

BANK FINANCIAL MANAGEMENT

Strategies and Techniques
for a Changing Industry

George H. Hempel
Donald G. Simonson

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Preface

The environment of the 1990s will require commercial banks to continue revising the focus of their financial management. During most of the 1960s banks focused primarily on asset management. Funds were obtainable at costs with regulatory ceiling so that high-performing banks were generally those able to employ their funds in high-yielding assets. Banks tended to struggle more with the liability side in the 1970s. Many banks seemed to believe they could profitably employ funds if they could obtain them at anything near a reasonable cost. Finding funding sources (often circumventing Regulation Q) and managing the cost of funds became major asset/liability management objectives.

With the rising and volatile rates of the late 1970s and 1980s, the focus of bank financial management became the maintenance of an adequate margin between the returns on assets and the costs of funds. This focus led to an emphasis on interest-sensitivity management, gap management, duration management, and simulation. Financial management became more complex because of the continuing trend to deregulation in the financial service industry. Ceilings on interest rates were removed. Banks and other financial intermediaries were allowed broader lending and borrowing powers. Competition among increasingly similar financial intermediaries and between these institutions and direct financial flows without an intermediary intensified.

By the late 1980s deregulation, intensified competition, and weak management had caused severe financial stress on much of the savings and loan industry and on banks in areas with weak regional economies. These problems will be more difficult to resolve, and their cost will be higher than is now admitted. The effects of the restructuring of financial institutions and regulatory practices will be felt throughout the 1990s.

While it is impossible to predict the exact environment that will affect bank financial management in the future, many trends seem likely to continue well into the next decade. Two of the changes are endogenous: (1) changes in the structure of the banking and financial services industry and (2) changes in the regulatory environment. The remaining changes are broad exogenous changes in the financial markets in which banks must operate.

The structure of the banking and financial service industry will probably change markedly. The number of all types of financial institutions is likely to be dramatically reduced during the next decade. Remaining geographic and business activity barriers will probably be removed, and differences among types of financial institutions will largely disappear by the mid-1990s. Success-

sive waves of acquisitions and mergers will probably produce major new financial institutions that will rival today's large money-center banks in prominence and size.

Passage of risk-based capital rules and of the Financial Institutions Reform, Recovery, and Enforcement Act (FIRREA) in the late 1980s are probably the tip of the iceberg in coming regulatory changes. Reemphasis on capital and relating capital required to the perceived risk of broad asset categories will become fully effective by 1993. FIRREA encourages industry consolidations and strengthens the regulatory structure for future regulatory changes, the most likely of which are probably some type of risk-related deposit insurance and a shift toward market value instead of historical cost accounting for depository institutions.

Three changes in the financial markets in which banks operate stand out: (1) the globalization of money and capital markets; (2) the evolution of numerous new securities in these markets; and (3) the development of new secondary markets for many financial assets. The last two changes have led banks to securitize many financial assets.

This changing environment will affect bank financial management in several basic ways. First, banks will manage primarily using market value (or estimated present values of future cash flows). Second, financial managers will be forced to pay more attention to capital management (e.g., capital will be allocated to business lines, market value of capital will be emphasized, and assets requiring high capital allocations will be sold or securitized). Third, bank financial management will emphasize risk-adjusted probable future cash flows (which are the determinants of market values) in their decisions. Finally, risk management will be pushed by stock analysis, bank financial managers, and regulators of financial institutions. Cash flow management and risk management are likely to become the buzzwords of bank financial management by the mid-1990s.

The purpose of this book is to present the financial concepts, strategies, and techniques that will help bank managers to be successful in this changing financial environment. It is intended primarily for two bank management audiences. One is the general manager who is not directly responsible for financial management but is strongly affected by financial management at his or her bank. Much of the first half of the book is aimed at basic financial concepts, techniques, and strategies used in banking. Some of the later techniques and strategies may be tedious to this audience. The second audience is the professional bank financial manager. Much of the earlier material in the book should be basic to this person, and specifics discussed in the second half of the book may be of the greatest interest.

The first chapter examines selected aspects of today's banking environment, including the banking and regulatory structure, current banking problems and conditions, and probable changes in the challenging environment of the 1990s. Bankers who know the current and predicted environment may choose to skip this chapter. The remaining 23 chapters are divided into six

sections that cover various aspects of bank financial management, ranging from basic concepts to advanced strategies.

Part II explains how to measure bank financial performance. Chapter 2 covers the items on a bank's balance sheet and income statement. Topics such as loan loss accounting, sources and uses of funding, repricing schedules, off-balance sheet items, risks banks take, and risk-return tradeoffs are discussed in Chapter 3. Chapter 4 includes the evaluation of financial performance of an actual bank and enhances the risk and return measures discussed in the preceding chapters. Uniform bank performance reports are also presented and evaluated.

Part III includes descriptions of basic financial instruments and techniques that should be used by bank financial managers. The basic asset investment instruments used by banks and the basic instruments banks use to attract funds are covered in Chapters 5 and 6, respectively. Chapter 7 includes methods for calculating yields on asset instruments, for calculating costs on funding instruments, and for measuring duration. Chapter 8 emphasizes basic interest-rate and yield-curve analysis. Topics include: determinants of the general level of interest rates; causes of spreads among rates due to different maturities, credit risk, liquidity premiums, marketability, and taxation; explanation of the term structure of rates; and forecasts of forward rates. Experienced bank financial managers may choose to skip sections of Part III.

In Part IV, many of the key elements of bank asset management are covered. Chapter 9 includes how reserve requirements are calculated, how many corporate cash management principles apply to banks, and how to evaluate correspondent relationships. Chapter 10 discusses how a bank measures and fills its liquidity needs. In Chapter 11, topics such as how a bank should inventory its investment needs, formulate investment policies, and develop investment strategies are detailed. Standard loan pricing algorithms, letters of credit and loan commitments are discussed in Chapter 12.

Part V examines many of the key elements of bank liability management. Chapter 13 details how to measure and use the cost of funds. Topics include: measuring average and marginal cost of bank funds; using these cost figures to help with asset pricing decisions; and analyzing the effects of the interest sensitivity of assets and liabilities on the cost of funds and pricing. Chapter 14 discusses: how a bank should inventory its funding needs; the risks associated with funding decisions; contingency funding; and strategies for attracting funds.

The final three chapters of Part V cover the bank capital area of bank financing decisions. Topics in Chapter 15 include purposes of bank capital, methods of appraising capital adequacy, steps in financial planning, determination of total capital needs, and the proposed new risk-based capital requirements. Capital management, sustainable growth, and dividend policy are the primary topics of Chapter 16. Chapter 17 includes an evaluation of the use of capital notes, debentures, preferred stock, and common stock; a discussion of new forms of primary capital, such as perpetual debt, floating-

rate preferred, and dutch auction preferred; and an introduction to financing techniques, such as employee stock option plans and trusts.

Part VI discusses new financial management alternatives and strategies. Chapter 18 examines new investment and funding alternatives, such as mortgage-backed securities, CMOs, floating-rate notes, Eurosecurities, zero-coupon securities, and deposits tied to stock indices. Chapter 19 introduces new methods for pricing off-balance sheet items and contingency claim products, and Chapter 20 discusses the increasing importance of global banking for banks and for the world economy and of international banking activities in foreign exchange, interbank deposit, swap, and other markets.

Part VII includes selected unifying techniques in bank financial management. The processes for acquiring new or failing banks is emphasized in Chapter 21. Chapter 22 covers the need for interest-sensitivity analysis, strengths and weaknesses of gap analysis, methods for correcting some of the gapping, and simulation techniques. Duration analysis and strategies for hedging interest-rate risk are covered in Chapter 23. Chapter 24 discusses long-range financial planning techniques, which the authors believe are essential to acceptable future financial performance, and potential bank financial management actions in the 1990s are discussed.

We are indebted to numerous bankers and professors, most of whom have been mutually associated with banking schools, such as the Southwestern Graduate School of Banking, Western States Banking School, Pacific Coast School of Banking, Stonier Graduate School of Banking, and Graduate School of Banking at Colorado. The bankers whose ideas and comments we particularly appreciate include Wayne Hansen of First Wisconsin, Dick Roberts of First Wachovia, Frank Schackelford of Indiana National, Doug Metcalf and Don Wright of First Interstate, Dale Blickenstaff of Moore Financial Group, Tim Sidley of Mellon Bank, Oliver Hickle and John Falkenberg of United Bank, and Tom Loy of Loy and Associates. In addition, we wish to thank Professors Harry Blythe and Dave Cole of Ohio State University, Alan Coleman of Southern Methodist University, George Kaufman of Loyola of Chicago, Bill Alberts of the University of Washington, Nikil Varaiya of San Diego State University, Keith Johnson of the University of Connecticut, and George Parker of Stanford for helpful ideas and comments as we formulated this book. In addition, three graduate students at Southern Methodist University—Sumon Mazumder, Stephen Harvey, and Anthony Lorocco—assisted in various stages of preparing the manuscript. Kay McKee of Southern Methodist University and the Southwestern Graduate School of Banking provided her usual prompt and efficient secretarial assistance. In spite of continued excuses that we were busy, our wives, Elaine and Marsha, provided encouragement throughout the project. In spite of the help received, deficiencies undoubtedly remain. For these we take full responsibility and urge readers to call them to our attention.

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PART ONE

The Changing Nature of Bank Financial Management

Today's Banking Environment

The financial management of a commercial bank has become an increasingly challenging task. Concepts and techniques gainfully used only a few years ago now seem outdated. The markets that banks use to finance themselves have changed dramatically in the last few years. The protection provided by regulation and by geographic and product constraints appears to have nearly disappeared. To some financial managers the increasing complexity of banking decisions is worrisome; to many others this increasing challenge presents the opportunity for rewarding good management. This book presents up-to-date concepts, techniques, and strategies to help bank financial managers in this challenging period.

CURRENT BANKING STRUCTURE AND REGULATION

The current banking structure and regulation of commercial banks in the United States defies logical explanation and is primarily the result of our historical development.¹ Nearly all commercial banks in the United States are privately owned. Most banks can choose to be unit banks or part of a branch system, to be members of a holding company, and to seek correspondent relationships with other commercial banks. Available data on the number of banks in the United States in selected years from 1811 to 1989 appear in Table 1-1, and preliminary data on the banking structure are summarized in Table 1-2.

¹ The historical development of banks and bank regulation is covered in: D. R. Dewey, *Financial History of the United States* (New York: Longman Greens, 1934); Raymond W. Goldsmith, *Financial Intermediaries in the American Economy Since 1900* (Princeton, NJ: Princeton University Press, 1958); Paul B. Trescott, *Financing American Enterprise* (New York: Harper & Row, 1963); and H. R. Kroos and M. R. Blyn, *A History of Financial Institutions* (New York: Random House, 1971).

Table 1-1 Number and Total Assets of Commercial Banks

Year	Number of Banks	Total Assets (millions of dollars)
1811	88	\$ 42
1820	307	103
1830	329	110
1866	1,391	1,673
1880	3,355	3,399
1900	13,053	11,388
1920	30,909	53,094
1930	24,273	74,290
1940	15,076	79,729
1950	14,676	179,165
1960	13,999	230,046
1970	13,650	518,220
1980	14,763	1,532,974
1987	14,282	2,998,428
1989 ^a	13,112	3,299,028

^a Data are preliminary.

Sources: *The Statistical History of the United States from Colonial Times to the Present* (Stamford, CT: Fairfield Publishers, 1974); U.S. Bureau of the Census, *Statistical Abstract of the United States*, various years, (Washington, DC: U.S. Government Printing Office) and U.S. Board of Governors of the Federal Reserve System, *Federal Reserve Bulletins*, 1988–90.

Unit versus Branch Banking

Most banks in the United States have traditionally been unit banks—that is, single-office institutions primarily serving their local communities. At the end of 1989, there were 12,706 insured commercial banks in the United States. Of these, 5,885 were unit banks—down from 9,375 at the end of 1971. Although there are still several states that do not permit branch banking, the unit bank might well be placed on the “endangered species list.”

The history of banking in the United States began with branch banking, veered in the direction of unit banking and is now quite rapidly swinging back again. The number of branch banking offices increased from 4,613 in 1948 to 10,605 in 1960, to 23,362 at the end of 1971, and to 46,057 at the end of 1989.² This increase is a result of both the establishment of new branches

² Data from Federal Deposit Insurance Corporation, 1990.

Table 1-2 Preliminary Data on the Banking Structure, December 31, 1989^a

Structure		Number of Banks	
National banks (examined by Comptroller of the Currency)		4,213	
Federal Reserve member banks ^b (examined by Federal Reserve)		1,042	
Banks covered by FDIC ^c (examined by state and FDIC)		7,451	
State non-FDIC banks (examined by state banking authority)		406	
Total banks		<u>13,112</u>	
Branch offices (of 6,821 banks)		<u>46,057</u>	
Total banking offices		<u>59,169</u>	

Structure	Number	Banks Controlled	Assets (billions of dollars)
One-bank holding companies	5,148	4,942 ^e	\$ 542
Multibank holding companies	1,484	4,420	2,484
Total HC banks	<u>6,592^d</u>	<u>9,362</u>	<u>\$3,026</u>

(91.7% of \$3,299 total assets)

^aIncludes fifty states and District of Columbia.

^bIncludes all 4,213 national banks as well.

^cIncludes all 1,042 Federal members as well.

^dNumber after eliminating tiered one-bank and multibank holding companies.

^eA few banks are partially owned by two one-bank holding companies.

Sources: Federal Reserve System and Federal Deposit Insurance Corporation, 1990. These data are preliminary but should be representative of the banking structure.

in growing communities and the absorption of previously independent banks through mergers. The pros and cons of multiple-office banking and bank mergers are still in the forefront of bank policy considerations today. Despite this trend toward branch banking, opposition to it is still strong in some areas, and state laws concerning the establishment of branches vary from one part of the country to another. Statewide branching is permitted in 28 states (all of the western states, most eastern states, and a few midwestern states). Branching is prohibited or permitted in an extensively limited manner in 5 states (mainly in the agricultural Midwest). The remaining 17 states allow limited branching.

The Bank Holding Company

Bank holding companies are also an integral part of our current banking structure. There are two general types of bank holding companies—the one-bank and the multibank. One-bank holding companies were not defined in the Bank Holding Company Act of 1956 prior to the 1970 amendments, and, therefore, were not subject to the specific control of the Board of Governors of the Federal Reserve System. Under our current laws, a one-bank holding company is created when an existing bank organizes a holding company of which the bank becomes a subsidiary. Many smaller banks (with assets under \$200 million) have formed one-bank holding companies to gain tax or capital advantages, or both, from that form of organization. The holding company form of organization appeals to larger banks for two additional reasons: (1) multibank holding companies, which own a controlling interest in the stock of two or more banks, can be used to acquire additional banks (particularly important in states that limit branching), and (2) either type of holding company can be used to form or acquire additional subsidiaries in financially related activities. (The Board of Governors, under the authority of the 1970 amendments, has established a list of nonbanking activities permitted and denied to bank holding companies as shown in Table 1–3. Numerous other financial activities have been neither approved nor denied.)

Under the current legislative structure, multibank holding companies have usually been pushed into one of two patterns of organization and decision

Table 1–3 Nonbanking Activities Permitted and Denied to Bank Holding Companies

Permitted by Regulation

- | | |
|---|---|
| <ol style="list-style-type: none"> 1. Extensions of credit^a <ul style="list-style-type: none"> Mortgage banking Finance companies—consumer, sales, and commercial Credit cards Factoring 2. Industrial bank, Morris Plan bank, industrial loan company 3. Servicing loans and other extensions of credit^a 4. Trust company^a 5. Investment or financial advising^a 6. Full-payout leasing of personal or real property^e 7. Investments in community welfare projects^a 8. Providing bookkeeping or data processing services^a | <ol style="list-style-type: none"> 9. Acting as insurance agent or broker primarily in connection with credit extensions^a 10. Underwriting credit life, accident, and health insurance 11. Providing courier services^a 12. Management consulting for unaffiliated banks^{a,b} 13. Sale at retail of savings bonds and money orders with a face value of not more than \$1,000^{a,b} 14. Performing appraisals of real estate^b 15. Audit services for unaffiliated banks 16. Issuance and sale of travelers' checks 17. Management consulting to nonbank depository institutions |
|---|---|
-

(continued)

Table 1-3 (Continued)

 Permitted by Order

- | | |
|---|---|
| <ol style="list-style-type: none"> 1. Issuance and sale of travelers' checks^{a,c} 2. Buying and selling gold and silver bullion and silver coin^{a,c} 3. Issuing money orders and general-purpose variable denominated payment instruments^{a,b,c} 4. Futures commission merchant to cover gold and silver bullion and coins | <ol style="list-style-type: none"> 5. Underwriting certain federal, state, and municipal securities^{a,b} 6. Check verification^{a,b,c} 7. Financial advice to consumers^{a,b} 8. Issuance of small-denomination debt instruments |
|---|---|
-

 Denied by Federal Reserve

- | | |
|---|---|
| <ol style="list-style-type: none"> 1. Insurance premium funding (combined sales of mutual funds and insurance) 2. Underwriting life insurance not related to credit extension 3. Real estate brokerage^a 4. Land development 5. Real estate syndication 6. General management consulting 7. Property management 8. Computer output microfilm services | <ol style="list-style-type: none"> 9. Underwriting mortgage guaranty insurance^d 10. Operating a savings and loan association^{b,e} 11. Operating a travel agency^{a,b} 12. Underwriting property and casualty insurance^b 13. Underwriting home loan life mortgage insurance^b 14. Orbanco: Investment note issue with transactional characteristics |
|---|---|
-

^a Activities permitted to national banks.

^b Added to list since January 1, 1975.

^c To be decided on a case-by-case basis.

^d Board orders found these activities closely related to banking but denied proposed acquisitions as part of its "go slow" policy.

^e Operating a thrift institution has been permitted by order in Rhode Island and New Hampshire only.

Source: American Bankers' Association, undated.

making. First, some holding companies operate very much like a branching system. Although each bank has a separate board of directors, the subsidiary boards have little power. All banks have the same name and same functions, but the holding company retains decision-making authority. For example, investment loan rates and deposit rates are determined at the holding company level.

The second pattern emphasizes that the distinctive feature of any form of bank holding company is its ability to realize many of the benefits and render most of the services of widespread branch banking organizations while retaining the decentralization of management that can preserve the "local