
134	59	93	91
135	60	95	98
152	61	96	110
	65	97	118
	66	111	132
	69	140	181
	85	145	
	90	151	
	94	160	
	99	192	
	101		
	102		
	108		
	113		
	116		
	125		
	126		
	127		
	147		
	193		
	301		
	302		

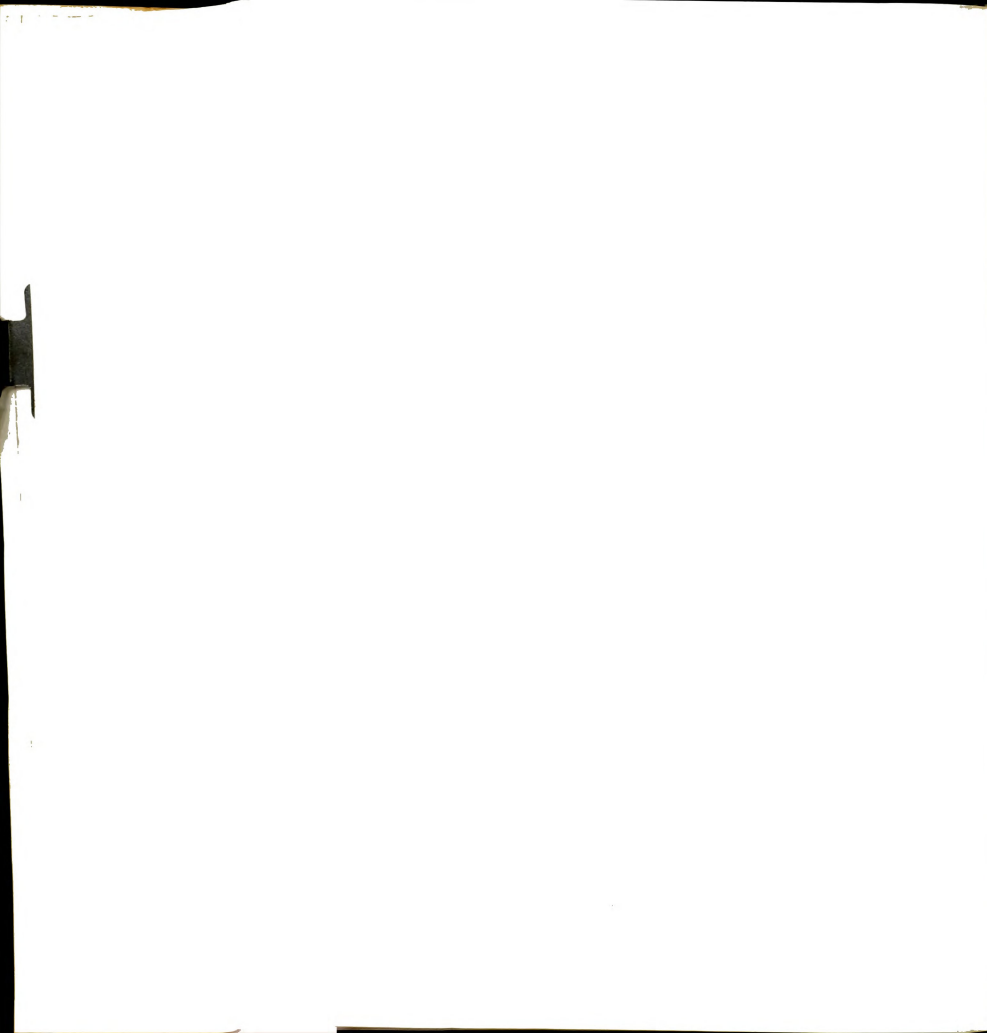


TABLE 4-2

Banks Grouped by Mean Over Time of Loans and Discounts
As a Per Cent of Assets (#7)

Mean = 46.6%, Median = 46.2%

<u>Group 1</u> <u>42% & Below = 27</u>	<u>Group 2</u> <u>43% - 49% = 55</u>	<u>Group 3</u> <u>50% & Above = 31</u>
4	3	1
8	7	2
16	9	5
22	13 95	6
24	15 98	10
31	19 99	11
34	23 103	12
39	25 110	17
60	26 113	18
64	27 115	20
72	28 118	21
81	29 128	37
82	30 135	40
83	32 140	45
87	35 145	46
90	38 160	47
96	42 192	49
97	43 193	54
101	48 301	57
111	50 302	63
116	51	67
120	53	76
125	58	79
129	59	84
151	61	102
152	65	108
181	66	126
	68	127
	69	132
	73	134
	74	147
	75	
	78	
	85	
	86	
	91	
	93	
	94	

TABLE 4-3

Banks Grouped by Mean of Payout Ratio (#17) Over Time

Mean = 46.6%, Median = 47.2%

<u>Group 1</u> <u>39% & Below = 24</u>	<u>Group 2</u> <u>40% - 54% = 66</u>	<u>Group 3</u> <u>55% & Above = 23</u>
10	2	1
18	3	6
21	4	9
23	5	13
34	7	19
38	8	20
45	11	25
46	12	27
54	15	28
64	16	40
82	17	50
83	22	57
111	24	59
118	26	61
120	29	75
128	30	84
129	31	85
135	32	96
140	35	125
151	37	126
152	39	132
160	42	145
181	43	193
302	47	
	48	
	49	
	51	
	53	
	58	
	60	
	63	
	65	
	66	
	67	
	68	
	69	
	72	
	73	



TABLE 4-4

Means of the Variables
Banks Grouped by Deposit Growth
Group 1

3.5% and below N = 21

<u>Var.</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>Code</u>
4	44.1	62.6	53.2	59.5	61.4	3
5	3.82	3.74	3.70	3.80	4.12	3
6	1.53	1.58	1.62	1.73	1.82	4
7	44.9	45.2	45.8	49.1	51.3	3
8	37.66	39.74	41.80	43.58	45.65	5
9	627	655	690	702	745	1
10	15.4	15.3	14.9	14.1	13.6	5
11	11.6	16.9	14.3	16.0	15.3	2
12	10.09	9.42	9.05	8.92	9.25	1
13	.82	.78	.75	.76	.78	4
14	63.7	61.5	61.1	61.7	63.2	3
15	114	157	130	141	140	1
16	8.04	5.98	7.20	6.58	6.86	3
17	41.4	43.5	43.7	45.6	44.1	2
18	3.64	2.64	3.09	2.94	3.00	3
19	498	483	467	854	842	5
20	0	0	0	0	.10	1
21	.33	.19	.14	.38	.33	3
22	.0	.14	.0	.10	.05	3
26	.62	.62	.67	.67	.67	4

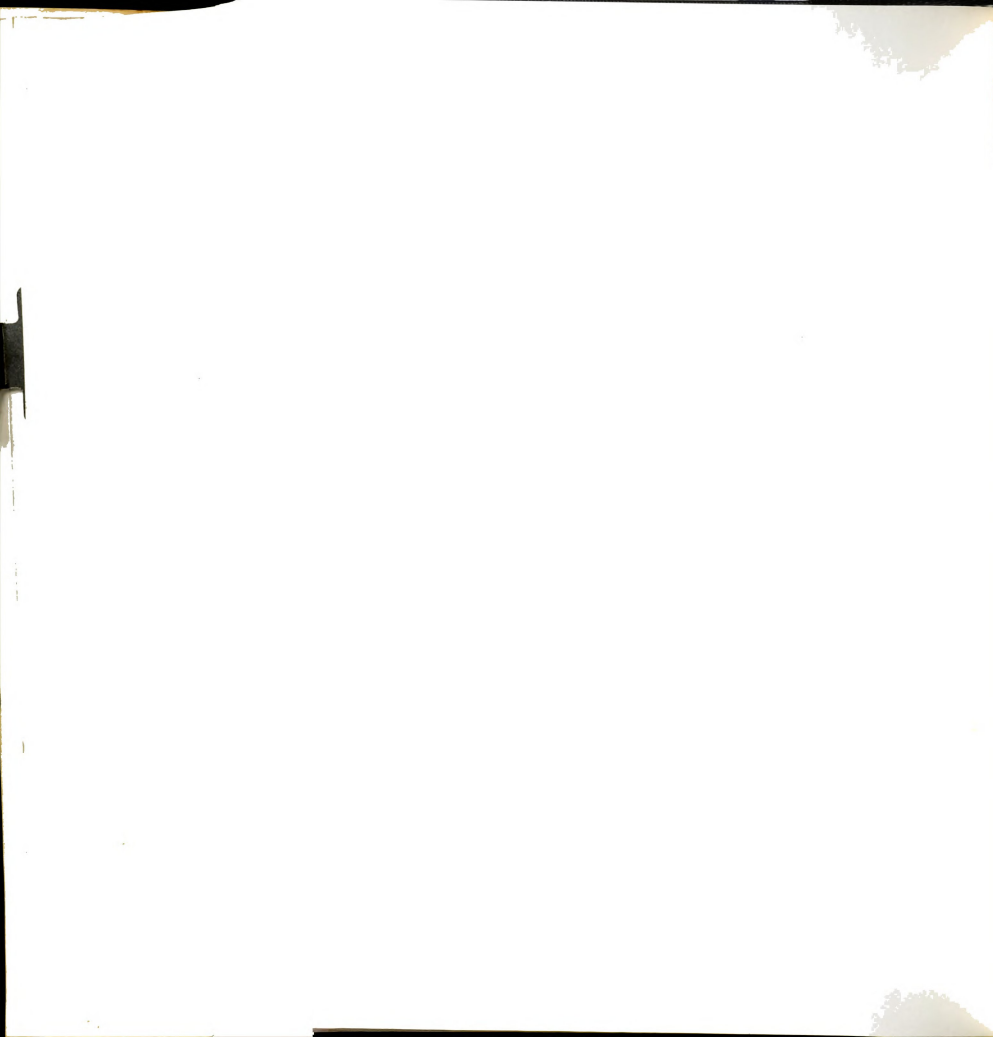


TABLE 4-5

Means of the Variables
Banks Grouped by Deposit Growth
Group 2

3.6 - 5.5% N = 40

<u>Var.</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>Code</u>
4	44.8	64.2	56.8	70.8	70.2	5
5	3.77	3.66	3.84	4.35	4.43	5
6	1.76	1.84	1.91	2.03	2.21	5
7	48.0	46.5	47.2	50.3	51.0	2
8	35.03	37.36	38.86	45.73	43.74	4
9	846	911	971	1032	1103	3
10	14.9	15.2	14.2	13.0	13.1	4
11	12.2	18.0	15.2	17.0	16.2	3
12	10.78	9.78	9.83	9.74	10.34	3
13	.87	.81	.80	.78	.82	5
14	64.4	62.2	60.9	62.8	62.9	1
15	132	178	151	164	167	3
16	7.43	5.70	6.80	6.38	6.37	1
17	47.8	51.8	51.5	50.9	51.0	5
18	3.98	3.01	3.46	3.13	3.25	5
19	508	457	434	408	401	2
20	.03	.03	.03	.05	.20	3
21	.23	.13	.13	.23	.18	2
22	.08	.10	.03	.03	.05	4
26	.53	.58	.63	.65	.68	5

TABLE 4-6

Means of the Variables
Banks Grouped by Deposit Growth
Group 3

5.6 - 7.5% N = 28

<u>Var.</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>Code</u>
4	46.0	65.1	55.8	54.9	69.1	4
5	3.52	3.49	3.51	3.18	4.14	4
6	1.31	1.36	1.46	1.50	1.72	3
7	45.0	44.8	46.4	49.0	50.8	1
8	32.18	35.06	37.21	33.27	42.05	3
9	1552	1734	1867	2013	2149	5
10	14.6	14.4	13.1	12.8	12.1	3
11	13.1	19.0	16.4	17.5	17.2	5
12	10.76	9.94	9.53	9.73	10.15	2
13	.84	.77	.71	.75	.74	3
14	62.0	59.7	59.9	60.6	62.9	2
15	140	189	157	172	174	4
16	7.42	5.55	6.93	6.35	6.45	2
17	42.5	44.1	46.5	47.1	46.3	4
18	3.31	2.35	2.88	2.75	2.74	2
19	557	513	502	467	426	3
20	.0	.0	.0	.04	.18	2
21	.43	.36	.43	.32	.39	5
22	.04	.0	.07	.07	.18	5
26	.43	.50	.50	.57	.54	3

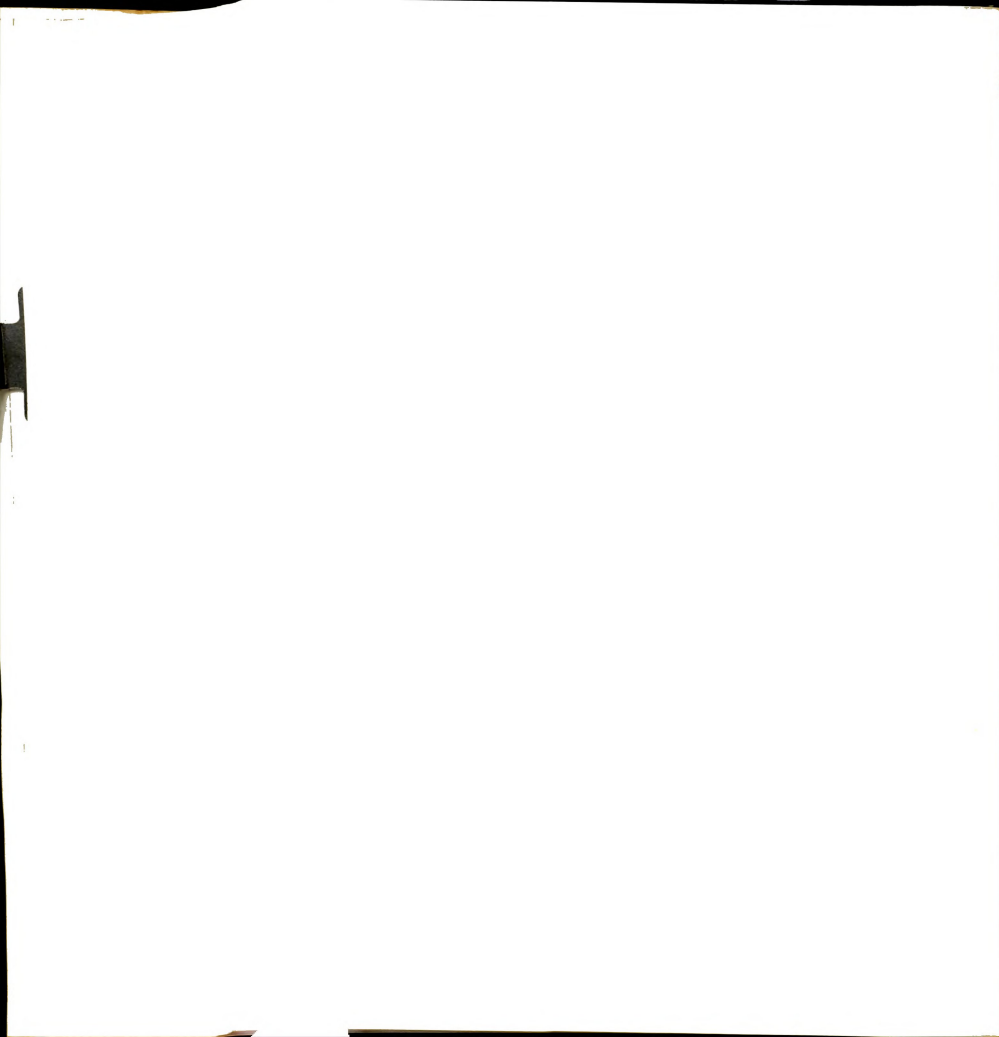


TABLE 4-7

Means of the Variables
Banks Grouped by Deposit Growth
Group 4

7.6% & Above N = 24

<u>Var.</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>Code</u>
4	30.1	46.1	40.6	50.3	51.5	1
5	2.38	2.48	2.61	2.84	3.13	1
6	.99	1.09	1.14	1.29	1.37	1
7	48.7	48.3	49.3	51.2	53.2	5
8	20.62	22.97	24.52	27.24	28.86	1
9	622	772	844	920	995	2
10	12.2	12.0	11.2	10.8	10.9	1
11	13.7	19.4	16.2	18.4	16.8	4
12	11.63	11.32	11.09	10.69	11.05	5
13	.81	.78	.74	.72	.72	1
14	64.2	62.4	61.8	62.7	64.6	5
15	161	216	177	197	187	5
16	7.31	5.60	7.17	6.54	7.00	4
17	42.1	44.1	44.1	45.3	43.3	1
18	3.28	2.38	2.81	2.54	2.65	1
19	529	471	445	407	548	4
20	.08	.04	.0	.08	.38	5
21	.29	.46	.33	.38	.38	4
22	.0	.08	.0	.04	.04	2
26	.33	.33	.46	.50	.50	2

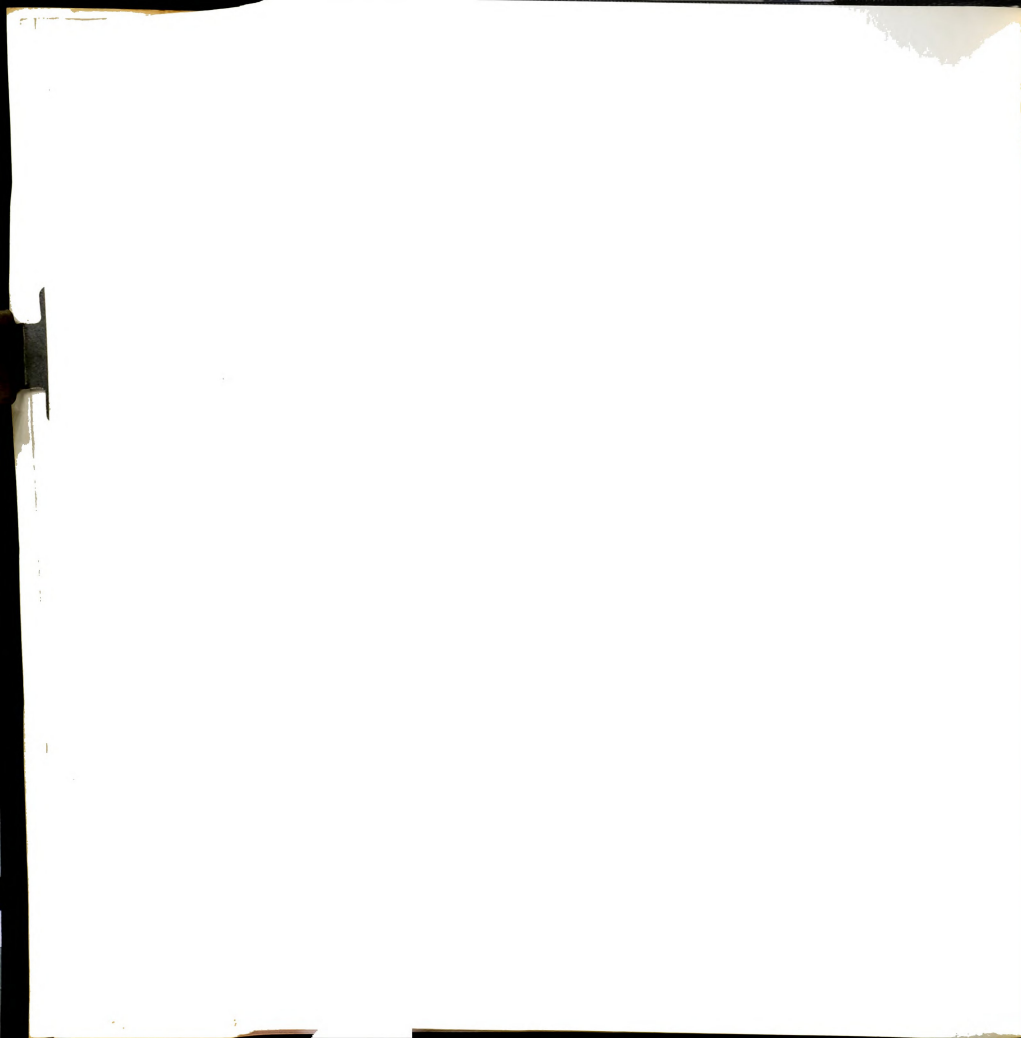


TABLE 4-8

Means of the Variables
Applicable For All Schemes
Group 5

Holding Companies = 9

<u>Var.</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>Code</u>		
						<u>A</u>	<u>B</u>	<u>C</u>
4	37.2	51.7	46.4	52.8	57.0	2	1	1
5	2.93	3.03	3.17	3.31	3.74	2	1	1
6	1.14	1.28	1.37	1.52	1.63	2	1	2
7	47.4	46.0	48.0	50.3	51.6	4	2	3
8	28.20	30.84	32.92	34.67	36.67	2	1	1
9	984	1076	1156	1211	1292	4	3	2
10	13.1	13.3	12.6	11.8	11.2	2	1	1
11	12.6	17.2	14.7	16.0	15.2	1	1	1
12	10.50	9.92	9.95	9.73	10.40	4	4	4
13	.76	.72	.70	.70	.74	2	2	1
14	63.4	62.3	61.9	63.2	63.8	4	3	3
15	135	175	144	153	154	2	1	1
16	8.21	6.54	8.02	7.57	7.52	5	4	4
17	40.3	43.5	44.6	47.5	45.2	3	2	2
18	3.22	2.57	3.12	3.07	3.12	4	4	3
19	458	433	425	415	398	1	1	1
20	.0	.0	.0	.0	.22	4	3	2
21	.33	.33	.11	.11	.11	1	1	1
22	.0	.0	.11	.11	.0	1	1	0
26	.11	.11	.0	.0	.0	1	1	0

A: Coding by Deposit Growth

B: Coding by Mean Loan/Asset Ratio

C: Coding by Mean Payout Ratio

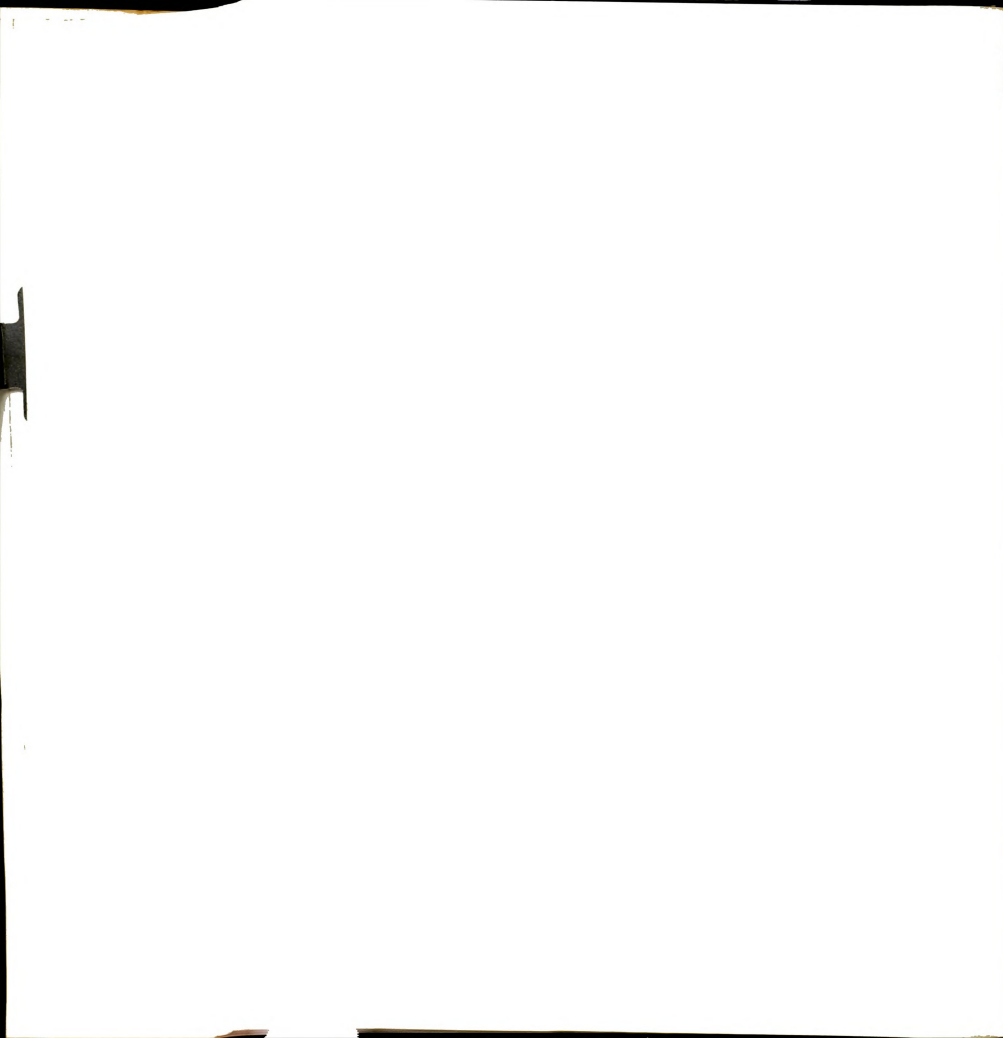


TABLE 4-10

Means of The Variables - Banks Grouped by Mean
Over Time of Loans and Discounts as Per Cent
of Assets - N = 27

Group #1 - 42% & Below

<u>Var.</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>Code</u>
1	81	81	81	81	81	
4	42.5	59.4	53.8	62.0	68.5	4
5	3.50	3.45	3.55	3.76	4.13	4
6	1.34	1.41	1.51	1.59	1.77	2
7	39.0	39.6	39.8	42.8	45.4	1
8	32.46	34.68	36.55	38.70	41.06	3
9	704	822	881	904	967	1
10	15.8	15.6	14.7	13.9	13.7	4
11	12.6	17.4	15.4	17.2	17.1	4
12	10.98	10.26	10.06	9.96	10.32	3
13	.81	.76	.73	.74	.77	3
14	58.9	57.0	56.2	57.2	59.1	1
15	136	178	156	171	177	4
16	7.71	6.07	7.28	6.57	6.36	1
17	39.4	42.1	43.1	43.2	43.9	1
18	3.25	2.47	2.88	2.63	2.62	1
19	645	594	570	508	481	3
20	0	0	0	0	.11	1
21	.37	.22	.19	.30	.37	3
22	0	.11	.04	0	.15	4
26	.41	.41	.41	.41	.41	2

TABLE 4-11

Means of the Variables - Banks Grouped by Mean
Over Time of Loans and Discounts as Per
Cent of Assets - Group #2 N = 55
43% - 49%

<u>Var.</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>Code</u>
1	80	80	80	80	80	
4	42.1	60.5	52.3	61.0	64.5	3
5	3.45	3.42	3.54	3.70	4.11	3
6	1.47	1.55	1.61	1.72	1.85	3
7	46.8	45.8	46.9	50.2	51.6	3
8	32.23	34.89	36.85	39.57	41.67	4
9	731	812	873	934	1000	2
10	14.6	14.6	13.7	12.9	12.5	3
11	12.3	18.0	15.2	17.0	15.9	2
12	10.60	9.88	9.74	9.67	10.25	2
13	.86	.79	.77	.78	.80	4
14	63.6	61.2	60.6	62.1	63.2	2
15	132	179	149	163	162	2
16	7.42	5.61	6.80	6.28	6.51	2
17	45.6	47.9	4.82	48.6	46.9	3
18	3.78	2.76	3.22	2.96	3.04	2
19	519	475	451	587	569	4
20	0	0	0	.06	.18	2
21	.22	.31	.18	.31	.22	2
22	.06	.09	.04	.09	.04	2
26	.49	.56	.67	.73	.73	4

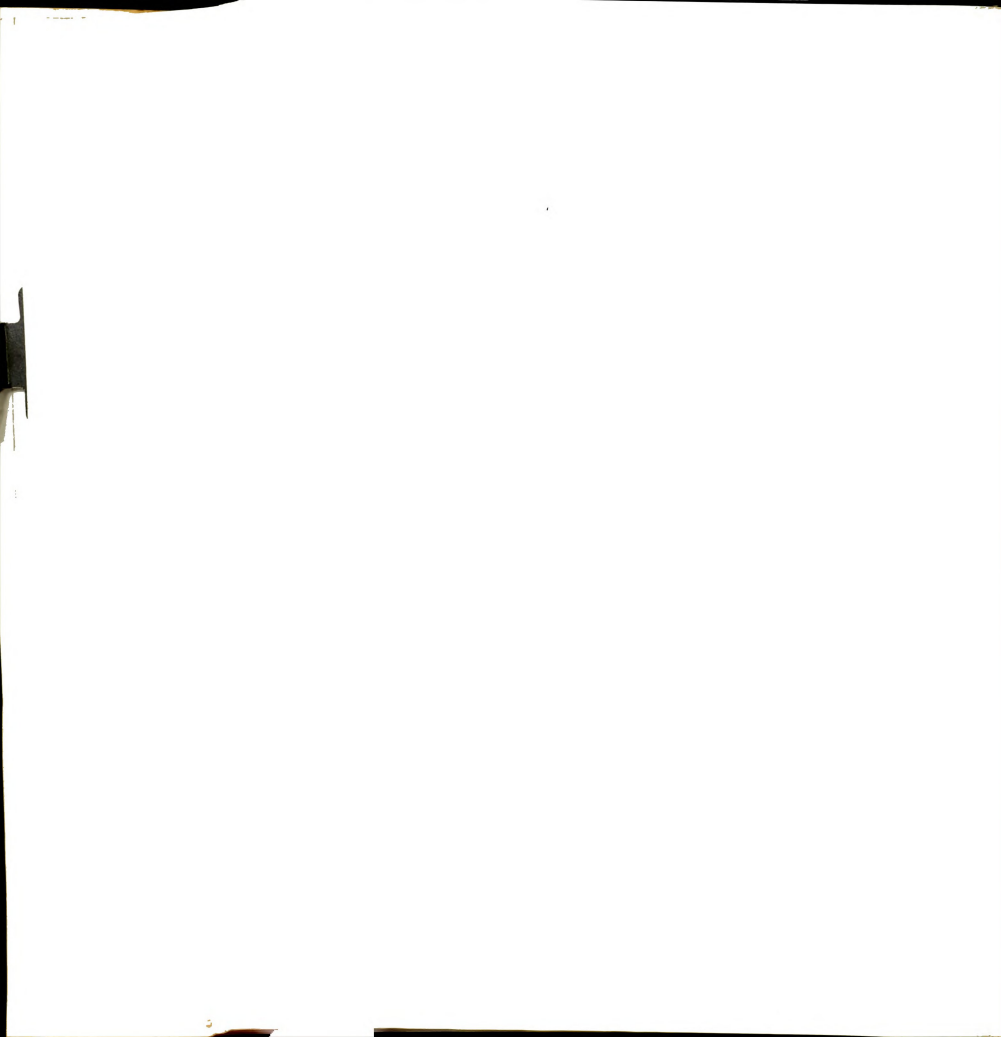


TABLE 4-12

Means of the Variables - Banks Grouped by Mean
Over Time of Loans and Discounts as Per
Cent of Assets - Group #3 N = 31
50% and Above

<u>Var.</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>Code</u>
1	56	56	56	56	56	
4	40.8	60.7	51.5	58.0	60.4	2
5	3.30	3.26	3.28	3.43	3.78	2
6	1.47	1.54	1.60	1.72	1.88	4
7	53.8	52.7	54.2	55.8	56.4	4
8	30.28	32.47	33.84	35.75	38.00	2
9	1490	1626	1744	1894	2022	4
10	12.7	12.8	11.9	11.2	11.4	2
11	13.1	19.7	16.3	17.7	16.6	3
12	11.09	10.28	9.96	9.85	10.16	1
13	.87	.80	.75	.73	.74	1
14	67.8	65.9	65.5	66.2	67.1	4
15	146	201	162	176	169	3
16	7.51	5.52	7.06	6.61	7.02	3
17	45.7	48.5	49.2	50.2	49.6	4
18	3.59	2.59	3.11	2.93	3.06	3
19	423	385	378	360	468	2
20	.10	.07	.03	.07	.36	4
21	.42	.23	.42	.32	.39	4
22	.03	.03	0	.03	.10	3
26	.52	.52	.52	.55	.55	3

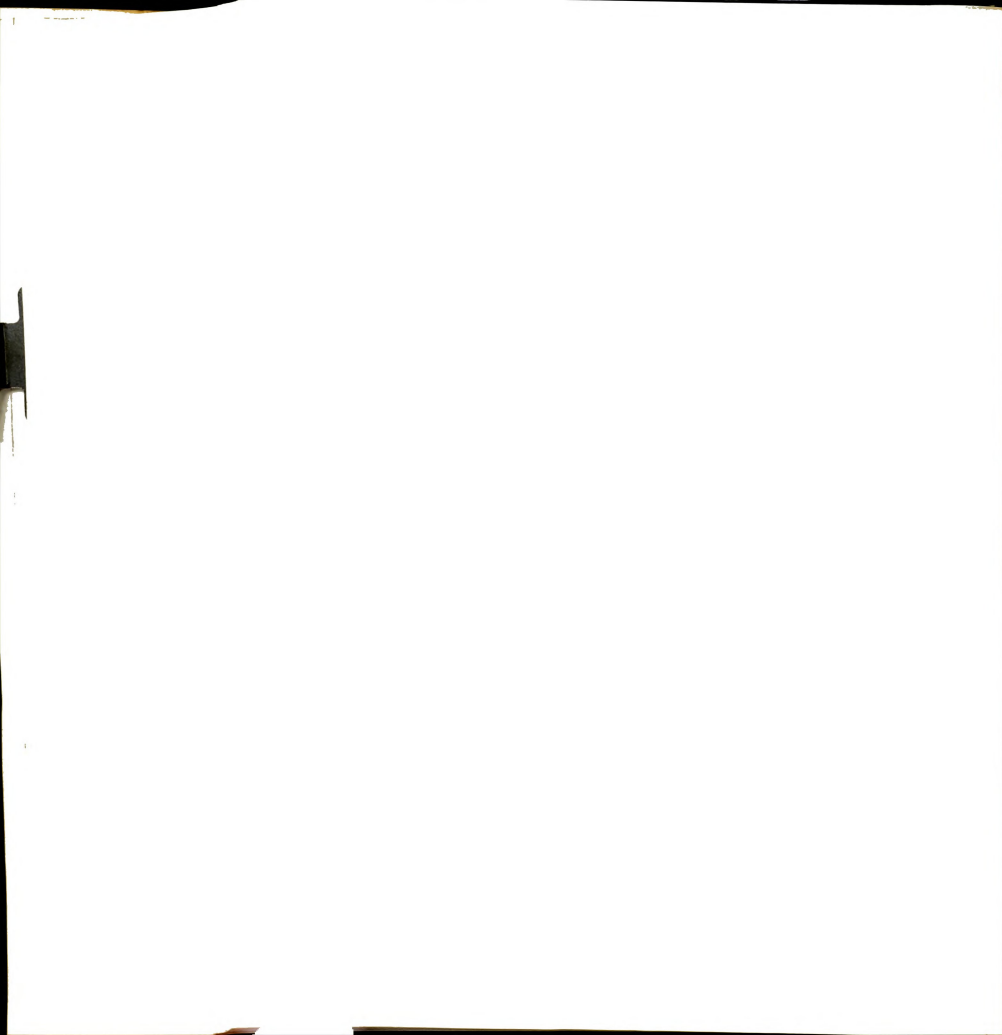


TABLE 4-14

Means of The Variables - Banks Grouped by Mean
Payout Ratio Over Time - Group #1, n = 24
39% and Below

<u>Var.</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>Code</u>
1	98	98	98	98	98	
4	51.0	70.5	60.1	68.7	72.8	4
5	4.28	4.21	4.18	4.38	4.79	4
6	1.09	1.12	1.22	1.33	1.44	1
7	46.0	46.3	46.6	49.0	50.5	1
8	37.43	40.33	42.93	46.12	49.24	4
9	530	580	634	663	700	1
10	14.2	13.8	13.1	12.7	12.4	3
11	12.1	16.7	14.6	16.3	15.9	2
12	11.66	11.11	10.55	10.22	10.25	2
13	.86	.81	.75	.75	.76	2
14	60.8	59.6	58.8	59.7	61.2	1
15	143	187	156	166	163	2
16	7.93	6.39	7.77	7.23	7.17	3
17	28.0	29.1	30.9	32.8	32.8	1
18	2.44	1.87	2.22	2.11	2.14	1
19	682	614	573	874	841	4
20	.08	.04	.0	.04	.08	1
21	.50	.29	.42	.50	.46	4
22	.0	.08	.04	.04	.04	2
26	.25	.25	.29	.29	.29	2

TABLE 4-15

Means of the Variables - Banks Grouped by Mean
Payout Ratio Over Time - Group #2, n = 66
40% - 54%

<u>Var.</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>Code</u>
1	68	68	68	68	68	
4	37.2	55.7	48.6	57.4	61.1	2
5	3.15	3.13	3.27	3.43	3.81	2
6	1.41	1.51	1.57	1.70	1.84	3
7	46.4	45.6	46.7	50.1	51.9	4
8	29.45	31.98	33.59	35.97	38.04	2
9	952	1077	1161	1250	1342	3
10	14.1	14.3	13.2	12.5	12.3	2
11	12.3	18.3	15.3	17.3	16.3	3
12	10.76	9.95	9.87	9.78	10.29	3
13	.84	.78	.75	.75	.76	3
14	64.5	62.1	61.7	63.1	64.6	4
15	132	182	151	169	168	3
16	7.75	5.68	7.02	6.32	6.57	2
17	45.3	48.4	48.5	49.4	48.0	3
18	3.83	2.76	3.25	2.97	3.04	2
19	501	465	447	422	405	2
20	.0	.0	.0	.03	.24	3
21	.26	.27	.18	.30	.29	3
22	.03	.11	.02	.06	.11	4
26	.50	.56	.62	.67	.67	3

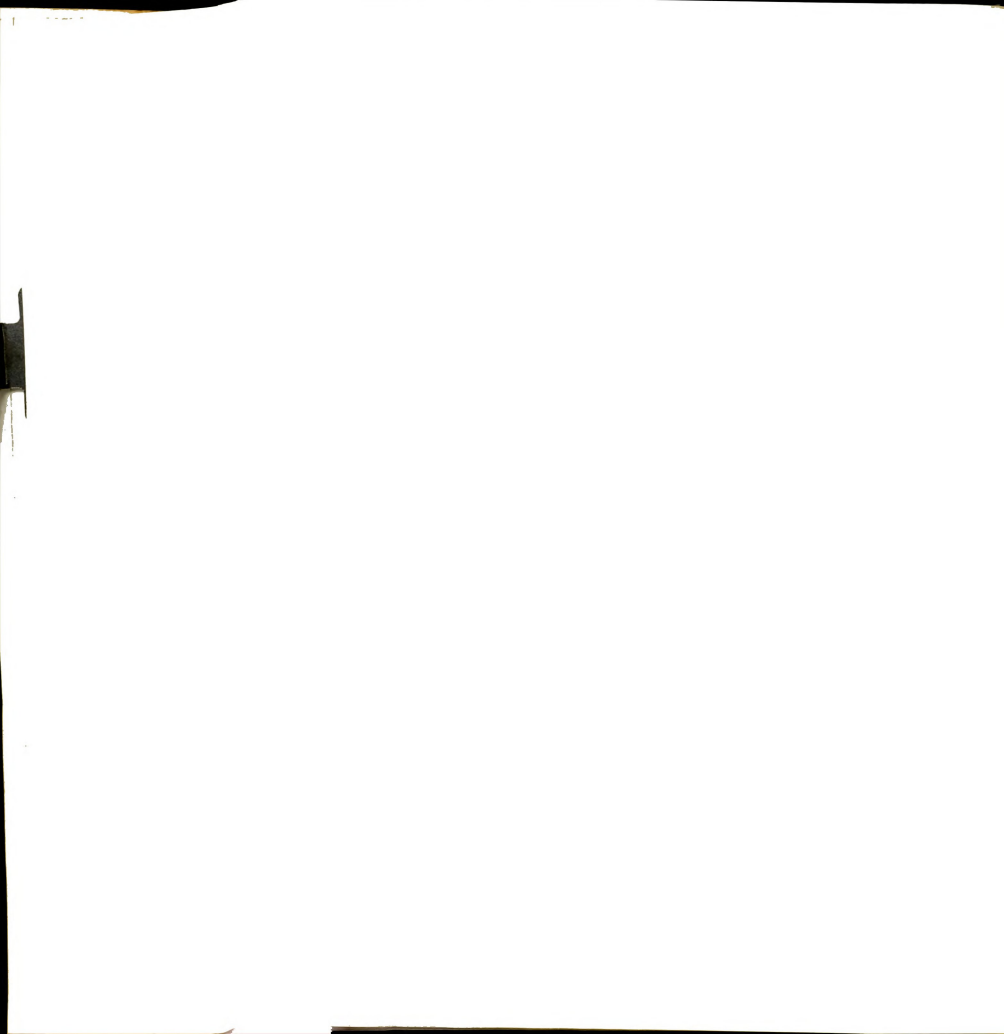


TABLE 4-16

Means of the Variables - Banks Grouped by Mean
Payout Ratio Over Time - Group #3, N = 23
55% and Above

<u>Var.</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>Code</u>
1	64	64	64	64	64	
4	45.6	62.7	55.5	60.5	64.8	3
5	3.31	3.24	3.31	3.46	3.83	3
6	1.88	1.94	1.99	2.02	2.25	4
7	49.1	47.7	49.2	50.6	51.2	2
8	32.41	34.05	35.45	36.89	38.53	3
9	1297	1403	1479	1568	1671	4
10	15.1	15.1	14.3	13.3	12.9	4
11	14.2	20.1	17.2	17.9	17.0	4
12	10.16	9.38	9.21	9.37	10.09	1
13	.86	.80	.78	.77	.81	4
14	64.2	61.8	60.8	61.5	61.6	2
15	144	190	160	171	173	4
16	6.43	5.00	6.07	5.97	6.17	1
17	57.7	60.3	60.7	58.6	58.5	4
18	4.16	3.11	3.62	3.42	3.53	4
19	419	377	378	360	517	3
20	.04	.04	.04	.09	.26	4
21	.26	.22	.26	.13	.17	2
22	.09	.0	.04	.04	.04	3
26	.65	.65	.70	.74	.74	4

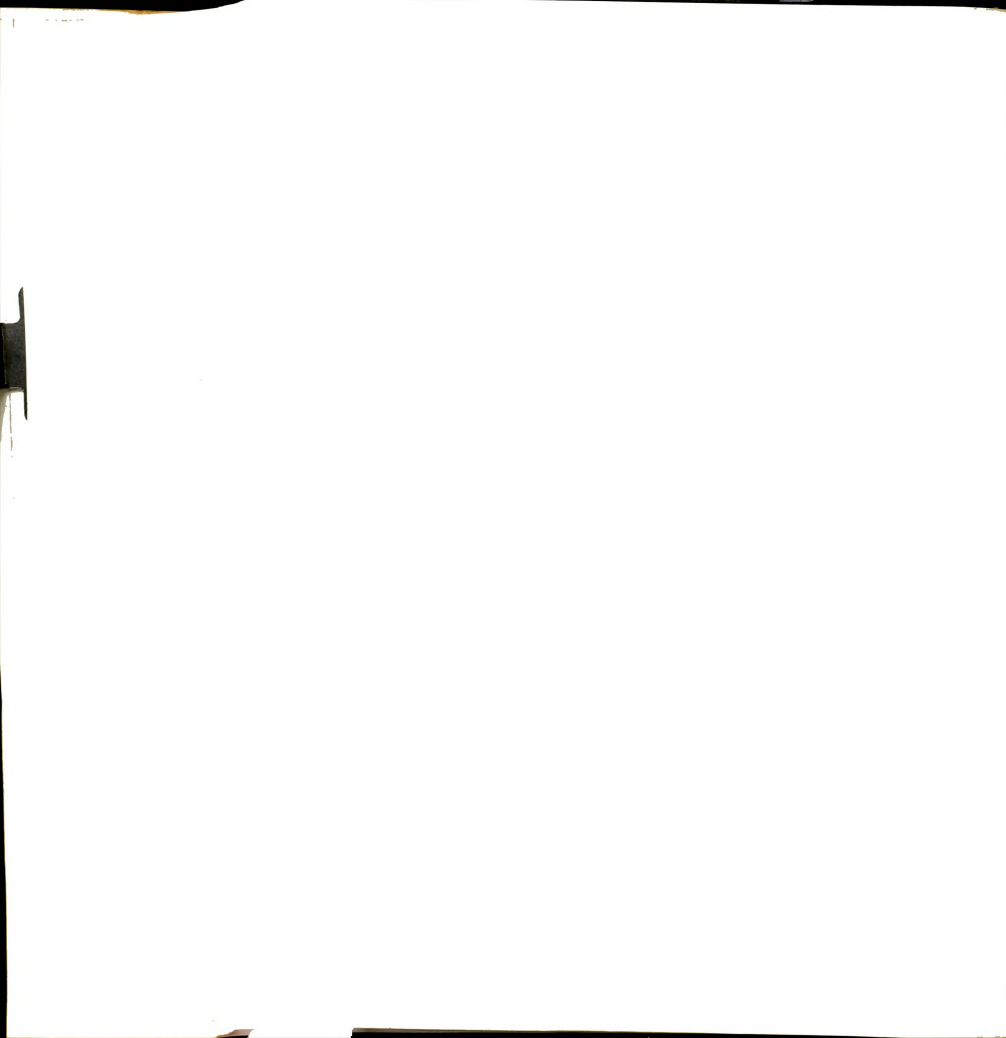


TABLE 4-18

Banks Grouped by Deposit Growth Group #1
r's, Beta's, Partial's, and R² Deletes

r's of #41 with

<u>Var.</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>Means</u>
37	.12	.16	.12	.22	.05	.13
39	-.09	-.01	.10	-.21	-.28	-.10
40	.08	-.00	-.10	.06	.44	.10
42	-.47	-.03	.07	-.20	-.24	-.17
47	.22	.18	.18	-.29	-.34	-.01
49	-.06	.03	-.17	.39	.51	.14
20	0	0	0	0	.42	.08
21	-.23	-.12	.17	.27	.29	.08
26	-.00	.08	-.03	-.30	-.12	-.08
43	-.31	.03	-.09	-.09	-.01	-.09
44	.16	.34	.17	.26	.04	.19
22	0	-.01	0	.01	.67	.13

Beta's

37	1.22	.11	.72	.77	.75	.71
39	.74	.03	.35	.28	-.07	.27
40	.77	.55	1.08	.89	.50	.76
42	.15	.45	.84	.99	-.02	.48
47	.36	.24	.08	-.02	-.07	.12
49	.61	.21	.05	.74	.49	.42
20					-.20	-.20
21					-.20	-.20
26					.11	.11
43	-1.41	-.59	-1.37	-1.57	-.62	-1.11
44	-.56	.60	.26	.21	-.55	0
22					.63	.63

Partial's

37	.50	.04	.28	.33	.30	.29
39	.47	.02	.25	.25	-.08	.18
40	.43	.24	.38	.43	.22	.34
42	.10	.24	.37	.39	-.01	.22
47	.32	.16	.04	-.01	-.07	.08
49	.41	.11	.03	.46	.44	.29
20					-.15	-.15
21					-.26	-.26
26					.12	.12
43	-.54	-.19	-.42	-.46	-.22	-.37
44	-.38	.31	.14	.11	-.33	-.03
22					.61	.61

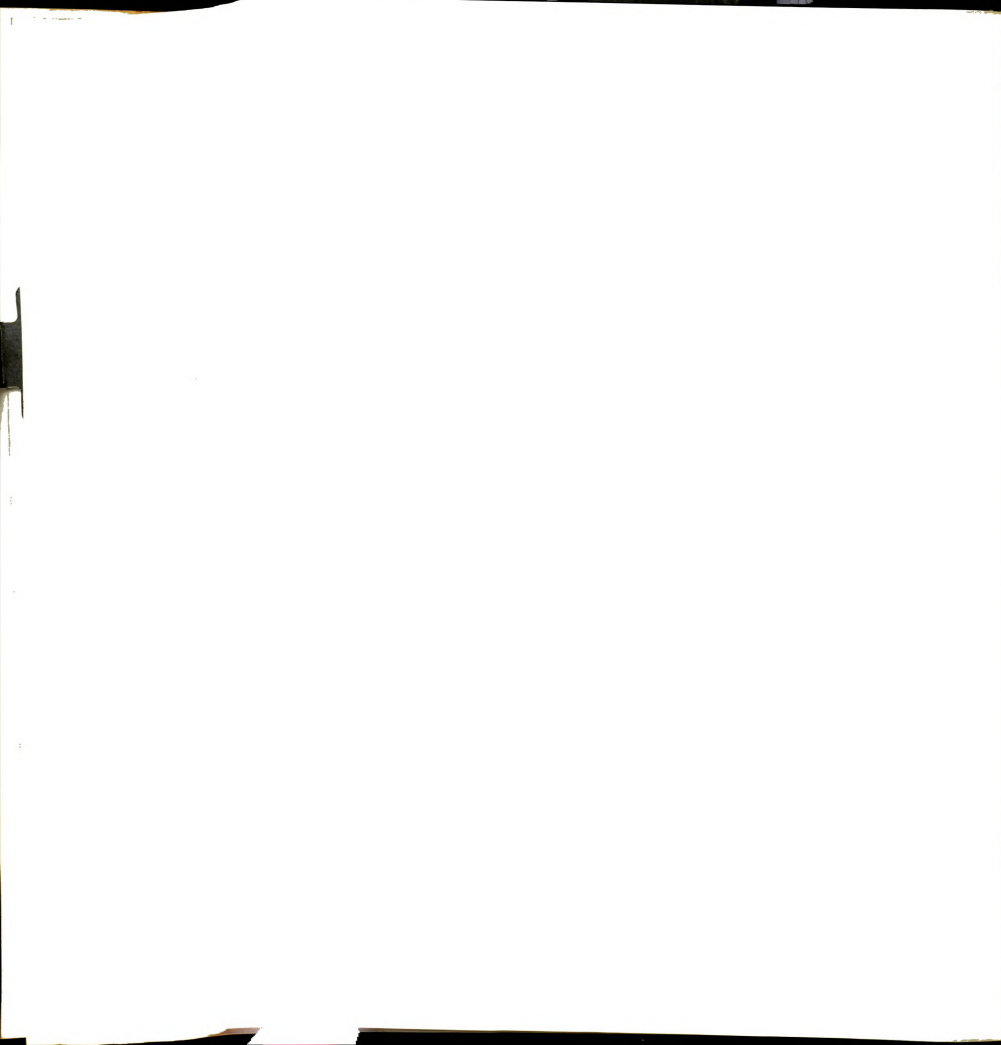


TABLE 4-18 (Continued)

Banks Grouped by Deposit Growth Group #1
r's, Beta's, Partial's, and R² Deletes

<u>Var.</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>
<u>R² Deletes</u>					
37	.287	.237	.168	.375	.774
39	.311	.238	.179	.405	.793
40	.346	.193	.102	.315	.783
42	.459	.190	.111	.341	.794
47	.403	.218	.231	.442	.793
49	.357	.229	.231	.291	.746
20					.789
21					.780
26					.791
43	.250	.210	.069	.289	.784
44	.376	.155	.216	.436	.768
22					.671
R	.681	.488	.481	.665	.891
R, D.F.	.328	0	.000	.266	.696
R ²	.464	.238	.232	.443	.794
R ² D.F.	.107	-.270	-.281	.071	.485



TABLE 4-19

Banks Grouped by Deposit Growth Group #2
r's, Beta's, Partials, and R² Deletes

r's of #41 with

<u>Var.</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>Means</u>
37	-.05	.05	-.06	-.22	-.29	-.11
39	.39	.48	.50	.40	.29	.41
40	.29	.13	.19	.18	.27	.21
42	.01	.07	.10	-.15	-.14	-.02
47	.41	.16	.27	.35	.55	.35
49	.39	.48	.49	.52	.45	.47
20	.19	.12	.15	-.04	.11	.11
21	.19	.21	.02	.06	.15	.13
26	.23	.21	.27	.30	.22	.25
43	.33	.21	.29	-.06	.13	.18
44	-.16	-.10	-.20	-.15	-.20	-.16
22	.10	-.03	.05	.07	-.04	.03

Beta's

37	.22	.54	.38	.21	-.01	.23
39	.21	.30	.43	.23	.13	.26
40	.45	.32	.44	.38	.17	.37
42	.45	.51	.43	.10	.27	.35
47	.64	.42	.36	.31	.64	.47
49	.54	.72	.56	.38	.53	.55
20			.11	-.11	-.04	-.01
21			.26	.21	.01	.16
26			.03	-.09	-.06	-.04
43	-.24	-.55	-.37	-.33	-.52	-.40
44	-.07	-.36	-.34	-.26	-.28	-.26
22			.01	-.01	-.10	-.03

Partials

37	.18	.42	.29	.15	-.01	.21
39	.27	.37	.48	.22	.14	.30
40	.20	.18	.20	.21	.10	.18
42	.29	.32	.32	.08	.20	.24
47	.63	.44	.41	.30	.65	.49
49	.55	.62	.58	.37	.48	.52
20			.17	-.13	-.04	0
21			.30	.22	.01	.18
26			.03	-.08	-.07	-.04
43	-.13	-.27	-.17	-.21	-.25	-.21
44	-.07	-.35	-.32	-.22	-.25	-.24
22			.02	-.01	-.14	-.05

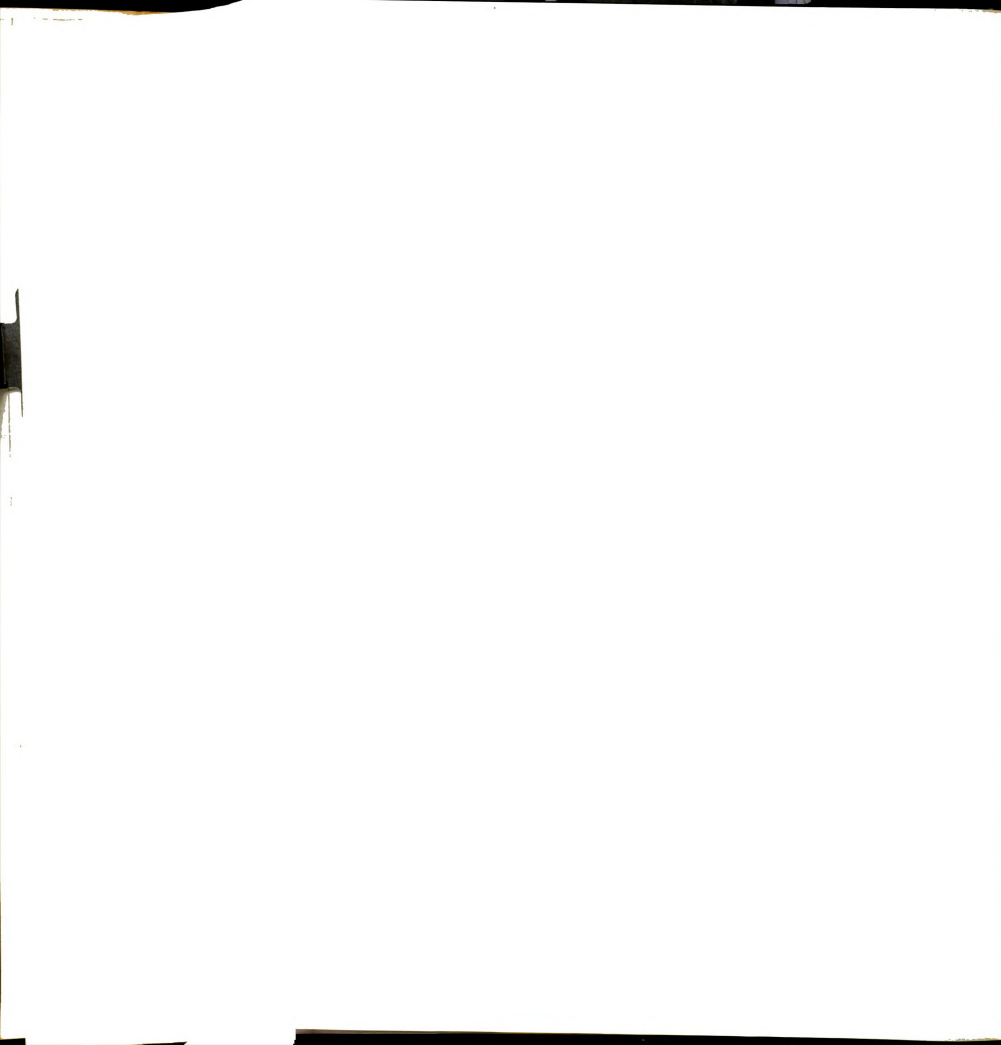


TABLE 4-19 (Continued)

Banks Grouped by Deposit Growth Group #2
r's, Beta's, Partial's, and R² Deletes

<u>Var.</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>
<u>R² Deletes</u>					
37	.597	.421	.646	.442	.611
39	.580	.373	.578	.425	.603
40	.594	.181	.661	.428	.607
42	.573	.316	.639	.450	.594
47	.355	.435	.609	.401	.323
49	.443	.623	.511	.366	.493
20			.665	.444	.610
21			.643	.425	.611
26			.674	.450	.609
43	.604	-.268	.665	.429	.586
44	.608	-.352	.639	.427	.586
22			.675	.453	.603
R	.781	.761	.821	.673	.782
R, D.F.	.714	.686	.728	.458	.662
R ²	.610	.579	.675	.453	.611
R ² D.F.	.510	.470	.530	.210	.438

TABLE 4-20

Banks Grouped by Deposit Growth Group #3
r's, Beta's, Partial's, and R² Deletes

r's of #41 with

<u>Var.</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>Means</u>
37	-.14	-.30	-.41	-.33	-.27	-.29
39	.14	.30	.19	.15	.12	.18
40	.21	.21	.40	.36	.27	.29
42	-.43	-.26	-.47	-.19	-.24	-.32
47	.36	.45	.44	.17	.33	.35
49	.13	.27	.34	.38	.36	.30
20	0	0	0	.0	-.14	-.14
21	.05	.07	.05	.25	-.20	.04
26	.10	.28	.25	.29	.04	.19
43	-.26	-.13	-.15	.19	.01	-.07
44	.09	.04	-.15	-.15	.15	0
22	-.21	0	-.17	.44	.21	.05

Beta's

37	-.06	-.46	-.70	-.46	-.56	-.45
39	.17	.26	.22	.08	.22	.19
40	.31	-.01	-.07	.19	.22	.13
42	-.11	-.17	-.54	-.01	-.42	-.25
47	.13	.29	.26	.30	.18	.23
49	.05	.22	.32	.41	.35	.27
20				-.08	-.22	-.15
21				.36	.03	.20
26				.15	-.30	-.07
43	-.35	-.04	-.0	.18	-.12	-.07
44	.03	.20	.26	.40	.65	.31
22				.23	.31	.27

Partial's

37	-.03	-.27	-.55	-.32	-.40	-.31
39	.16	.28	.35	.07	.25	.22
40	.13	-.01	-.05	.07	.11	.05
42	-.05	-.09	-.43	-.01	-.29	-.17
47	.10	.26	.35	.26	.23	.24
49	.05	.24	.48	.45	.42	.33
20				-.10	-.18	-.14
21				.40	.04	.22
26				.14	-.27	-.07
43	-.14	-.02	-.0	.08	-.10	-.04
44	.02	.17	.31	.34	.64	.30
22				.21	.41	.31

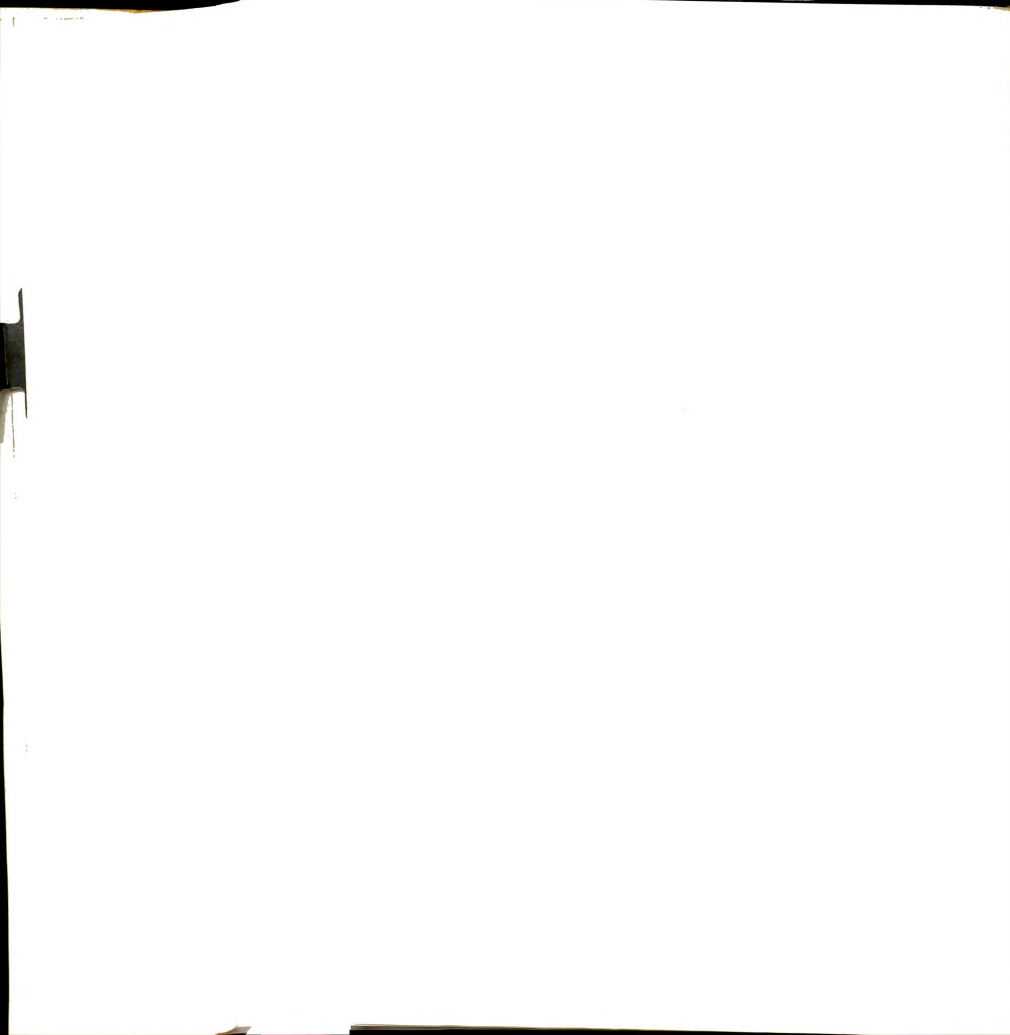


TABLE 4-20 (Continued)

Banks Grouped by Deposit Growth Group #3
r's, Beta's, Partial's, and R² Deletes

<u>Var.</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>
<u>R² Deletes</u>					
37	.289	.413	.626	.605	.636
39	.270	.409	.702	.644	.672
40	.278	.456	.737	.644	.689
42	.288	.452	.676	.645	.666
47	.283	.418	.700	.619	.676
49	.288	.423	.659	.557	.625
20				.642	.683
21				.578	.692
26				.639	.669
43	.274	.456	.737	.643	.690
44	.289	.440	.709	.600	.480
22				.629	.633
R	.538	.676	.859	.803	.832
R, D.F.	0	.477	.792	.602	.668
R ²	.289	.456	.737	.645	.693
R ² , D.F.	-.010	.228	.627	.362	.447

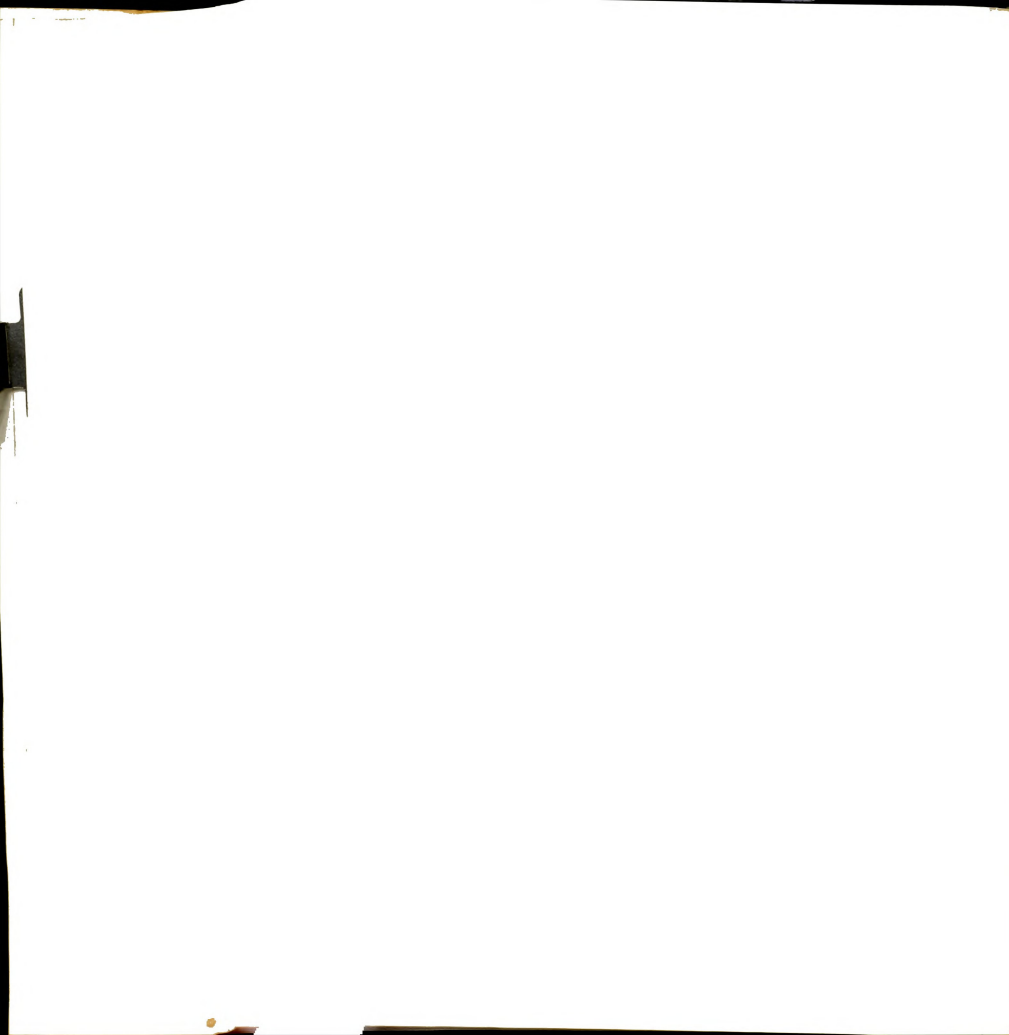


TABLE 4-21

Banks Grouped by Deposit Growth Group #4
r's, Beta's, Partial's, and R² Deletes

r's of #41 with

<u>Var.</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>Means</u>
37	.22	.30	.49	.56	.34	.38
39	0	.38	.33	.12	-.05	.16
40	-.39	-.49	-.37	-.37	-.25	-.37
42	-.09	.03	.20	.34	.49	.19
47	.18	.25	.12	.07	-.02	.12
49	.11	-.02	-.02	.28	.14	.10
20	-.17	.12	0	.20	.07	.04
21	-.12	.16	.32	.09	-.14	.06
26	.30	.46	.33	.14	.05	.26
43	-.26	-.15	.08	.15	.16	0
44	.41	.31	.32	.61	.37	.40
22	0	-.27	0	.15	.57	.09

Beta's

37	-.37	-.12	.25	-.12	.38	0
39	-.15	.33	.38	.11	.12	.16
40	-.65	-.77	-.45	-.82	.28	-.48
42	-.18	-.26	.32	.11	.84	.17
47	.14	.41	.46	-.11	.09	.20
49	.07	.00	-.12	-.13	-.19	-.07
20				.34	-.57	-.12
21				-.23	-.36	-.30
26				.16	-.15	0
43	.04	.50	.27	.39	-.67	.11
44	.47	.08	.10	.58	.23	.29
22				.22	.61	.41

Partial's

37	-.14	-.09	.19	-.12	.41	.05
39	-.17	.41	.50	.17	.17	.22
40	-.19	-.38	-.28	-.54	.16	-.25
42	-.05	-.11	.22	.08	.49	.13
47	.15	.34	.47	-.13	.13	.19
49	.07	.00	-.19	-.18	-.29	-.12
20				.29	-.38	-.05
21				-.30	-.45	-.38
26				.20	-.21	0
43	.01	.18	.15	.29	-.31	.06
44	.41	.08	.11	.56	.31	.29
22				.30	.70	.50



TABLE 4-21 (Continued)

Banks Grouped by Deposit Growth Group #4
r's, Beta's, Partial's, and R² Deletes

<u>Var.</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>
<u>R² Deletes</u>					
37	.390	.499	.580	.754	.706
39	.385	.400	.460	.751	.747
40	.381	.419	.560	.659	.748
42	.401	.497	.574	.756	.676
47	.389	.438	.482	.754	.750
49	.400	.503	.583	.749	.731
20				.736	.712
21				.734	.693
26				.747	.743
43	.402	.485	.585	.735	.729
44	.285	.500	.590	.647	.727
22				.734	.516
R	.634	.709	.771	.870	.868
R, D.F.	.289	.487	.615	.702	.697
R ²	.403	.503	.595	.758	.754
R ² , D.F.	.084	.238	.378	.493	.486

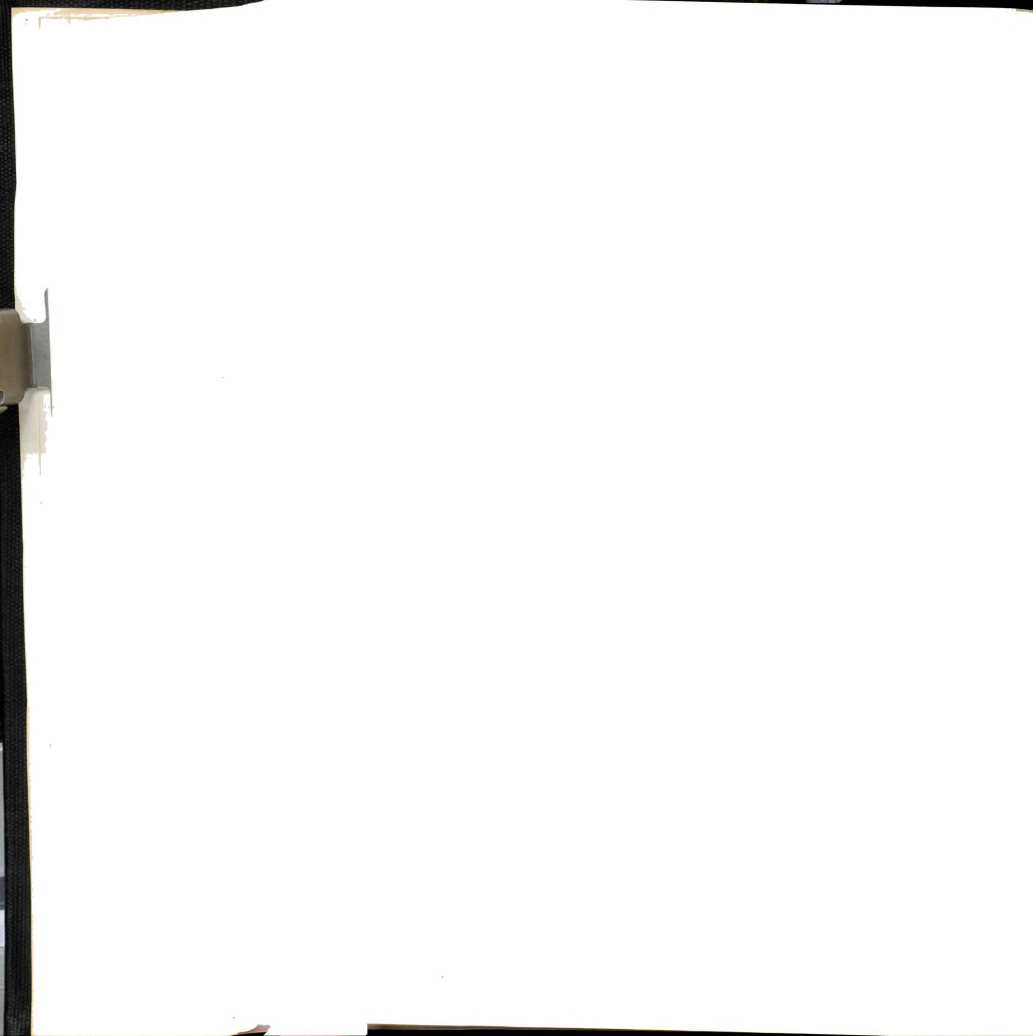


TABLE 4-22

Holding Companies, Group #5
r's and Beta's

r's of #41 with

<u>Var.</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>Means</u>
37	.03	.14	.03	-.13	-.55	-.10
39	-.04	.13	.20	.20	.10	.12
40	-.53	.09	.25	.33	.63	.15
42	.55	.39	.26	-.01	-.32	.17
47	.08	-.01	-.22	-.40	-.53	-.22
49	-.10	.09	.16	.29	.10	.11
20	0	0	0	0	-.33	-.33
21	.79	.58	.40	.44	.54	.55
26	-.31	-.02	0	0	0	-.07
43	.33	.70	.62	.42	.26	.46
44	-.10	-.19	-.37	-.33	-.40	-.28
22	0	0	.19	-.14	0	.01

Beta's

37	9.98	-3.57	2.67	-3.43	-2.83
39	-.81	-.53	.51	-.54	.08
40	-2.89	-2.36	3.83	-10.47	.52
42	.30	-3.47	1.56	-12.60	-.23
47	-2.34	-.04	-1.12	-1.52	1.59
49	-.90	-.04	-1.59	1.41	-.71
20					
21					
26					
43	-5.66	5.19	-.86	7.28	1.26
44	-9.21	2.62	-.04	.41	.94
22					

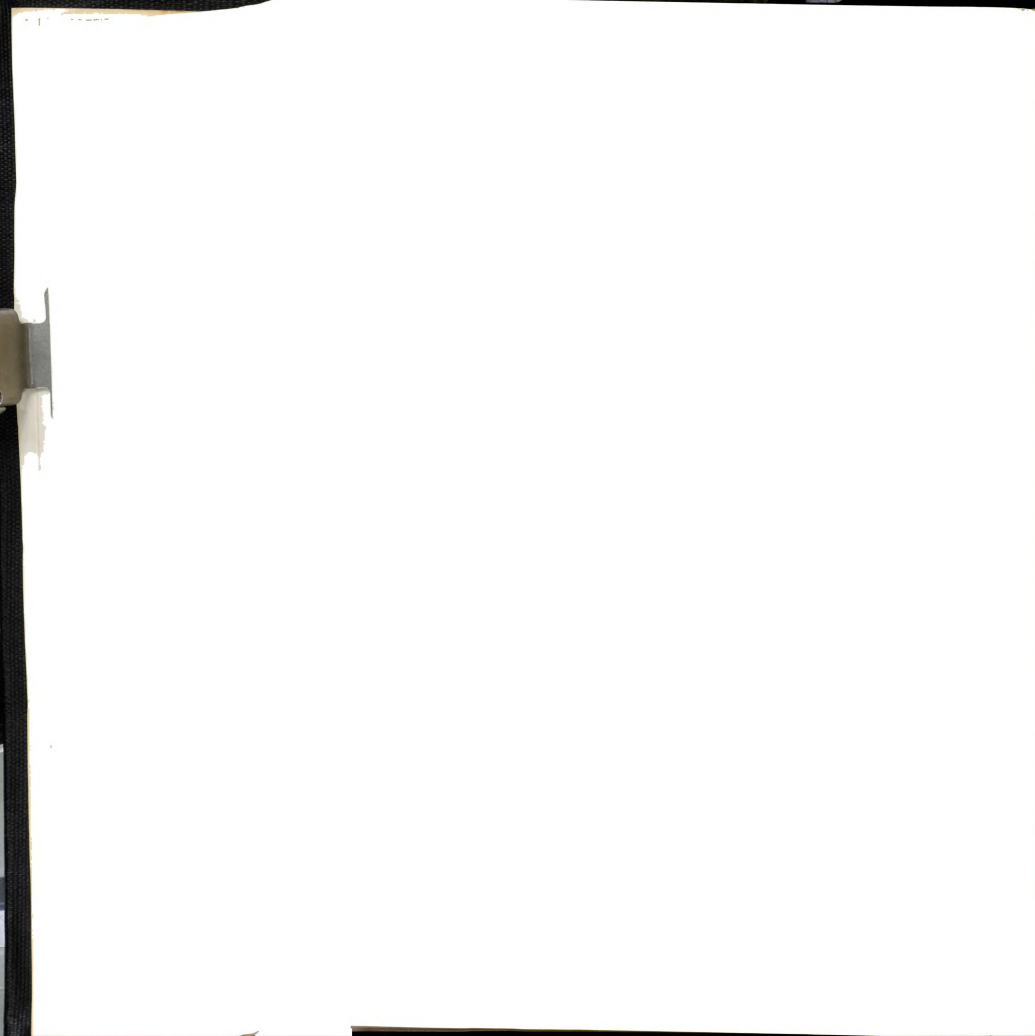


TABLE 4-23

Banks Grouped by Mean of Loans and Discounts/Assets Over
Time, Group #1, r's, Beta's, Partial's and R² Deletes
42% and Below n = 27

r's of #41 with

<u>Var.</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>Means</u>
37	-.17	-.11	-.20	-.12	-.22	-.17
39	-.01	.20	.01	-.02	-.27	-.01
40	.18	.03	.30	.31	.34	.23
42	-.29	-.11	-.02	-.02	.04	-.08
47	.32	.28	.23	.30	.39	.30
49	.26	.27	.36	.37	.23	.30
20	0	0	0	0	-.27	-.27
21	-.27	-.05	.39	-.11	.09	.01
26	-.27	-.02	-.15	-.02	-.31	-.15
43	-.42	-.19	.14	.14	.37	0
44	.02	-.06	-.13	-.08	-.11	-.07
22	0	-.22	-.07	0	.19	-.02

Beta's

37	.01	-.11	-.28	.36	-.12	-.03
39	.37	.39	.33	.50	.04	.33
40	-.11	-.21	-.58	.51	-.51	-.18
42	.08	.13	-1.11	.25	-.52	-.23
47	.68	.69	.30	.39	.59	.53
49	.55	.59	.63	.63	.47	.51
21	-.06	.26	.40	.41	-.04	.19
26	-.61	-.49	-.63	-.59	-.70	-.60
43	-.33	-.16	1.10	.17	.61	.28
44	-.14	-.16	-.26	-.25	.13	-.14

Partial's

37	.01	-.08	-.22	.24	-.10	-.03
39	.30	.26	.26	.30	.03	.23
40	-.06	-.09	-.25	.14	-.31	-.11
42	.03	.03	-.38	.07	-.32	-.11
47	.57	.50	.32	.31	.55	.45
49	.56	.50	.63	.49	.54	.54
21	-.08	.28	.49	.38	-.05	.20
26	-.44	-.30	-.43	-.31	-.46	-.39
43	-.18	-.05	.42	.06	.44	.14
44	-.19	-.15	-.31	-.22	.14	-.15

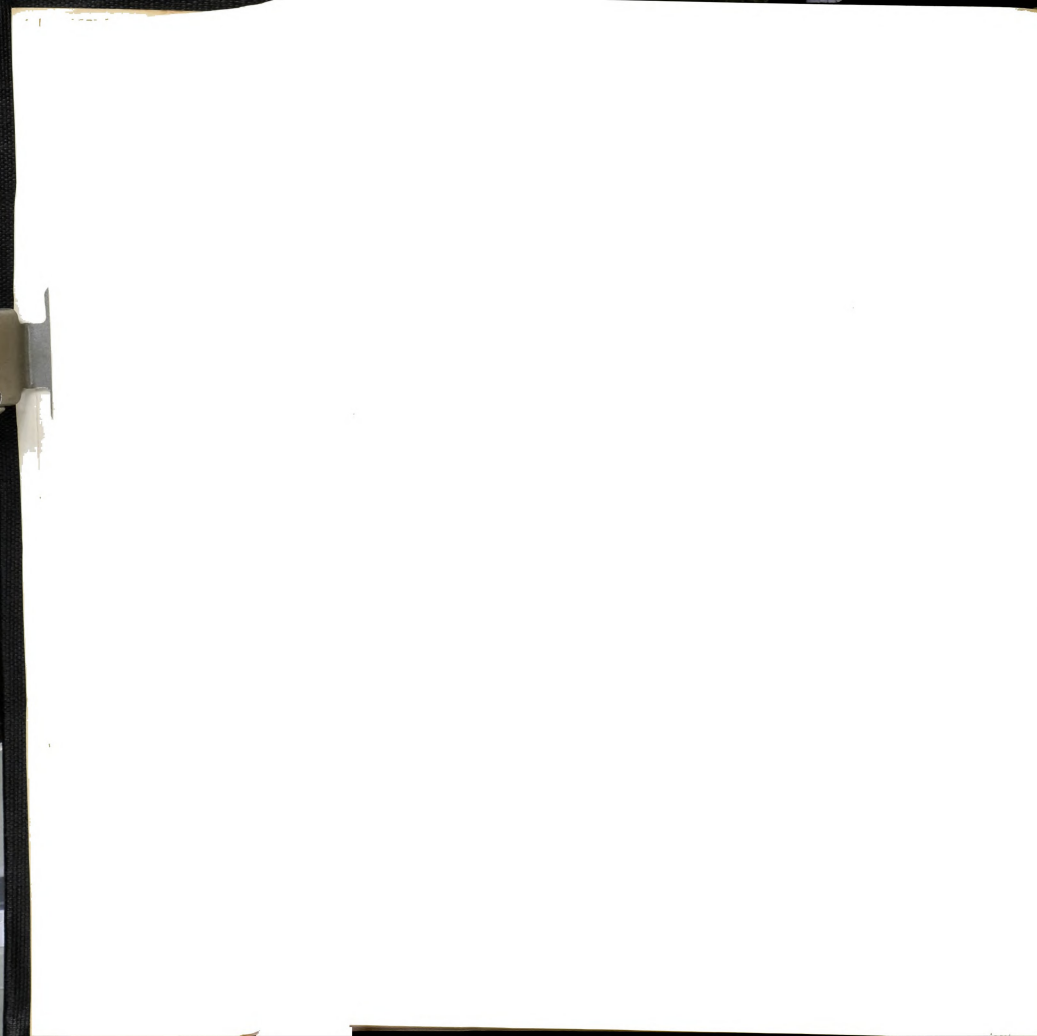


TABLE 4-23 (Continued)

Banks Grouped by Mean of Loans and Discounts/Assets Over
Time, Group #1, r's, Beta's, Partials and R² Deletes
42% and Below n = 27

<u>Var.</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>
<u>R² Deletes</u>					
37	.629	.455	.619	.422	.581
39	.593	.418	.610	.402	.585
40	.627	.453	.613	.443	.540
42	.628	.457	.576	.452	.537
47	.450	.282	.595	.395	.402
49	.463	.281	.396	.284	.411
21	.627	.411	.521	.362	.584
26	.539	.403	.552	.397	.472
43	.616	.456	.560	.453	.487
44	.615	.445	.597	.427	.577
R	.793	.677	.798	.674	.765
R, D.F.	.630	.345	.640	.337	.571
R ²	.629	.458	.636	.455	.585
R ² D.F.	.397	.119	.409	.114	.325

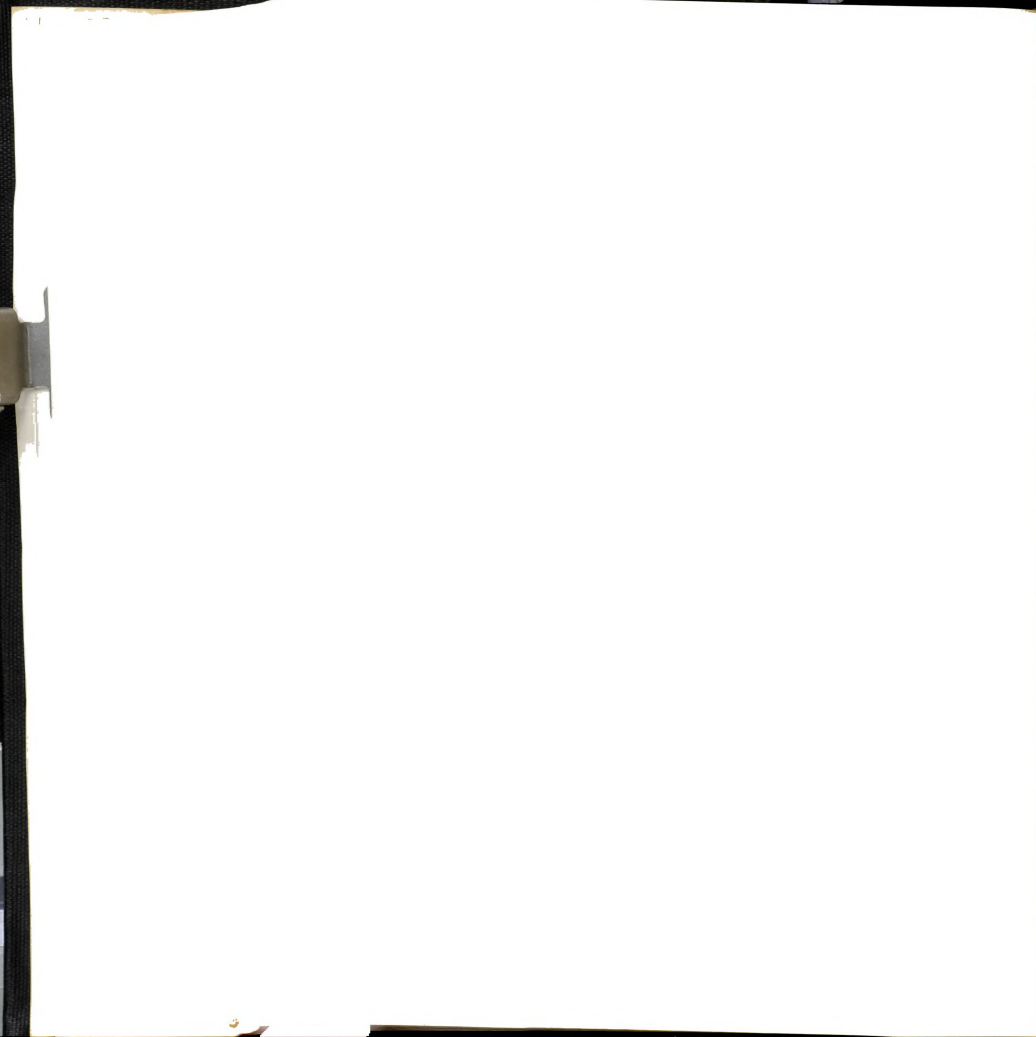


TABLE 4-24

Banks Grouped by Means of Loans and Discounts/Assets Over
Time, Group #2, r's, Beta's, Partials, and R² Deletes

43% - 49%, n = 55

r's of #41 with

<u>Var.</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>Means</u>
37	.13	-.03	.01	.01	-.08	.0
39	.26	.47	.39	.31	.26	.34
40	-.04	-.01	-.11	-.08	.02	-.04
42	-.05	.13	.10	.05	-.04	.04
47	.22	.24	.29	.06	.11	.18
49	.04	.21	.14	.37	.39	.23
20	0	0	0	.14	.14	.14
21	.26	.18	.09	.29	-.03	.16
26	.24	.32	.25	.19	.14	.23
43	.02	.14	.02	-.05	-.02	.02
44	-.07	-.06	-.14	-.04	-.09	-.08
22	-.07	.02	.02	.26	.07	.06

Beta's

37	.03	.04	.00	.18	.06	.06
39	.11	.29	.21	.17	.18	.19
40	-.47	-.13	-.41	.09	.12	-.16
42	-.17	.14	.07	.18	.10	.06
47	.24	.21	.30	.04	.07	.17
49	.13	.26	.27	.41	.47	.31
21	.28	.17	.10	.21	-.01	.15
26	.13	.20	.19	.15	.03	.14
43	.29	.10	.14	-.43	-.40	-.06
44	-.14	-.17	-.33	-.36	-.33	-.27

Partials

37	.03	.04	.00	.16	.06	.06
39	.09	.27	.20	.17	.16	.18
40	-.18	-.06	-.16	.05	.07	-.06
42	-.09	.09	.05	.14	.07	.05
47	.23	.23	.29	.04	.06	.17
49	.14	.29	.28	.42	.44	.31
21	.28	.19	.10	.22	-.01	.16
26	.11	.18	.17	.13	.03	.12
43	.11	.05	.06	-.19	-.20	-.03
44	-.12	-.16	-.26	-.27	-.24	-.21

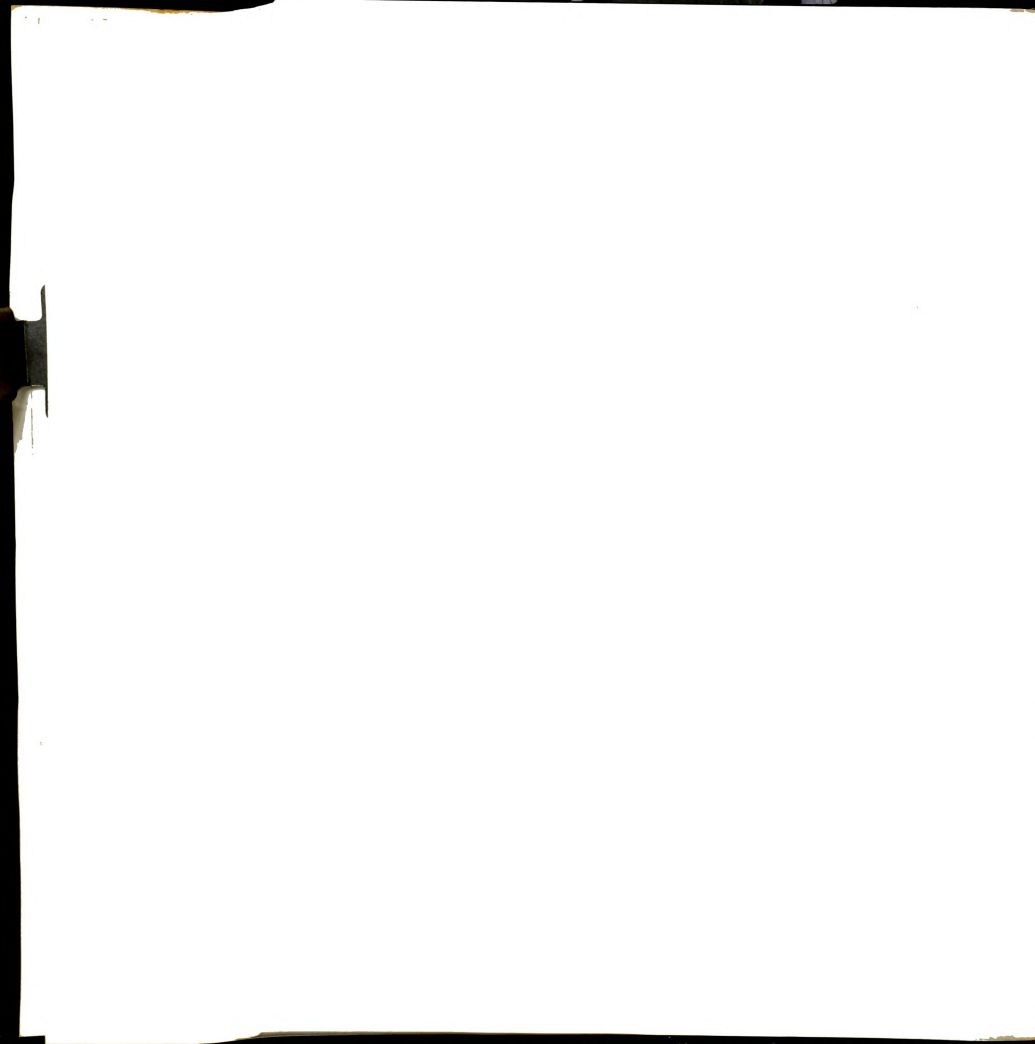


TABLE 4-24- (Continued)

Banks Grouped by Means of Loans and Discounts/Assets Over
Time, Group #2, r's, Beta's, Partial's, and R² Deletes
43% - 49%, n = 55

<u>Var.</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>
<u>R² Deletes</u>					
37	.233	.376	.360	.317	.262
39	.228	.329	.334	.314	.244
40	.209	.375	.342	.333	.261
42	.228	.372	.358	.322	.260
47	.191	.344	.299	.333	.261
49	.219	.318	.304	.196	.088
21	.167	.353	.354	.299	.264
26	.225	.357	.341	.323	.263
43	.225	.375	.357	.309	.233
44	.222	.361	.312	.282	.218
R	.483	.614	.600	.578	.514
R, D.F.	.244	.485	.463	.428	.311
R ²	.234	.377	.360	.334	.264
R ² , D.F.	.060	.235	.214	.183	.097

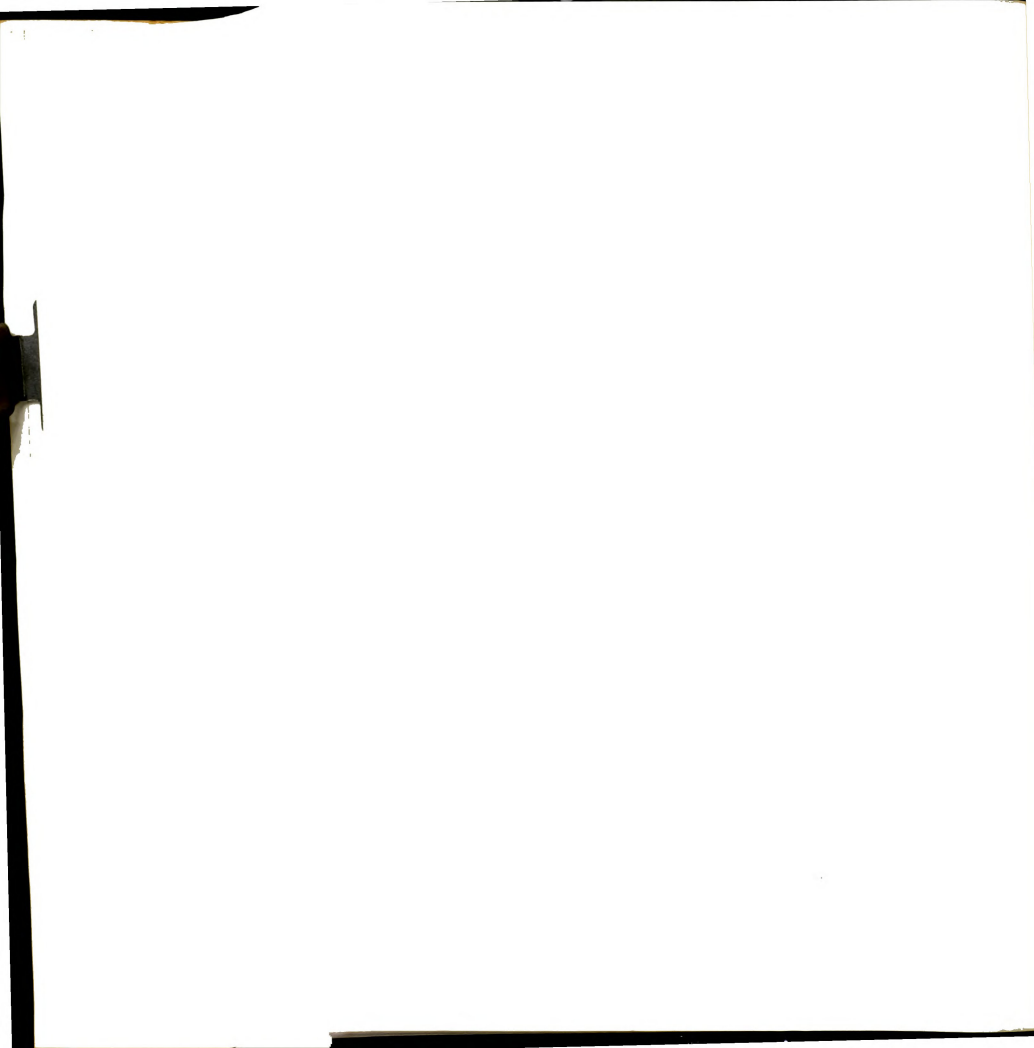


TABLE 4-25

Banks Grouped by Means of Loans and Discounts/Assets Over
Time, Group #3, r's, Beta's, Partial's, and R² Deletes
50% and above, n = 31

r's of #41 with

<u>Var.</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>Means</u>
37	.02	-.27	-.10	.01	.11	-.05
39	.12	.18	.39	.26	.32	.25
40	.04	.06	.08	-.04	.11	.05
42	-.08	.01	-.02	.08	.07	.01
47	.24	.11	.16	.08	.17	.15
49	.46	.50	.43	.59	.42	.48
20	-.04	.12	.10	-.05	.30	.09
21	-.07	.26	.06	.13	.02	.08
26	.32	.24	.46	.28	.46	.35
43	-.05	-.04	.03	-.03	-.10	-.04
44	.25	.17	.08	.14	.41	.21
22	.07	-.22	0	-.05	.45	.05

Beta's

37	.32	-.27	-.22	-.05	-.11	-.07
39	-.11	.03	.05	.10	.03	.02
40	.11	.17	.00	.01	.51	.16
42	.16	.17	.26	.18	.48	.25
47	.51	.19	.30	.27	-.05	.24
49	.57	.42	.48	.64	.16	.45
21	.10	.41	.44	.14	.10	.24
26	.34	.04	.46	.03	.47	.27
43	-.10	-.25	-.13	-.02	-.24	-.15
44	.12	.12	.02	.01	.56	.17

Partial's

37	.26	-.20	-.19	-.05	-.13	-.06
39	-.10	.03	.04	.09	.04	.02
40	.03	.05	.00	.00	.41	.10
42	.05	.06	.18	.15	.48	.18
47	.47	.18	.33	.26	-.07	.23
49	.55	.41	.52	.61	.20	.46
21	.13	.40	.47	.16	.14	.26
26	.26	.03	.35	.02	.43	.22
43	-.03	-.07	-.05	-.01	-.23	-.08
44	.13	.14	.02	-.01	.53	.16

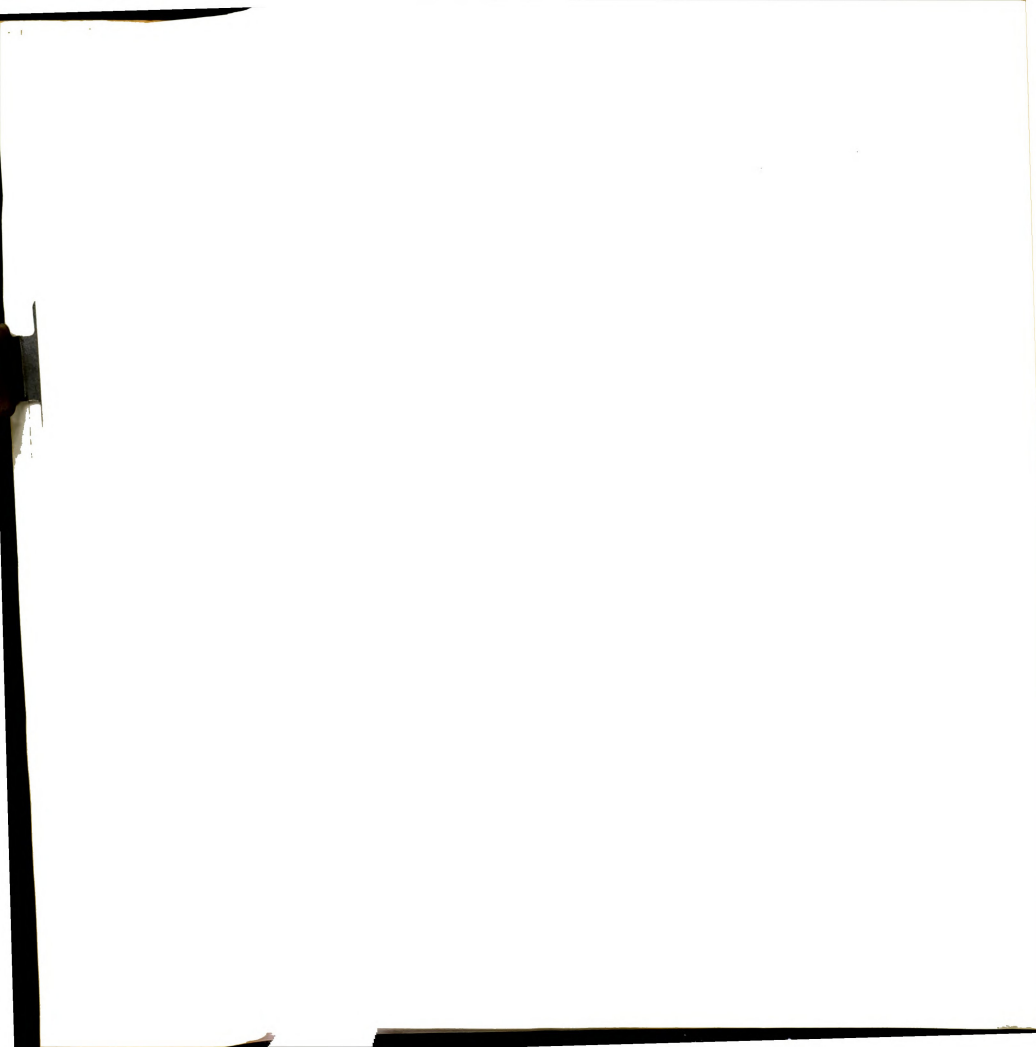


TABLE 4-25 (Continued)

Banks Grouped by Means of Loans and Discounts/Assets Over
Time, Group #3, r's, Beta's, Partial's, and R² Deletes
50% and Above, n = 31

<u>Var.</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>
<u>R² Deletes</u>					
37	.468	.449	.511	.464	.606
39	.499	.470	.527	.460	.612
40	.504	.469	.528	.465	.536
42	.503	.468	.513	.453	.499
47	.360	.453	.472	.426	.611
49	.292	.362	.350	.154	.596
21	.496	.367	.395	.451	.604
26	.468	.470	.463	.464	.526
43	.504	.468	.526	.465	.590
44	.495	.460	.527	.465	.458
R	.710	.686	.726	.682	.783
R, D.F.	.506	.453	.540	.444	.647
R ²	.504	.470	.528	.465	.612
R ² , D.F.	.256	.205	.291	.197	.419

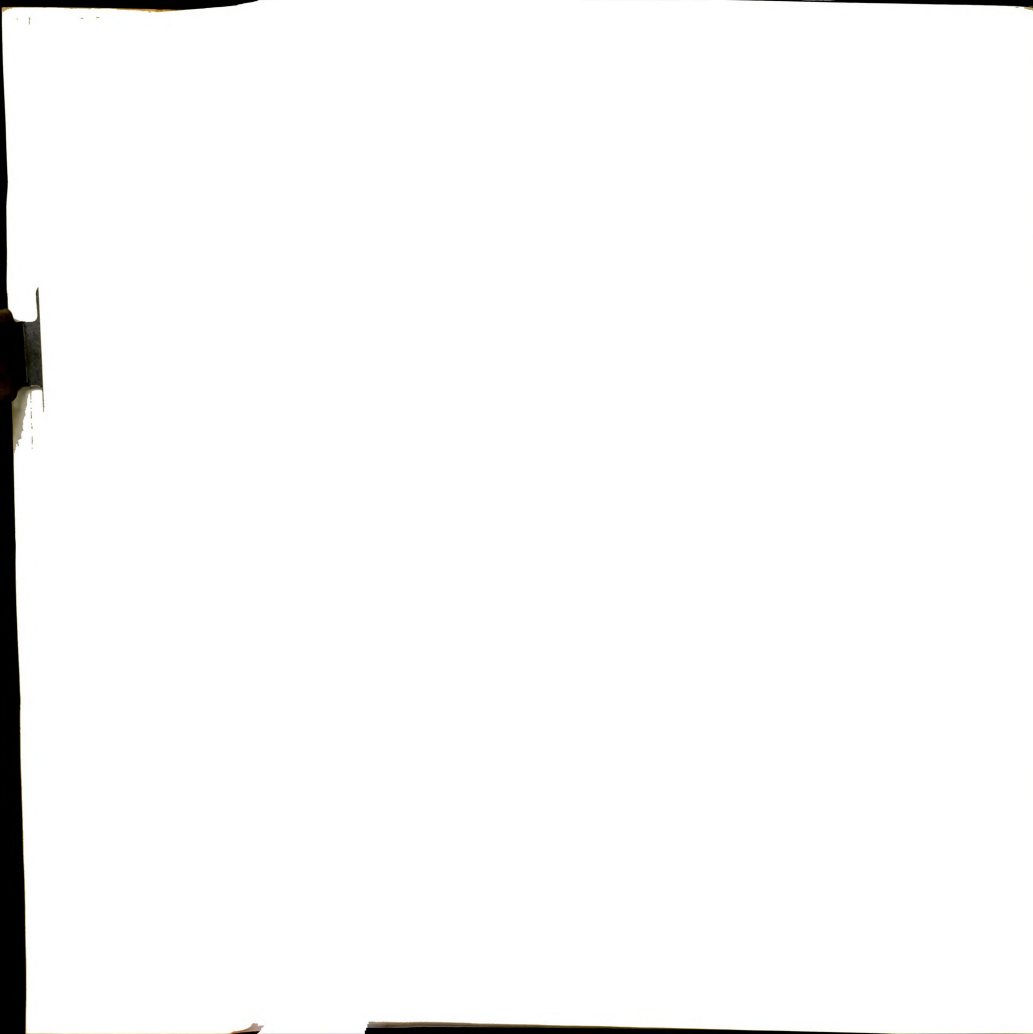


TABLE 4-26

Banks Grouped by Mean of Payout Ratio Over Time
Group #1, r's, Beta's, Partials, and R² Deletes
39% and Below, n = 24

r's of #41 with

<u>Var.</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>Means</u>
37	.01	.13	-.02	.01	.02	.03
39	.21	.66	.47	.30	.06	.34
40	-.30	-.34	-.06	.04	.11	.11
42	-.02	.35	.20	.03	-.12	.09
47	.12	.02	.03	-.11	.15	.04
49	-.07	.11	.03	.22	.34	.13
20	-.04	.24	0	.03	-.13	.02
21	.02	.34	.20	.33	.15	.21
26	.14	.43	.20	.18	.01	.19
43	-.28	.09	.14	.17	.02	.03
44	-.02	-.10	-.15	.10	.09	-.01
22	0	-.20	-.01	.03	.49	.06

Beta's

37	-2.49	-.25	-.82	-.93	-.46	-.99
39	.82	.37	.53	.48	.37	.51
40	-2.73	-.34	-.50	-.62	-.46	-.93
42	-2.10	-.12	-.13	-.47	-.42	-.65
47	-.13	.12	.20	-.19	.39	.08
49	-.33	.55	.13	.11	.52	.20
21	-.03	.88	.62	.35	.43	.45
26	-.08	.35	.03	-.01	-.56	-.05
43	1.65	.07	.50	.65	.61	.70
44	.33	-.10	.09	.53	.21	.21

Partials

37	-.64	-.11	-.27	-.43	-.17	-.32
39	.48	.31	.40	.37	.27	.37
40	-.65	-.14	-.16	-.26	-.11	-.26
42	-.63	-.05	-.05	-.21	-.11	-.21
47	-.16	.21	.18	-.17	.31	.07
49	-.28	.55	.12	.11	.47	.19
21	-.03	.73	.43	.38	.30	.36
26	-.07	.35	.02	-.01	-.31	0
43	.56	.03	.21	.26	.20	.14
44	.26	-.09	.05	.37	.12	.14

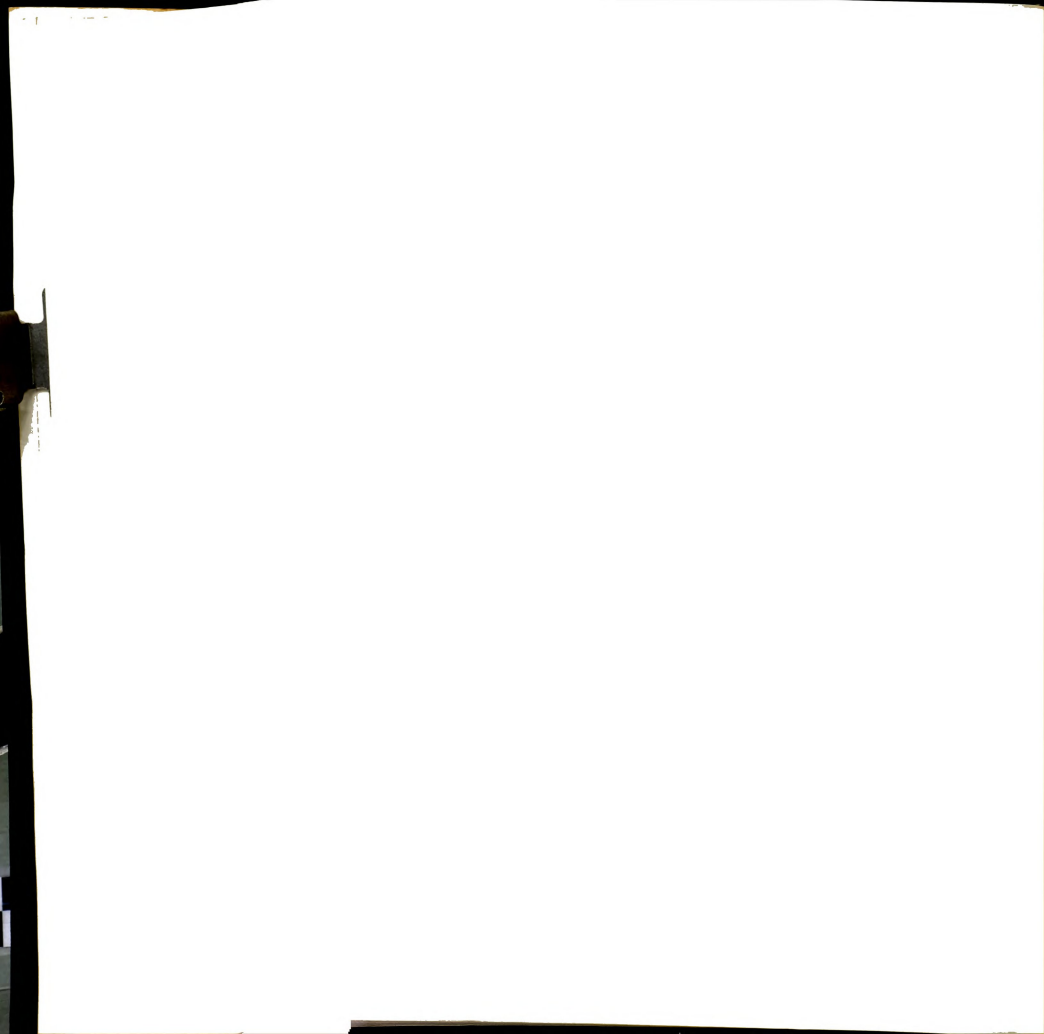


TABLE 4-26 (Continued)

Banks Grouped by Mean of Payout Ratio Over Time
Group #1, r's, Beta's, Partials, and R² Deletes
39% and Below, n = 24

<u>Var.</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>
<u>R² Deletes</u>					
37	.241	.809	.417	.283	.317
39	.415	.791	.359	.319	.285
40	.215	.808	.447	.368	.330
42	.249	.811	.459	.384	.329
47	.535	.802	.442	.394	.269
49	.511	.728	.453	.404	.150
21	.547	.591	.336	.314	.271
26	.545	.785	.460	.412	.270
43	.345	.811	.435	.369	.312
44	.515	.810	.459	.321	.328
R	.740	.901	.679	.642	.581
R, D.F.	.447	.816	.213	0	0
R ²	.548	.811	.460	.412	.338
R ² , D.F.	.199	.666	.045	-.040	-.171

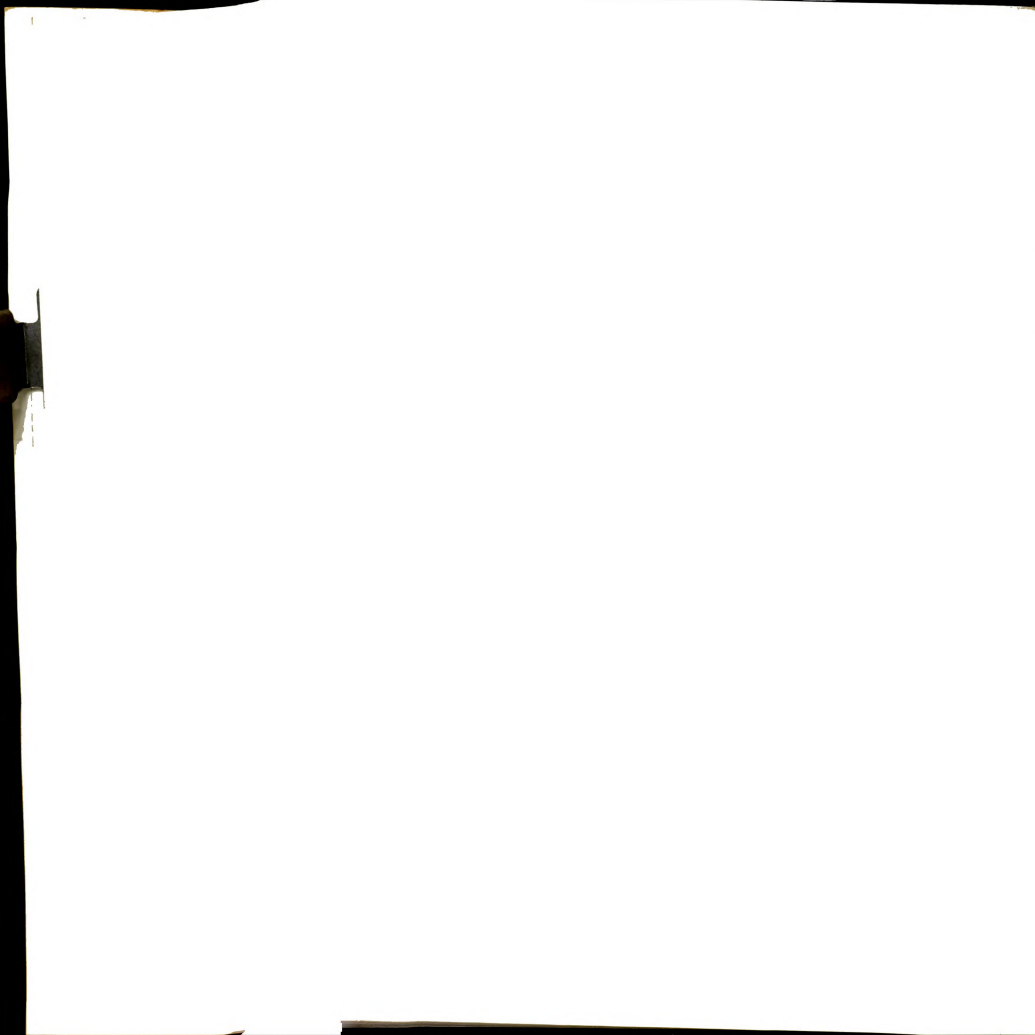


TABLE 4-27

Banks Grouped by Mean of Payout Ratio Over Time
Group #2, r's, Beta's, Partials, and R² Deletes
40% - 54%, n = 66

r's of #41 with

<u>Var.</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>Means</u>
37	.04	-.01	.02	.02	-.03	.0
39	.21	.27	.31	.20	.22	.24
40	-.01	-.02	-.05	.07	.08	-.01
42	.10	.11	.17	-.03	.01	.07
47	.09	-.04	-.0	.16	-.25	.01
49	.36	.33	.43	.53	-.02	.33
20	0	0	0	.11	.14	.13
21	-.03	.01	.25	.10	.08	.08
26	.18	.17	.21	.17	.08	.16
43	.03	.04	.07	-.09	-.07	-.01
44	.16	.19	.05	-.02	.02	.07
22	.09	-.06	-.03	.18	.27	.09

Beta's

37	.12	-.01	.17	.29	-.06	.10
39	.20	.20	.18	.01	.12	.14
40	.17	.07	.26	.37	.02	.18
42	.47	.27	.43	.34	.14	.32
47	.41	.19	.20	.28	.22	.26
49	.50	.35	.48	.60	.45	.48
21	.03	-.04	.21	.20	-.0	.08
26	.06	.05	.16	.01	-.06	.04
43	-.38	-.15	-.35	-.48	-.16	-.30
44	.10	.19	-.04	-.13	.14	.05

Partials

37	.07	-.01	.12	.25	-.05	.08
39	.19	.18	.18	.01	.11	.13
40	.08	.04	.12	.24	.02	.10
42	.24	.13	.24	.26	.12	.20
47	.37	.16	.19	.30	.22	.25
49	.45	.31	.46	.60	.42	.45
21	.04	-.04	.22	.23	-.01	.09
26	.05	.05	.15	.01	-.05	.04
43	-.17	-.07	-.16	-.31	-.13	-.17
44	.09	.15	-.04	-.12	.13	.04

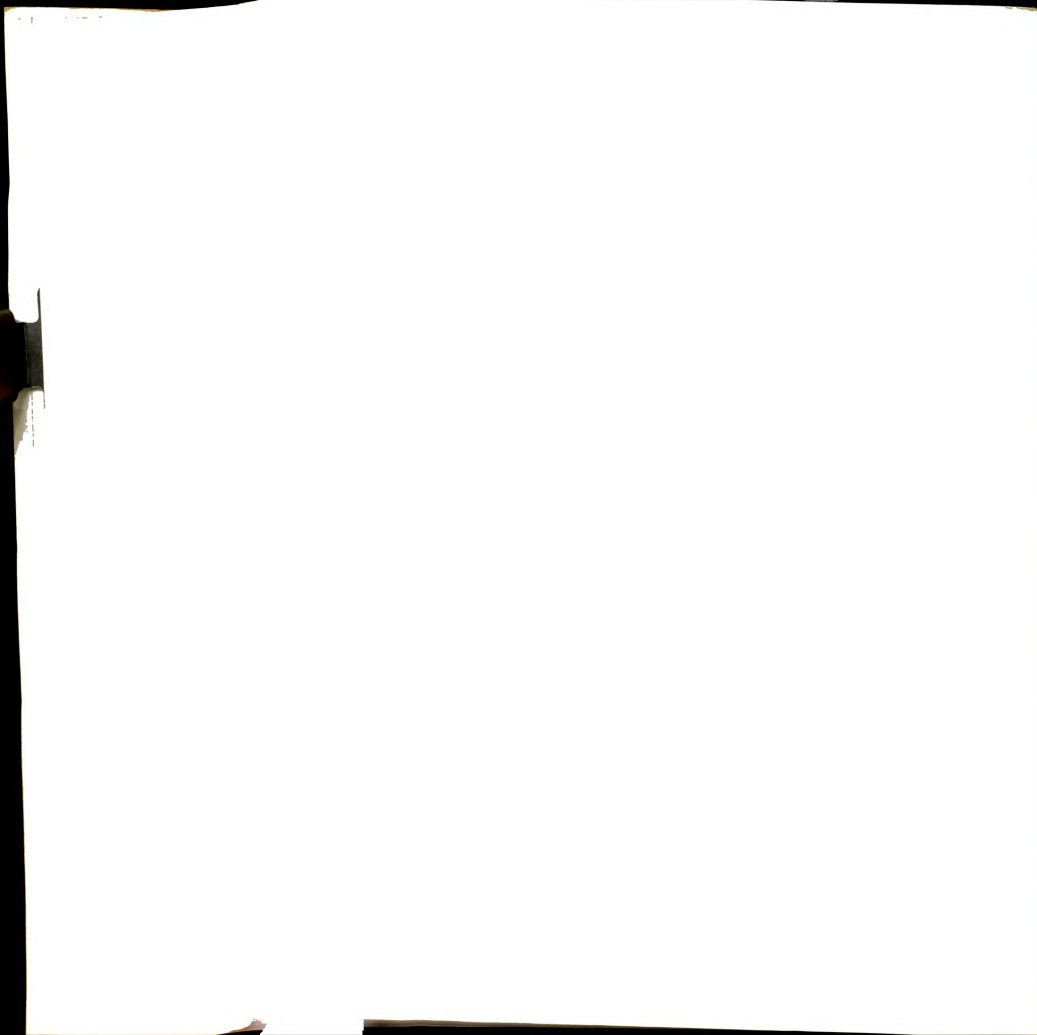


TABLE 4-27 (Continued)

Banks Grouped by Mean of Payout Ratio Over Time
Group #2, r's, Beta's, Partials, and R² Deletes
40% - 54%, n = 66

<u>Var.</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>
<u>R² Deletes</u>					
37	.317	.231	.375	.426	.272
39	.296	.205	.362	.460	.266
40	.317	.230	.374	.427	.274
42	.278	.217	.345	.421	.263
47	.213	.211	.359	.406	.239
49	.146	.151	.217	.162	.122
21	.320	.230	.351	.429	.274
26	.318	.229	.368	.460	.272
43	.301	.227	.366	.402	.262
44	.315	.213	.382	.452	.262
R	.566	.481	.619	.678	.523
R, D.F.	.444	.302	.521	.601	.377
R ²	.320	.231	.383	.460	.274
R ² D.F.	.197	.091	.271	.362	.142

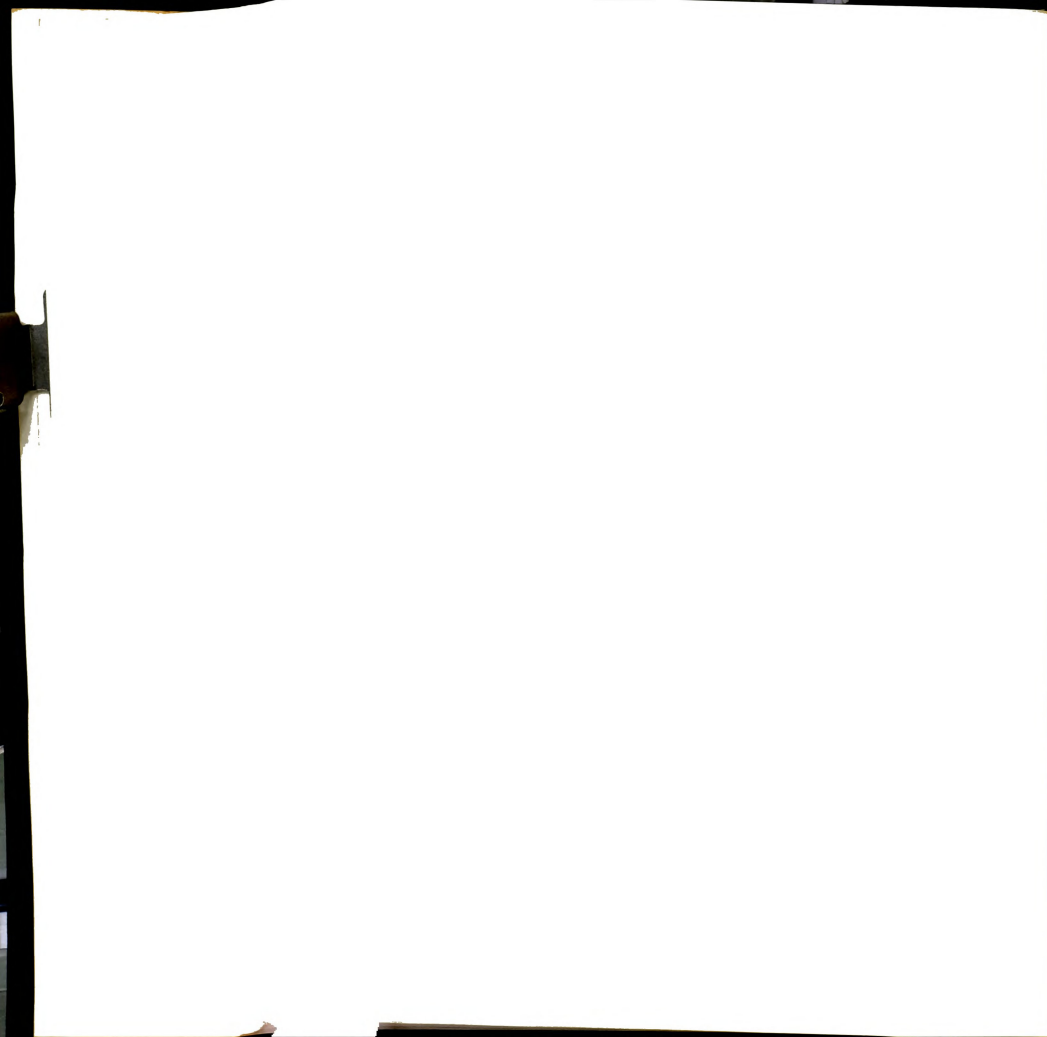


TABLE 4-28

Banks Grouped by Mean of Payout Ratio Over Time
Group #3, r's, Beta's, Partials, and R² Deletes
55% and Above, n = 23

r's of #41 with

<u>Var.</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>Means</u>
37	-.13	.00	-.18	-.08	-.49	-.18
39	-.14	.05	.07	.10	.01	.01
40	.22	.06	.04	-.18	.25	.08
42	-.48	-.32	-.23	.43	.26	.07
47	.63	.26	.15	-.10	-.07	.17
49	.50	.62	.49	.54	.34	.50
20	.07	.06	.06	-.05	.09	.05
21	.25	.42	.19	.34	-.10	.22
26	-.30	-.18	-.24	-.24	-.10	-.21
43	-.22	-.10	-.11	.01	.23	-.04
44	-.01	-.01	-.08	-.06	-.25	-.08
22	-.34	0	-.09	.10	-.09	-.08

Beta's

37	.26	.29	-.17	-.14	-.96	-.14
39	.46	.18	.47	.33	.18	.32
40	.77	-.34	-.04	-.46	-1.10	-.23
42	.20	-.27	-.22	.23	-.06	-.02
47	.43	.59	.09	.26	.51	.38
49	.45	.41	.58	.66	.66	.55
21	.22	.65	.28	.35	-.02	.30
26	-.33	.08	-.33	-.33	.19	-.14
43	-.63	.02	.25	.41	.88	.19
44	.13	-.50	.12	-.14	.25	-.03

Partials

37	.17	.22	-.06	-.10	-.70	-.09
39	.49	.20	.38	.39	.22	.34
40	.29	-.13	-.01	-.24	-.49	-.12
42	.13	-.20	-.11	.23	-.06	0
47	.48	.58	.11	.37	.60	.43
49	.66	.54	.56	.76	.69	.64
21	.38	.64	.27	.50	-.03	.35
26	-.39	.09	-.23	-.33	.19	-.13
43	-.24	.01	.05	.21	.37	.08
44	.13	-.48	.07	-.11	.22	-.03

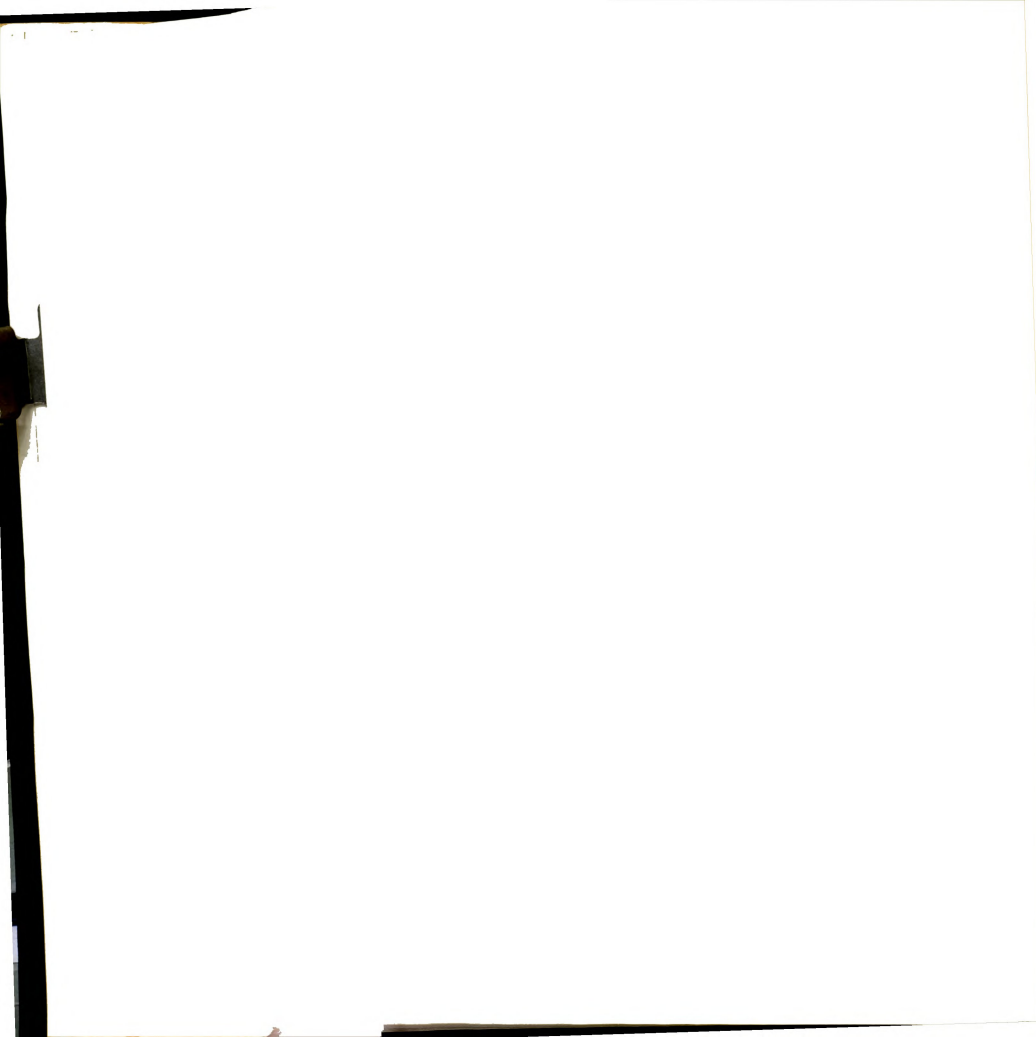


TABLE 4-28 (Continued)

Banks Grouped by Mean of Payout Ratio Over Time
Group #3, r's, Beta's, Partial's, and R² Deletes
55% and Above, n = 23

<u>Var.</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>
<u>R² Deletes</u>					
37	.171	.721	.503	.757	.451
39	.494	.723	.420	.715	.705
40	.288	.730	.504	.745	.628
42	.128	.724	.498	.745	.718
47	.481	.604	.498	.722	.560
49	.655	.627	.272	.424	.458
21	.377	.552	.465	.679	.718
26	-.392	.733	.475	.729	.708
43	-.239	.735	.503	.749	.675
44	.130	.657	.502	.756	.705
R	.875	.857	.710	.871	.848
R, D.F.	.755	.717	.301	.747	.696
R ²	.766	.735	.504	.759	.719
R ² , D.F.	.571	.514	.091	.559	.484

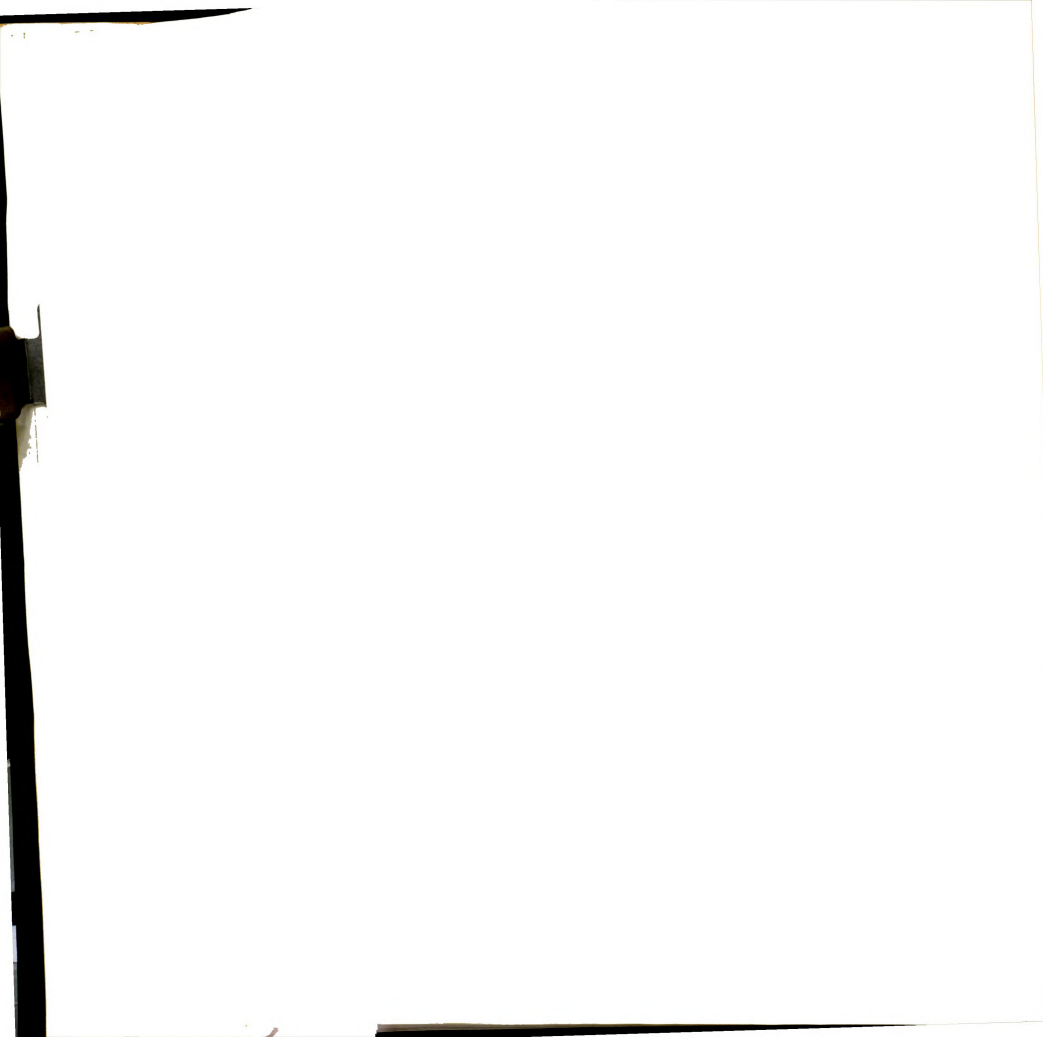


TABLE 4-29

Means of Beta Weights Over Time
For All Groups

	<u>Var.</u>	Low <u>Gr 1</u>	<u>Gr 2</u>	<u>Gr 3</u>	High <u>Gr 4</u>
<u>Deposit Growth</u>	37	.71	.23	-.45	0
	39	.27	.26	.19	.16
	40	.76	.37	.13	-.48
	42	.48	.35	-.25	.17
	47	.12	.47	.23	.20
	49	.42	.55	.27	.07
	20	-.20	-.01	-.15	-.12
	21	-.20	.16	.20	-.30
	26	.11	-.04	-.07	0
	43	-1.11	-.40	-.07	.11
	44	0	-.26	.31	.29
	22	.63	-.03	.27	.41
<u>Loan/Asset</u>	37	-.03	.06	-.07	
	39	.33	.19	.02	
	40	-.18	-.16	.16	
	42	-.23	.06	.25	
	47	.53	.17	.24	
	49	.57	.31	.45	
	21	.19	.15	.24	
	26	-.60	.14	.27	
	43	.28	-.06	-.15	
	44	-.14	-.27	.17	
<u>Payout Ratio</u>	37	-.99	.10	-.14	
	39	.51	.14	.32	
	40	-.93	.18	-.23	
	42	-.65	.32	-.02	
	47	.08	.26	.38	
	49	.20	.48	.55	
	21	.45	.08	.30	
	26	-.05	.04	-.14	
	43	.70	-.30	.19	
	44	.21	.05	-.03	

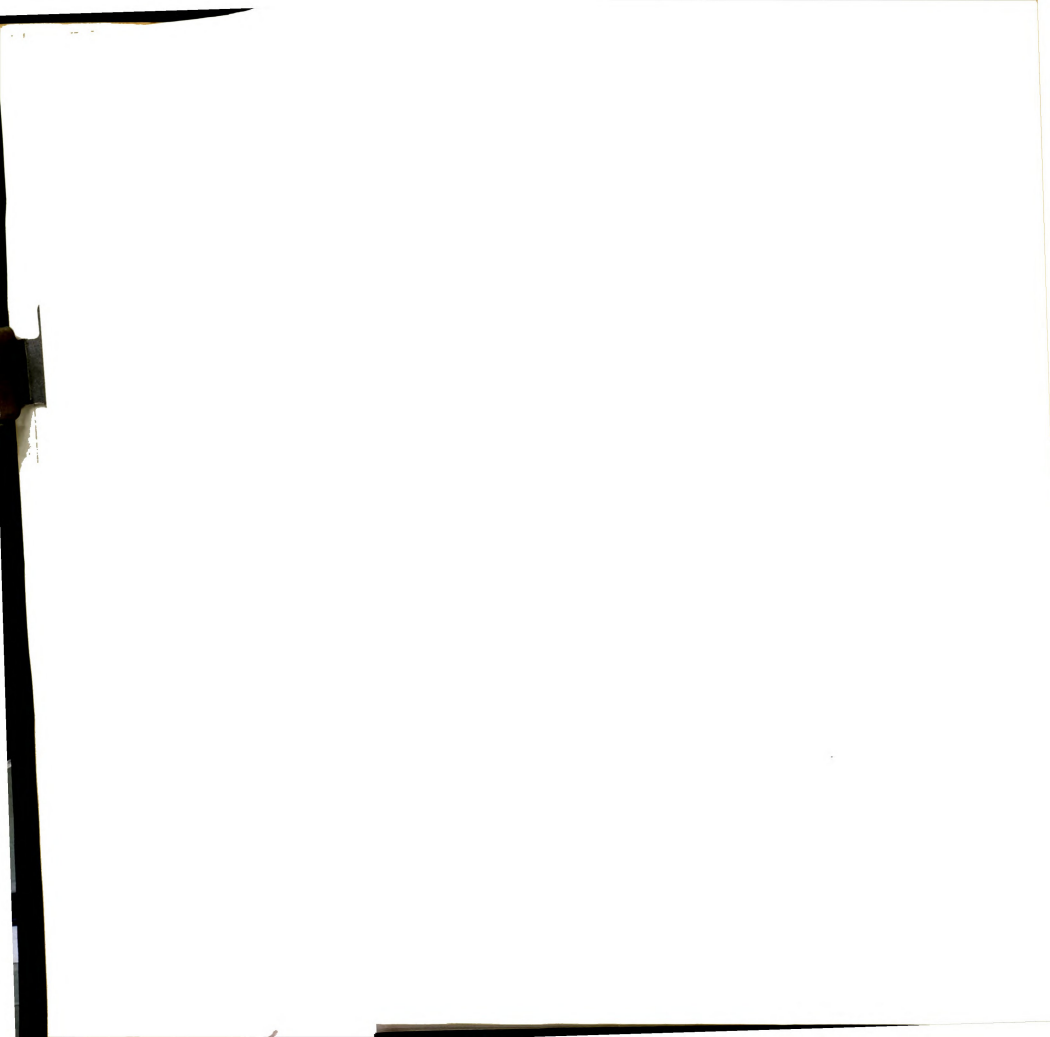


TABLE 4-31

Coded R² Deletes, 1964
 1 = High Impact, 10 = No Impact

<u>Variable</u>	<u>Means</u>	<u>Group 1</u>	<u>Group 2</u>	<u>Group 3</u>	<u>Group 4</u>
<u>Deposit Growth Scheme</u>					
37	(4.5) 3	3	9	3	3
39	(7.0) 7	8	6	6	8
40	(7.1) 10	5	7	8	9
42	(5.0) 4	10	5	4	1
47	(7.0) 8	9	1	7	10
49	(2.8) 1	1	2	2	6
21	(6.5) 6	4	10	10	2
26	(7.0) 9	7	8	5	7
43	(5.8) 5	6	3	9	5
44	(2.8) 2	2	4	1	4
<u>Loaning Scheme</u>					
37	(8.0) 8	8	8	8	
39	(8.0) 9	10	4	10	
40	(5.7) 7	6	7	4	
42	(4.0) 3	5	5	2	
47	(5.3) 6	1	6	9	
49	(3.0) 1	2	1	6	
21	(8.7) 10	9	10	7	
26	(4.7) 5	3	9	3	
43	(4.0) 4	4	3	5	
44	(3.3) 2	7	2	1	
<u>Payout Scheme</u>					
37	(5.0) 4	7	7	1	(5.0) 4
34	(5.7) 5	5	6	6	(7.0) 8
40	(8.0) 10	10	10	4	(9.0) 10
42	(7.7) 8	9	5	9	(5.0) 5
47	(2.3) 2	2	2	3	(5.3) 6
49	(1.3) 1	1	1	2	(1.0) 1
21	(7.7) 9	4	9	10	(8.3) 9
26	(6.3) 6	3	8	8	(6.7) 7
43	(4.7) 3	6	3	5	(4.0) 3
44	(6.3) 7	8	4	7	(3.7) 2
<u>Over All Schemes</u> <u>Mean of Coded Means</u>					

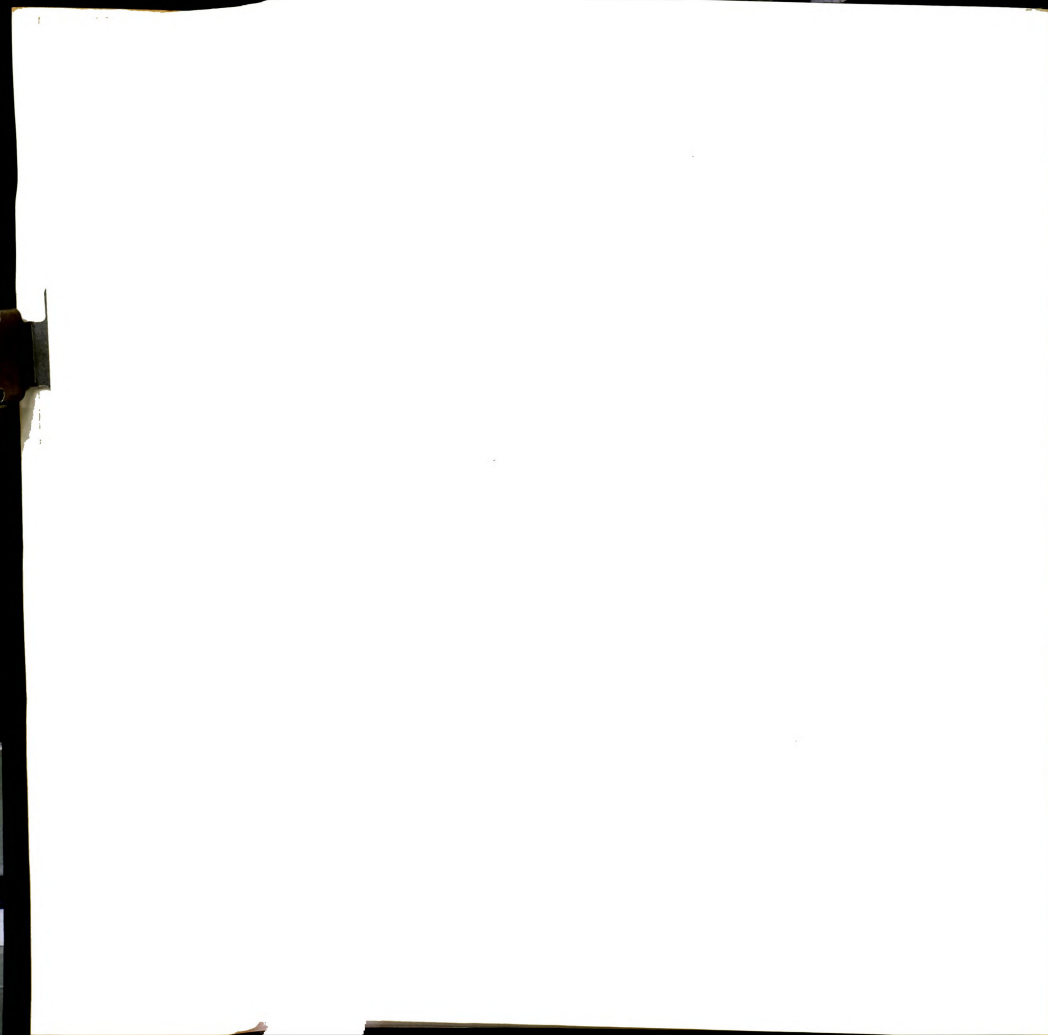


TABLE 4-32

Group Means of Simple and Partial Correlations
of #41 With Other Variables

<u>Variable</u>	<u>Group 1</u>		<u>Group 2</u>		<u>Group 3</u>		<u>Group 4</u>	
	<u>r</u>	<u>Part</u> <u>r</u>	<u>r</u>	<u>Part</u> <u>r</u>	<u>r</u>	<u>Part</u> <u>r</u>	<u>r</u>	<u>Part</u> <u>r</u>
<u>Deposit Growth Scheme</u>								
37	.13	.29	-.11	.21	-.29	-.31	.38	.05
39	-.10	.18	.41	.30	.18	.22	.16	.22
40	.10	.34	.21	.18	.29	.05	-.37	-.25
42	-.17	.22	-.02	.24	-.32	-.17	.19	.13
47	-.01	.08	.35	.49	.35	.24	.12	.19
49	.14	.29	.47	.52	.30	.33	.10	-.12
20	.08	-.15	.11	0	-.14	-.14	.04	-.05
21	.08	-.26	.13	.18	.04	.22	.06	-.38
26	-.08	.12	.25	-.04	.19	-.07	.26	0
43	-.09	-.37	.18	-.21	-.07	-.04	0	.06
44	.19	-.03	-.16	-.24	0	.30	.40	.29
22	.13	.61	.03	-.05	.05	.31	.09	.50
<u>Loaning Scheme</u>								
37	-.17	-.03	0	.06	-.05	-.06		
39	-.01	.23	.34	.18	.25	.02		
40	.23	-.11	-.04	-.06	.05	.10		
42	-.08	-.11	.04	.05	.01	.18		
47	.30	.45	.18	.17	.15	.23		
49	.30	.54	.23	.31	.48	.46		
20	-.27		.14		.09			
21	.01	.20	.16	.16	.08	.26		
26	-.15	-.39	.23	.12	.35	.22		
43	0	.14	.02	-.03	-.04	-.08		
44	-.07	-.15	-.08	-.21	.21	.16		
22	-.02		.06		.05			
<u>Payout Scheme</u>								
37	.03	-.32	0	.08	-.18	-.09	-.05	-.11
39	.34	.37	.24	.13	.01	.34	.20	.28
40	.11	-.26	-.01	.10	.08	-.12	.06	-.09
42	.09	-.21	.07	.20	.07	0	.08	0
47	.04	.07	.01	.25	.17	.43	.07	.25
49	.13	.19	.33	.45	.50	.64	.32	.43
20	.02		.13		.05		.07	
21	.21	.36	.08	.09	.22	.35	.17	.27
26	.19	0	.16	.04	-.21	-.13	.05	-.03
43	.03	.14	-.01	-.17	-.04	.08	-.01	.01
44	-.01	.14	.07	.04	-.08	-.03	-.01	.05
22	.06		.09		-.08		.02	
							<u>Payout Only</u> <u>Mean of Means</u>	

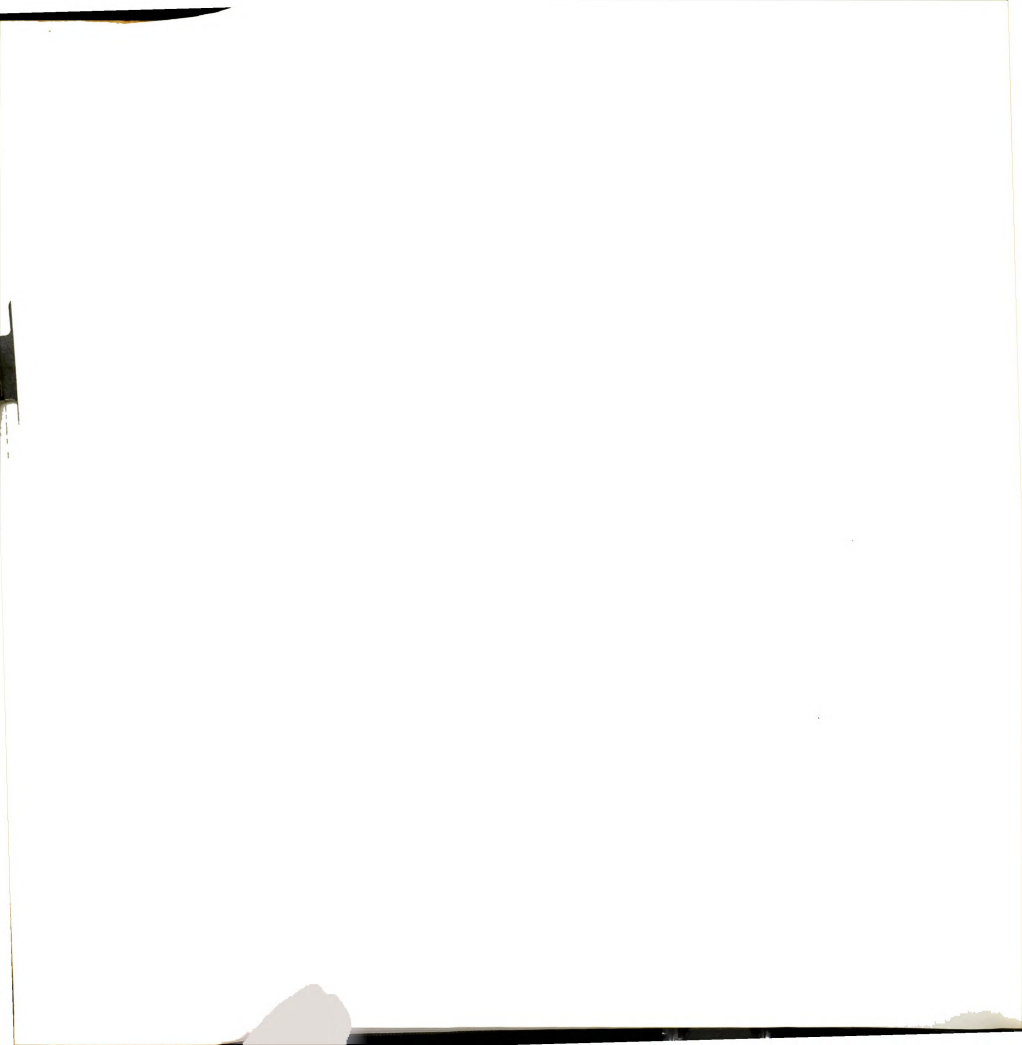


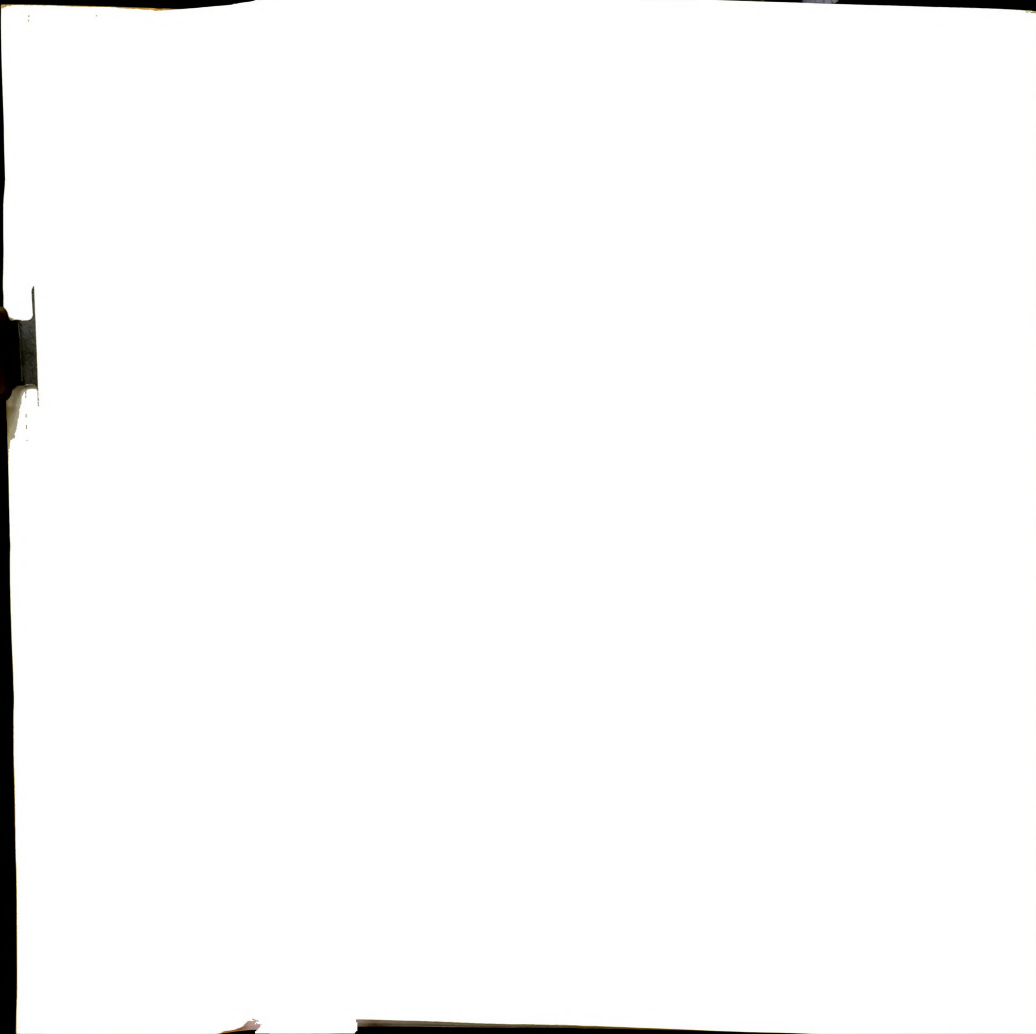
TABLE 4-35

Percentage Changes By State For Population,
Personal Income and Deposits; 1950 - 1960

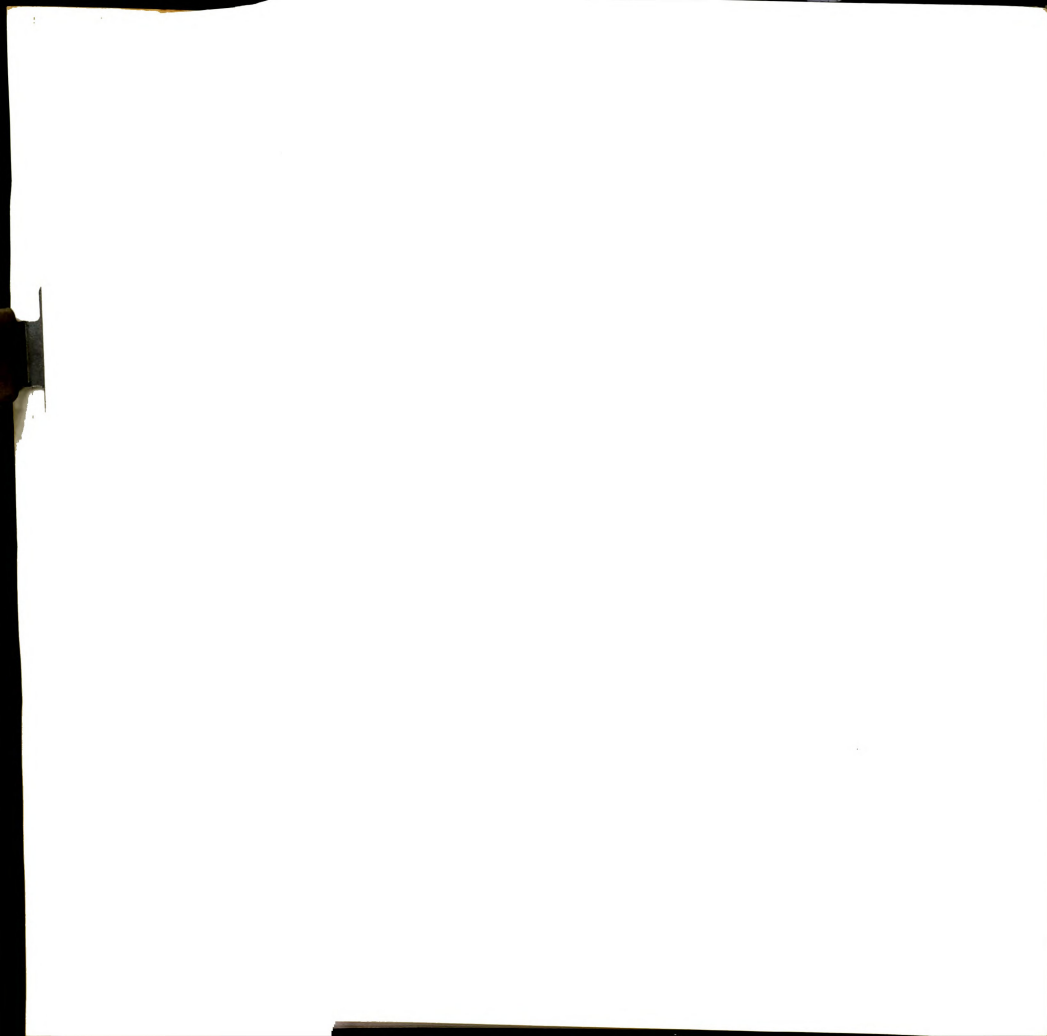
State No.	Representation In Study	States	Population		Personal Income		Deposits	
			Total	PerYr*	Total	PerYr*	Total	PerYr*
		Total U. S.	19.1	1.8	76.0	5.8	49.0	4.1
1	19 + 1	New York	12.6	1.2	67.3	5.3	35.4	3.1
2	6	California	47.2	3.9	121.4	8.3	73.2	5.6
3	5	Illinois	15.2	1.4	65.3	5.2	35.1	3.1
4	9	Pennsylvania	7.6	.7	56.0	4.6	32.7	2.9
5	6	Michigan	21.8	2.0	68.7	5.4	56.6	4.6
6	6	Massachusetts	9.8	.9	66.9	5.3	23.1	2.1
7	11 + 1	Ohio	21.4	2.0	76.7	5.9	44.3	3.8
8	7	Texas	23.6	2.1	78.4	6.0	67.8	5.3
9	1	Washington	19.6	1.8	66.2	5.2	38.0	3.3
10	2	Oregon	15.5	1.5	63.4	5.0	43.5	3.7
11	2	Arizona	72.2	5.6	170.7	10.5	167.0	10.3
12	2	North Carolina	12.2	1.2	74.9	5.7	55.7	4.5
13	4	Missouri	9.5	.9	66.9	5.2	40.4	3.4
14	2	Georgia	14.3	1.4	80.9	6.1	66.3	5.2
15	2	Maryland	30.5	2.7	98.7	7.1	49.6	4.1
16	3	Washington, D.C.	-6.1	-.6	29.2	2.6	33.2	2.9
17	3	Indiana	18.0	1.7	69.7	5.5	45.7	3.8
18	2	Rhode Island	10.3	1.0	48.3	4.0	28.2	2.5
19	2	Connecticut	24.8	2.2	89.0	6.6	42.8	3.6
20	6	New Jersey	24.8	2.2	86.9	6.5	51.3	4.2
21	3	Tennessee	8.0	.8	67.9	5.3	64.4	5.1
22	1	Alabama	6.8	.7	80.0	6.1	76.2	5.8
23	1	Florida	75.5	5.8	173.6	10.6	139.5	9.1
24	1	Colorado	31.1	2.8	111.3	7.8	64.3	5.1
25	3	Oklahoma	6.2	.6	71.5	5.6	57.3	4.7
26	2	Hawaii	28.9	2.6	109.3	7.7	248.7	13.3
27	1	Kentucky	2.7	.3	65.9	5.2	42.9	3.6
28	1	Delaware	38.9	3.3	96.4	7.0	29.3	2.6
29	+1	Louisiana	20.6	1.9	78.6	6.0	64.8	5.1
30	+2	Minnesota	14.0	1.3	68.2	5.3	45.5	3.8
31	+3	Wisconsin	14.6	1.4	70.1	5.5	50.0	4.2
32	+1	Utah	28.0	2.5	91.8	6.7	73.6	5.6

Source: Francis I. duPont & Co., Bank Growth Goals, (New York, 1961).

*Compounded Annual Average



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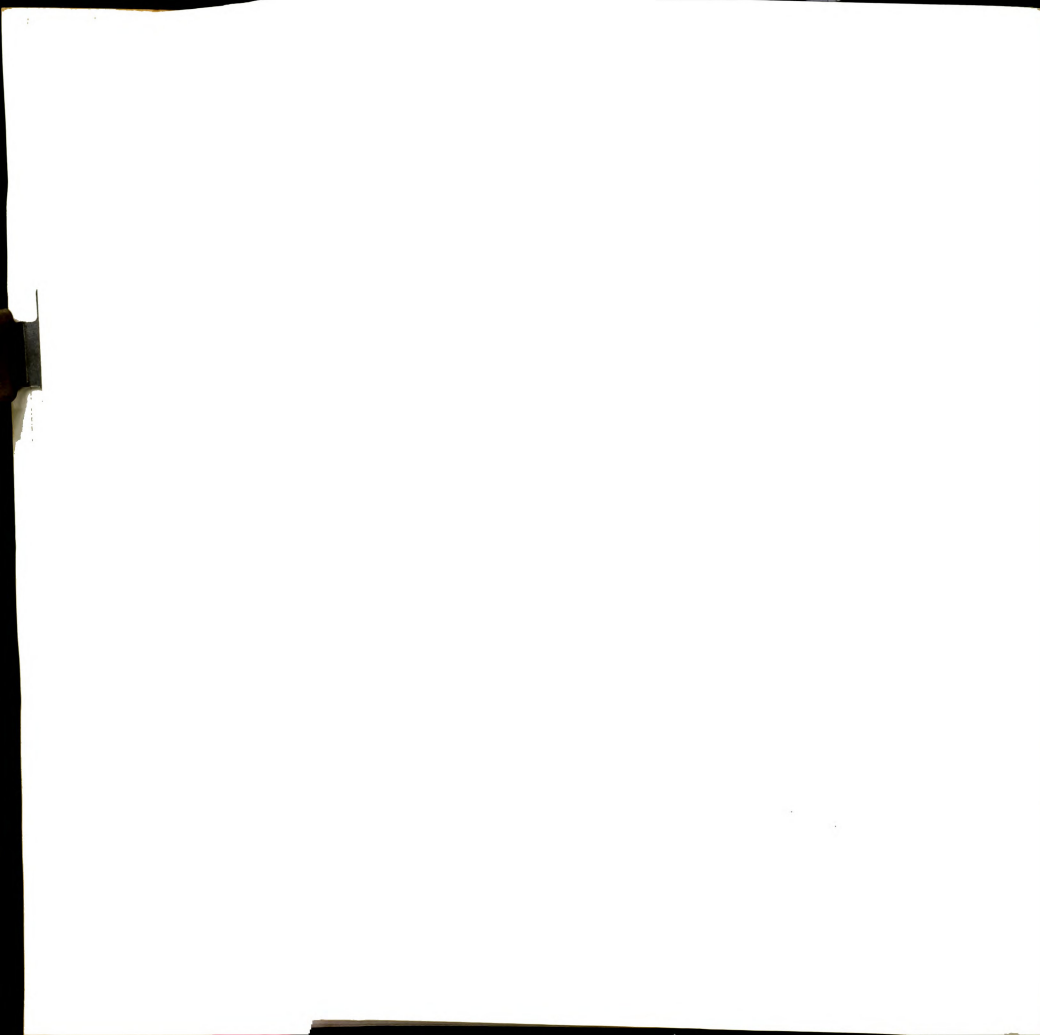
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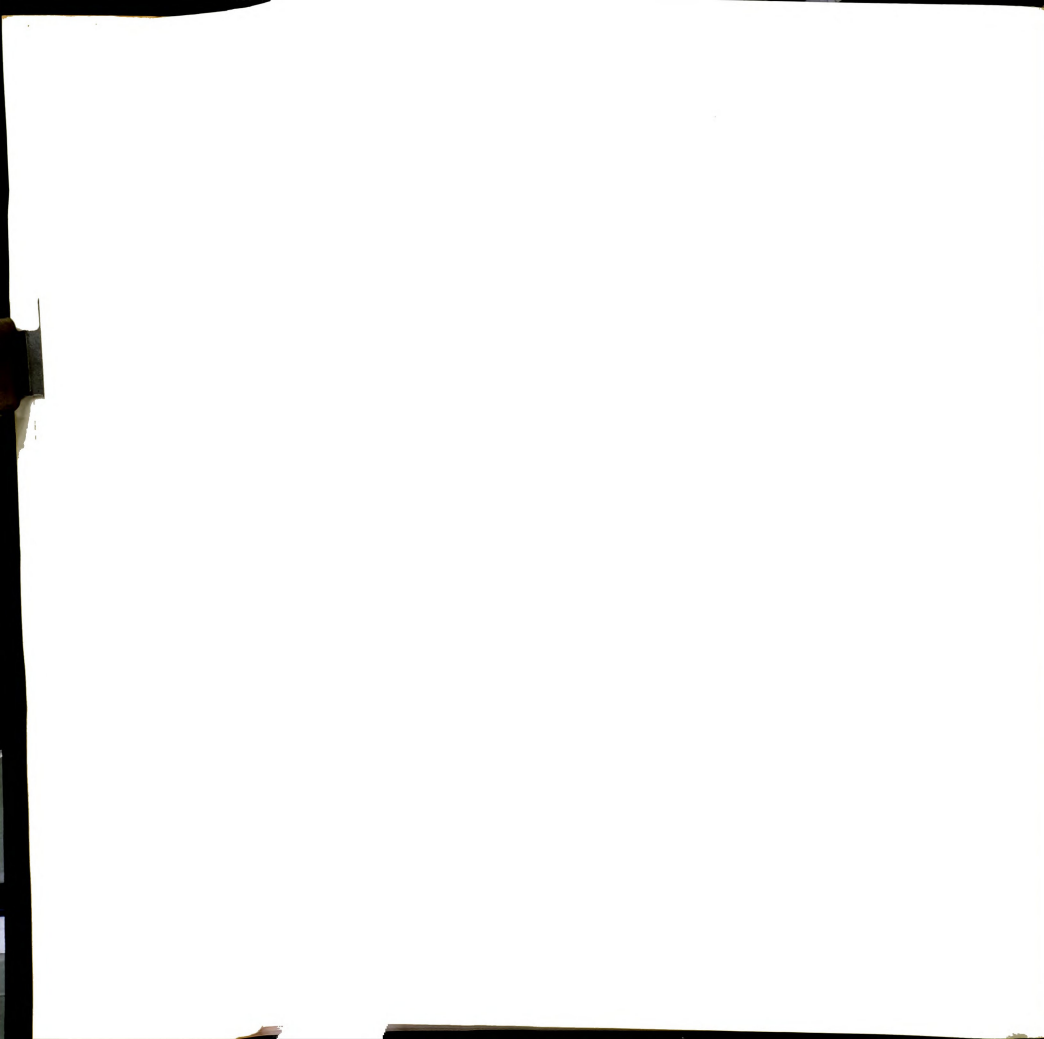
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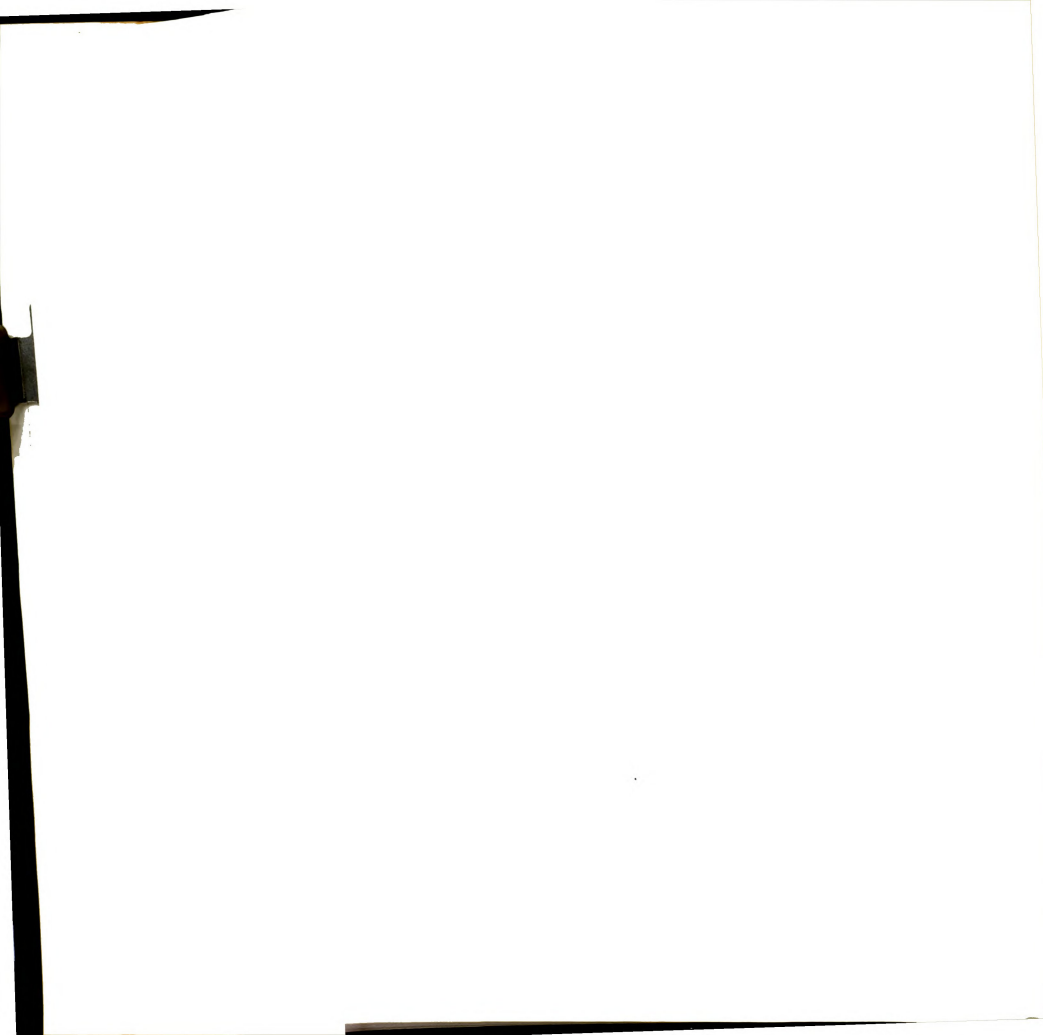
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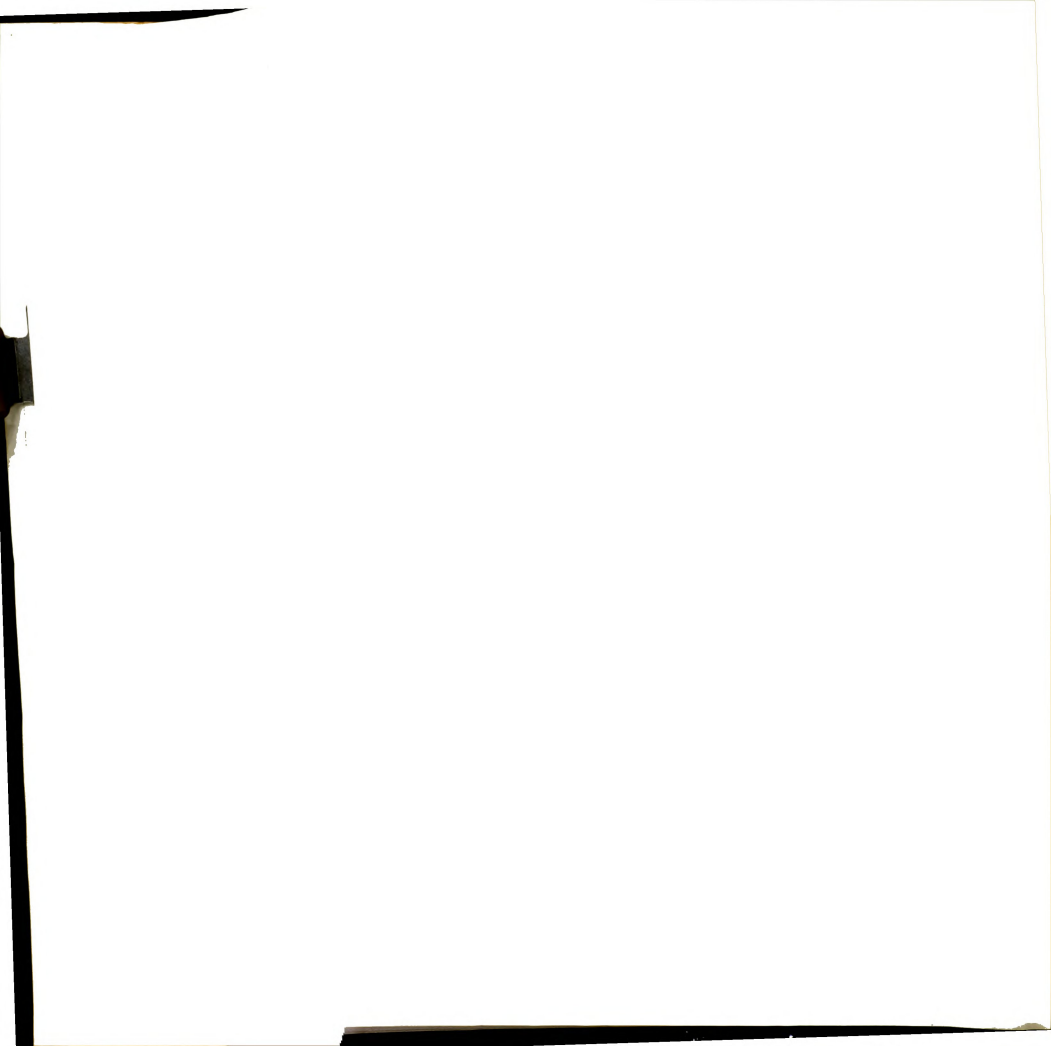
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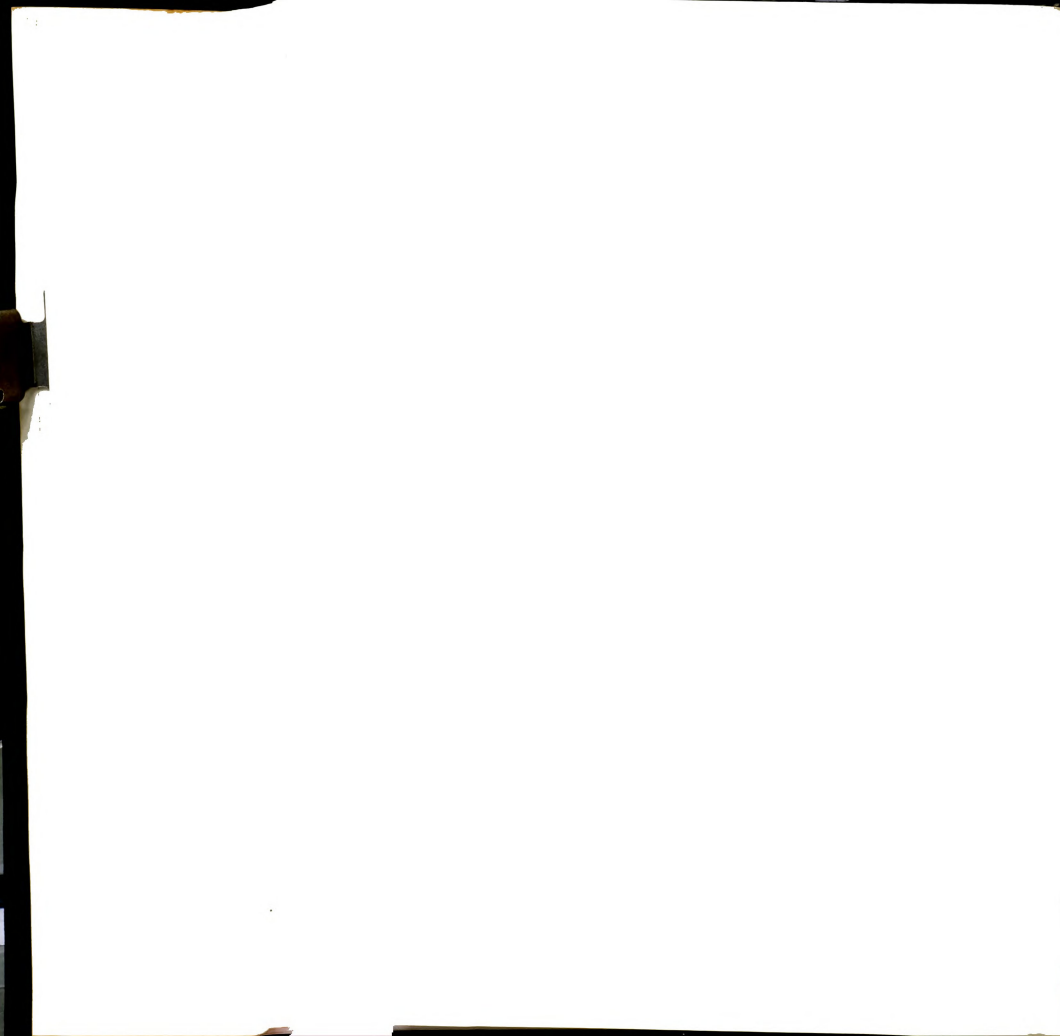
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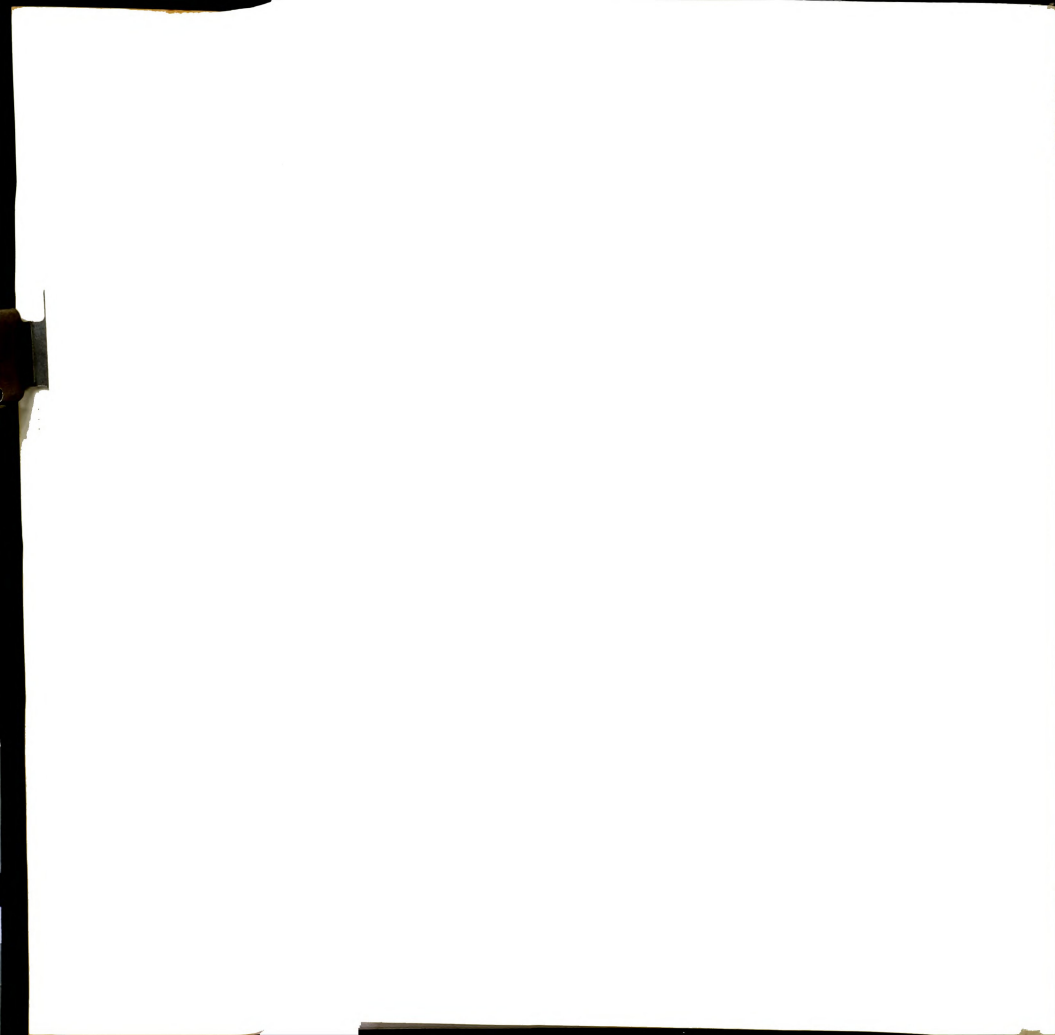


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