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Current developments in commercial bank investment portfolio management

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THESIS

CURRENT DEVELOPMENTS IN COMMERCIAL BANK INVESTMENT PORTFOLIO MANAGEMENT

by

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CHAPTER I.

INTRODUCTION

Statement of the Problem

The basic purpose of this inquiry is to observe and comment upon current developments in commercial bank investment portfolio management. There has been no attempt to draw a statistical sample, nor has there been any effort to lay down any precise rules that an individual bank should follow. Rather, this is an attempt to identify and clarify certain basic issues in the light of today's requirements and current banking practice. Such an analysis, it is believed, will aid in the formulation of appropriate bank investment policy, regardless of the size of the institution.

The "investment portfolio" of a bank is that portion of a bank's assets that are not in "cash" or "loans". Today, the greater portion of the total amount of securities publicly issued and traded is owned by institutional investors such as commercial banks, savings banks and insurance companies. As shown by Table I, approximately 44% of the earning assets of all commercial banks are currently in "investments." For purposes of this paper, "investments" will be thought of as "credits not always but primarily of longer maturities placed through the open markets and ordinarily subject to resale in these markets."*

*3, p. 12.

TABLE I.

Assets of all Commercial Banks
(In Millions of Dollars)

	Loans	Investments	Percentage investments are of total earning assets
December 30, 1939	17,238	23,430	57
December 31, 1945	26,083	97,937	79
December 30, 1950	52,249	74,426	58
December 31, 1955	82,601	78,280	48
November 27, 1957	93,010	74,260	44

Source: Federal Reserve Bulletin, January 1958, p. 41.

On the asset side of a balance sheet of a commercial bank, "loans" and "investments" constitute the earning assets of the bank. The other major asset is "cash" upon which there is no return to the bank. It is the management of these earning assets that largely determines the earnings performance of the bank in question. As indicated in Table I, the investment portfolio of a typical commercial bank has constituted almost half of the total earning assets of that bank in recent years. Needless to say, the management of this portion of a bank's earning assets involves tremendous responsibilities and such management, without dire results, cannot be taken lightly.

Objectives

The primary objective of this study is to highlight recent thinking and developments in the area of commercial bank investment portfolio management. The major point of view taken will be that of management and only indirectly that of the stockholder or depositor.

One of the problems of an endeavor such as this is the fact that all commercial banks are not of the same size. Hence, it is possible to speak from a "small" or "large" bank point of view. Therefore, an attempt will be made, whenever possible, to contrast investment procedures in both the large and the small commercial bank. Furthermore, this author feels that the small bank, in spite of its limitations as to trained

personnel, experience and time, should be aware of how investment matters are handled in the larger institutions. If the small bank can duplicate certain procedures, all well and good. If not, at least the smaller bank can be aware of the various directions in which further effort can be profitably expended. However, the small banker should also be aware of the limitations under which he operates and should not try to follow procedures which he is not equipped to handle.

A secondary objective is to provide a document which may serve as the foundation for a more comprehensive study in this field. As previously indicated, no attempt has been made to indicate "the correct approach" in every situation. Rather, the author feels that the "outlining" of a problem area is almost as important as its solution. In fact, greater awareness of problems can go a long way toward better and more profitable management of a commercial bank's investment portfolio.

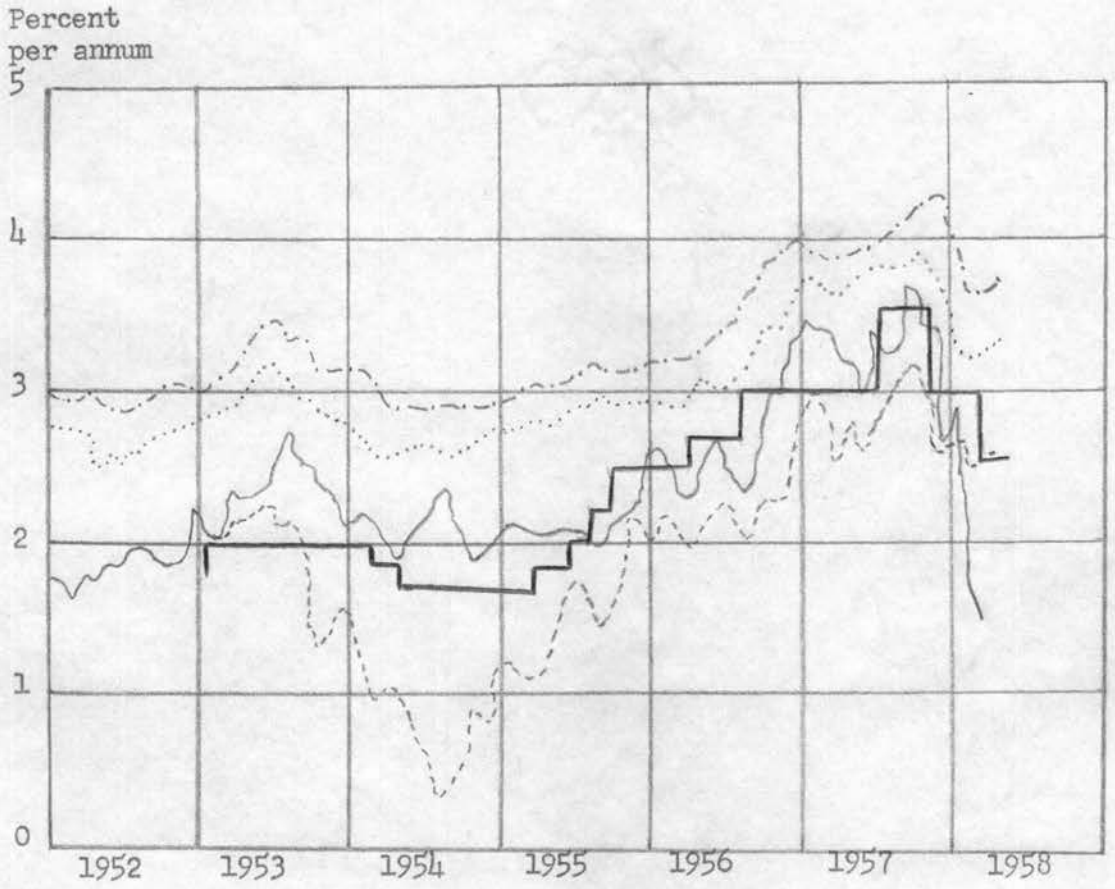
Events during the period 1954-1957

For purposes of continuity, this investigation has been limited to the recent period of rising interest rates. As shown by Chart I, this period runs from the middle of 1954 to mid-November of 1957 when the Federal Reserve discount rate was reduced to 3% from its recent high of 3.5% (the highest since 1933), a running time of about three years.

At this point, one should recall that business dips and rebounds are reflected in interest rate movements. Generally speaking, as business

CHART I.

Bond Yields and Interest Rates (1952 - 1958)



- - - - - Treasury Bills
——— Discount Rate (New York)
——— State and Local Government Aaa
..... Taxable Government Bonds
.-.-.- Corporate Aaa Bonds

Source: Treasury Department and Board of Governors of the Federal Reserve System

gets better interest rates firm and rise, and as general business conditions decline interest rates tend to ease off. In turn, this easing and firming of interest rates have an immediate effect on bond prices.

Indeed, this three-year rise in interest rates had a noticeable impact on bond prices and yields. Bond prices drifted downward almost continuously, sometimes slowly, at other times quite rapidly. However, in spite of the steady decline in these prices, no selling panic developed such as occurred in 1953.

During 1955 and 1956, commercial bank investment portfolio holdings declined $10.4 billion. In addition, during the first half of 1957, bank investments were reduced $3.1 billion. However, during the latter half of the year, commercial banks added $4.6 billion to their investment portfolios, making the net results for the year an increase of $1.5 billion.*

Beginning in 1955, the Federal Reserve Board adopted a policy of restraint on bank credit expansion, its object being to limit, rather than halt, the growth of commercial bank credit. This, of course, meant that the increased loan demand from 1955 on generally caused bankers to reduce their security portfolios in order to meet this more profitable avenue for the use of their funds.

Because such a large portion of commercial bank investments are in Government securities, Treasury debt management policy has become

*35, pp. 116-117.

another factor of importance. Treasury policy during this period has been to avoid any clash with business, in fact, one might safely state that the Treasury acted in a manner directly opposite to that of the Reserve. From 1955 on, it issued mostly short-term bills, certificates and notes.*

Methods of investigation

The first step, and the real nucleus of this investigation was the drafting of a questionnaire covering specific portfolio practice and general portfolio policy. The questionnaire was divided into different subdivisions dealing with various aspects of bank investment policy. One set of questions related to specific issues and the other set of questions referred to general phases of portfolio policy. A final draft of the questionnaire may be found in the Appendix.

Armed with this questionnaire, the author consulted a number of bank investment officers in prominent large and small commercial banks in the New England area. This investigation also included some government bond houses, a few authorities at leading academic institutions, and one seminar program under the sponsorship of the Boston Chapter of the American Institute of Banking.

At the same time as the primary research was in progress, considerable secondary research was being undertaken. In this area, one

*22, p. 1.

discovery was that, since 1951, very little material in book form has been produced that directly relates to this area of bank management. The completed thesis, of course, is the combined results of both endeavors.

Acknowledgments

The author wishes to acknowledge the generous assistance given by those individuals consulted. Their efforts contributed greatly in keeping this study headed in worthwhile directions.

CHAPTER II.

INVESTMENT REQUIREMENTS OF COMMERCIAL BANKS

The purpose of this chapter is to outline the ability of commercial banks to assume investment risks. An understanding of this is important since the investment policies of any institution are largely determined by its investment requirements.

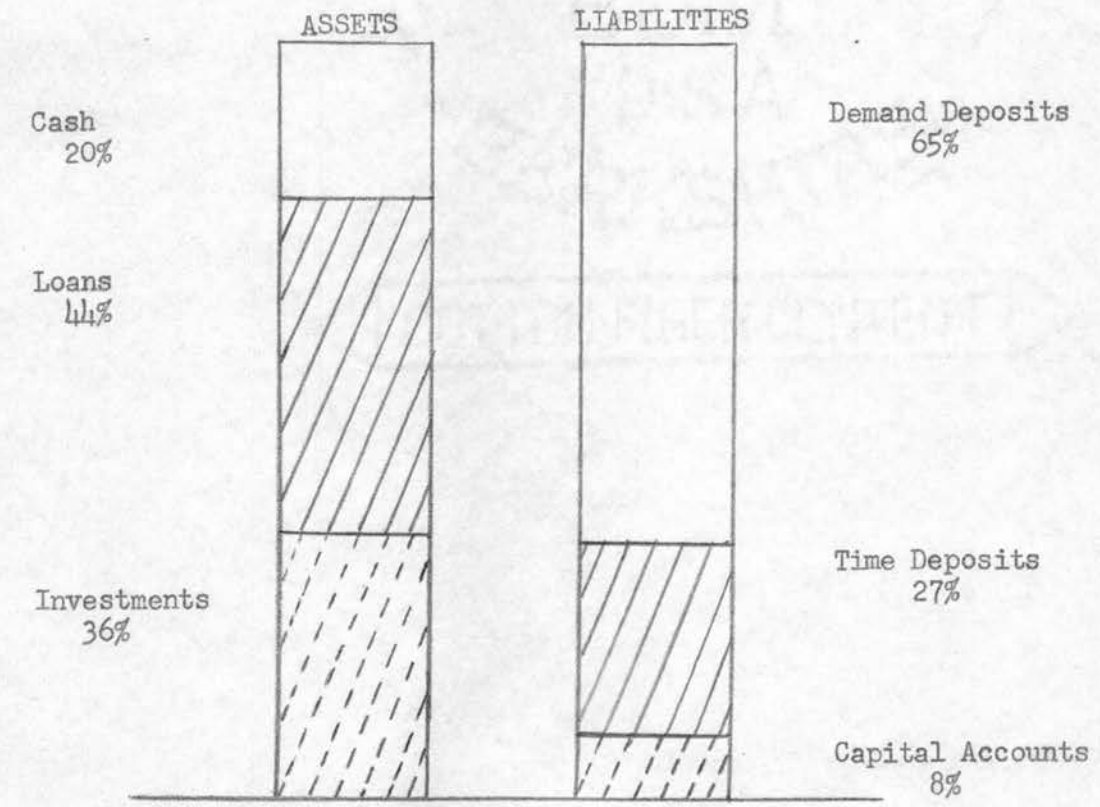
Need for stability of principal

For commercial banks, "stability of principal" is the major investment requirement. The reason for this is threefold. First, as illustrated by Chart II, the liabilities of a typical commercial bank are very large in relation to its assets. Demand and time deposit liabilities recently comprised about 92 percent of the total assets of an average bank. This leaves a capital cushion of approximately 8 percent to absorb any loss or shrinkage in the value of the assets. Therefore, a relatively small loss within the investment portfolio would be a serious matter for the typical commercial bank.

In the second place, an average bank has well over half of its deposits in the form of demand deposits. This, of course, means that the bank has the legal obligation of converting these deposits into currency "on demand." Even in connection with time deposits, a bank is always well advised to pay them out as requested.

CHART II.

Division of the Balance Sheet of
a Typical Commercial Bank



Source: Federal Reserve Bulletin, December 1957, p. 1381;
(adapted from the figures for all commercial banks
as of June 6, 1957).

The third reason, although not as compelling from a legal viewpoint, is just as important from a competitive standpoint. A commercial bank is primarily an institution for making loans. If a bank does not meet all reasonable customer credit demands, its competitors usually will. During a long period of rising loan demand, such as we have just passed through, a commercial bank has two ways of meeting the situation: (a) by holding cash, and (b) by having investments which can be quickly converted into cash with little loss. Since the holding of large amounts of excess cash lowers a bank's earnings, bankers logically look to the investment portfolio to supply additional loan funds as needed.

Other requirements

The quality of investment management usually varies with the size of the bank and often limits the ability of the individual bank to assume investment risks. The important thing here is for each bank to be aware of its limitations in this area and to invest accordingly. Moreover, regardless of the portfolio makeup, the bank in question must exercise sound and continuous investment management.

Because investments make up such a large percentage of a bank's earning assets, banks do require a certain amount of stability of investment income. However, if stability of principal is adequately provided for, stability of investment income will usually be taken care of.

Another investment requirement is for highly marketable securities. The reason for this is the legal requirement that deposits be

paid on demand, or in the case of time deposits, within a relatively short time. This constant danger of forced sale is something that no commercial banker can safely ignore.

Tax-exempt securities are also a requirement since commercial banks are subject to the Federal corporate income tax. However, the tax position of each bank varies with its size making this requirement very important for some banks and relatively unimportant for others.

Legal restrictions

Recognizing the investment requirements of commercial banks, both Federal and state laws limit the investments of commercial banks to bonds. With but few exceptions, ownership of stocks is prohibited. Even in the area of bond investment, only high-grade issues may be purchased. Today, bankers are required to limit their purchases to the top four bond rating categories (Aaa down through Baa), confirmed by two rating services.

Priorities in the use of bank funds

At this point, a discussion of priorities in the use of bank funds should prove extremely useful in understanding the proper place of the investment activities of a typical commercial bank. The general priorities usually accepted are as follows:*

1. Primary reserves (cash)
2. Secondary reserves
3. Customer credit demands (loans)
4. Open-market investment for income.

*3, pp. 12-18.

From this list of priorities, the concept most relevant to this discussion is the fact that loans take precedence over investments. Once the primary and secondary reserves (safety features) have been taken care of, loan demand comes next. This is so because banks are better suited for this type of market than they are for the investment market. Loans are the area where a banker should take most of his risks and make most of his profit. Investment income should enter the picture only after the first three priorities are taken care of. In the survey of current practices, one question# referred specifically to this area. Bankers were asked to establish a priority for the employment of commercial bank funds. Without exception, the above list of priorities was established.

The questionnaire also tackled the problem of priorities among the obligations of an investment portfolio. Here again there was general agreement. The priorities generally agreed upon were:

1. Safety of funds (quality).
2. Availability of funds (liquidity).
3. Earnings (profitability).

In establishing this group of priorities, one runs into the financial problem of liquidity versus profitability. The more liquid a financial institution is, the less profitable it is; and the more profitable an institution is, the less liquid it becomes. In the case of commercial banks, liquidity comes out on top because of their investment requirements. However, the crux of the situation is not the fact that

#Questionnaire, Section H on p. 2 of Part II.

liquidity bests profitability as an objective; instead, it is the maintenance of the proper balance between liquidity and profitability in each individual bank. This is something that can be properly decided only by the management of the bank concerned.

CHAPTER III.

FORMULATION OF BANK INVESTMENT POLICY

The subject of this chapter is the formulation of bank investment policy. Many financial writers are of the opinion that this aspect of investment portfolio management has been seriously neglected by many of our banking institutions. Furthermore, general investment policy is easier to develop than loan policy because every bank has access to the entire bond market, while local loan policies have to be developed in relation to the opportunities which unfold in the area served by the bank.

Generally speaking, an "investment policy" is a program for the use of a bank's funds which are not loaned to its customers. Although this discussion is confined mainly to investments in securities, other types of bank investments (e.g., mortgages) should not be slighted.

Situation of the individual bank

The purpose of shaping an investment policy is to reduce the guesswork in handling an investment portfolio. Moreover, if the program of an individual bank is to serve the needs of that bank, it must be based on the situation of that bank. Therefore, there are certain basic studies that a portfolio manager should make (on a continuing basis, if need be) before committing his investment funds to the market. Some of the more important subjects which require analysis are:

(1) A study of the general type and character of the business of the bank. The desired end result here is a picture of the kind of bank one is working with (e.g., a savings bank that has evolved into a commercial bank).

(2) Information concerning the deposits of the bank. Which funds are temporary and what percentage of a bank's deposits may be considered normal? What is the make-up of the time deposits? What is the seasonal variation of the deposits, and how do cyclical conditions affect the various types of deposits?

(3) The volume and character of the bank's loans.

(4) The tax position of the bank. Before any move of importance is made in the portfolio, the tax results should be considered.

(5) The margin of safety provided by the capital accounts.

(6) The current business situation and a forecast of what business conditions are likely to be six months to a year from now. This, of course, is an external study, but it is an area the knowledge about which can make the difference between average and excellent portfolio performance.

One interesting observation during the survey was that many portfolio managers were constantly working toward better reporting in the areas listed above. The inference here is that as the business climate in which a commercial bank operates becomes more dynamic (as is the trend today), additional management effort needs to be channeled in this direction.

Goal of bank investment programs

The first step in the formulation of a bank's investment policy should be the establishment of a goal. In the last section of Chapter II, the elements of such a goal were outlined: (a) safety; (b) liquidity; and (c) profitability. Since all of these play a part, the objective becomes a compromise. One authority on bank management stated it in this fashion: ". . . the goal is really a compromise of maximum income consistent with commercial bank safety and maximum flexibility in investment position."* Evidence obtained during the survey points to a deduction that although bankers are thinking along these lines, very few of them have formulated a definite objective. In spite of the fact that a goal should change as conditions change, it is the opinion of this writer that more thinking needs to be continuously directed at fundamentals such as this.

Basic principles in the formulation of investment policy

In 1939 the New York State Bankers Association sponsored a series of conferences on bond portfolios. In the first conference, one

*3, p. 285.

of the speakers discussed a "Statement of Principles and Standards of Investment for Commercial Banks" issued by the Bank Management Commission of the American Bankers Association in 1937.* These principles appear to be every bit as important today as they were then. Following a summary of these principles, there will be a comparison of these standards with what is happening today. The principles are as follows:

(1) Every bank should adopt a definite written investment policy to meet its particular situation. This policy should be approved by the Board of Directors.

(2) Each bank should fix the responsibility for carrying out its policy on one officer.

(3) A bank's liquidity should be provided for by means of a secondary reserve account of high-grade, short-term maturities.

(4) A separate investment account of prime longer-termed spaced maturities should be established to provide additional income.

As far as the first principle is concerned, it is the exception rather than the rule for a bank today to have its investment policy in written form. Even those banks that have made some attempt in this direction often have only part of their investment policy written out. Lack of a written policy may not adversely affect the large bank where

*10, pp. 27-39.

there is available the teamwork of perhaps a dozen officers. In fact, the larger the bank, the more flexible its investment policy can be. The portfolio manager of a large bank often attempts to change his program in accordance with changing market conditions. However, the country banker usually cannot afford to do this because of lack of training and money market experience. Such a bank should have a short written policy. Once such a program is mapped out, the small bank should follow it and fight what sociologists call the "herding instinct" - the tendency to do what others are doing at the moment. For example, the small bank that had established a spaced maturity program in its separate investment account and had resisted the pressure for "shorts" during the latter part of the recent period of rising loan demand, would have made out very well, capital appreciation-wise, following the 1957-58 downturn in interest rates. Although it is easy to look back and suggest how things "should have been done", it is almost always the small banker who cannot afford to do this. The small bank portfolio will usually show a better performance over the long run, if the portfolio manager adheres to an established policy through the ups and downs of the business cycle.

Principle number two suggests that the overall responsibility for carrying out portfolio policy should be vested in one officer. Questionnaire answers show that this is usually the case. Investment decisions are almost always the responsibility of one individual, but

an investment committee (either a committee or the board of directors) helps by doing the staff work and presenting recommendations.

The remaining principles will be discussed in another chapter.

Additional observations

As an aid in formulating bank investment policy, it appears as if the smaller banks seldom seek the advice of their larger city correspondents. The city correspondents, on the other hand, are willing and well equipped to handle requests for investment advice. As so often happens, the small banker only comes for help after the damage has been done. Whatever the case, this avenue of investment guidance could be much better utilized than it has been in the past.

In addition to regularly published information and correspondents, bankers occasionally consult government bond dealers regarding specific market information. However, when this is done the banker should realize that the broker often cannot escape his own bias. Advice coming from this source should always be sifted with this in mind.

As far as determining what brokers receive the business of a bank, it appears as if two considerations are involved. One is whether or not the brokerage house carries an account with the bank. The other is the extent to which the broker in question aids the bank (e.g., by rendering timely market information).

Another observation concerns the "rules of thumb" or general standards used by banks in selecting their investments. Some banks, in regard to corporate and municipal obligations, follow the policy of buying nothing but double A names and above. Other banks limit their purchases to single A names and above and make a majority of their purchases in the single A category. Almost none of the larger banks have been buying any corporate issues at all and many banks are planning to let those that they do have run off. In regard to "municipals", some banks follow a policy of sticking to names in their own area (e.g., the New England area). Few of the larger banks rely heavily on the ratings of the agencies in making purchases within their own area. All banks appear to use agency ratings cautiously. However, the reader should be warned that these observations were made during a period of rising loan demand when most bankers were allowing their portfolios (mainly their secondary reserves) to run off in order to secure additional loan funds.

CHAPTER IV.

THE INVESTMENT PORTFOLIO AND COMMERCIAL BANK LIQUIDITY

Liquidity, the ability to convert assets into cash at a moment's notice without loss,# is one of the foremost considerations in the development of investment policy. For more than twenty years, commercial banks have experienced an exorbitant amount of liquidity. During the past few years, however, this situation has changed. Loan-deposit ratios have been in a steep climb. In effect, loans have increased at the expense of the secondary reserves. When asked what issue their bank considered most critical during the period of this investigation, almost every bank official questioned replied that liquidity was the issue that had concerned them most. The purpose of the chapter will be to show why commercial banks need liquidity and the function of the secondary reserve assets as a source of liquidity.

Why commercial banks need liquidity

There are two basic reasons why liquidity is essential to commercial banks. One is to provide for deposit decline. The other is to meet loan demands. An additional reason is to be able to take advantage of favorable investment opportunities that may arise.

Because commercial banks are legally required to meet most of their obligations on demand (e.g., demand deposits), liquidity policy

#or, the ability to shift from one asset to another without loss.

should be constructed in such a manner that a bank will be able to cope with foreseeable deposit losses without: (a) extraordinary capital losses, (b) curtailment of loans, or (c) excessive borrowing from outside sources (e.g., the Federal Reserve). At times these deposit variations can be anticipated (e.g., seasonal deposit shifts), but this is not always the case. Because some types of deposits (e.g., deposits of public funds) are more likely to be withdrawn suddenly than others, each bank investment officer must have a thorough knowledge of his bank's deposit structure.

The second reason for protective liquidity policy is to avoid disturbing a bank's loaning operations when cash drains develop. If a bank does not have an adequate secondary reserve, loans may have to be cut back in times of stress. This is a situation that every banker trys to avoid. Only when a bank is able to meet all reasonable loan demands is it fulfilling the basic reason for its existence. For example, had larger liquidity reserves been available during the early thirties, many loan losses could have been avoided, since banks that were pressed for cash would not have had to press for loan liquidation.

In addition to these reasons, a bank which happened to have a strong liquid position would be able to participate in any favorable investment opportunities that might come along. This, of course, is not a compelling reason for maintaining liquidity, but since liquidity is needed, every bank should attempt to make the best of the framework within which it is forced to operate.

Secondary reserves as a source of liquidity

Earning assets - loans and investments - contribute to cash availability in three ways: (a) through maturities of loan and investments; (b) by a high degree of marketability; and (c) through rediscount eligibility or acceptability as loan collateral.

The situation today is such that banks rely mainly on their secondary reserve account for liquidity. Traditional banking theory held that banks could maintain their liquidity by concentrating on short-term business loans. Experience did not bear out this theory. As a result, conservative banking practice of today dictates that loans should not be counted as part of the secondary reserves. However, many of the larger banks still regard street loans (e.g., call loans to brokers) as a part of their protective investments.

The reliance on the secondary reserves of a bank for the bulk of its liquidity is another reason why careful consideration must be given to the selection of a bank's securities. Since the determinants of investment liquidity are maturity, quality and marketability, all securities selected for the secondary reserve account must contain these qualities. These factors will be discussed further in connection with the securities suitable for commercial bank investment.

When the secondary reserves of a bank are properly established, they will be available at all times to replenish not only the primary reserves (cash and due) but also all other predictable and expected demands.

But, since no two banks are alike, it is impossible to arrive at any uniform standard by which to determine the minimum amount of secondary reserves needed. However, the factors that each individual bank must consider in evaluating its liquidity needs include: (a) the bank's deposit structure, (b) the quality and maturities of its loans and non-secondary-reserve investments, (c) the capital position of the bank, and (d) the economic trends affecting its community.

Liquidity versus profitability

Too little liquidity may subject a bank to undue hazards. On the other hand, an excessive amount of liquidity can easily result in needless sacrifice of bank earnings as well as neglect of the legitimate credit requirements of the community concerned. What is needed is a "middle road" that provides a satisfactory compromise of both objectives.

This "middle road" will vary from time to time as the business cycle progresses through its various phases. During the "recession" and "depression" phases, commercial banks typically build up an increasing amount of protective liquidity. As the "recovery" and "prosperity" phases roll around, this excess liquidity is largely worked off. The problem that each individual bank has to solve is that of determining not only what liquidity is needed at the moment but, more important, the amount of liquidity that will be needed the next six to twelve months.

Liquidity policy becomes especially important in periods of rising loan demand, such as the economy has just passed through. At such times a banker can be subjected to these two conflicting pressures: (a) pressure to deplete his secondary reserves in order to satisfy customer credit demands (profitability); and (b) the need for maintaining enough secondary reserves to make sure that the bank can meet its obligations on demand (liquidity). This peak period of business cycle activity is a very critical one because commercial banking experience has shown that a rapid increase in loans and a corresponding decrease of liquid reserves exposes a bank to the danger of sudden cash drains which often happen on the downside of the business cycle.

CHAPTER V.

SECONDARY RESERVES

The primary objective of this chapter is to point out the policies banks are currently following in this area. However, before this can be accomplished, the reader should be exposed to a discussion of the purpose and function of secondary reserves in commercial banking.

Purpose and division of secondary reserves

Because of the nature of bank deposits and the character of loan demands, secondary reserves are needed to act as a reservoir, ready at all times to fulfill a bank's expected and remote liquidity needs. As previously indicated, quality and liquidity are the top priorities in this area, but profitability enters the picture to the extent of the risks involved in the purchase of a bank's securities.

As is usually the case, a bank's secondary reserves are divided up into two major divisions. One is a secondary reserve of highly liquid securities, and the other a tertiary reserve# of longer-term issues. These reserves are generally thought of as the "investment portfolio" of a bank.

Secondary reserve

The basic purpose of the secondary reserve is to act,

". . . as a bellows, contracting as deposits decline or loans increase

#sometimes termed the "investment core", the "investment account" or "secondary reserves, Class II".

and expanding as deposits increase or loans decline."* The issue to be discussed next is the extent to which practice today follows the basic theory in this area.

As was noted in previous chapters, one of the basic principles in the formulation of investment policy is that the secondary reserve account should provide for a bank's liquidity. This is normally done by investing secondary reserve funds in short-term "governments" and other securities maturing within two to three years. Questionnaire results indicate that theory and practice in this segment of portfolio management are not far apart. Every bank visited had its investment portfolio divided into two major divisions similar to those discussed above. Separate policies were applied to each division, and the liquidity of the secondary reserve was provided for by highly marketable, short-term securities. However, the 1954-'57 period of rising loan demand and increasing interest rates caused at least one re-evaluation of portfolio policy.

Since the Federal Reserve-Treasury accord in 1951, many bankers had not been too certain as to what maturities should be considered as falling within the secondary reserve. As indicated, one of the accepted maturity limits was up to three years. Then, along came the recent period of rising interest rates and falling bond prices, the duration and intensity of which few bankers correctly predicted. The result was that

*7, p. 20.

towards the end of this period many banks found it necessary to sell off a number of their bonds in the secondary reserve account to meet the increased loan demand. The "eye-opener" was that bond prices for this maturity range had fallen well below what the banks had anticipated. This caused many banks to take greater capital losses in their investment accounts than they would have preferred. The implication here is that no bonds with maturities of over two years should be included within the secondary reserve and, if possible, the bulk of the maturities should be closer to one year than two.

Tertiary reserve

The remainder of the investment portfolio, the tertiary reserve, may be considered the more permanent part of the investment account. After a bank has decided upon the size of the secondary reserve, the rest of the investments fall within this "investment core". Although liquidity is still a consideration, greater emphasis may be placed upon income.

In order to hedge against changing interest rates, the maturities of this investment account should be fairly evenly staggered over a period of years - usually ten years. The question as to the number of years that a maturity schedule should be restricted to is one that should be determined individually by each bank, based on its local conditions.

However, most authorities recommend that the maximum length be confined to ten years, except in rare circumstances, such as when a bank in a small community with a light loan demand is compelled to purchase larger maturities to provide necessary income.

Every bank visited during the survey had adopted this principle of having a separate investment account for the purpose of additional income. But, uniformity regarding maturity policy was not very widespread. The most widely adopted policy was the ten year "ladder effect".# One bank evenly spaced its tertiary reserve maturities out to five years. Another bank stated its maturity policy as follows: "Our objective is an evenly spaced maturity pattern with the amount maturing in each year determined by the average projected growth in loans." This bank had some maturities over the ten year mark. Still another bank evenly spaced its "governments" out to six years and its "municipals" out to nine years.

All indications are that the ten year "ladder effect" is almost ideal for the small bank. The even spacing gives an opportunity for a periodic "second look" at the market and reduces the annual work load in this area. For the larger, better staffed institutions, other more flexible policies can prove to be more rewarding. One suggestion is to divide the tertiary reserve into two parts, each being a five year area. As the funds roll over, invest in the more profitable maturities in

Maturities evenly spaced out to ten years.

each area, at the same time, trying to keep the fund fairly well balanced. This policy requires more skillful handling and more time must be devoted to analyzing market conditions.

One question in the survey concerned the average year-end maturity of the various investment portfolios for the years 1954 through 1957. The results show that the figure for any one bank did not vary substantially over this period. The mean for all banks visited was roughly three years - six months. The low for a single bank was two years, and the high for any one bank was about four years - six months. One correlation noted was that the average maturity was shorter in the "high-loan" banks.#

Banks having a high percentage of their deposits in loans.

CHAPTER VI.

TYPES AND CHARACTERISTICS OF SECURITIES SUITABLE FOR COMMERCIAL BANK INVESTMENT

This chapter will explore the securities suitable for commercial bank investment in the order of their importance. Also, an attempt will be made to indicate the position each type of security should have in a typical investment portfolio.

During the course of the investment survey, there is one principle that almost every bank investment officer stated or implied in the replies to the questionnaire. It was the idea that of the three major obligations of an investment portfolio - quality, liquidity and profitability# - quality is the one priority that should never be compromised. However, continuing emphasis in this area does not mean that investment liquidity (via marketability and proper maturities) should be slighted in any way. Both have their place just as income objectives do also, but one can never emphasize too often that the loan portfolio - and not the investment portfolio - is the place where a bank should take its quality (or credit) risks.

Direct obligations of the United States Treasury ("governments")

Only marketable United States Treasury securities (see Table II) will be discussed here. Non-marketable government obligations (e.g.,

See Section E of Chapter II.

TABLE II.

Types of Securities Suitable for Commercial
Bank Investment in Order of Importance

I. Direct Obligations of the United States Treasury

- A. U.S. Treasury Bills
- B. U.S. Treasury Certificates of Indebtedness
- C. U.S. Treasury Notes
- D. U.S. Treasury Bonds

II. Securities of the Instrumentalities of the United States Government:

- A. Federal Intermediate Credit Banks
- B. Federal Home Loan Banks
- C. Federal Land Banks
- D. Federal National Mortgage Association
- E. Banks for Cooperatives

III. Municipal and Other Tax Free Obligations

- A. General Obligation Bonds
- B. Housing Authority Bonds
- C. Revenue Bonds

IV. Corporate Bonds

- A. Railroad Equipment Trust Certificates

Savings Notes and Bonds), found only to a modest extent in bank portfolios, will not be considered. With but few exceptions, all marketable "governments" are subject to Federal Income Taxes.

United States Government securities excel all others in quantity, volume or availability and marketability and, therefore, are held in bank portfolios in great quantity. Since these securities will, undoubtedly, always be paid promptly and in full, there is no credit risk involved in holding them. However, there is a market or interest rate risk to be taken into account. For these reasons, the issues that require the most attention here are: (a) What maturities best fit the needs of the bank in question? (b) What is the future outlook for interest rates?

Treasury Bills may have a maturity of up to one year but are generally confined to a maturity of 90 to 92 days. Since bills are sold on an auction basis, holders of maturing series have no privilege of exchange. Certificates are limited to a maturity of one year, and holders of maturing certificates are usually given the privilege of exchanging them for such securities as the Treasury may be offering to refund them. Treasury Notes, when offered, have original maturities from one to five years. Holders are given the same exchange privileges as the holders of certificates. Treasury Bonds are issued with maturities greater than five years but usually less then twenty-five years. In respect to exchange privileges, they are similar to the certificates and notes.

(The interest rate picture and forecasting will be taken up in another section of this paper).

Because government bonds best satisfy the safety and liquidity requirements of commercial banks, investment theorists have long advocated that they should make up the bulk of the investment portfolios of these banks. Survey results do not disagree. A majority of the banks questioned indicated that Treasury obligations made up from 85 to 90 percent of their portfolios. In some cases, government bonds made up only 70 to 75 percent of a bank's investments, but this was only noted in the larger banks which had especially active municipal departments.

For the small bank, Treasury obligations provide an especially good avenue for a high percentage of its investment funds. Not only is the investment officer of a small bank often pressed for time but, more important, he often lacks the investment experience necessary to safely invest a sizeable portion of his bank's funds in other types of securities. Survey results confirmed this logic.

Securities of the instrumentalities of the United States Government ("agency bonds")*

While "agency bonds" cannot be considered as falling within the "riskless" asset category that government bonds do, they are not far behind. These securities (see Table II) are issued by Federal agencies, created by Act of Congress to fulfill a definite need within the national

*8, pp. 79-81.

economy. These agencies are supervised by the Federal Government, and the approval of the Secretary of the Treasury is needed in all agency financing. These facts indicate a high credit rating. The bonds of all of these agencies, except those of Federal Land Banks, have been approved by the regulating authorities for bank investment without special restriction. Federal Land Bank bonds are eligible for bank investment with special restriction. All of these securities are subject to Federal Income Taxes.

Federal Intermediate Credit Banks finance their operations through the sale of "consolidated collateral trust debentures." They are permitted to issue these debentures with maturities up to five years, but nine months or less is the usual maturity length. Federal Home Loan Banks sell "consolidated notes" with maturities usually less than one year to finance their obligations. Federal Land Banks are financed by the public sale of "consolidated Federal Farm Loan Bonds" whose maturities vary from a few months to 15 years. The Federal National Mortgage Association was created to fulfill three functions and the association has used varying methods of financing to carry out its missions. Periodic sale of "consolidated debentures" has been the principal source of financing for the Banks for Cooperatives. Four issues are currently outstanding.

Since questionnaire results indicated that this class of security has been largely ignored by commercial banks, discussing (with bank

investment officers) the place of "agency bonds" in investment portfolios was an interesting experience. In view of the desirability of holding the lion's share of a bank's investment funds in government bonds, it was agreed that "quasi-governments" (as "agency bonds" are sometimes called) should only play a minor role. However, this was about the only area of agreement. The investment officers of the larger banks seemed to feel that "agency bonds" were a good investment for the small bank that was not interested in short-term trading. On the other hand, the smaller banks usually held very few "quasi-governments" (if any at all) and generally felt that they did not want them. One of their reasons for not liking them was that holding this type of security unduly increased their reporting load. Others did not like their marketability.

After sifting the opinions of many sources, the facts appear to be that the marketability of "agency bonds" has gained a great deal in recent years. In fact, they are often more marketable than many municipal obligations. For the small bank they can provide a good means of investing their funds. Their yields are often attractive, and the risk of holding them is relatively minor. However, for banks that engage in a considerable amount of arbitrage, these are not a preferred type of investment.

Municipal and other tax free obligations

Municipal bonds, or "municipals", rank third in importance as bank investments. These bonds are public securities issued by states,

counties, municipalities and other political subdivisions. Another way of expressing this would be to say that "municipals" are securities issued by political subdivisions other than the Federal Government.

One of the attractive features of these securities is that the income produced from holding them is exempt from Federal Taxes. For this reason, municipal bonds are often referred to as "tax exempts". Another favorable feature is that there is usually a large supply of these securities available. The credit risk factor may be reduced by careful screening of this ample supply. A record of prompt payment as well as an opportunity for broad diversification are also in their favor. In addition, a wide choice of maturities helps to explain why many bankers are attracted to this type of security.

On the other side of the picture, the marketability of these bonds is not always the best. A market of close two-way trading is the exception instead of the rule. For this reason, these securities are usually purchased with the assumption that they will be held to maturity.

Today, municipal bonds are classified into three categories: (a) General Obligation Bonds, (b) Housing Authority Bonds, and (c) Revenue Bonds.

General Obligation Bonds are direct obligations of the issuing authority backed by its general taxing power. This feature is the reason why these bonds are the "municipals" most in demand. They are usually issued in serial form, repayment of principal provided for either

semi-annually or annually. Housing Authority Bonds are the newest category of municipal bonds on the market. These are of a very high credit grade because repayment is backed by the pledge of the Federal Government's full faith and credit. These bonds were first offered in July of 1951. Revenue Bonds are secured only by the income or revenues derived from the operation of a specific facility for which they are issued (e.g., a toll road). No taxing powers are pledged as security and therefore, they cannot be regarded in the same light as the other two categories of municipals.

Survey results indicate that bankers favor General Obligation Bonds by a wide margin. Smaller banks appear to limit the small amount of "municipals" they carry almost entirely to this category of municipal bonds. Larger banks that had approximately 15 percent of their portfolios in "municipals" stated that General Obligation Bonds returned a higher yield than Housing Authority Bonds, but that the latter were more marketable. Some banks considered Housing Authority Bonds advantageous for "tax switching". Very few Revenue Bonds were held by any of the banks. In concluding, a ranking of municipal bonds in the order of their importance, liquidity-wide, would be: (a) Housing Authority Bonds, (b) General Obligation Bonds, and (c) Revenue Bonds.

Corporate bonds ("corporates")

Corporate bonds are those bonds issued by private corporations. In spite of the fact that there is a sufficient supply of these bonds

which might qualify credit-wise, the type of bond is the least attractive for bank investment. Questionnaire results indicate that almost all banks are allowing their "corporates" to run-off, with the intention of reinvesting such funds in other types of bonds. However, there is one issue in this category that is often utilized for bank investment, namely, Railroad Equipment Trust Certificates. The reasons for this are: (a) Their favorable history of earning which have provided an adequate margin of safety; (b) the fact that they are a prior claim on railroad operating income (almost equal with wages); and (c) because they are generally issued in semi-annual serial maturity form. But, because of their limited marketability (especially in times of stress), these securities are usually purchased with the idea of keeping them to maturity.

CHAPTER VII.

ECONOMIC FORECASTING AND THE INVESTMENT PORTFOLIO

Market fluctuations# may be a source of financial rewards, but they may also be a source of great penalties. For these reasons, no financial manager should consider himself fully informed without some information (and planning) in regard to future probabilities. It follows that economic forecasting has a place in investment portfolio management. However, there is no fool-proof formula that may be relied upon for accurate prediction. Past economic history may serve as a guide, and general rules may prove to be helpful, but economic events may never be depended upon to repeat themselves in exactly the same manner. This is so because all the factors shaping the respective outcomes are continually changing. This chapter will point out the part economic forecasting can play in portfolio management.

Economic forecasts employed in investment portfolio management

Some of the more important economic forecasts that are of importance in this area are: (a) Funds position projections of various lengths up to a year; (b) secondary reserve position forecasts of various lengths up to a year; and (c) a continuous forecast of general business conditions.

Since bank portfolios are made up of high-grade bonds, interest rate fluctuations are one of the primary concerns.

Funds position projections relate to the legally required reserves that every commercial bank is required to maintain on deposit with the Federal Reserve. Although this topic will not be pursued further in this paper, there is no intent to imply that this area lacks importance. A well managed bank must keep fully invested at all times. Excess reserves mean loss of potential earnings, something that no banker wants to make a practice of allowing.

Secondary reserve position forecasts are needed because a bank portfolio manager has to supply funds to the loaning officers when needed and take up the slack when loan demand lessens. Economic projections allow this to be accomplished in an orderly fashion. Table III illustrates one method of estimating the future size of the secondary reserve for a hypothetical bank. Three-month projections are used.

The steps in making this type of forecast are as follows: (a) Estimate deposits (line 1); (b) estimate loans (line 3); (c) estimate municipals (or tertiary reserve) (line 4); (d) estimate cash requirements (30 percent of deposits in this case) (line 2); (e) add in any other assets (line 5); (f) take a total (line 6); (g) determine liabilities, capital being known and deposits already estimated (lines 10 and 11); (h) include net current liabilities (line 9); (i) take a total (line 12); (j) place total liabilities figure in line 8 (total assets); and (k) subtract line 6 from line 8. This figure (line 7), a residual, represents the amount available for the secondary reserve. Then, the bank investment

TABLE III.

Three-Month Secondary Reserve Position
Forecasts for Bank XYZ

Bank XYZ (In Millions of Dollars)

		9/30/57	12/30/57	6/30/58
Line 1.	Deposits	165.3	180.0	150.0
	Assets			
2.	Cash and due	$ 43.8	$ 54.0	$ 45.0
3.	Loans	103.9	100.0	95.0
4.	Municipals	17.3	8.0	15.0
5.	Other	4.1	4.0	4.0
6.		169.1	166.0	159.0
7.	Secondary Reserve	21.1	18.5	15.5
8.	Total	$190.2	$204.5	$174.5
	Liabilities			
9.	Net current	6.6	6.0	6.0
10.	Deposits	165.3	180.0	150.0
11.	Capital	18.3	18.5	18.5
12.	Total	$190.2	$204.5	$174.5

officer, knowing the amount of money available for investment purposes, acts accordingly. Should this amount be insufficient for the liquidity needs of the bank, there is time to take appropriate action. Before leaving this topic, one should note the important part that several other projections play in this liquidity forecast. Estimates of the secondary reserve position can only be as accurate as the projections of the deposit and loan trends are.

Bankers are always interested in interest rate movements because of the vulnerability of their high-grade bonds. Survey results indicate that most banks forecast interest rate trends on the basis of the general business outlook. In doing this, an assumption is made that Federal Reserve policy is based on the same outlook. None of the banks visited stated that they ever tried to "second guess" the Federal Reserve Board. Any action the bankers took in regards to lengthening or shortening their portfolios were always in accordance with the outlook for general business and not on the basis of what they thought the Federal Reserve would do.

The portfolio managers of the larger banks maintained a constant check on various economic indicies in their efforts to chart the business outlook. The executives of the smaller banks, on the other hand, stated that they usually relied upon regularly published secondary sources (e.g., The Wall Street Journal). All bankers viewed this area as being extremely important. To emphasize this, many pointed out that if they had correctly estimated the intensity and duration of the recent "tight-money" period,

they would have: (a) Moved sooner to provide larger secondary reserves; and (b) engaged in more "tax switching" (this subject is explained in the next chapter). This information all points to the idea that economic forecasting is no longer a convenience, it is a definite necessity.

Significance of yield curves

The term "yield curve" refers to a chart showing the different yields of bond issues of varying maturities as of a particular date.# The three curves shown in Chart III illustrate the basic patterns of these various curves.

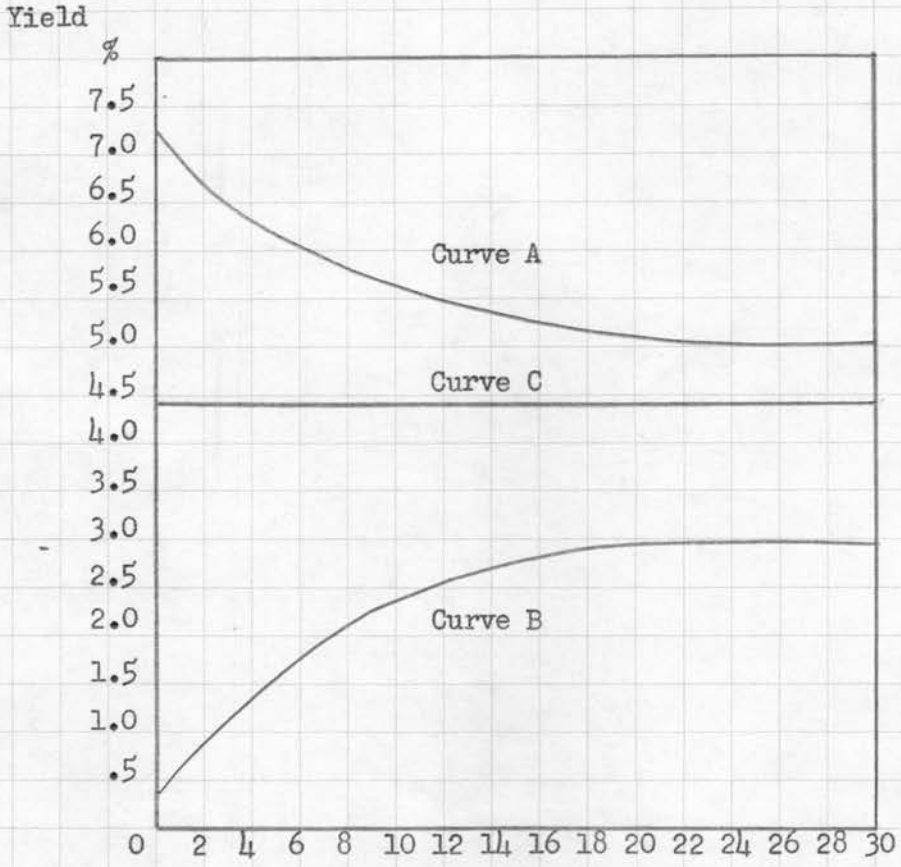
Curve A in Chart III is typical of the pattern which prevailed in most years from 1907 through 1929 and is known as a "decreasing yield curve." Curve B, an "increasing yield curve", has been in evidence almost continually since 1931. The "flat yield curve", Curve C, represents the pattern of an approximately horizontal line. This pattern existed between 1901 and 1905, as well as during the early part of 1957.*

In addition to using yield curves in determining the relative attractiveness of buying or selling particular bond issues, investment theorists have stated that the existence of rate patterns ". . . has two important implications for the investment analyst: (a) The possibility of 'playing the pattern', or investing and withdrawing investments at various levels; (b) the use of the shape of the curve to guide investment maturity policy."**

If issues of differing tax status are included, all issues should be reduced to a basis of yield net after taxes so as to be comparable.
*12, Part III.
**3, p. 325.

CHART III.

The Three General Types of Yield Curves



Source: Your Bank--Its Deposits and Its Investments, p. 56.

When there is an upsweeping yield curve (similar to Curve B in Chart III) investment writers have pointed out the possibility of adding to a bank's income by investing for "selected segments" in the existing yield pattern (especially if government bonds are "pegged"# as was the case during World War II). For example, if a bank should buy a 20-year bond with a 2½ percent coupon at par, the yield is 2½ percent if the security is held to maturity. If an upsweeping yield curve exists and there is no change in the curve during this period, the market yield of the bond falls as time passes. If the 15-year yield to maturity is 2 percent, the bond is worth $106.45 for each $100 of par after 5 years. Should the bank now sell the bond, it has received coupons at 2½ percent for each year and it has a capital gain of $6.45. For the 5-year period from the twentieth year to the fifteenth, the effective yield from maturity is approximately 3-3/4 percent.*

This operation is only feasible, however, for the investor who is not concerned with liquidity to the extent that commercial banks are and can afford to sell their bonds before maturity and reinvest the funds at the long end of the market (e.g., insurance companies).

Financial writers have also noted that yield curves can be useful in shaping a bank's maturity policy. In examining the prevailing yield curve, advocates of this viewpoint suggest that a banker should look for the approximate section of the curve where it noticeably bends

The government attempted to keep the market price of government bonds at a certain figure by freely buying and selling as circumstances demanded.

*3, p. 326.

and make his purchases in this area. This is because the banker is seeking as much earning power as possible without undue risk of capital. Out to the bend of the yield curve, the steepness (if there is any) means that the banker is being paid for the added maturity risk. Beyond the bend of the curve, the marginal compensation for the additional maturity risk is continually diminishing.

Some authorities have also endeavored to promote the yield curve as a forecasting device, but this use has been almost entirely disproved by experience. For example, the "increasing yield curve" was explained as a forecast of ultimately higher long-term interest rates, but the long length of the period during which the long rates remained low, cast considerable doubt upon the concept. Replies to the questionnaire appear to bear this out. Almost all banks surveyed stated that they did not use yield curves in their forecasting.

As suggested above, survey results indicate that yield curves no longer hold the position of importance that they did formerly. Some use is made of yield curves in forming a bank's maturity policy, but this is not widely heralded. However, questionnaire results did establish that the principal use of yield curves by commercial banks today is in determining the relative attraction, or lack of attraction, of individual bond issues that they are interested in buying or selling.

CHAPTER VIII.

ADDITIONAL THOUGHTS ON INVESTMENT PORTFOLIO MANAGEMENT

This chapter will take up three additional areas of portfolio management. The first topic to be explored will be "diversification". "Trading" will be covered next, followed by a discussion of "bond losses of banks."

Diversification

Investment diversification is the idea of spreading investment risks over an area sufficiently wide so that losses will be reduced to the average experience of many securities. As applied to investment portfolio management, the function of diversification is to obtain the greatest possible separation of risks peculiar to different industries, to different geographical areas and to different types of issuers. However, since diversification applies only to investments which are not "riskless," United States Government securities are excluded from this discussion; so are "agency bonds" for the most part. Thus, in the true sense of the word, diversification really applies to only whatever "municipals" and "corporates" a bank portfolio may contain. In view of these facts, one may logically conclude that diversification plays but a small part in actual portfolio management. In this respect, survey results agree.

Only one of the banks surveyed indicated that it had a definite policy in this area. This bank stated that it attempted to apply geographical diversification to its municipal holdings. On the other hand, another bank (and one that deals rather heavily in "municipals") frankly stated that it made little effort to apply the principal of geographical diversification to its portfolio investments. This bank pointed out that the bulk of its municipal holdings are Massachusetts names because the bank is better acquainted with the risks in its home state. On the whole, discussion of this topic, during the survey, brought forth little enthusiasm.

Trading

The term trading, as used in this paper, will mean "buying and selling of bank investments for short-term gain." This discussion will not apply to the buying and selling that a bank engages in during the course of its normal investment operations.

With the flexible monetary policy that the Federal Reserve Board has employed since 1951, it is possible to move in and out of "governments" and other high-grade securities, accumulating capital gains (which are taxed at only 25%). Yet, one should remember that a single mistake can easily involve a loss greater than the profit of a half dozen other moves. Also, a banker can be right in theory, but wrong as far as timing is concerned.

Some authorities believe that a banker's approach to his portfolio is either that of a trader or that of a long-term investor. This school of thought believes that it cannot be both.

Generally speaking, there are three different situations in which there is some excuse for a commercial bank to engage in trading: ". . . (a) making a market in the municipal issues that which a bank has underwritten; (b) arbitrage transactions,# particularly in United States Government securities; and (c) absorbing temporarily out-of-line new issues."*

Only one of the banks questioned indicated that it engaged in any form of trading and this bank confined its trading largely to arbitrage. The bank in question is one of considerable size, which is almost a necessary requisite since each arbitrage transaction usually produces but a very small return.

All bankers agreed that this is an area that the small banker would do well to stay clear of. Trading is only for those banks with the capital, the experience, and the current trading facilities required for this business. A good illustration of this point is provided in a recent survey of Federal and state supervisory agencies.** It is an example of overtrading the bond account. This particular bank had total

The simultaneous sale of a security in one market and the repurchase of the same type of security in another market at lower cost.
*3, p. 292.
**2, pp. 57-59.

resources of $2,600,000 and capital accounts of $146,000. The institution had been trading in "municipals" on an almost unbelievable scale. Successive examination reports showed progressive increases in both the number and size of the trading transactions as well as a sharp decline in their average profitability. During the last period studied, bond sales totaled about $2,500,000, which was four times as large as they were three years earlier. The annual volume of sales had increased to such an extent that they not only equalled the bank's total assets, but they also amounted to 3½ times the investment portfolio and almost 20 times the capital account. As a result of this excessive trading, there existed ". . . a depreciation of $270,000 on the date of examination, which rendered the bank wholly insolvent."* The remaining municipal issues had low coupons and long maturities. Over 80 percent matured after 20 years.

This case demonstrates that excessive trading can fairly rapidly impair the soundness of a small bank, even though the trading is mainly in securities that are considered to be high grade.

Bond losses of banks

Because of the present high corporate income taxes, tax considerations occupy a prominent place in investment portfolio management.

*2, p. 59.

Often as the result of tax loss exchanges, substantial tax savings can be produced and, at the same time, the basic strength of the portfolio may be improved.

Up to the second half of 1954, the bond market was strong and sales (by banks) were usually made at a profit. As a result, many banks ended the year 1954 with their bond costs at a very high level. When the bond market declined in the spring of 1955, most banks bound bond prices below their costs. The result was that numerous banks adjusted their portfolios by taking losses in issues that they had previously purchased at a high price, and reinvested the proceeds in other issues not identical to those sold. In addition to the improvement in their investment portfolios, these banks were often able to improve their yield by selling premium bonds and buying new bonds at par or below, or by buying a bond with a higher coupon than the one sold. This operation, commonly called "tax switching", has been utilized by most banks during the recent period of falling bond prices.

Tax relief is offered by special treatment accorded to banks with respect to net bond losses. A net loss for the year on sales and exchanges of bonds, or other indebtedness securities, may be deducted in full from income which otherwise would be taxed at Federal income tax rates. A net gain for the year, on the other hand, would be taxed at the capital gains tax of only 25 percent (if the securities sold had been held longer than six months).

In other words, if a bank has other taxable income in excess of $25,000, a net loss for the year would reduce taxes by 52 percent (to the extent that taxable income did not fall below $25,000). In addition, in Massachusetts, if present state taxes are included, a bank only loses 44 cents on each dollar of capital loss. A net capital gain, however, would be taxed at just 25 percent. Thus, since taxes are less on gains than on losses, it is to a bank's advantage to take losses in one year and gains in another.

Questionnaire results point out that the banks are not only fully aware of this, but that they have been putting this knowledge to good use during the period of this survey. Replies indicate that for most banks, 1956 and 1957 were so-called "loss years." On the other hand, it is very probable that 1958 will be a "gain year" for many banks. Also, most bankers were of the opinion that, conservatively speaking, capital gains and losses resulting from portfolio operations should be taken "into" and "out of" a bond reserve account. Otherwise, reported earnings in a "loss year" would suffer, and earnings in a "gain year" would be unduly high.

CHAPTER IX.

ANALYSIS OF "ALLOCATION OF COMMERCIAL BANK FUNDS" TECHNIQUE

In banking literature, more than one analytical approach has been put forth in regard to the employment of commercial bank funds. Up to this point, this author has generally adhered to the viewpoint that has come to be known as the "priorities technique." The basis of this approach is the establishment of a list of priorities in the use of bank funds, as outlined in the last section of Chapter II. One of the best known of the other approaches is the "allocation technique", sometimes referred to as a plan for the "conversion of commercial bank funds". The purpose of this chapter is first to explain this "allocation" approach and then to analyze it.

Description of the "allocation technique"

Allocation theorists like to point out that one of the factors contributing to the failure of commercial banks during the last depression was the "lack of synchronization between the types of assets and types of liabilities."* Banks that embrace this approach will supposedly synchronize their assets with the demands of their depositors. Instead of allowing the loan portfolio to increase and decrease with the demand for loans, its fluctuations will be coordinated with the variations in

*5, p. 3.

the deposits and the capital funds. If this plan is followed, the allocation theorists claim that the liquidity and safety of customers' and stockholders' funds will be better rewarded with "adequate and consistent net profits."

The basic assumption governing this approach is that a commercial bank is in business for three purposes: (a) To handle the deposits of a community; (b) to meet a reasonable loan demand of this community; and (c) consistent with objectives (a) and (b), to be as profitable as it can for the stockholders.

The "allocation technique" recognizes that commercial bank liabilities differ in characteristics, and that these liabilities can be divided into several categories according to these characteristics. Each category of liabilities should then be balanced by a set of assets which are appropriate.

Liabilities are classified according to their rate of turnover (the likelihood that they will rise or fall). There are generally three classifications: (a) Demand deposits; (b) savings deposits; and (c) capital funds. Capital funds include capital stock, surplus, undivided profits and voluntary reserves. Sometimes two other classifications are added, special demand deposits (e.g., due to banks and public funds) and special time deposits (e.g., temporary public funds).

Since demand deposits are the most volatile, the assets which are balanced with these should be shorter in maturity (more marketable)

than those which are allocated to savings deposits and capital funds. Likewise, since capital funds normally change very slowly, offsetting assets can be longest in maturity.

Table IV is an example of a possible allocation of the funds of a commercial bank along the lines described above. For study purposes, it falls into three divisions: (a) The major sources of funds available for allocation; these appear across the top of the table; (b) the assets which are listed down the left-hand side of the table; and (c) the percentages used in allocating the liabilities into the appropriate assets.

In relation to a bank's investments, allocation writers state that cash should be kept at a safe minimum level. Concerning loans, investments are considered as supplements to a bank's loan portfolio. Thus, if loans are rather long or somewhat lacking in quality, investments should be of relatively short maturity and of high quality.

Theorists state that this approach can be applied to different banks only after each bank has established its own yardsticks. This is accomplished by analyzing the past behavior of demand deposits, savings deposits, cash and investments.

Analysis

In order for this plan to be workable, a bank must have control over the way in which it uses its funds. In practice, this is usually not the case. Most banks have to employ their funds as they can. For

TABLE IV.

An Example of the Allocation of a Commercial Bank's Funds

Assets:	Demand Deposits	Time Deposits	Capital Funds
Primary Reserve:			
Cash, due from banks, etc.	8%	4%	-
Secondary Reserve:			
U.S. Governments, short term, call loans, comm. paper	23%	16%	-
Total Liquid Assets	31%	20%	-
Loan Portfolio:			
Secured by marketable coll.	12%	6%	-
First mortgages	8%	40%	25%
Consumer Credit	10%	10%	25%
Prime unsecured	10%	4%	-
Total	40%	60%	50%
Investment Portfolio			
U.S. Governments, long term	12%	11%	35%
High grade municipal and industrial obligations	5%	4%	15%
Total	17%	15%	50%
Legal Reserve			
Federal Res. Acct.	12%	5%	-
Grand Total	100%	100%	100%

Source: Allocation of Commercial Bank Funds. Harold E. Zarker, Boston, Bankers Publishing Co., 1957.

example, loan demand is not something that each bank can regulate like the flow of water from a faucet. It can be estimated for a period but there is no guarantee that the estimate and the percentage of a bank's funds that are supposed to be in loans will be the same (or even very close).

As far as this writer can see, there is no provision for seasonal fluctuations in this plan. The "allocation technique" appears to be intended for banks where there is very little fluctuation of deposits. This factor, alone, severely limits the adaptability of this approach. Also, it casts considerable doubt upon one of the objectives of the plan, that of ". . . providing for liquidity and 'flexibility' of funds. . . "

Advocates of this plan acknowledge that adoption of this approach would result in considerably less income from the "earning assets" of a bank than is usually the case. Their answer to this is that a bank should make up for the smaller income by selling its services at an adequate (meaning higher) price. This, proponents point out, would offset the lower return on the invested assets. But, this feature also points to the lack of feasibility of this approach. If one bank in a community should unilaterally attempt to raise its service charges enough to make up the difference in its earnings, its business would undoubtedly fall off considerably. Even if all banks in a community adopted this plan and raised their service charges together, a sizeable

amount of business would probably be lost to banks in nearby communities. The only solution here would be for all banks throughout the country to raise their service charges equally and at the same time. This, of course, is not even a remote possibility in a free enterprise system such as ours.

On the favorable side of the ledger, since liquidity considerations take such a large position of importance over profitability goals, widespread adoption of this plan would avoid a large part of the heavy losses and charge-offs experienced by many banks in the past. As one writer phrases this thought, "gains result primarily from the avoidance of losses."*

Findings

The evidence above clearly indicates that the adoption of this approach is not advisable except in a community where the following factors predominate:**

(a) The bank does not have large demand deposits which fluctuate violently.

(b) The bank's community is largely made up of conservative and frugal individuals.

(c) The local industry is well diversified; and

(d) Wage and employment conditions are satisfactory.

*5, p. 27.
**5, p. 9.

Even if there are many communities in which these factors are present, hurdles such as control over a bank's loan demand, and the inevitable rise in service charges would have to be overcome. For these reasons, it is extremely doubtful if this plan will ever be considered "workable" on a wide scale.

CHAPTER X.

SUMMARY AND CONCLUSIONS

The intent behind writing this paper was to observe and comment upon current developments in commercial bank investment portfolio management. With the bond portfolio accounting for some 35 per cent of a typical bank's total assets and for about 25 per cent of the bank's income, the importance of this area is evident.

An investigation into the ability of commercial banks to assume investment risks did not disclose anything that bankers have not been aware of since the depression of the '30's. Liquidity requirements of banks are still first and foremost. The investment requirements of their institutions have not changed so that bankers can safely reach for yields at the long end of the bond market. Nor is there any prospect that these requirements will change in the foreseeable future. If banks were to reach for yields, they would be unwisely sacrificing proper maturity spacing.

As far as the obligations of an investment portfolio are concerned, questionnaire results indicated that there was general agreement in this area. The priorities agreed upon were: (a) Safety of funds (quality); (b) availability of funds (liquidity); and (c) earnings (profitability). Here one is able to obtain some idea of the relationship of liquidity and profitability in the management of bank funds.

Inquiry into the manner in which bank investment policy is formulated brought out some interesting facts. The first is that it is unusual for a commercial bank to have its investment policy in written form. From this can be inferred that in some banks there is bound to be a lack of coordinated investment effort. It should be added that most banks undoubtedly do have a well-conceived investment policy even though such a policy is not in writing. It is also true that the mere preparation and adoption of a written policy does not guarantee satisfactory investment results. Yet, it is contended that those banks which do have a written policy are likely to have more efficient investment operations than those that are without it. The fact that an institution has expended the necessary thought and effort to have a policy in written form is a strong indication that the bank is handling its investment problems to the best of its ability.

Another noteworthy fact is that some bank portfolio managers are becoming more interested in better reporting concerning the basic situation of their own bank (e.g., deposit and loan characteristics of the bank). Investment managers appear to believe that more effort in this direction can pay off in proportionately better portfolio performance.

The fact that the larger banks are an excellent source of easily accessible investment advice, coupled with the information that this avenue is very often not utilized to the extent it should be, suggests that many small bankers are not obtaining the performance that

they might from their investment portfolios. Survey results appear to substantiate this since it was seldom that any of the smaller bankers stated that they frequently consulted with their larger correspondents concerning their investment policies.

Concerning commercial bank liquidity, available information indicates that policy in this area becomes very important during periods of rising loan demand such as banks have just passed through. It takes an experienced banker to not only know when his loan-deposit ratio is high enough, but also to take positive action (e.g., turning away new loan applications) to ensure that adequate liquidity is maintained.

In the area of secondary reserves, survey results point out that only bonds maturing within two years should be considered as falling within this reserve category. This information is a direct result of events occurring during the last period of rising interest rates. This is not to imply, however, that this segment of portfolio management is being badly handled. To the contrary, questionnaire replies show that most banks are following excellent procedures in the establishment of their reserves. Regarding the tertiary reserve, results indicate that it is advisable to follow a spaced maturity policy out to a period no longer than ten years. Exceptionsto this advice are rare. The ladder effect is especially good for the small bank that is limited concerning the quality of its investment management.

Information received regarding the types and characteristics of securities suitable for commercial bank investment indicates that

bankers have been neglecting "agency bonds" as a source of investment. These bonds are right behind United States Treasury obligations as far as minimum risk is concerned, and their liquidity appears to be better than many bankers believe. Reports point out that their marketability is often better than many municipals. This type of security is especially good for the small bank that intends to hold most of their obligations to maturity.

Economic forecasting is rapidly becoming very important in investment portfolio management. From the replies one may conclude that the large banks have a decided edge in this direction, and that the small banker should give more attention to this subject. Although yield curves are no longer considered to be as important as they once were, this area probably merits more effort than it is currently receiving.

Survey results plainly show that investment diversification is not widely practiced in bank portfolio management. This occurs in spite of the fact that this concept applies only to the "municipals" and "corporates" held by commercial banks. In the opinion of this writer, geographical diversification should at least be practiced regarding a bank's municipal holdings. It is this area that appears to be most seriously neglected in the institutions surveyed.

As far as trading is concerned, available information implies that, for the most part, it is not being improperly engaged in. Questionnaire results show only one of the larger banks practicing this type of "scalping" operation. In addition, all bankers agreed that this procedure is not recommended for the small bank or for the inexperienced.

In this period of high corporate income taxes, every bank portfolio manager should be well versed in the tax position of his own bank. Survey results not only indicate this to be the case, but also point out that this information was actively employed (e.g., in "tax-switching") during the period of this survey.

Generally speaking, there are two recognized approaches in banking texts regarding the management of commercial bank funds. The most widely accepted is called the"priorities technique." The less widely known and adopted method is the "allocation technique." As the result of the survey and a critical analysis, it was found that the "allocation technique" is definitely lacking in many respects. Therefore, it is doubtful if this approach will ever be widely accepted in its present form.

On the basis of this survey and the information presented above, there follows a series of recommendations which banks of all sizes are urged to follow:

(1) Investment policy should be reduced to written form.

(2) More thinking needs to be directed towards basic fundamentals (e.g., better reporting concerning the characteristics of each bank).

(3) Small banks should more fully utilize the investment guidance of their larger correspondents.

(4) Only bonds maturing within two years should be included within the secondary reserve.

(5) Follow a spaced maturity policy out to a maximum of ten years in the tertiary reserve.

(6) Look into the advantages of holding "agency bonds."

(7) Build up experience in the area of forecasting.

(8) Do not neglect the safety behind investment diversification as far as "municipals" and "corporates" are concerned.

From an overall viewpoint, this survey discloses that bank investment portfolios are generally well managed. Few dangerous practices were uncovered and a high-caliber type of individual was usually found in charge of the various portfolios. The most encouraging discovery, however, was that many portfolio managers are continually striving for better performance through new and revised procedures. These investment officers and the banks concerned feel that there is always room for improvement in portfolio policy. In closing, the author hopes that this philosophy will someday become the rule instead of the exception.

QUESTIONNAIRE

Part I: Specific Portfolio Practice

A. Formulation of Bank Investment Policy:

1. How are investment decisions made at your bank?
   a. By an individual?
   b. By a committee?
   c. Other?

2. To what extent does your bank seek investment advice from correspondents?
   a. Seldom?
   b. Often?

3. To what extent do correspondents seek your advice concerning their investment portfolio?
   a. Seldom?
   b. Often?

4. Does your bank consult sources other than regularly published information and correspondents? If so, please list.

5. Is your investment policy in written form?
   a. Yes?
   b. No?

6. How is your policy implemented?

7. What "rules of thumb" or general standards are used in making these decisions (e.g., "We never buy anything other than "governments" ")?

8. In what manner has your "policy formulation procedure" changed over this period?

B. Goal of Bank Investment Programs:

1. How would your bank rate the following obligations of an investment portfolio?
   a. Earnings (profitability)?
   b. Safety of funds (quality)?
   c. Availability of funds (liquidity)?

C. Portfolio Size:

1. Are there any subdivisions (or classes) within your portfolio (e.g., primary reserves, secondary reserves)?
   a. Yes? (What?)
   b. No?

2. Are there any subdivisions within the secondary reserve account?

3. If so, are separate policies applied to each subdivision?
   a. Yes? (What?)
   b. No?

4. What securities are suitable for secondary reserve use?

5. How has the size of your portfolio varied over this period?
   a. Smaller?
   b. No change?
   c. Larger?

D. Portfolio Quality:

1. Percentage breakdown: 12/54 12/55 12/56 12/57
   a. U.S. Treasuries
   b. Municipals
   c. Corporates

2. Quality:

	Municipals				Corporates			
	12/54	12/55	12/56	12/57	12/54	12/55	12/56	12/57
a. AAA								
b. AA								
c. A								
d. BAA								

E. Maturity Policy:

1. Does your bank follow any one policy in regard to maturity spacing?
   a. Yes? (What?)
   b. No?

2. What was the average maturity of your portfolio at the following dates?
   12/54 12/55 12/56 12/57

F. Forecasting:

1. To what extent does your bank attempt to forecast future interest rate movements?

2. To what extent does your bank act on the basis of these forecasts?

3. When the tight-money situation became evident, what action did your bank take in the area of its investments?

4. To what extent did your bank foresee the recent November downturn in interest rates?

5. Does your bank use yield curves in its forecasting?
   a. Yes?
   b. No?

6. How does your bank interpret the recent prevailing "flat yield curve"?

G. Diversification (of non-governmental securities):

1. Does your bank have a definite policy in regard to this area?
   a. Yes? (What?)
   b. No?

2. To what extent has your policy changed during this period?

H. Trading:

1. To what extent does your bank engage in "trading"?

I. Earnings:

1. Does your bank regard your investment portfolio as more of an earning asset than previously?
   a. Yes?
   b. No?

2. What was the average yield of your investment portfolio at the following dates? 12/54 12/55 12/56 12/57

3. Does your bank attempt to obtain a predetermined yield (or a yield within a specified range)?
   a. Yes? (What?)
   b. No?

Part II: General Portfolio Policy

A. Formulation of Bank Investment Policy:

1. In what manner did your investment policies and decisions change as rising interest rates became evident throughout the country and in your area?

2. Do you now feel that you took about the "most appropriate" action at the time? Looking back at these decisions what alternative moves might have been made?

3. During this period (12/54 - 12/57), what were the feelings of your bank concerning the intensity and duration of "tight-money"? (Looking back, did your bank expect the rates to go as high as they did for as long as they did?)

B. Goal of Bank Investment Programs:

1. In general terms, how would you describe the goal of your bank investment program?

2. How does your investment portfolio income fit into your overall profit objectives?

3. How would you state the relationship of your investment portfolio to your loan portfolio? To what extent are your loan and investment policies interrelated?

C. Portfolio Size:

1. If the size of your portfolio varied over this period, what caused these changes?

D. Portfolio Quality:

1. What position should each of the following securities have in a typical bank investment portfolio?
   a. Direct obligations of the U.S. Treasury:
      1 U.S. Treasury Bills
      2 " " Certificates of Indebtedness
      3 " " Notes
      4 " " Bonds
   b. U.S. Government Agency Bonds:

c. Municipal & other tax free obligations:
   1 General Obligation Bonds
   2 Housing Authority Bonds
   3 Revenue Bonds
d. Corporates:
   1 Utility
   2 Railroads
   3 Industrials

E. Maturity Policy:

1. How would you describe the overall maturity policy of your bank?

F. Forecasting:

1. What types of forecasts does your bank attempt to make?

2. How does your bank go about forecasting interest rate changes?

G. Diversification (of non-governmental securities):

1. Describe your general policy in this area:

H. Miscellaneous Questions:

1. From the following establish an order of priority for the employment of commercial bank funds:
   a. Customer credit demands:
   b. Open-market investment for income:
   c. Primary reserves:
   d. Protective investment:

2. What pressures has your Bank Investment Officer been subject to during this period (e.g., liquidity, correspondents, etc.)?

3. What issues did your bank consider to be the most critical during this period?

4. How large is your "time savings department"? Is there any relationship between the amount of time deposits and the average maturity of your investment portfolio?

5. Do you subscribe to any particular school of thought concerning the use of bank funds (e.g., the "conversion theory"?)

6. Does your bank attempt to keep fully invested at all times? At any time by design?

7. Does your bank feel that there should be any relationship between maturity policy and your loan-deposit ratio (The idea being that a low loan-deposit ratio permits a longer average maturity and vice versa)?

8. What is your attitude towards capital gains and losses in your investment account?

9. In what way have examiner attitudes affected your investment policies?

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