



2026

ADVANCED

SCHOOL

OF BANKING

YEAR 1

September 21 - 25, 2026

Holiday Inn

Kearney, Nebraska

Printed in the United States of America

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Introduction

Purpose of This School

The purpose of the General Banking Curriculum is to prepare bankers to serve effectively and profitably the needs and desires of the American public by:

- Developing a better understanding of banking -- focusing on critical banking functions, their interrelationships, and the determinants of profitability.
- Developing analytical skills and management techniques.
- Creating an awareness of the changing banking environment and the role of the commercial bank in the financial services industry.

Prerequisites for admission to Advanced School of Banking are:

1. a. a college degree and two years of banking experience; or
b. a high school diploma and five years of banking experience.
2. a. successful completion of AIB courses in Principles of Banking, Economics for Bankers, and Accounting; or
b. equivalent coursework; or
c. demonstrated knowledge.

Acknowledgments

The General Banking Curriculum reflects the assistance and support of many individuals involved in this endeavor.

Acknowledgment goes to the **American Bankers Association**, which provided the base Professional Development Program curricula for this school until 1996.

Acknowledgment is also given to the Education Directors and Administrators of the state banking associations who currently use the curriculum and offered input into the current revision process. Additional thanks go to Schools of Banking Executive Director **Tami R. Lutzi**, and Assistant Director **Kami M. Murphy** for their contributions in organizing, formatting, editing and producing the revised curriculum.

Advanced School of Banking

GRADUATION CRITERIA

All students attending the *Advanced School of Banking* qualify as candidates for an *Advanced School of Banking* Diploma upon successful completion of Years 1 and 2.

Successful completion of this two-week School is evaluated using the following major standards of performance:

- 1) Attendance at all scheduled classroom and BankExec sessions (Years 1 and 2)
- 2) A passing grade of 60% or above on the final examination administered at the close of Year 1
- 3) Thorough and timely completion of interim assignments and receipt of a rating of acceptable or above on all assignments
- 4) Active participation in all classroom activities (Years 1 and 2) and BankExec activities (Year 2)

These criteria are designed to be universally attainable and provide a standard of excellence for all students. Upon successful completion of the required course of study, a grade of “passing” will be recorded with the Schools of Banking.

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Scholarship Awards

Upon completion of Year 2, Schools of Banking may award scholarships to outstanding graduates of the *Advanced School of Banking* who excelled during the School. Up to two scholarships may be awarded to Kansas bankers and two to Nebraska Bankers: one in each state for the Graduate School of Banking at Colorado, and the Southwestern Graduate School of Banking in Dallas. Based on enrollments, an additional scholarship to the Graduate School of Banking at Colorado may be authorized for an outstanding Colorado graduate.

The Herbert V. Prochnow Educational Foundation of the Graduate School of Banking in Madison, Wisconsin, has established a scholarship program to advance the goal of professional development of bankers. This scholarship must be obtained through the Kansas Bankers Association for Kansas bankers or the Nebraska Bankers Association for Nebraska Bankers.

Selection for all scholarships is based upon:

- Attendance and active participation in all classroom activities at both Years 1 and 2, such as group discussions, case studies and question and answer sessions.
- Year 1 final examination score.
- Performance on interim assignments and timeliness of submission.
- Active participation in all BankExec simulation activities, including team decision-making and the Board of Directors presentation, and demonstrated efforts to make the BankExec simulation a positive learning experience for everyone involved.
- Demonstrated leadership, team-building and decision-making skills.

Graduate School of Banking at Colorado

The Graduate School of Banking at Colorado (GSBC) awards scholarships annually to bankers in co-sponsoring states. The Schools of Banking *Advanced School of Banking* receives at least two of these scholarships. Each recipient of the award receives a 1/3 discount from the regularly charged fees for each year of attendance at the Graduate School of Banking at Colorado.

Students receiving their scholarships through the *Advanced School of Banking* have an additional benefit, since the School's curriculum qualifies students for the Second Year Direct Entrance Program, thus allowing them to graduate from GSBC in two years. Those bankers not receiving scholarship awards also qualify for the Second Year Direct Entrance Program. However, if you choose this option, you are ineligible to graduate with Honors from the Graduate School of Banking at Colorado.

Scholarships must be used within two years of graduating from the *Advanced School of Banking*. Scholarships are not transferable. GSBC does not discriminate on the basis of race, religion, sex, national or ethnic origin, or age.

Southwestern Graduate School of Banking

The Southwestern Graduate School of Banking in Dallas (SWGSB) awards one scholarship annually to a graduating banker of the *Advanced School of Banking*. The recipient receives \$5,000 for the first year only of the three-year Graduate School program to be applied to the first year SWGSB tuition. SWGSB's tuition covers all fees including room and board during the on-campus session. The Southwestern Graduate School of Banking objectives, curriculum and faculty are described at www.swgsb.org.

The recipient must enter SWGSB within two years of graduating from the *Advanced School of Banking*. The Committee does not discriminate in the scholarship selection process based on race, color, sex, age, creed, religion or nationality.

ADVANCED SCHOOL OF BANKING – YEAR 1

Kyle Campbell

*President & Chief Executive Officer
Astra Bank
Abilene, Kansas*

Bank Financial Analysis

Kyle A. Campbell is a third-generation community banker with more than 25 years of leadership experience in financial services, governance, and community development. He currently serves as President and Chief Executive Officer of Astra Bank, where he leads the strategic direction, culture, and long-term growth of the organization and its affiliated entities.

Kyle's career spans executive leadership, board service, and industry advocacy. Prior to becoming CEO, he held progressive leadership roles at First National Bank in Belleville. Earlier in his career, Kyle worked as a manufacturing engineer and project lead engineer with Procter & Gamble, developing a foundation in operational excellence, disciplined execution, and team leadership.

Kyle is deeply engaged in banking advocacy and education. He serves as Chair-Elect of the Kansas Bankers Association and has held numerous leadership roles at both the state and national levels, including service on Kansas Bankers Association's Federal Affairs Committee and State Affairs Committee and the American Bankers Association's Government Relations Council and Membership Council. He is also a long-standing faculty member for the Kansas-Nebraska Schools of Banking, where he teaches and mentors future banking leaders.

Beyond banking, Kyle is actively involved in civic and nonprofit leadership. He currently serves as Chair of the Eisenhower Foundation Board of Directors and has held leadership positions with organizations such as the Salina Symphony, Dickinson County Economic Development Corporation, and the Abilene City Planning Commission.

Kyle holds a Bachelor of Science in Chemical Engineering from Kansas State University, a Master of Business Administration from Rockhurst University, and is an honors graduate of the Graduate School of Banking at the University of Wisconsin-Madison. He is known for principled leadership, a people-first approach, and a steadfast commitment to help individuals, businesses, and communities fulfill their dreams.

Perry Haralson

*Chief Financial Officer and Director of Compliance
Cornhusker Bank
Lincoln, Nebraska*

Economics of Banking Asset/Liability Management Investments

Perry Haralson serves as the Chief Financial Officer and Director of Compliance for Cornhusker Bank and supervises a team responsible for BSA, compliance, audit, reporting, accounting, and the financial/statistical modeling for the bank. He has worked at Cornhusker Bank for 23 years and served as a branch manager and commercial/construction loan officer prior to moving into bank executive management and serving on the board of directors. He is a graduate of the

School of Banking at the University of Colorado, the Financial Managers School at the University of Wisconsin, holds an M.B.A specialized in Financial Management, and a Business Administration degree from the University of Nebraska-Lincoln.

Perry served 11 years in the Marine Corps prior to starting his banking career. Perry is also on the faculty of the Graduate School of Banking at the University of Colorado and the Dakota School of Banking. He is a class of 2012 Nebraska Bankers Association Leadership Program graduate, the former chair of the NBA Government Affairs Committee, and Executive Board member of the Home Builders Association of Lincoln, the Friendship Home, and the Lincoln Care Foundation. Perry has been married to his wife, Jennifer, for 30 years and has two sons 19 and 22.

Sean C. Payant Ph.D.

Deposit/Marketing Strategies

President

Haberfeld

Lincoln, Nebraska

Sean Payant is the President for Haberfeld, a Lincoln, Nebraska, customer acquisition company that specializes in working with financial institutions to increase their overall profitability. Haberfeld has served clients in all 50 states and has worked with institutions from \$24 million to \$24 billion in assets.

Sean joined Haberfeld in 2007 as a consultant. He subsequently served as the organization's Chief Consulting Officer from January 2010 until January 2021, then served as the Chief Strategy Officer in February 2021 until being named President in July 2025. Prior to joining Haberfeld in 2007, Sean served as the Executive Director of the Schools of Banking, a jointly-owned subsidiary of the Kansas and Nebraska Bankers Associations, for nine years. Sean has more than 25 years of experience leading team development and strategic planning sessions for financial institutions, for profit corporations and not-for-profit organizations. He has also instructed and authored on a variety of topics. Sean has been a featured speaker for the American Bankers Association, the Arkansas, Connecticut, Illinois, Iowa, Kansas, Kentucky, Louisiana, Nebraska, New York, North Dakota, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Ohio, Oregon, Tennessee, Texas, Virginia, Washington, and Wisconsin Bankers Associations, Community Bankers of Georgia, Pennsylvania Community Bankers Association, Community Bankers Association of New Mexico, The Financial Brand Forum, Western Bankers Association, ABA Stonier Graduate School of Banking, Schools of Banking, Sheshunoff CEO Affiliation, Bank CEO Network, Pacific Coast Banking School and State Banking Association Education Directors Conferences. Sean holds a Bachelors degree from Midland University, and Masters and Doctor of Philosophy degrees from the University of Nebraska-Lincoln.

Rob Schuetz

*Chief Technology Officer
First Capital Bank of Texas
Lubbock, Texas*

**Information Technology for
Bank Management**

With 10+ years of experience and a background in solutions design for financial institutions, national restaurants, and retail chains, Rob has focused his attention on strategic IT consulting and needs assessments with a focus on leveraging technology to help these institutions better align technology to their overall business strategy. Prior to his role at First Capital Bank of Texas, Rob performed CTO/CIO functions for 20+ community banks across the central US.

Nick Vrba

*President
RVR Bank
Fremont, Nebraska*

Lending

Nick Vrba is the President and a Director for RVR Bank. Nick has been with RVR Bank (formerly First State Bank & Trust Company) since 2002 when he started at the bank as a part-time teller. He rose through the ranks and has served as Head Teller and Lobby Supervisor, Assistant Loan Officer – Review, Assistant Vice President – Loan & Loan Review Officer, Vice President – Loans, Administration and Review, Senior Vice President-Senior Lender, Executive Vice President, Secretary of the Board of Directors and member of the Executive Team. He earned his Bachelor of Science in Business Administration from Midland University.

Vrba is a graduate of the Graduate School of Banking in Colorado, several KBA/NBA Schools, and the Nebraska Bankers Association Leadership Program. Nick currently serves as a member of the NBA Board of Directors and is active with the NBA and ABA on various government relations issues. He is a former member of the NBA & KBA Schools of Banking Basic/General Banking Advisory Committee and now serves as a faculty member. He has served as President of the Board of the Fremont Area United Way, the Fremont Area Chamber of Commerce, Fremont Area Habitat for Humanity, First Lutheran Church and the Midland University Alumni Association. He has been honored with the ABA Emerging Leader Award and the Fremont Area Chamber of Commerce Compass Award. Nick and his wife, Tracey, have three daughters.

School Administration

Tami R. Lutz, CAE, IOM

*Schools of Banking, Inc.
Lincoln, Nebraska*

Executive Director

Tami Lutz joined the Schools of Banking as Executive Director in September, 2007. She is responsible for overseeing financial operations, administration of Schools' programs, curriculum management, marketing, staff and volunteer/committee structure. Tami has extensive association management experience in several professions including real estate, engineering, and medicine. Prior to joining the Schools of Banking, she was the executive director of the Larimer County Medical Society in Windsor, Colorado. She has also held education, communications, and marketing positions at the Nebraska REALTORS® Association, and the American Council of Engineering Companies, Nebraska Chapter. Tami has a Bachelor of Science in Secondary Education degree from the University of Nebraska-Lincoln, with English, Speech Communications and Theater endorsements. She has earned her Certified Association Executive (CAE) certification from the American Society of Association Executives, as well as the Institute of Organization Management (IOM) certification from the U.S. Chamber of Commerce Foundation. She is also a member of the Nebraska Society of Association Executives.

Kami Murphy

*Schools of Banking, Inc.
Lincoln, Nebraska*

Assistant Director

Kami Murphy joined the Schools of Banking as the Registrar in 2000 and became the Assistant Director in 2009. In this capacity, Kami is responsible for assisting with the administration of the Schools of Banking programs as well as coordinating the production of School related documents, inputting all registration information, managing accounting procedures, and serving as the *Advanced School of Banking-Year 2* simulation administrator. She also coordinates all housing and meal needs for each School. Kami's prior work experience included five years in the banking industry as well as office management and office administration experience. Kami is a graduate of Leadership Lincoln Class XXVII. She is a member of the Friends Council of Make-A-Wish Nebraska, and the Nebraska Society of Association Executives.

ADVANCED SCHOOL OF BANKING - YEAR 1
September 21-25, 2026 ~ Holiday Inn ~ Kearney, Nebraska

MONDAY September 21	TUESDAY September 22	WEDNESDAY September 23	THURSDAY September 24	FRIDAY September 25
7:30-8:00 am Registration 8:00 am-8:15 am Welcome & Orientation 8:15 am-10:00 am Bank Financial Analysis	7:00-8:00 am Breakfast 8:00 am-10:00 am Information Technology For Bank Management	7:00-8:00 am Breakfast 8:00 am-10:00 am Investments	7:00-8:00 am Breakfast 8:00 am-10:00 am Lending	8:00-9:00 am Breakfast 9:00 am-10:00 am Final Exam
10:00-10:15 am Break 10:15 am-12:00 pm Bank Financial Analysis (continued)	10:00-10:15 am Break 10:15 am-12:00 pm Information Technology For Bank Management (continued)	10:00-10:15 am Break 10:15 am-12:00 pm Investments (continued)	10:00-10:15 am Break 10:00 am-12:00 pm Lending (continued)	10:00-10:15 am Break 10:15 am-10:45 am Introduction to BankExec and Orientation to Year 2 10:45 am-11:00 am Closing Comments
12:00-12:45 pm Lunch 12:45 pm-3:00 pm Bank Financial Analysis (continued)	12:00-12:45 pm Lunch 12:45 pm-3:00 pm Economics of Banking	12:00-12:45 pm Lunch 12:45 pm-3:00 pm Asset/Liability Management	12:00-12:45 pm Lunch 12:45 pm-3:00 pm Deposit/Marketing Strategies	(Note: Schedule subject to variations in sequence and minor adjustments in length of class sessions.)
3:00-3:15 pm Break 3:15 pm-5:15 pm Bank Financial Analysis (continued)	3:00-3:15 pm Break 3:15 pm-5:00 pm Economics of Banking (continued)	3:00-3:15 pm Break 3:15 pm-5:00 pm Asset/Liability Management (continued)	3:00-3:15 pm Break 3:15 pm-4:45 pm Deposit/Marketing Strategies (continued)	
FREE EVENING	FREE EVENING	FREE EVENING	EVENING TO STUDY FOR THE EXAM	



Schools of Banking

2026 Calendar

Sept. 21 – 25	Advanced School of Banking – Year 1 Holiday Inn, Kearney, NE
Oct. 7 & 8	Compliance Update School Drury Plaza Hotel, Lincoln, NE
October 19 – 23	Commercial Lending School Younes Conference Center/Comfort Inn, Kearney, NE

2027 Calendar

March 1 – 5	School of Lending Principles Bluemont Hotel, Manhattan, KS
April 12 – 16	School of Banking Fundamentals Holiday Inn, Kearney, NE
May 18 – 20	Relationship & Business Development School Bluemont Hotel, Manhattan, KS
June 7 – 11	Advanced School of Banking—Year 2 Bluemont Hotel, Manhattan, KS
June 21 – 25	Bank Compliance School Bluemont Hotel, Manhattan, KS
July 12 – 16	Agricultural Lending School Bluemont Hotel, Manhattan, KS
Aug. 24 – 26	Advanced Agricultural Lending School Holiday Inn, Kearney, NE
Sept. 20 – 24	Advanced School of Banking – Year 1 NBA Boardroom/Hampton Inn – Lincoln, NE
Oct. TBA	Compliance Update School – Kansas
October 18 – 22	Commercial Lending School Bluemont Hotel, Manhattan, KS

Implementation Items from the School

As you think of things to apply at your financial institution throughout the School, please take a moment to make yourself a note here.

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BANK FINANCIAL ANALYSIS

Notes

Learning Objectives

The purpose of this module is to introduce the Uniform Bank Performance Report (UBPR) and the bank financial statements. As part of this introduction, the components of the UBPR and bank financial statements will be discussed. The student will learn how different components of the financial statements interrelate to yield information that is helpful in evaluating a bank's performance and will learn how this information is available through the UBPR.

Upon completion of this course, the student will be able to:

- Utilize the UBPR as a tool for evaluating the performance of a bank;
- Identify and discuss basic balance sheet and income statement components and how those components impact performance of the bank;
- Understand and utilize performance ratios critical to assessing the performance of a bank;
- Identify trends in performance; and
- Relate identified trends in performance to established bank goals and to peer performance.

Introduction

In banking, it is essential to evaluate a bank's performance against meaningful benchmarks and to assess whether the bank is performing as well as it should. In this respect, banking is like other industries. Because banking is highly regulated and financial data are reported in standardized formats, useful comparisons within the industry are readily available. To use these comparisons effectively, an analyst must understand the tools that make them available, the financial statement structures being compared, and the key ratios commonly used within the banking industry.

The tools that are available for bank financial analysis are the UBPR and the Call Report. Data contained within the UBPR reflects data reported by the bank in its Call Report. The UBPR also includes readily available peer group comparisons. Additionally, the UBPR summarizes the data in the Call Report and calculates industry standard ratios. For these reasons, this course utilizes the UBPR as its primary analysis tool.

Bank financial statements are divided into the bank's balance sheet and the bank's income statement. Each of these statements has key components that are common to them, regardless of a bank's size. Accordingly, mastery and

understanding of these statements and key components will enable the student to begin evaluation of a bank's performance, regardless of size.

There are ratios that arise from analysis of a bank's balance sheet and a bank's income statement that are commonly utilized within the banking industry. The value of these ratios is that they allow for comparison of banks of dissimilar size or situation. Because of the essential nature of ratios to bank financial analysis, it will be critical that students understand the components that comprise each of the ratios and the value of the ratio itself.

Risk Management in Banking

Before discussing bank financial statements and ratios, it is important to understand why analysis of this information matters. The essence of banking is managing risk. Societal, technological, economic, competitive, and regulatory changes continually reshape banks' risk profiles. Accordingly, effective bank analysis requires an understanding of the principal risks that can affect financial condition and performance. For purposes of this course, those risks include capital, credit, liquidity, interest rate, operational, off-balance-sheet, legal/compliance, price, and foreign exchange risk. A bank may also choose to manage reputational considerations internally, although federal banking agencies have removed reputation risk as a separate component of their supervisory programs.

Capital Risk

In banking, capital provides a financial buffer that protects depositors and other creditors from losses. When the value of a bank's assets exceeds the value of its liabilities, the bank has positive equity and is solvent. When liabilities exceed assets, equity is negative and the bank is insolvent, placing depositors and other creditors at greater risk of loss in liquidation or receivership.

The amount of capital necessary to provide an adequate buffer varies with a bank's risk profile. Consequently, risk in other areas directly affects capital adequacy. For example, a bank engaged in higher-risk lending may need more capital support than a bank whose lending is concentrated in lower-risk assets with conservative underwriting and collateral margins. The objective is not simply to hold more capital, but to maintain capital commensurate with the nature and level of risks assumed by the bank.

Capital risk in a bank can also change with economic conditions in which the bank operates. Banks with concentrations of business in a specific sector of the economy can experience increased capital risk as the sector in which the bank has a concentration of business undergoes stress. The stress that this sector of the economy encounters may be economic or regulatory in nature. As an example, a bank that has a concentration of business in the petroleum industry will likely

have a different level of capital risk when oil is selling in excess of \$100 per barrel than when oil is selling for less than \$50 per barrel. Given the impact that business concentrations can have on a bank's capital risk profile, it is very important that one fully understands the composition of a bank's business portfolio when attempting to assess the bank's capital risk profile.

Regulatory changes to capital rules have underscored the importance of capital as a safety buffer in the event of a bank failure. The rules implementing Basel III capital standards in the United States include several measures that strive to measure the sufficiency of capital in a bank. These capital measures assess the size of certain aspects of a bank's capital base relative to its risk weighted assets (RWA) and augment other regulatory measures of capital. RWA gained widespread adoption with the implementation of the Basel II capital standards and are an attempt to weigh the bank's assets according to the risk associated with those assets. Accordingly, an asset with a higher risk weighting would be considered an asset with greater associated risk than an asset with a lower risk weighting. Risk weightings in the Basel III capital standards range from 0% (essentially risk-free assets like cash or assets unconditionally guaranteed by the U.S. Government, its agencies and the Federal Reserve) to 1,250%. The rules also call for a 2.5% capital buffer that is required in addition to the minimum levels of capital that are specified for the required capital measures. The rules recommend that banks assess the risk profile within their business to ensure that the capital base is sufficient to act as an appropriate safety buffer for the bank.

A simplified alternative to the risk-based capital framework, the Community Bank Leverage Ratio (CBLR) framework is available to qualifying community banking organizations that meet applicable size and balance-sheet criteria. Rather than requiring the calculation and reporting of risk-based capital ratios, the framework relies on a leverage measure based on Tier 1 capital and average total consolidated assets. Effective July 1, 2026, the minimum CBLR is 8%, reduced from 9%. The 2026 rule also extended the framework's grace period from two quarters to four quarters, subject to limits on repeated use of the grace period.

One additional capital measure frequently used by analysts and investors is the tangible common equity (TCE) ratio. TCE generally removes intangible assets and preferred equity from common equity and compares tangible common equity with tangible assets. Although TCE is not a substitute for regulatory capital ratios, it can provide a useful perspective on the loss-absorbing capacity attributable to common shareholders and can highlight balance-sheet effects that may not be reflected in the same way in regulatory capital measures.

Credit Risk

Credit risk assesses the bank's ability to be repaid the principal invested in the bank's earning assets in the manner contractually stated when the bank acquired the asset. Generally, credit risk primarily focuses on the bank's loan portfolio, as

this is usually the bank's largest and highest risk asset portfolio. Nevertheless, credit risk is also significant in the bank's investment portfolio.

A bank with sound credit risk management practices regularly assesses the quality of its loan portfolio to ensure that the bank will have its principal repaid according to the schedule to which the bank and borrower mutually consented in the loan agreement. Should the borrower fail to pay according to that schedule, the borrower is said to be in default on the loan obligation. Excessive levels of default in a bank's loan portfolio are indicative of an elevated level of credit risk in the bank. Banks with sound credit risk management practices not only assess the current payment ability of the borrowers in the bank's loan portfolio, but these banks are very proactive in working to anticipate and mitigate issues that might produce defaults in its loan portfolio.

Once credit risk in a bank's loan portfolio is identified and estimated, the bank maintains an allowance for credit losses on loans and leases (ACL on LN&LS) as a contra-asset account to absorb expected credit losses. Under the Current Expected Credit Losses (CECL) methodology in ASU 2016-13, the allowance reflects expected credit losses over the contractual life of financial assets, subject to the standard's requirements. Provision for credit losses is recognized in the income statement and adjusts the allowance. As of 2024, UBPR terminology was updated to use CECL-aligned terms such as "ACL on LN&LS" rather than the older "ALLL" terminology.

Credit risk is also present within the bank's securities portfolio. Economic challenges have caused securities to experience impairments to their valuations, as the likelihood of payment default has increased. Further, municipality bankruptcy filings have increased the concern for payment default in securities held in a bank's securities portfolio. In addition to bankruptcy concerns, economic developments have increased discussion as to how banks' investment portfolios would be impacted if a municipal or state entity has their credit rating reduced below investment grade.

Liquidity Risk

Liquidity risk measures the bank's ability to generate cash with minimized income impact to the bank. A bank with greater liquidity risk will experience more impact to earnings as it works to generate liquidity from its balance sheet. Liquidity is heavily dependent upon two aspects: the availability of a functioning market for the asset or liability that will be utilized to generate cash and interest rate movements. The availability of a functioning market for the asset or liability that will be utilized to generate cash is critical to determining a bank's liquidity. As an example, as the financial crisis that developed in 2008 spread, many of the markets that banks utilized to generate cash ceased to operate. Consequently, many of the sources that were utilized for liquidity were no longer available to banks whose liquidity plans assumed functioning markets for liquidity generation. Markets that were utilized to sell assets, such as home loans or MBS, to other banks or investors simply disappeared overnight. The disappearance of these

markets, and its resulting impact on liquidity, caused other funding markets, such as Federal funds, to cease to operate freely, as owners of the cash being invested in the funding markets became concerned about repayment. Similarly, a liquidity crisis was triggered in early 2023 by significant and rapid interest rate increases. These rate increases eroded the value of banks' securities portfolios, which weakened the liquidity position of the affected banks.

When a certain segment of the securities market experiences financial stress to the point that there is no trade (that is, buying or selling) that occurs, a temporary impairment of the value of a portion of the bank's securities portfolio may occur. If this situation becomes a prolonged situation, a bank's regulators may deem that the securities value needs to be reduced in an amount that is commensurate with the impairment being experienced. At that point, the value of the securities must be written down commensurate with the impairment, with the offset to this write down coming from capital, if no reserve for credit impairment of securities exists. This scenario was experienced by many banks that owned private-label mortgage-backed securities (MBS) in the aftermath of the 2008 financial crisis. The impairment of these securities can cause significant strain on the bank's capital levels, and cause capital stress of such intensity that a bank failure is possible.

It is important to be mindful that a bank's liquidity can be significantly impacted in an adverse manner through other economic changes, even though the markets for the asset or liability remain fully functional. Liquidity can be impacted by changes in asset pricing, even though the market for the asset may remain fully functional. This change in pricing causes the sales of assets to more adversely impact the bank's income. These types of events can be of such magnitude that bank failure is even possible, as was the case with Silicon Valley Bank in 2023.

There are two types of liquidity: asset liquidity and liability liquidity. Asset liquidity refers to how significantly the earnings of the bank will be impacted as the bank's assets are converted to cash. Generally, an asset that has a very active market and limited interest rate sensitivity, such as US Treasuries, is thought of as being very liquid. Conversely, assets that do not have a readily available active market and have significant interest rate sensitivity are thought of as being more illiquid. Generally, a bank's loan portfolio is considered to be more illiquid than its securities portfolio.

Liability liquidity refers to a bank's ability to obtain funding to generate cash. Customer deposits are an important source of liability liquidity, but deposit availability and pricing can change quickly during periods of stress. Banks therefore maintain diversified contingent funding sources, which may include Federal funds purchased, Federal Home Loan Bank advances, brokered deposits, and Federal Reserve discount-window borrowing. The relative cost, collateral requirements, operational readiness, and reliability of each source should be evaluated as part of liquidity risk management.

The bank failures and deposit runs of 2023 reinforced the importance of contingency funding, collateral readiness, uninsured-deposit concentrations, and the interaction between interest-rate risk and liquidity risk. In response to the stress of 2023, the Federal Reserve created the Bank Term Funding Program (BTFP), which allowed eligible institutions to borrow against qualifying securities. The BTFP was temporary and ceased extending new loans on March 11, 2024. Banks should therefore evaluate ongoing liquidity capacity using durable sources such as on-balance-sheet liquidity, market funding, Federal Home Loan Bank capacity, and the Federal Reserve discount window.

Interest Rate Risk

Interest rate risk measures the impact of interest rate changes to a bank's income stream. A bank with higher interest rate risk will see more significant changes to its income stream as the interest rate environment in which it operates changes, whereas a bank with more controlled interest rate risk may see little change in its income forecast with a similar interest rate environment change. Accordingly, a comprehensive interest rate risk management program measures the impact of interest rate changes on the bank's assets and the bank's liabilities, as both may be significantly impacted by a change in rates.

Historically, banks have utilized GAP modeling to attempt to quantify and manage the interest rate risk embedded within the bank's balance sheet. GAP modeling compares the amount of assets on the bank's balance sheet that are scheduled or able to reprice over a specified time period to the amount of liabilities on the bank's balance sheet that are scheduled or able to reprice over the same specified time period. Banks that have more assets repricing during the time period being measured are said to be asset sensitive, whereas banks that have more liabilities repricing during the time period measured are said to be liability sensitive. Over time, a bank's management team will develop a conviction regarding the overall direction of interest rates, that is whether a bank's management team believes that interest rates are generally going up or that interest rates are generally going down. Given this conviction, a bank's management team will work to manage its GAP to better position the bank to benefit from the anticipated interest rate changes.

Over time, the assets and liabilities on bank balance sheets have become increasingly complex with optionality features (such as call options or conversion options) and a wider array of repricing indices. Additionally, unconventional monetary policy has resulted in increasingly complex interest rate shifts. With this rise in complexity, the effectiveness of GAP modeling as the sole management tool to measure interest rate risk has decreased. Today, banks with robust interest rate risk practices utilize more dynamic modeling software capable of handling the optionality and pricing indices of the various assets and liabilities found on bank balance sheets, as well as handling more complex interest rate shifts.

Operational Risk

Operational risk is the risk that arises from operating procedure weaknesses or transactional complexity. Generally, banks have focused on developing robust operational procedures to reduce their level of operation risk. By developing these procedures, the bank sought to minimize the adverse financial impact to the bank that would result from incorrectly processed financial transactions, fraud or theft. Much of the current focus in the banking industry is on managing the operational risk that arises from increasing transactional complexity. Technological changes, such as mobile banking, and environmental factors, such as fraud, introduced operational risks that were new and significant. As the delivery channels utilized in banking continue to develop, it is a reasonable expectation that operational risk associated with transaction complexity will continue to increase.

While there is no quantifiable measure for operational risk, it remains a risk area that must be appropriately monitored and managed to ensure that the bank's continued operation is not threatened. Banks manage operational risk through effective policies, procedures, internal controls, staffing, business continuity planning, cybersecurity, fraud controls, third-party risk management, and other safeguards. As banking delivery channels and technology become more complex, operational risk increasingly includes risks associated with digital banking, cyber events, payment fraud, vendor dependencies, data, and model-driven processes.

Off-Balance Sheet Risk

Off-balance sheet risk arises from commitments and exposures that do not appear on a bank's balance sheet. Some examples of these commitments and exposures include unused loan commitments, letters of credit and positions involving futures, swaps and options. Because these commitments and exposures add risk to the bank, regulators require that banks have sufficient capital on hand to support these activities. Recently, off-balance sheet risk has become of greater importance to community banks due to their level of involvement in origination of secondary market residential real estate loans. In the event that loans the bank has originated for sale into the secondary market go into default, the bank experiences off-balance sheet risk in that it may be required to repurchase these defaulted loans, also known as recourse.

Like operational risk, there is no quantifiable measure for off-balance sheet risk. This is also a risk area that regulators work to determine whether or not a bank has sufficient resources to shoulder its level of off-balance sheet risk. Off-balance sheet risk can escalate to the point where it impacts other risk areas such as liquidity risk and capital risk. Bank failures from recent economic downturns and crises provide examples of banks that inappropriately managed off-balance sheet risk to the point the bank was closed by regulatory authorities. Banks manage off-balance sheet risk through effective policies, procedures, modeling, and auditing. The increasing complexities of the features used to manage bank balance sheets necessitate strong risk management practices in this area.

Reputational Risk

A bank's reputation can affect customer behavior, funding stability, employee retention, and franchise value. For that reason, bank management may choose to consider reputational effects within its enterprise risk management process. However, the federal banking agencies changed their supervisory approach in 2025–2026: the Federal Reserve removed reputational risk as a component of its bank examination programs, and the FDIC and OCC subsequently codified removal of reputation risk from their supervisory programs. Though bank regulators have removed this risk component from their examination manuals, this aspect of risk has not disappeared from banking. Safe and sound banking practices continue to consider the impact of a bank's operational choices on the bank's reputation.

Legal Risk

Legal risk is the risk that arises from laws and regulations that apply to a bank's business practices. While not analytically quantifiable, legal risk has significant potential to adversely impact a bank when its business practices are found to not align with applicable laws and regulations. Several banks have recently experienced this with legal proceedings that have resulted from poor business practices. In addition to adversely impacting the bank's reputation, thereby creating additional reputational risk, these legal proceedings can become a significant drain on the bank's financial performance over the lengthy time period of the legal action.

Price Risk and Foreign Exchange Risk

Price risk arises from trading assets and liabilities that have volatile price components. Typically, banks that have exposure to price risk have dedicated staff resources to ensure the appropriate management of these assets and liabilities. Due to the nature of these assets and liabilities, the magnitude of price risk can be quite volatile depending upon market conditions. Accordingly, robust systems and procedures are essential to manage price risk in a bank with trading assets and liabilities.

Foreign exchange risk arises from assets or liabilities that are denominated in foreign currencies. The magnitude of the foreign exchange risk that exists within a bank is dependent upon the magnitude of U.S. Dollar-volume differences between these similar assets and liabilities and the magnitude of the shift in value between the U.S. Dollar and the foreign currency in which the subject assets or liabilities are denominated. For example, a U.S. bank with assets valued at ten billion Euros and liabilities valued at 5 billion Euros would have foreign exchange risk if the value of the Euro relative to the U.S. Dollar changed.

CAMELS Ratings

Bank regulators routinely examine banks to ensure compliance with all applicable laws and regulations, as well as to ensure that safe and sound banking practices

are being utilized in the bank. Examinations that focus on the safety and soundness of a bank's banking practices (*i.e.* a Safety and Soundness Examination) rank the bank's performance in six general categories. These categories comprise the acronym CAMELS and are as follows:

- C – Capital adequacy
- A – Asset quality
- M – Management quality
- E – Earnings quality
- L – Liquidity
- S – Sensitivity to market risk

Capital adequacy focuses on the solvency of the bank and whether or not the bank's level of capital is sufficient to provide an adequate safety buffer against adverse circumstances given its operating strategy. A bank's capital adequacy rating assesses the strength of its capital risk management practices.

Asset quality focuses on the quality of the bank's loan portfolio and securities portfolio. Sound credit risk management practices are essential to achieving a high rating in asset quality.

Management quality reflects the fundamental soundness and robustness of policies, procedures and controls implemented by a bank's management team.

Earnings quality reflects the strength and repeatability of a bank's earnings. As strong and repeatable earnings are a good, continued source of future capital, consistently strong ratings in earnings quality may have a positive influence on a bank's capital rating.

Liquidity focuses on the bank's ability to generate sufficient liquidity to meet the bank's needs during a liquidity stress event. A bank's liquidity rating assesses the strength of a bank's liquidity risk management practices.

Sensitivity to market risk relates to the bank's combined risk profile with respect to interest rate risk, price risk and foreign exchange risk. The bank's rating for sensitivity to market risk will be significantly impacted by the bank's operating strategy, the risks inherent within that strategy and its resulting management practices to safely and effectively manage that risk.

After regulators have reviewed each of these categories and assigned a rating for each of these, the regulators will review these ratings to determine a single, composite rating for the bank.

CAMELS ratings range from "1," which is the highest rating, to "5," which is the lowest rating. Banks that have ratings of "1" and "2" are considered to be safe and sound operating banks. Banks that have a rating of "3" are likely subject to

some regulatory action that has a goal of improving the bank's operating practices. Banks that have a rating of "4" are subject to more stringent regulatory action. Banks that have this rating are expected to make prompt corrective action (often referred to by regulatory agencies as PCA) to improve their situation or be subject to a rating downgrade in the near future. Banks that have a rating of "5" are near closure by the bank's regulatory agency. In many cases, the bank's rating is not downgraded to this level until the bank's regulatory agency has concluded that it will close the bank.

Uniform Bank Performance Report (UBPR)

The Uniform Bank Performance Report (UBPR) is an analytical tool created for bank supervisory, examination, and management purposes. It presents financial condition and performance information in a standardized format and provides trend, peer-group average, and percentile information for many ratios. Because the UBPR is generated from Call Report data, it provides a practical framework for connecting regulatory reporting, financial statements, and performance analysis. The UBPR can aid in the evaluation of a bank's performance with respect to the following:

- Capital adequacy;
- Asset quality;
- Earnings adequacy;
- Liquidity adequacy; and
- Interest rate sensitivity.

Accordingly, the UBPR aligns quite well to the CAMELS ratings used in the current bank examination rating process. A bank's Call Report, which is completed as of the close of business at the end of each quarter, is the source of the information reported in the UBPR.

While the UBPR was designed as a concise analytical tool for supervisory, examination, and management purposes, this course uses it as a framework for teaching the basics of a bank's balance sheet, income statement, and key performance ratios. The UBPR is particularly useful because it provides trend data and peer comparisons alongside bank-specific results. This course will restrict its focus to the pages covering the financial information that is part of this course. UBPRs are available online at www.ffiec.gov/UBPR.

Balance Sheet

A bank's balance sheet, commonly referred to as a Statement of Condition, shows the bank's assets, liabilities and capital as of a single point in time. Bank balance sheets come in as many varieties as there are bank charters, so it is difficult to

take a single bank's balance sheet and use that as a model. Accordingly, the balance sheet template presented on page 4 of the UBPR will be used as the model for this course.

Earning Assets

Using the UBPR as our framework, discussion of the bank's balance sheet will begin with a bank's assets, and more specifically, with earning assets. Earning assets are those assets which the bank utilizes to generate interest revenue. Common types of earning assets are:

- Loans and leases;
- Securities;
- Interest bearing bank balances;
- Federal Funds sold; and
- Trading account assets.

Loans and Leases

Loans and leases tend to be the earning asset of primary focus in banks, as they are the earning asset type with the greatest expected yield or return. The greater yield comes with a tradeoff – higher risk to the bank. Loans and leases are split into five classifications:

- Real estate;
- Commercial;
- Individual;
- Agricultural; and
- Other loans and leases.

Real estate loans include all loans in a bank's loan portfolio that are primarily secured by real estate. Loans included in this category include construction and development loans, farmland loans, 1 – 4 family residential loans, multi-family loans, and non-farm non-residential loans (more commonly referred to as commercial real estate loans).

Commercial loans include all loans made for a non-consumer purpose, excluding those made for an agricultural purpose. The exception to this is loans that are made for a non-consumer, non-agricultural purpose that are primarily secured by real estate of any kind; those loans are included in the real estate loan category.

Individual loans include all loans made for a consumer purpose, excluding those loans that are primarily secured by real estate of any kind, which are included in the real estate loan category.

Agricultural loans include all loans that are made for an agricultural purpose, except for loans primarily secured by any kind of real estate. As with commercial

loans and individual loans, loans that are primarily secured by any kind of real estate are included in the real estate category.

Other loans and leases include all leases originated by the bank, as well as other loans that do not fit in the previously mentioned categories. Generally, community banks find the most significant contributor to the other loan category to be overdrawn deposit accounts.

In addition to these loan categories, the allowance for credit losses on loans and leases (ACL on LN&LS) is a contra-asset account that is netted against the bank's loan and lease portfolio to arrive at net loans and leases. This is the same CECL-based allowance discussed in the credit risk section earlier.

Securities

Securities are generally the secondary focus earning asset for community banks. Depending on a bank's balance sheet composition, the bank's securities portfolio may range from a very minor part of the bank to a very significant asset portfolio on the bank's balance sheet. In general, the return on a bank's securities portfolio is lower than the return on its loan portfolio. This lower return is the offset for the reduced credit risk that a bank incurs in its securities portfolio. In addition to providing the bank with a source of revenue, the bank's securities portfolio is also a source of liquidity. Securities are split into four different classifications:

- U.S. Treasury and Agency securities;
- Municipal securities;
- Foreign debt securities; and
- All other securities.

Securities are instruments that entitle the bank to a specified cash flow for an investment of its principal. Varying types of cash flow include discount interest, periodic interest and periodic principal and interest. Securities that have a discount interest type of cash flow do not pay interest to the bank during its investment period. Rather, the initial principal investment is discounted, such that the bank invests a lower principal amount than the stated face value of the security. Then, at maturity, the bank receives a cash flow of the full face value of the security. Some examples of securities that commonly utilize this type of cash flow include U.S. Treasury Bills (commonly called T-Bills) and some municipal securities (generally referred to as "zero coupon" bonds). Periodic interest cash flows to the bank are generated by the majority of the types of securities. These securities pay the bank quarterly or semi-annual payments of interest on the bank's principal investment. The full amount of the bank's principal is repaid at maturity. Periodic principal and interest cash flows are a payment of accrued interest plus a portion of the bank's principal to the bank. This cash flow structure is very similar to a cash flow structure from a loan and generally are a feature of mortgage-backed securities (MBS) and collateralized mortgage obligations (CMO).

All securities have a certain amount of interest rate risk. The value of the security varies inversely with the interest rate environment. As the interest rate environment is generally declining, the securities that were purchased in a higher interest rate environment become more valuable, since they provide a greater level of cash flow on investment than what is available in the current lower interest rate environment. The reverse is also equally true. Due to the nature of this interest rate risk, it is imperative that a bank fully understand the level to which interest rate risk is present in its securities portfolio, as not all securities investments are impacted by interest rate moves in the same manner and to the same degree.

For accounting purposes, debt securities are generally classified as held-to-maturity (HTM), available-for-sale (AFS), or trading. The classification affects where changes in fair value are recognized. AFS securities are reported at fair value, with unrealized gains and losses generally reflected in accumulated other comprehensive income (AOCI), subject to applicable accounting and regulatory-capital treatment. Trading securities are reported at fair value with changes generally recognized in earnings. HTM securities are carried at amortized cost, so unrealized fair-value changes caused by market interest-rate movements are not recognized in the same manner on the balance sheet or income statement. Importantly, HTM classification does not eliminate the security's economic interest rate risk or the potential liquidity consequences of selling securities at a loss.

U.S. Treasury securities are direct obligations of the U.S. Treasury. Because they are direct obligations of the U.S. Treasury, they have the "full faith and credit" of the Federal Government, indicating that these obligations are supported by the taxing authority of the Federal Government. Due to the "full faith and credit" aspect of these securities, there is a widely available and very active market for these securities making them a good source of liquidity. The drawback to the "full faith and credit" aspect of these securities is the market perception of lower credit risk relative to other types of securities; this perception is reflected in lower yields on these securities when compared to other types of securities.

Federal Agency securities are obligations of Federal agencies such as Federal National Mortgage Association (FNMA or "Fannie Mae"), Federal Home Loan Mortgage Corporation (FHLMC or "Freddie Mac") and Federal Home Loan Bank (FHLB). Agency securities generally carry a higher yield than U.S. Treasuries because these securities do not carry the "full faith and credit" of the U.S. Treasury. However, because most investors perceived that the Federal Government will not let these entities fail, Federal Agency securities are said to have the "implied full faith and credit" of the U.S. Treasury. Accordingly, though yields on Federal Agency securities may be slightly higher than U.S. Treasuries, these securities are still considered to be a relatively conservative and safe investment.

Municipal securities are obligations of states and political subdivisions in the United States. They come in many forms and generally provide the bank with tax-advantaged income sources. In recent years, efforts to provide economic stimulus to the economy have led to a proliferation of this tax advantage, making a blanket generalization of types of municipal securities that are tax advantaged virtually impossible. A bank can significantly increase the yield on its securities portfolio through investment in municipal securities, especially in municipalities that are in, or near, the bank's trade territory but do not issue a consistent volume of securities that would justify paying for an official bond rating.

Foreign debt securities are all debt and equity securities that are issued in a foreign country. Other securities include corporate securities, "private label" MBS and mutual funds. In the financial crisis that started in 2008, securities of this type were faced with significant liquidity issues, as the markets for these types of securities froze or disappeared altogether. Consequently, many banks do not have a significant amount of these types of securities on their balance sheets.

Interest Bearing Bank Balances

Interest bearing bank balances are deposits of the bank held at other financial institutions that earn interest for the bank. These bank deposits can be in accounts that facilitate the bank's normal operations, such as a primary correspondent account (or clearing account), certificates of deposit purchased at other financial institutions, reserves at the Federal Reserve Bank or in a bond settlement account.

Federal Funds Sold

The Federal Funds market provides overnight funding transfer between banks to meet very short-term funding needs. A bank with excess funds will "sell" those funds into the Federal Funds market to be purchased by a bank with overnight funding needs. In return for selling excess funds into this market, the bank receives an interest rate commensurate with the service provided by these funds.

Trading Account Assets

Trading account assets are earning assets owned by the bank which earn revenue for the bank primarily through properly timed purchase and sale transactions. In general, if a bank has substantial trading assets, it will have a specialized group within the bank whose role is to properly manage these assets.

Non-Earning Assets

The remainder of the bank's assets are non-earning assets. As the name of the category indicates, these assets are not sources of interest revenue for the bank. The non-earning asset classes listed in the UBPR are:

- Non-interest bearing cash and due from banks;
- Premises, fixed assets and capital leases;
- Other real estate owned (OREO);
- Direct and indirect investment in real estate ventures;
- Investment in unconsolidated subsidiaries; and
- Acceptances and other assets.

While the presence of non-earning assets is necessary in banking, it is critical to ensure that a bank's level of non-earning assets does not grow excessively relative to its earning assets.

Non-Interest Bearing Cash and Due From Banks

This asset category includes all cash on hand in the bank along with all deposits of the bank in other financial institutions that do not earn interest. While it is essential that a bank has a certain amount of cash on hand and non-interest bearing due from bank deposits, a bank generally tries to minimize the amount of this type of asset to maximize its earning potential.

Premises, Fixed Assets and Capital Leases

This non-earning asset category includes all of the bank's land, buildings, furniture, fixtures and equipment. Also included in this category are fixed assets of the bank that are associated with a capital lease. A capital lease is one where the bank either retains ownership of the fixed asset at the end of the lease term, the lease exceeds 75% of the asset's useful life, the bank has the option to acquire ownership at a "bargain price" at the end of the lease term or the sum of the cash flows under the lease (discounted at an appropriate rate) exceeds 90% of the asset's present purchase price.

Other Real Estate Owned (OREO)

Other Real Estate Owned (OREO) includes all other real estate owned by the bank that is not an operating facility of the bank. OREO does not include investment property that a bank may own. Generally, OREO is thought of as being all foreclosed real estate which resulted from non-performing loans that the bank is attempting to liquidate.

Direct and Indirect Investment in Real Estate Ventures

Investments in real estate (RE) ventures arise when a bank directly or indirectly holds real estate for acquisition, development, or construction purposes, or for other investment purposes. Due to regulatory guidance, bank ownership of investment property is limited, so it is not a frequent practice of many banks.

Investment in Unconsolidated Subsidiaries

Unconsolidated subsidiaries are investments of the bank in other entities whose financial statements are accounted differently than the bank's financial statements. This generally will occur when a bank owns 50% or more of an entity but lacks actual control of the entity, has only temporary control of the entity or the bank's business operations are substantially different than the entity in question.

Acceptances and Other Assets

This category includes all acceptances due the bank in its operations, as well as all other non-earning assets on the bank's balance sheet that have not been included in the previously discussed categories. Examples of these other assets include interest earned not collected (IENC), equity securities that do not have readily determinable market values (such as equity shares of FHLB or a bankers bank), bank owned life insurance (BOLI) assets and pre-paid expenses.

Core Deposit Liabilities

In the UBPR template, the first type of bank liabilities is core deposit liabilities. Core deposit liabilities are assumed to be the most stable source of funding for a bank, as they are assumed to be customers that have a direct relationship with the bank and are not as interest rate sensitive due to lack of balance. Core deposit liabilities are significant to bankers and regulators because they are typically more stable in balance and less sensitive to interest rates during times of increased economic and financial stress. The types of deposits listed in the UBPR may be divided into non-maturity deposits and time deposits. Non-maturity core deposits are accounts that do not have any contractual endpoint and include:

- Demand deposits;
- NOW & ATS accounts;
- Money market deposit accounts; and
- Other savings deposits.

Time deposits are accounts that do have a contractual maturity. Core deposit liabilities that are time deposits include:

- Time deposits at or below insurance limit.

Demand Deposits

Demand deposits represent funds deposited by a bank's customers that may be withdrawn at any time by the customer without penalty and without prior notice by the customer. The manner in which the withdrawal is completed by the customer is not restricted, nor is the number of withdrawal transactions. Common forms of withdrawal are checks, ATM withdrawals and debit card purchases. Additionally, demand deposits have no maturity date (or an original maturity date of less than seven days) and no eligibility restrictions. Historically, these accounts have not paid interest; however, with the repeal of Regulation Q as part of the Dodd-Frank Act (passed in 2010) the prohibition of paying interest on demand deposits was removed from banks.

NOW & ATS accounts

Negotiable order of withdrawal (NOW) accounts are accounts that function much like a demand deposit account, but owe their origin to the presence of Regulation Q. Regulation Q, passed into law in 1933, prevented banks from paying interest on demand deposits. In the late 1970's and early 1980's, banks in the

northeastern part of the U. S. developed NOW accounts in attempt to increase deposits in the bank by working around the prohibitions of Regulation Q. Though they are commonly referred to as checking accounts, drafts written on NOW accounts are not checks but negotiable orders of withdrawal (NOWs), thus giving the accounts their name. NOW accounts also differ from demand deposit accounts in that a bank may require up to seven days advance notice before a significant withdrawal is made from the account. In 1981, banking regulations were modified to explicitly allow banks to offer NOW accounts. With the complete repeal of Regulation Q through the passage of Dodd-Frank, NOW accounts are no longer necessary in a bank's product line, though many banks continue to offer such accounts.

Automatic transfer service (ATS) accounts are interest bearing accounts that allow for unlimited transfers to other accounts, generally covering debits that are drawn from a demand deposit account. Like NOW accounts, ATS accounts originated to help banks develop funding sources that were hampered by Regulation Q. ATS accounts essentially functioned as a demand deposit account coupled with a savings account. With the repeal of Regulation Q, ATS accounts are still in use by some banks to provide customers with overdraft protection.

Money Market Accounts

These are accounts that were originated to enable banks to compete for funding with money market mutual fund share accounts. One type of permitted withdrawal on these accounts is by check, which makes money market accounts somewhat of a hybrid account between demand deposit accounts and savings accounts. Historically, Regulation D limited certain convenient transfers and withdrawals from savings deposits, including money market deposit accounts. In April 2020, the Federal Reserve deleted the six-per-month limit from the Regulation D definition of a savings deposit. Institutions may still impose contractual transaction limits, but the former federal six-transfer limit is no longer a Regulation D requirement.

Other Savings Deposits

The other savings deposits category includes all savings account deposits held in the bank with the exception of money market accounts. Examples of accounts in this category include passbook savings accounts, statement savings accounts, health savings accounts and overdraft protection plan accounts. It is important to remember that savings accounts do not have a stated contractual maturity.

Time Deposits At Or Below Insurance Limit

Time deposits are deposit accounts that have a stated contractual maturity with the account holder. These accounts pay a greater interest rate to the account holder, as the account generally has a penalty clause that comes into effect should the customer choose to withdraw the funds prior to the maturity date. In an effort to prevent a liquidity crisis during the onset of the financial environment that started in 2008, the deposit insurance limits were temporarily raised from the prior statutory amount of \$100,000 per accountholder to \$250,000. With the

passage of the Dodd-Frank Act, these increased deposit insurance limits were permanently established.

Non-Core Deposit Liabilities

Non-core deposit liabilities are a source of funding to the bank that are assumed to be less stable than core deposit liabilities because they lack a direct relationship with the bank or because they are assumed to be interest rate sensitive due to balance size. A bank may experience increased regulatory scrutiny and reduced shareholder value if it becomes overly reliant on non-core deposit liabilities to fund its balance sheet. Types of non-core deposit liabilities included in the UBPR balance sheet include:

- Fully insured brokered deposits;
- Time deposits above insurance limit; and
- Deposits in foreign offices.

Fully Insured Brokered Deposits

Brokered deposits are deposits obtained through or with the assistance of a deposit broker, as defined by applicable FDIC rules. Brokered deposits can provide useful funding, but their stability, pricing, maturity structure, insurance coverage, and regulatory treatment should be evaluated carefully. Whether a brokered deposit is fully insured depends on the ownership and deposit-insurance rules applicable to the underlying depositors and account structure; the aggregate balance alone does not determine insurance coverage.

Time Deposits Above Insurance Limit

These are any deposits of the bank that have a stated maturity and deposit balance exceeding \$250,000. Also included in this category are brokered deposits that do not meet the criteria to be considered fully insured.

Deposits in Foreign Offices

This category of non-core deposits includes all deposits (regardless of account type) that are held in a location of the bank that is located in a foreign country.

Borrowings and Other Liabilities

Occasionally, a bank does not have sufficient deposit liabilities to fund the assets it has on its balance sheet. To fill this gap in the balance sheet, a bank will borrow funds from other sources. Additionally, it may have liabilities on its balance sheet that are not deposit accounts that are held in the bank. These borrowed funds and other liabilities are contained within the next section of the balance sheet in the UBPR, which contains the following:

- Federal Funds purchased;
- Securities sold under agreement to repurchase;
- Federal Home Loan borrowings maturing < 1 year;
- Federal Home Loan borrowings maturing > 1 year;

- Other borrowing maturing < 1 year;
- Other borrowing maturing > 1 year; and
- Subordinated notes and debentures
- Other liabilities.

Federal Funds Purchased and Resales

The Federal Funds market provides overnight funding transfer between banks to meet very short-term funding needs. A bank with a short-term need for funds will “purchase” those funds in the Federal Funds market from a bank with excess overnight funding. To purchase these funds, the bank must pay an interest rate commensurate with the service provided by these funds.

Securities Sold Under Agreement to Repurchase

Securities sold under agreements to repurchase (repos) are secured borrowing transactions in which a bank sells securities and agrees to repurchase them at a later date. Repos are not FDIC-insured deposits. Instead, the transaction is secured by securities under the terms of the repurchase agreement. Repos can provide short-term wholesale funding, but the bank should manage credit, off-balance sheet, and liquidity risks associated with the arrangement. Repurchase accounts also provided banks with an avenue to pay large non-consumer deposit accounts interest on their deposits prior to the repeal of Regulation Q in 2010.

Federal Home Loan Bank Borrowing

Borrowing from the Federal Home Loan Bank (FHLB) is a common method for a bank to use to meet gaps in its funding that may arise. Like a brokered deposit, borrowings from FHLB can be tailored to meet a bank’s specific funding need, with a variety of terms available (from overnight to 15 years) and a variety of structures available (from simple bullet advances to complex convertible advances). Borrowing from the FHLB requires a bank to have an ownership interest in the FHLB that is commensurate with the bank’s borrowing activity. Further, all the bank’s borrowings at FHLB are secured by assets of the bank, generally from its loan portfolio. For UBPR purposes, this category of borrowing is divided into two categories: borrowing that matures in less than one year and borrowing that matures in greater than one year.

Other Borrowing

This category includes borrowings of the bank that come from sources other than FHLB. This borrowing serves the same purpose as FHLB borrowing and is divided in the same fashion on the UBPR: borrowing that matures in less than one year and borrowing that matures in greater than one year.

Subordinated Notes and Debentures

Subordinated notes and debentures are obligations of the bank that have a claim to the bank’s assets after all senior creditors of the bank, including the FDIC. However, these obligations do not entitle the note or debenture holder to a claim on dividends issued by the bank. Accordingly, investors providing these securities are between the secured creditors of the bank (*e.g.* FHLB) and equity investors in the event of bank failure. In the event of a bank failure, these investors usually

do not receive any return of their investment on the bank. These investments are not covered by the FDIC's Deposit Insurance Fund in the event of a bank failure.

Other Liabilities

This section includes the bank's liability on acceptances executed and outstanding, mortgage indebtedness and liability for capitalized leases, and all other liabilities not included in previously discussed liability sections.

Equity

This section of the UBPR includes all structures that meet the regulatory requirements to be considered as capital of the bank.

Total Bank Capital

Total bank capital represents the total ownership interest in a bank and is comprised of several components: common stock outstanding, preferred stock outstanding, surplus, and retained earnings. Common stock represents the amount of common stock ownership that is outstanding to shareholders at par value. Owners of common stock earn a return on their investment through dividends paid on the common stock and through increases in the market value of the shares owned.

Preferred stock represents an ownership interest that generally has priority over common stock with respect to dividends and liquidation proceeds. Preferred shares often pay a stated dividend and typically have limited or no voting rights under ordinary circumstances, although voting rights can arise under specified conditions. Depending on its terms and regulatory eligibility, preferred stock may qualify for particular categories of regulatory capital.

Common stock represents the amount of common stock ownership that is outstanding to common stock owners at par value. Common stock owners may receive dividends on their ownership interest in the company and may have the opportunity to exercise voting rights.

Surplus is another common capital structure present in banks. Surplus represents the amount of investment that was received for shares in excess of par value on common stock. Surplus can be a significant capital structure, as regulation can dictate that capital held in surplus can impact how a bank operates.

Retained earnings represent the total earnings of the bank, less any dividends that have been paid out to common stock shareholders and preferred stock shareholders of the bank. Generally, this is the category of capital that a bank desires to increase as the size of the bank grows, so the ownership interest of the common stock shareholders is not diluted.

Income Statement

A bank's income statement, also referred to as a Statement of Income, shows the bank's income and expense activity over a period of time. Unless otherwise specified, it is assumed that the income statement time period shown is current year to date of the income statement. It is important to note that this aspect of an income statement differs from a balance sheet, which shows the bank's asset, liability, and capital structure at a point in time.

In the UBPR, the income statement is on page 2, and it begins with total interest income, then subtracts total interest expense, then steps through the addition or subtraction of various other key components that allow for the calculation of the bank's net income. The UBPR income statement then concludes by subtracting dividends paid by the bank, which yields retained earnings for the period. This additional calculation shows how the income statement ultimately ties back to the bank's balance sheet.

Total Interest Income

Total interest income is the primary source of earnings for most banks. It represents the earnings off of its earning assets – loans and leases, securities, interest bearing due from accounts and Federal Funds sold. These categories of earning assets from the balance sheet are directly connected to the following total interest income categories:

- Income on loans and leases (loans and leases from the balance sheet);
- Investment interest income (securities from the balance sheet); and
- Other interest income (interest bearing due from accounts and Federal Funds sold from the balance sheet).

Income on Loans and Leases

This category of income includes all of the bank's earnings off of loans and leases. This includes the interest income that has been accrued from the loans in the bank's portfolio over the time period that the income statement covers. Additionally, any other fees that result in income for the bank that have been recognized during the time period covered by the income statement are included in this category. Examples of these other fees include origination fees and late charges.

A bank's loan portfolio may contain loans and leases that may have preferential tax treatment of the income from those loans. These loans generally receive preferential tax treatment because governmental authorities desire to promote bank lending of certain types. Examples of loans that may receive preferential tax treatment include loans and leases to states and political subdivisions in the United States and beginning farmer loans. The effect of this preferential tax treatment is that banks contract for interest rates that are generally below the

market rate for a similar loan or lease that would not receive preferential tax treatment. Because the preferential tax treatment of this income effectively increases the yield on these loans and leases, the UBPR attempts to calculate an estimated tax benefit for these loans and leases. Adding this estimated tax benefit to the income reported by the bank provides a tax equivalent (TE) income for the bank's loan portfolio.

Investment Interest Income

Investment interest income includes all of the interest income that is derived from the bank's securities portfolio. The UBPR income statement subdivides this income so that one may readily find the bank's income from U. S. Treasury and agency securities, mortgage-backed securities and all other securities.

Similar to the bank's loan portfolio, the bank's securities portfolio may contain securities that qualify for preferential tax treatment of the income that results from the investment in that security. This is generally done for the same reason as previously mentioned in the income on loans and leases section, and it has the same general effect for the securities in which the bank invests. The securities that typically qualify for this preferential tax treatment are securities issued by states and political subdivisions of the United States. Because of the impact on the book yield of the securities, the UBPR attempts to compensate for this using an estimated tax benefit that is added to the bank's securities portfolio income. The result of this addition is a tax equivalent (TE) income figure for the bank's securities portfolio.

Other Interest Income

Other interest income includes all interest income derived from the bank's interest bearing due from accounts, from the bank's Federal Funds sales and from its trading account income. Due to the more volatile nature of the balances that may occur on the bank's balance sheet, it is important to note that an average balance for the time period of the income statement should be utilized when calculating the yield on these various types of assets.

Total Interest Expense

Total interest expense is the amount of interest that the bank pays on liabilities that it utilizes to fund its balance sheet. Total interest expense is split into six different categories – the first two are for interest expense associated with deposits of the bank, the next three are for interest expense associated with borrowings of the bank, and the final one is for other interest expense.

The categories that represent interest expense associated with deposits of the bank are interest on deposits in foreign offices and interest on domestic deposits. Interest on deposits in foreign offices is associated with the non-core deposit liability category deposits in foreign offices. If a bank does have deposits in foreign offices, the bank must fill out a different format of the Call Report (FFIEC Form 031, instead of FFIEC Form 041 or FFIEC Form 051 which are most

commonly used by banks). Interest on domestic deposits is associated with all deposits that are not included in deposits in foreign offices.

The categories that represent interest expense associated with borrowings of the bank are interest on Federal Funds purchased and repos, interest on trading liabilities and other borrowings, and interest on subordinated notes and debentures. Interest on Federal Funds purchased and repos is the period to date interest expense of Federal Funds purchased and securities sold under agreements to repurchase. This category of the income statement is related to the borrowings and other liabilities category of Federal Funds purchased and resales from the balance sheet. Interest on trading liabilities and other borrowings includes the period to date interest expense on trading liabilities as well as the interest expense on all other liabilities that do not fit into another category in the interest expense section. Some of these other liabilities would include FHLB borrowings, other borrowings, mortgages, and capital leases. The last category in this section, interest on subordinated notes and debentures, relates to the subordinated debt and equity category of subordinated notes and debentures from the balance sheet.

Other interest expense represents expenses incurred by the bank associated with trading liabilities on its balance sheet or associated with other forms of debt on its balance sheet. This category is reported for banks that complete the FFIEC 051 form quarterly, as they do not need to distinguish between interest expense on trading liabilities and other borrowings and interest expense on subordinated notes and debentures.

At the end of the interest expense section, interest expense is netted against interest income to yield net interest income (TE). The TE designation is included due to the estimations added into interest income to achieve a tax equivalent figure.

Other Income Statement Items

At this point in the UBPR, the income statement shifts structure from the addition and subtraction of groups of items, to addition and subtraction of individual items – turning the income statement into a running list of subtotals until the income statement culminates with retained earnings.

Non-Interest Income

Non-interest income is income of the bank that is not earned by interest accrual on assets of the bank. Examples of non-interest income include service charges on deposit accounts, overdraft item fees (overdraft fees based on a period of time are considered interest income), income from fiduciary activities, loan servicing fees, and gains or losses on trading assets. Additionally, income from subsidiaries of banks, such as title insurance companies, insurance companies and investment companies, will be recorded in this section.

Over the course of the past several decades, banks have been focusing on increasing non-interest income to the level that it covers the bank's non-interest expense. The measure used by bank management teams to monitor the progress toward this goal is net burden, which is defined as non-interest expense less non-interest income. When a bank achieves non-interest income that is sufficient to cover or exceed non-interest expense, the result of net burden is either zero or a negative figure. Unless the bank has a line of business that allows for the generation of a sizeable amount of fee income or the bank has financially successful subsidiary (such as an investment advisory department or a trust department), it is unlikely that the bank has achieved this goal.

On the UBPR income statement, non-interest income is added to net interest income (TE), and the resulting figure is the bank's adjusted operating income (TE).

Non-Interest Expense

Non-interest expense is the expense of the bank that is incurred by the bank for activities other than paying for funding sources of the bank's balance sheet. Non-interest expense may also be referred to as overhead. There are three categories of non-interest expense: personnel expense, fixed asset expense and other non-interest expense.

Personnel expense for a bank includes all costs associated with employment of the bank's staff. Examples of these types of costs include wages, Social Security taxes, benefits paid by the bank (such as health insurance premiums), and any incentive compensation, including but not limited to bonuses, profit sharing or retirement plans.

Fixed asset expense includes all costs associated with the bank's premises and equipment. Examples of these types of expenses include depreciation, lease expenses, maintenance and repair, taxes (real estate and personal property). To the extent that the bank generates any revenue from either renting or subleasing these assets, that income is counted as a contra-expense in this section.

Other non-interest expense includes all other non-interest expense that is not appropriately categorized in the prior two categories. Examples of other non-interest expense include regulatory assessments, professional services fees, data processing expenses, marketing, postage, and communications expenses. Any cash overages and shortages are also commonly reported as a net figure in this section.

To ensure long-term sustainability of the bank, management teams work to ensure that the amount of non-interest expense is appropriately balanced between the three categories just discussed. Significant imbalances can result in the bank allocating too much of its planned budget to a type of non-interest expense to the detriment of other critical areas of the bank.

Provision

Provision for credit losses is the income-statement amount recognized to adjust a bank's allowances for expected credit losses. Under CECL, the allowances are based on expected credit losses over the contractual life of covered financial assets, considering relevant historical experience, current conditions, and reasonable and supportable forecasts as required by the accounting standard. Analysts should distinguish the provision expense recognized during a period on the income statement from the allowance balance reported on the balance sheet.

Non-interest expense and provision for credit losses are subtracted from adjusted operating income (TE) to yield pretax operating income (TE).

Realized Gain/Loss on Securities

Realized gain/loss on securities includes the income or expense that results from the sale of securities in a bank's securities portfolio. This section has two line items: realized gain/loss on held-to-maturity securities and realized gain/loss on available for sale securities. It is uncommon for a bank to show any realized gain/loss on held-to-maturity securities, as the bank has to have positive intent to hold the security until maturity. Sales of held-to-maturity securities are only allowed when there is an isolated event (such as a change in tax laws) that would force the bank to sell the security, when there is a significant credit deterioration in the specific security that would force its liquidation or when the security is very close to its maturity date. Even with these conditions, if a bank sells an amount of held-to-maturity securities that is deemed to be significant, the bank will be forced to change the classification on all of its held-to-maturity securities. As a result, sale of a held-to-maturity security is only completed as an action of last resort for the bank.

Realized gain/loss on available-for-sale securities may appear in a bank's income statement. However, if it is determined that the bank normally sells available-for-sale securities with the intent of making a profit on the sale, the bank may be forced to reclassify securities designated as available-for-sale held in its portfolio to trading account securities.

Realized gain/loss on securities is added to, or subtracted from, pretax operating income (TE) to yield pretax net operating income (TE) on the UBPR.

Applicable Income Taxes

This section of the UBPR income statement includes all applicable Federal, state, local and foreign taxes paid by the bank on its income during the income statement time period, and it reverses out all current tax equivalent benefits added into the bank's income in prior income statement sections. Additionally, other tax equivalent adjustments from prior time periods are factored into the bank's income as well.

Applicable income taxes represent the total taxes the bank paid to taxing authorities on its pretax net operating income (TE). These taxes can represent

Federal, state, local and foreign taxes. It is important to note that a bank's corporate status may impact the amount of taxes paid. Generally, banks are either a Subchapter C corporation (C Corp) or Subchapter S corporation (S Corp or sub-S). Subchapter C corporation banks pay the applicable Federal tax on the bank's income directly, whereas the Federal tax liability on Subchapter S corporation banks is passed through in a *pro rata* manner to the shareholders of record. Consequently, it will appear that a Subchapter S corporation bank pays much less tax than its Subchapter C corporation counterpart, but all that has occurred is a shifting of the tax burden.

Current tax equivalent adjustment reverses the current part of the estimated tax benefit included in interest income on loans and leases and securities that is attributable to the income included in the time period of the income statement. Other tax equivalent adjustments reverse the remainder of the estimated tax equivalent adjustment included in interest income on loans and leases and securities that is attributable to prior income periods. An example of this type of adjustment is an adjustment attributable to a tax loss carry back.

After applicable income taxes are subtracted from pretax net operating income (TE), the result is net operating income. Since the estimated tax equivalent adjustments have been netted out of income due to this step, the (TE) designation is now dropped from the income line item.

Discontinued Operations and Noncontrolling Interests

This section of the income statement represents any income from discontinued items or extraordinary items and from noncontrolling minority interests, net of tax impact. Discontinued items represent parts of the bank that are presently being held for sale or parts of the bank that have already been disposed. It is expected that the bank will have no significant future involvement in the areas of these disposed items. Noncontrolling interests are ownership positions of the bank in other entities which do not allow the bank to exert controlling influence on the entity. Due to this lack of controlling influence, income from these interests is not consolidated within the prior discussed portion of the income statement. When these items are combined with the bank's net operating income, the result is net income.

Dividends and Retained Earnings

After the UBPR income statement has calculated net income, the UBPR income statement then defines how much of the bank's income was distributed to its shareholders in the form of a dividend and how much of the bank's income was retained within the bank as retained earnings. It should be recalled from the balance sheet section of this course that retained earnings is a capital item. Accordingly, one should see retained earnings increase or decrease by the amount of retained earnings shown on the retained earnings line of the UBPR income statement. Consequently, the full integration of the balance sheet and income statement is now fully defined – assets and liabilities from the balance sheet produce income and expense, respectively, on the income statement, and

net income from the income statement not paid out in the form of dividends becomes retained earnings on the balance sheet.

Ratio Analysis

U.S. banks vary widely in asset size, business model, geographic footprint, funding structure, and product mix. Because absolute dollar amounts are often not comparable across institutions, analysts generally use ratios, trends, and appropriately selected peer groups to make more meaningful comparisons.

Ratios allow for informative and relative comparisons between banks of dissimilar size and composition. Utilizing ratios provides a consistent basis from which to conduct meaningful analysis between peer banks. Ratio analysis can be divided into two different subsets – level analysis and trend analysis.

Using ratios for level analysis helps one to determine how one bank is performing relative to another bank at a single point in time. This type of analysis can also be useful for analyzing a bank's performance relative to generally accepted industry benchmarks of performance.

Another benefit of ratios is that they provide a very useful tool for spotting trends that are occurring within a bank's performance. Trend analysis looks at a bank's ratios over a period of time to determine if there is a pattern of performance that is developing or that has been established over time. These trends often yield very useful information with respect to a bank's overall performance, augmenting the information provided by level analysis.

Ratio analysis frequently uses "common sizing" to express financial statement items relative to a consistent base. Balance-sheet composition ratios commonly express an item as a percentage of assets, while income-statement performance ratios often relate income or expense to average assets or another relevant average balance. The specific denominator matters: UBPR users should use the definition provided for the particular UBPR ratio rather than assuming that every balance-sheet and income-statement line item is divided by average assets.

For many UBPR ratios, the report presents the bank's result, the applicable peer-group average, and the bank's percentile rank within that peer group. Dollar-value line items generally do not receive peer averages and percentile rankings in the same manner as ratios. Analysts should interpret percentile ranks in context because a high percentile is not inherently favorable for every ratio; for some measures, a lower value may be preferable.

The UBPR uses peer groups to facilitate comparison among institutions with broadly similar characteristics. Peer-group definitions vary by factors such as asset size, number of banking offices, metropolitan or nonmetropolitan location, charter type, and specialized business model. The FFIEC periodically revises these

definitions as the industry changes. UBPR peer groups were revised as recently as February 26, 2026. Analysts should therefore confirm the current peer-group definition shown in the UBPR and User's Guide rather than relying on historical peer-group counts or thresholds.

On page 31 is a chart that is found in "A User's Guide for the Uniform Bank Performance Report." This user's guide is available from the FFIEC on their website (www.ffiec.gov). Prior to starting with this model, a couple of ratios that appear in the UBPR will be discussed to align the chart with the ROE model for ratio analysis that is commonly utilized in banking.

ROE Ratio Analysis Model

The return on equity (ROE) ratio analysis model is a commonly utilized methodology for analyzing bank profitability using financial ratios. This model utilizes ratios found within the UBPR in a specified framework to provide a thorough analysis of a bank's performance over time and relative to its peers.

Capital Ratios

The ROE ratio analysis model starts with the bank's ROE. In the UBPR, this is found on page 11 as net income in the percent of average bank equity section. ROE represents the earnings generated by the total capital investment in the bank. The calculation for ROE is as follows:

$$\text{Return on Equity} = \frac{\text{Net Income}}{\text{Average Equity}}$$

This ratio indicates how efficiently a bank uses its equity capital to generate net income. Because shareholders expect a return commensurate with the risk of their investment, ROE is a useful starting point for profitability analysis. However, ROE should be interpreted together with capital levels and risk: a higher ROE can result from stronger earnings, greater leverage, or a combination of both.

The ROE ratio analysis model analyzes bank performance by decomposing the ROE formula into continuously more detailed results to allow the analyst to gain insight into root causes for the bank's financial performance. The first decomposition step in the ROE ratio analysis model is to define ROE in terms of return on assets (ROA). This is done as follows:

$$\text{Return on Equity} = \text{Return on Assets} \times \text{Equity Multiplier}$$

ROA is the beginning of the analysis chart following, and it is the beginning of the earnings and profitability ratios section of the ROE ratio analysis model.

The equity multiplier is also referred to as the leverage ratio. This name arises from the equity multiplier's direct relationship to financial leverage. As the equity multiplier increases, not only does financial leverage increase, but financial risk increases as well. The equity multiplier is defined as:

$$\text{Equity Multiplier} = \frac{\text{Average Assets}}{\text{Average Equity}}$$

The equity multiplier is the inverse, or reciprocal, of the total capital and minority interest figure listed on page 6 of the UBPR.

There are five other key capital ratios that are frequently utilized in bank financial analysis that do not fit within the flow of the ROE ratio analysis model. Three ratios were established by the Basel III accord and are common equity tier 1 risk-based capital ratio, tier 1 risk-based capital ratio, and total risk-based capital ratio. These ratios differ in the types of capital structures that are allowed to be included in the ratio calculation.

The common equity tier 1 risk-based capital ratio includes the total capital of the bank, less goodwill, intangibles, deferred tax assets, accumulated other comprehensive income (AOCI), and non-significant investments in unconsolidated subsidiaries. Additionally, further deductions may be made from a bank's capital depending upon the level of these disallowed structures in a bank's balance sheet.

The tier 1 risk-based capital ratio includes all of the capital structures defined in the common equity tier 1 capital ratio plus some additional capital structures. These structures include capital instruments that qualify for tier 1 status, capital that does not fully qualify for tier 1 status and is in the process of phase-out, and tier 1 minority interest that does not qualify for common equity tier 1 status.

The total risk-based capital ratio includes all of the capital structures defined in the tier 1 capital ratio plus additional capital structures defined as tier 2 capital structures. While there are several of these types of capital structures, the most tier 2 capital structure in most banks is the loan loss reserve.

Each of the above defined ratios is calculated by dividing the capital included in the definition of the ratio by the bank's total risk weighted assets. Risk weighting of assets is a significant topic and one that is outside the scope of this course.

In addition to risk-based capital measures, leverage measures provide another perspective on capital adequacy. The Tier 1 leverage ratio compares Tier 1 capital with average total consolidated assets, subject to regulatory adjustments. Qualifying community banking organizations that elect the CBLR framework use a related leverage measure as the simplified capital standard. Analysts should distinguish these regulatory leverage measures from nonregulatory analytical measures such as the equity multiplier or tangible common equity ratio.

Bank Financial Analysis

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Earnings and Profitability Ratios

The earnings and profitability ratios mirror the major sections of the UBPR's income statement. These ratios are found on page 1 of the UBPR and culminate with ROA, which is listed on the UBPR as net income in the earnings and profitability percent of average assets section. The formula for calculating ROA is:

$$\text{Return on Assets} = \frac{\text{Net Income}}{\text{Average Assets}}$$

The earnings and profitability ratio portion of the ROE ratio analysis model progresses by splitting ROA into its seven component ratios:

$$\begin{aligned} \text{Return on Assets} = & \frac{\text{Interest Income (TE)}}{\text{Average Assets}} - \frac{\text{Interest Expense}}{\text{Average Assets}} + \frac{\text{Noninterest Income}}{\text{Average Assets}} \\ & - \frac{\text{Noninterest Expense}}{\text{Average Assets}} - \frac{\text{Provision: Loan \& Lease Losses}}{\text{Average Assets}} \\ & + \frac{\text{Realized Gain or Loss on Securities}}{\text{Average Assets}} - \frac{\text{Taxes \& Extraordinary Items}}{\text{Average Assets}} \end{aligned}$$

This decomposition of ROA provides insight into how a bank generates its income and into opportunities that may exist for a bank to improve its performance. Each of the component ratios in this equation is found on page 1 of the UBPR in the line item named the same as the numerator of the component. The first four component ratios of this equation are further refined to provide a more detailed analysis of the bank's performance. Interest income (TE) to average assets and interest expense to average assets are decomposed as part of the margin analysis ratios, while non-interest income to average assets and non-interest expense to average assets are decomposed as part of the non-interest income ratios.

Margin Analysis Ratios

The margin analysis ratios of the ROE model examine the interest income and expense of a bank. Generally, in banking the word margin is used to refer to the difference between the bank's interest income and the bank's interest expense. Accordingly, margin analysis ratios are utilized to examine the bank's performance with respect to its interest income and interest expense.

Interest income (TE) to average assets, which appeared in the earnings and profitability ratios section of the ROE ratio analysis model, can be decomposed in the following way:

$$\begin{aligned} & \frac{\text{Interest Income (TE)}}{\text{Average Assets}} \\ & = \frac{\text{Interest Income (TE)}}{\text{Average Earning Assets}} \times \frac{\text{Average Earning Assets}}{\text{Average Assets}} \end{aligned}$$

This decomposition provides insight into whether a bank's interest income primarily arises from the yield on its earning assets, from the level of earning

assets that a bank possesses within its balance sheet, or from a balanced approach to both. Both of the resulting component ratios of interest income (TE) to average assets can be found in the margin analysis section of page 1 of the UBPR. The line items containing each of these components are easily identified, as the title of the line item describes the component ratios. It is at this level of decomposition that one must start utilizing multiple pages of the UBPR. To analyze the interest income (TE) to average assets ratio, one must utilize page 3 of the UBPR, as this ratio is primarily concerned with yields earned on the bank's earning assets. To analyze the average earning assets to average assets ratio, one must utilize page 6 of the UBPR, as this ratio is primarily concerned with the composition of the bank's balance sheet.

Interest income (TE) to average earning assets is influenced by the mix of earning assets and the yields earned on those assets; however, the information to calculate the dollar volume weighted average is not listed within the UBPR. The information that does factor into the calculation of this ratio is listed in the second section of page 3 in the UBPR. The four items that contribute to the interest income (TE) to average earning assets are yield on total loans and leases (TE), yield on total investment securities (TE), yield on interest-bearing bank balances and yield on Federal funds sold and resales. Yield on total loans and leases (TE) is further divided into two subcategories: yield on loans in domestic offices and yield on loans in foreign offices. The yield information for loans in domestic offices is further divided into the following categories: yield on real estate loans (which includes all loans secured by real estate), yield on commercial and industrial loans (except for those secured by real estate), yield on individual loans (except for those secured by real estate), yield on agricultural loans (except for those secured by real estate). Yield on loans secured by real estate is further divided into yield on loans secured by 1 – 4 family residential property and yield on all other loans secured by real estate. Additionally, yield on credit card loans is specifically listed under individual loans.

Average earning assets to average assets is composed of ratios found on page 6 of the UBPR. These ratios combine to form average earning assets to average assets in the following manner:

$$\begin{aligned} & \frac{\text{Average Earning Assets}}{\text{Average Assets}} \\ &= \frac{\text{Net Loans \& Leases}}{\text{Average Assets}} + \frac{\text{Interest Bearing Bank Balances}}{\text{Average Assets}} + \frac{\text{Federal Funds Sold \& Resales}}{\text{Average Assets}} \\ &+ \frac{\text{Trading Account Assets}}{\text{Average Assets}} + \frac{\text{Securities (AFS)}}{\text{Average Assets}} + \frac{\text{Securities (HTM)}}{\text{Average Assets}} \end{aligned}$$

It is important to note that this formula will work on page 6, as all of this information is as of the end of the time period specified in the UBPR. However, the average earning assets to average assets ratio on page 6 may not agree with the average earning assets to average assets ratio on page 1. This is because page 1 is an average over a different time period than on page 6, so any agreement between the two figures is likely a coincidence.

Interest expense to average assets, which appeared in the earnings and profitability ratios section of the ROE ratio analysis model, is very similar to interest income (TE) to average assets. However, because of the format of the UBPR, interest expense to average assets cannot be decomposed in the same manner, as the cost information provided in the UBPR is based on earning assets, and the composition is based on interest bearing funds to average assets. In many banks, the ratio of earning assets to average assets and interest-bearing funds to average assets may be similar so that a similar decomposition formula that was presented for interest income (TE) to average assets may be valid at certain times, but it is not always necessarily valid.

The information regarding the cost of interest-bearing funds is available from the second section of page 3 of the UBPR. The ratio for this is shown in the line item entitled cost of all interest-bearing funds. Cost of all interest-bearing funds is composed of four different ratios, which are dollar volume weight averaged to yield the cost of all interest-bearing funds. The ratios that make up this dollar volume weighted average are cost of total interest-bearing deposits, cost of Federal funds purchased & repos, cost of other borrowed money and cost of subordinated notes & debentures. Each of the last three aligns with a balance sheet category that was previously discussed. The cost of total interest-bearing funds is further sub-divided into cost of transaction accounts, cost of other savings accounts, cost of time deposits over \$250M, cost of all other time deposits and cost of foreign office deposits.

When examining the interest-bearing funds to average assets ratios reported on page 6, it should be noted that the averages reported on page 6 are not necessarily the same averages reported on page 1. This is due to a difference in time periods used for generating the two averages. However, page 6 does provide ratios useful in determining the composition of the bank's funding structure. The ratios that combine to form interest bearing funds to average assets are Federal funds purchased & repos to average assets, total Federal Home Loan Bank borrowings to average assets, total other borrowings to average assets and acceptances & other liabilities to average assets. Total deposits to average assets are only included in this to the extent that interest bearing deposit liabilities are included. Demand deposits to average assets, which is included in total deposits to average assets, includes non-interest bearing liabilities, and must be excluded accordingly from this calculation.

Efficiency Ratio Analysis

Efficiency analysis examines the relationship between noninterest expense, net interest income, and noninterest income. Because these results do not have a direct balance sheet component, other than having been common sized, the data for analyzing non-interest ratios comes from page 3 of the UBPR.

Page 3 of the UBPR begins with ratios that combine to make up the bank's non-interest expense to average assets. The formula for this is:

$$\frac{\text{Noninterest Expense}}{\text{Average Assets}} = \frac{\text{Personnel Expense}}{\text{Average Assets}} + \frac{\text{Occupancy Expense}}{\text{Average Assets}} + \frac{\text{Other Operating Expense}}{\text{Average Assets}}$$

The personnel expense to average assets ratio is further decomposed into two other ratios found on page 3 of the UBPR:

$$\frac{\text{Personnel Expense}}{\text{Average Assets}} = \frac{\text{Personnel Expense}}{\text{Employee}} \times \frac{\text{Employee}}{\text{Average Assets}}$$

The last ratio in the above formula does not appear in the UBPR, but its reciprocal, average assets to employee, does.

Page 3 of the UBPR does not list any ratios for non-interest income but it does provide a more detailed accounting of the non-interest income earned by the bank. There are nine different categories of non-interest income into which non-interest income is divided: fiduciary activities; deposit service charges; trading, venture capital & securitization income; investment banking & advisory income; insurance commission & fees; net servicing fees; loan & lease net gains/losses; other net gains/losses; and other non-interest income. If the analyst desires to turn these into ratios, this can be achieved utilizing the average total assets figure reported at the bottom of page 1 of the UBPR.

The information from a bank's non-interest income and expense is combined with the bank's net interest income to calculate the bank's efficiency ratio. This ratio shows how much non-interest expense a bank must incur to generate a dollar of revenue. In the context of the efficiency ratio, revenue is defined as net interest income plus the bank's non-interest income. The efficiency ratio may be expressed in terms of the following formula:

$$\text{Efficiency Ratio} = \frac{\text{Noninterest Expense}}{\text{Net Interest Income} + \text{Noninterest Income}}$$

Within the context of the efficiency ratio, it is generally desirable to have a lower efficiency ratio because that means that a bank needs to expend less non-interest expense to generate revenue. Accordingly, a bank with a lower efficiency ratio is said to be more efficient than a bank with a higher ratio.

However, it is not necessarily true that a bank with a lower efficiency ratio will perform better than a bank with a higher efficiency ratio over the long term. It is possible that a bank with a consistently low efficiency ratio may not be investing appropriately in its personnel, its facilities, its equipment, or its strategic plan that may better position it for long-term, sustainable operation. Accordingly, a

management team should have a target for its efficiency ratio results, and the management team should monitor these results to ensure that they are on target and to ensure that the categories within the efficiency ratio (personnel, occupancy and other) are staying relatively balanced to position the bank for future success.

Conclusion

After discussion of the resources available to evaluate the performance of a bank relative to its peer group and the reasons that such evaluation is necessary, the student should now be equipped to evaluate the financial performance of a bank, regardless of the size of the bank being evaluated. This evaluation, which utilizes the ROE ratio analysis model with key ratios and trends available in the UBPR, focuses on ratios that allow for the comparison of institutions of dissimilar size and situation.

The goal of financial analysis is to improve understanding by and decision-making for users of bank financial statements, not simply to calculate ratios from these statements. By developing a sound, comprehensive understanding of key ratios, trends, peer comparisons, and the risks underlying them, the student should be better prepared to identify drivers of performance and evaluate possible management responses. Effective analysis connects the numbers to the bank's strategy, risk profile, and long-term sustainability.



Technology For Bank Management

*Materials for this session will
be provided at the School.*

MACROECONOMICS AND THE BANKING SYSTEM

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MACROECONOMICS AND THE BANKING SYSTEM

Notes

OVERVIEW

This module is designed to provide a basic background in macroeconomics for bankers. It is not intended to be a substitute for a complete introductory course in macroeconomics, but rather an overview of those macroeconomic concepts most relevant to the banking business. The module begins with a presentation of key theoretical concepts, including the role of financial intermediaries, the role of money, money demand and supply and how monetary and fiscal policies affect the banking system and overall economy. As part of the discussion of monetary policy, you will be given an overview of the Federal Reserve System and how that system relates to the private banking sector, as well as a historical perspective of banking in the USA. The module concludes with an overview of the current macroeconomic environment as it relates to those employed in the banking industry.

LEARNING OBJECTIVES

Following the successful completion of this session, you should be able to:

- Explain the difference between saving and investment and how these activities influence national spending and income
- Describe the role of financial intermediaries in facilitating economic growth.
- Explain what money is, what factors influence decisions by people to hold money and the different approaches taken to measure the nation's supply of money.
- Describe the relation between the money supply, inflation, GDP, interest rates, employment, and the value of the dollar in foreign exchange markets; describe how changes in the business cycle can impact a bank's strategies.

- Explain the differences between fiscal and monetary policy, who implements each type of policy, and how each policy affects the banking system and national economy; explain the relation between federal budget deficits, monetary policy, and interest rates
- Describe the important changes that have taken place in the banking industry over the last seventy-five years and how the financial services industry has been changing
- Describe recent key trends in the performance of the U.S. economy and its banking system.

DEFINITIONS OF KEY TERMS

Disposable income: Personal income minus tax payments.

Exchange rate: The price of one country's currency in terms of another country's currency.

Federal deficit: Federal government expenditures minus tax receipts.

Fiscal policy: Actions regarding the level and mix of federal government expenditures and taxes.

Gross Domestic Product (GDP): A measure of the total value of all goods and services produced in a country in a given period of time. GDP is typically expressed in "real" terms, calculated as the value of gross domestic product in current dollars divided by a relevant price index.

Inflation: An increase in the general level of prices.

Investment: Capital investment equals total expenditures on durable goods that have a useful life of more than one year. Financial investment equals the dollar value of loans and securities purchased minus the dollar amount of borrowing.

Monetary base: Currency in circulation and bank reserves.

Monetary policy: Actions regarding the monetary base, money stock, and interest rates by the Federal Reserve to meet economic objectives.

Saving: Current income minus the amount spent on consumption goods and services.

Trade balance: U.S. merchandise exports minus imports

Unemployment rate: Percentage of the labor force that is looking for work but is unemployed.

MACROECONOMIC THEORY FOR BANKERS

Macroeconomics is basically the study of how the national economy functions. This is in contrast to *microeconomics*, which focuses on studying the behavior of individual buyers and sellers, the markets that bring them together and how government policies affect market participants. Macroeconomics is a very large sub-discipline, and we will only cover those topics most relevant to bankers:

- ❖ The role of the financial system in the economy
- ❖ Money, money demand and supply
- ❖ Macroeconomic policy; monetary and fiscal

The Role of the Financial System

In any economy, there will be *surplus spending units* (those who spend less than they earn) and *deficit spending units* (those who spend more than they earn). Surplus spending units are savers, whereas deficit spending units are borrowers. *Financial markets* and *intermediaries* bring surplus and deficit spending units together by equating the demand for financial capital with the supply. While aggregate spending must equal aggregate income, an individual unit will usually find that it spends more or less than its income. A consumer, for example, earns income from which he or she pays taxes and buys goods and services. If in some period desired purchases exceed disposable income, the consumer must borrow, draw on past savings, or simply do without. The same applies to government.

Saving

Savers in the economy include households (consumers) and government. When households have something left over after consumption and paying taxes, they are savers. What is saved by households is called *private saving*. For them, saving equals disposable income less consumption expenditures. Historically, American consumers in the aggregate have spent less than they earned, so their saving is positive. When government spends less than it takes in as tax revenues, it will incur a *budget surplus*.

and also be a saver (the government incurs a *budget deficit* if it spends more than it takes in as revenue); what is saved by government constitutes *public saving*. State and local governments may operate with a balanced budget, such that saving equals zero or they may have a surplus, while the federal budget has consistently been in deficit in the recent past. *National saving* is the sum of private saving and public saving. As savers, households and governments are suppliers of financial capital to the economy. Note that businesses are also potential suppliers of financial capital if only part of their profits is retained, i.e. not fully distributed as dividends.

Investment

Where does the supply of the nation's financial capital (national saving) go? It goes to demanders of financial capital, who either borrow or engage in investment. Demanders of financial capital include households who spend more than they earn, firms who need financial capital for investment purposes and government when it incurs a budget deficit.

In economics, the word "investment" has a very different meaning than it has outside of the discipline. Investment is an activity undertaken by businesses and it involves using resources today in such a way that they allow for greater production, and hence greater consumption, in the future. Investment results in additions to productive capacity. For example, when a business buys new equipment or builds a new factory, it is engaging in investment because it is increasing its capacity to produce in the future. This is in contrast to the layperson's notion of investment, which often relates to the purchase of stocks and bonds. Those types of transactions simply represent the transfer of ownership of assets. However, in economics investment takes place only if there are additions to productive capacity, not transfers of assets. Specific investment activities include business purchases of plant, equipment, tools and information technology. However, economists also regard spending by households on new residential structures to be investment. The reason is that new housing represents an addition to our future productive capacity because a new house can generate housing services in the future.

What is The Role of the Financial System?

The role of the financial system is to ensure that the supply of investment capital by savers equals the demand for financial capital by borrowers and investors. For any given period, an economic unit can have a balanced budget where income equals spending and saving is zero, a surplus where

income exceeds spending and saving is positive, or a deficit where spending exceeds income and saving is negative.

Think of the financial system as a gigantic market for loanable funds. It's the market that supplies credit and financial capital to those who need them, as well as a place for savers to obtain a return on their unused income. There are two important components to the financial system:

- (i) *Financial markets* are institutions where the supply of capital from savers directly meets the demand for capital by borrowers and investors. Savers in these markets are individual households, firms and government. These institutions include the *bond market* (where debt instruments are bought and sold) and the *stock market* (where shares of ownership in companies are bought and sold);
- (ii) *Financial intermediaries* are an alternative way in which suppliers and demanders of funds can be brought together. Intermediaries include depository institutions (banks and thrift institutions), stock and bond brokerage firms, mutual funds and life insurance companies. Intermediaries are middlemen that come between suppliers and demanders; they raise funds from savers and make them available to those who need them. For example, some individuals put excess cash in time and savings deposits at banks, which then make car and home loans to other individuals. A life insurance company obtains cash from writing insurance policies and uses the proceeds to make mortgage loans.

Financial intermediaries differ by the nature of their liabilities and assets. Commercial banks, savings institutions, and credit unions raise funds primarily in the form of checkable deposits and time or savings deposits. They concentrate their financial assets in consumer and commercial loans, mortgages, and government securities. Insurance companies receive premiums from writing insurance policies and buy longer-term bonds and mortgages. Mutual funds issue shares in the fund and buy stocks, bonds, or short-term securities.

The mechanism that ensures the equality of the supply of loanable funds with the demand is the *interest rate*, which is the market price of loanable funds. If financial markets are well-functioning (meaning that there are no controls on interest rates, no regulations that hamper the decision-making of savers, investors and borrowers, and all market participants are well informed), then the market will establish an *equilibrium interest rate* that

equalizes the demand for loanable funds with the supply (i.e. matches savings and investment). It is a vital feature of any competitive financial system that savings in the aggregate equal investment.

The Specific Role of Depository Institutions

Commercial banks play a unique role in the U.S. economy, because they create money in the form of demand deposits. The Federal Reserve System (Fed) attempts to control how much money can be created, by requiring banks to hold cash reserves against their deposits. The Fed can thus alter the growth rate of the money stock and the level of interest rates, by increasing or decreasing the availability of reserves to banks. By changing the growth rate of the money stock, the Fed influences the rate of inflation, the rate of unemployment, growth in real GDP and the change in the value of the dollar relative to other countries' currencies.

MONEY, MONEY DEMAND AND MONEY SUPPLY

What exactly is Money?

Money can be defined as a good which is used as a means of payment, where the prices of other goods are in units of the money good. Money's major functions are to serve as a *medium of exchange*, a *unit of accounting*, a *store of value* and a *standard of deferred payment*. As a medium of exchange, money is anything that is generally accepted by society as a customary means of payment; it is what merchants will accept for their goods and services, and how we are paid for our labor services. In order for money to serve this function well at any point in time, it must be liquid. That is, it must be easy and inexpensive to turn the money good into cash which can be used to make a payment. In order for money to serve this function over time, it must also serve as a store of value. In times of high inflation, various assets that serve best as a medium of exchange may not serve well as a store of value, and vice versa. Generally, assets with greater liquidity function better as a medium of exchange, while less liquid assets tend to earn higher rates of return, and thus serve better as a store of value.

What's the alternative to having a medium of exchange? The alternative would be *barter*, a system of exchange where people trade goods and services for other goods and services. A barter system has two great limitations, however: (1) it requires that there be a *dual coincidence of wants* between parties (meaning that if person A wants to sell something

to person B, person B must also want what person A has to sell); and (2) each good in the economic system will have many different prices, in terms of all the other goods. In fact, if N is the number of commodities, there must be $N(N-1)/2$ prices. A money system is much less costly; because it does not require a dual coincidence of wants and there need be only $N-1$ prices in terms of the money good (the price of money is itself, of course).

What Influences the Demand for Money?

We all use money; hence we all demand to hold it, at least to varying degrees. Unlike other goods, the demand for money is universal. As members of society, there is a social contract among us that: (1) all prices will be expressed in common money units, which in the USA is dollars and cents; and (2) we will use the money as a medium of exchange for market transactions. Economists generally agree that there are three motives for holding money:

- (i) *A transactions motive.* According to this motive, people want to hold money so they can transact in the marketplace. The amount of money people want to hold due to this motive will depend on their incomes, and on the prices of goods and services. Since a person's spending tends to rise with his income and/or the price level, the demand for money with respect to this motive will be positively related to peoples' incomes and the general price level.
- (ii) *A precautionary motive.* According to this motive, people want to hold money to hedge against uncertainty. We all can face unexpected expenses due to the loss of a job, health problems, unexpected house or car repairs, etc. According to this motive, the demand for money will vary positively with the amount of uncertainty and the level of income, but inversely with the interest rate. The interest rate is the opportunity cost of holding money. If it rises, it will be more costly to hold liquid balances for precautionary purposes; hence money demand will be lower.
- (iii) *A speculative motive.* According to this motive, people want to hold money in order to be able to take advantage of attractive future investment opportunities. For example, suppose investors anticipate that interest rates on bonds will rise in the future. They will stock up on cash balances now and wait until interest rates rise, at which time their cash will be invested in bonds. According to this motive, people will hold more cash balances today if they expect higher future

interest rates. On the other hand, people will hold less cash balances today if there are higher current rates of interest, since interest is the opportunity cost of holding cash. Thus, current rates and money holdings will be negatively related.

Given the three motives above, there will be three components to the nation's demand for money; a *transactions demand*, a *precautionary demand* and a *speculative demand*. The sum of the three demands constitutes the total demand for money.

How is the Supply of Money Determined?

The nation's supply of money consists of currency, coin and bank deposits, with most of the supply comprised of bank deposits. The U.S. Treasury, with its power to print paper money and mint coins, can directly control the size of the money supply. However, it is really the banking system that primarily determines how big the money supply is. As we will see later, while the Federal Reserve System can influence the size of the money supply by implementing its tools of monetary policy, the Fed uses the banking system to increase or decrease the stock of money in the USA.

The Federal Reserve has established several definitions of the nation's money supply. These range from narrower definitions that are restricted to assets with higher liquidity, to broader definitions that include less liquid asset categories.

M1 = M1 consists of (1) currency in circulation outside of the US Treasury, Federal Reserve Banks, and vaults of depository institutions; (2) demand deposits at commercial banks (excluding those amounts held by depository institutions, the U.S. government, and foreign banks and official institutions) less cash items in the process of collection and Federal Reserve float; and (3) other liquid deposits

M2 = **M1** + small-denomination time deposits (time deposits in amounts of less than \$100,000) less IRA and Keogh balances at depository institutions; and (2) balances in retail MMFs less IRA and Keogh balances at MMFs.

These measures above are based on different theoretical approaches to the measurement of money. M1 is based on the approach that the money supply should include any assets used as a medium of exchange. It

contains funds that are most liquid, and thus most readily used for day-to-day transactions.

In contrast, M2 is based on the approach that the money supply should include the most liquid assets in M1, plus some assets that are highly liquid and thus very easily converted into the funds included in M1. Accordingly, M2 includes more assets that have an extremely high degree of liquidity.

Over time, growth in the nation's stock of money is related to business activity, employment, and the general strength or weakness of the U.S. economy. In general, loan growth follows money growth with a lag.

How Can the Banking System Create Money?

When banks are required by the Federal Reserve to hold only a fraction of their deposits as reserves (a system called *fractional reserve banking*), a new deposit (withdrawal) in the system can lead to an increase (decrease) in the money supply that is a multiple of the original deposit (withdrawal). Before we develop an example of this process, let us distinguish between the different types of bank reserves and analyze the balance sheet of a depository institution:

- (i) *Total reserves* – these are anything that the law permits banks to claim as reserves. They can be held either in the form of vault cash or reserves held at the district Federal Reserve Bank.
- (ii) *Required reserves* – these are reserves that a depository institution must hold in the form of vault cash or deposits at the Federal Reserve. Required reserves are set by the Federal Reserve according to a *required reserve ratio*, which is the percentage of total deposits that the Federal Reserve requires depository institutions to hold. The ratio is r , where $r = (\text{Required reserves} / \text{Total deposits})$;
- (iii) *Excess reserves* – these are any reserves banks voluntarily hold above the legal minimum. Many banks choose to hold reserves above the legal minimum because daily outflows of deposits will sometimes exceed the level of required reserves. Under such conditions, excess reserves serve as a buffer.

It follows from the above that:

$$\text{Total reserves} = \text{Required reserves} + \text{Excess reserves}.$$

The balance sheet of a depository institution will typically look like this:

Assets	Liabilities
Total Reserves	Deposits
(i) Required	(i) Checkable
(ii) Excess	(ii) Non-checkable
Loans	Net Worth
Securities	

Securities held by a depository institution are usually highly liquid, including mostly government bonds or very high grade blue chip corporate bonds. The net worth of the institution is its stockholders' claims to the institution's assets.

Now we have the tools necessary to develop an example of how the banking system can expand the money supply. In the following example, assume that the required reserve ratio (r) is 0.2 (meaning that banks must hold a minimum 20% of deposits on reserve). Furthermore, assume that checkable deposits are the bank's only liabilities, there are no restrictions on lending, all loan proceeds are deposited into checkable accounts, banks are on average always "fully lent out" (meaning that on average they hold no excess reserves) and banks have zero net worth.

Below is the balance sheet of Bank 1:

Assets	Liabilities
Total Reserves \$2,000,000	Deposits \$10,000,000
(i) Required \$2,000,000	
(ii) Excess \$0	
Loans \$8,000,000	

One way in which the money supply can rise or fall is if the Federal Reserve engages in *Open Market Operations*, which is the purchase or sale of U.S. government securities from or to the commercial banking system. We will discuss how such purchases and sales affect the overall economy later, but

for now we will focus on how such transactions can result in a bigger or smaller money supply.

Suppose the Federal Reserve purchases \$500,000 in U.S. government securities from Mr. Brown, who holds an account at Bank 1 above. The Federal Reserve will start the process by writing a check on itself to Mr. Brown, who deposits the check in his account at Bank 1. The bank will send the check to the district Federal Reserve Bank, who then credits the bank's account by \$500,000. At this point, the money supply has increased by \$500,000 because there is a new deposit in the system of that amount.

Below is the bank's balance sheet following these activities:

Assets	Liabilities
Total Reserves \$2,500,000	Deposits \$10,500,000
(i) Required \$2,000,000	
(ii) Excess \$500,000	
Loans \$8,000,000	

Since deposits are up by \$500,000 the bank must immediately increase its required reserves by 20% of that amount, or \$100,000, leaving it with \$400,000 in excess reserves. Here is the balance sheet following this reallocation of reserves:

Assets	Liabilities
Total Reserves \$2,500,000	Deposits \$10,500,000
(i) Required \$2,100,000	
(ii) Excess \$400,000	
Loans \$8,000,000	

What happens at this point? Because Bank 1 has excess reserves, it can now create a loan in that amount. When a bank creates a loan on its asset side, it also creates a new deposit on its liability side; either a new checking account is created in the borrower's name or, if the borrower is an existing depositor, the funds will be placed in that person's account. Suppose that

Bank 1 creates a \$400,000 loan for Mrs. Johnson. Here is the bank's balance sheet after the loan has been extended:

Assets	Liabilities
Total Reserves \$2,500,000 (i) Required \$2,100,000 (ii) Excess \$400,000	Deposits \$10,900,000
Loans \$8,400,000	

Next suppose that Mrs. Johnson uses her borrowed funds to purchase a small business in town from Mr. Weaver. Suppose also that Mr. Weaver banks at Bank 2. Here is what Bank 1's balance sheet looks like after Mrs. Johnson has purchased the business and her loan proceeds are in Mr. Weaver's hands:

Assets	Liabilities
Total Reserves \$2,100,000 (i) Required \$2,100,000 (ii) Excess \$0	Deposits \$10,500,000
Loans \$8,400,000	

When Mrs. Johnson spent her loan, Bank 1's deposits fell by \$400,000, as did its excess reserves; excess reserves fell when Mr. Weaver cashed his \$400,000 check from Mrs. Johnson. However, note that total deposits in the banking system don't fall back to the original level of \$10,000,000 because Mr. Brown, the seller of the government securities to the Federal Reserve, still has his funds on deposit at Bank 2. The important thing to note is that so far, the money supply (in the form of bank deposits) has net increased by \$500,000.

The story is by no means over. The \$400,000 received by Mr. Weaver makes its way over to Bank 2, showing up as a new deposit. From now on, we'll only consider changes in balance sheets of other banks analyzed. Below is the change in Bank 2's balance sheet following Mr. Weaver's deposit:

Assets	Liabilities
Total Reserves +\$400,000	Deposits +\$400,000
(i) Required +\$80,000	
(ii) Excess +\$320,000	

At this point, the money supply has gone up by an additional \$400,000 because there is a new deposit in Bank 2. After satisfying the reserve requirement, Bank 2 will have excess reserves of \$320,000. What will it do? It will lend out these excess reserves. Suppose the \$320,000 is lent to Mrs. Bates, who uses them to build a new home in the area. Suppose also she writes a check for the loan proceeds to Mr. Waverly, a local contractor who will build her house. Mr. Waverly banks at another bank, Bank 3. After Mr. Waverly has received his funds; here is Bank 2's balance sheet:

Assets	Liabilities
Total Reserves +\$80,000	Deposits +\$400,000
(i) Required +\$80,000	
(ii) Excess	
Loans +\$320,000	

The important thing to note above is that Bank 2's assets and liabilities are net up by \$400,000 because Mr. Waverly's \$400,000 deposit is still with the bank.

You can probably guess the next sequence of events. The \$320,000 received by Mr. Waverly is deposited in Bank 3. Now the money supply is up by another \$320,000. Bank 3 uses these funds to create a loan equaling 80% of that amount, or \$256,000. Suppose these funds ultimately make their way to Bank 4, who in turn creates a loan of 80% of that amount, or \$208,800. The process continues, rippling through the banking system with each bank along the way receiving a new deposit that is 80% of the previous bank's new deposit. Every time there is a new deposit the money supply rises by that amount.

How much has the money supply increased over the long run? The following formula approximates the long run change:

$$\text{Long run change in the money supply} = (\text{money multiplier}) \times (\text{initial new deposit or withdrawal})$$

The money multiplier equals the reciprocal of the required reserve ratio, or $(1/r)$. In this case, since $r = 0.2$, the multiplier is 5. In other words, the initial new deposit of \$500,000 (the check written by the Federal Reserve to Mr. Brown) will multiply itself by **five times** over the long run, resulting in a \$2,500,000 increase in the money supply. This increase consists of the initial new deposit plus \$2,000,000 in additional new deposits that were created by all the lending activity triggered by Mr. Brown's deposit.

The long run change in the money supply will depend on the size of the money multiplier, which depends on the required reserve ratio. If the ratio was 0.1, the money multiplier is 10 and the money supply would have risen by \$5,000,000 in the long run. On the other hand, if the required reserve ratio was 0.25, the money supply would have risen by only \$2,000,000. As an extreme example, if there was a 100% reserve requirement ($r = 1$), there would be no multiple expansion of banking deposits and the money supply would only rise in the long run by the amount of the initial new deposit.

A very important practical matter is that the money multiplier is not expected to be exactly $1/r$. In reality, the multiplier depends not only on the required reserve ratio, but other factors such as the amount of *currency drain* in the system and if banks choose to hold any excess reserves. Currency drain occurs when a portion of a newly created loan is held as cash or coin. For example, suppose that Mr. Waverly, the contractor who was paid \$320,000 by Mrs. Bates, decides to hold 10% of his funds in cash. Then his bank cannot create a loan of \$256,000, but only 90% of that, or \$230,400. If all persons receiving funds in this story held 10% of their proceeds as cash, the money multiplier would actually be $(1/(r+c))$, where c is the percentage of deposits held by the public as cash or coin. If $c=0.1$, the multiplier would fall to 3.33 and the money supply would rise in the long run by only \$1,665,000. Also, if banks choose to hold excess reserves, then the money multiplier would fall further to $(1/(r+c+e))$, where e is the percentage of deposits held by banks as excess reserves. As a result, real-world money multipliers are usually lower than the reciprocal of the required reserve ratio.

The above is, of course, a simplified example of how the system actually works. It illustrates the following, however:

1. Banks must have excess reserves or be able to obtain additional reserves as necessary, in order to make loans or buy securities;
2. The Federal Reserve can attempt to control the money stock by changing the amount of reserves that banks hold; and
3. The amount of deposits outstanding (and thus the money stock) is equal to some multiple of the amount of reserves at banks.

MACROECONOMIC POLICY

There are two types of macroeconomic policy, monetary policy and fiscal policy. Each type of policy is implemented with general goals for the performance of the U.S. economy in mind. These goals have been set down by the Congress of the United States in the Employment Act of 1946 and again in the Full Employment and Balanced Growth Act of 1978. The primary goals are:

1. Stability and growth of the economy;
2. A high level of employment;
3. Stability in the purchasing power of the dollar, and;
4. A reasonable balance of payments in transactions with foreign countries.

The Federal Reserve seeks to promote these goals in its conduct of monetary policy, along with other responsibilities for regulating financial institutions in the interest of safety and soundness of the financial system. Other objectives, which are secondary in the sense that they lead to the achievement of the primary goals, include the stabilization of exchange rates, a high rate of capital investment, a continuing increase in productivity, and a balanced federal budget. The last item is a matter of fiscal rather than monetary policy and thus is not the direct responsibility of the Fed.

Policy Objectives

Below we discuss each of the above policy objectives in further detail.

Stability and Growth of the Economy

Economic growth is measured in terms of real *Gross Domestic Product* (GDP), which is the inflation-adjusted value of total spending on final (meaning finished, i.e. ready to use) goods and services in the nation. GDP is measured as the sum total of personal consumption expenditures, business investment (formally called *gross private domestic investment*), government purchases of goods and services, and *net exports* (exports minus imports). The economy grows whenever the percentage change in real GDP is positive from one quarter to the next. When the percentage change in GDP is negative for at least two consecutive quarters (six months), the U.S. economy is said to be in a *recession*. Our standard of living improves, on average, when real GDP is continuously growing faster than the growth of our population. As long as the growth in real GDP is positive, the economy is said to be expanding. When the rate of real GDP growth is declining, the economy is said to be contracting. The term *business cycle* refers to changing economic conditions as determined by the percentage change in real GDP. Each facet of the economy has its own pattern of swings in relative strength and weakness, however. Interest rates, prices, employment, and the value of the dollar vary in conjunction with changes in real GDP, but the precise magnitudes of these variations are not reliably predictable.

High Level of Employment

A primary objective of policy makers is to have a high percentage of people who are able, and want to be, gainfully employed. Employment goals are typically stated in terms of an *unemployment rate*. The civilian unemployment rate, for example, is defined as the percentage of the civilian labor force that is currently looking for work, but unable to find it. When the unemployment rate is high, more unemployed workers and their families suffer. Without work, individuals have less to spend so total spending declines as businesses produce less.

Stability in Purchasing Power of the Dollar

Inflation is evidenced by rising general price levels, sometimes continuously for extended periods of time and occasionally with rapid acceleration. When inflation is high, a dollar held and not invested loses purchasing power as goods and services increase in price. Inflation presents problems because most individuals and businesses enter into contracts in nominal (not inflation-adjusted) dollars. Laborers, for

example, are paid in nominal wages and salaries that often adjust slowly relative to price changes. Likewise, banks enter loan agreements with consumers and businesses that may be fixed in terms of the nominal interest rate earned. Such agreements are costly to adjust or re-price when inflation changes unexpectedly. In this light, unless inflation is fully anticipated, it distorts the normal flow of transactions. The more inflation is unanticipated, the more it is likely to accelerate and distort the flow of transactions.

Inflation may be caused by several phenomena including: business and labor pricing policies, government income and trade policies, excessive growth in the money supply, increased government spending, declining productivity, and structural problems with supply, such as with agricultural production during droughts, or oil production during OPEC efforts to control energy prices, or natural disasters.

Government policy makers attempt to reduce the problems of inflation by restricting funds flows and lowering inflation expectations. Low rates of inflation do not distort business transactions nearly as much as high rates of inflation do, but they still weaken the structure of the economy.

Consider, for example, the case of an oil bust in the Southwest or a real estate crash in the northeast. Business is often based on unrealistic expectations of continued price increases. No banker should make a loan that requires a price increase for repayment.

Balance in Trade with Foreign Countries

International economic policy objectives are normally stated in terms of influencing the value of goods, services, and financial transactions among countries, as well as the value of the U.S. dollar versus other countries' currencies. The *exchange rate* indicates the value of one country's currency in terms of another country's currency. Stable exchange rates are critical to a country's ability to market its goods internationally, since volatile exchange rates represent uncertainty that dampens trade and investment internationally. For example, if the domestic currency becomes stronger (more valuable relative to foreign currencies), this makes it more expensive for foreign consumers to buy a country's export goods, while at the same time making it less expensive for a country's own consumers to buy foreign goods. The outcome is a decrease in exports combined with an increase in imports, and deterioration in the trade balance. One long-term goal of U.S. policy makers is therefore to maintain

stable exchange rates with respect to the dollar, in order to stimulate healthy international trade.

Over time, trade policy objectives vary depending on the prevailing economic conditions in the U.S. versus its trading partners. In general, the U.S. attempts to coordinate its macroeconomic policies with those of other democratic nations. Occasional developments in economic trade may call for policy actions. For example, if U.S. imports from Japan increase at too high a rate relative to U.S. exports to Japan, the U.S. might pursue policies to increase exports and/or decrease imports. These policies could involve attempts to weaken the value of the dollar relative to yen, or perhaps threats of “protectionist” policy actions involving direct trade restrictions that would limit Japanese exports (such as tariffs, quotas, or embargos). As an example of international political battles related to trade problems, U.S. concerns about violations of intellectual property rights by Chinese manufacturers have led to U.S. threats to impose trade sanctions against certain sectors of Chinese export markets.

Analysts monitor variations in U.S. exports and imports, to determine what kinds of international trade problems emerge or disappear and what policies affecting trade seem to be required. Analysts also monitor capital flows into and out of the U.S., to assess the extent of foreign investment in U.S. assets relative to investment by U.S. wealth holders in the assets of other countries.

Balanced Federal Budget

The federal budget surplus or deficit refers to the difference between government expenditures and tax receipts. The size of and growth rate in the surplus or deficit are important because they influence economic conditions. Any deficit must be financed by additional U.S. Government borrowing in the Treasury bill and bond markets. Additional problems arise from the way the deficit is financed, particularly in the case of large foreign funds flows and Fed monetization of the debt.

Recent debate has focused on the merits of a balanced federal budget. Whether budget deficits are bad, as many observers believe, depends on whether the deficits adversely affect employment, inflation, the value of the dollar, and the economies of other countries.

Safety and Soundness of Financial Institutions

The federal government has established regulatory agencies whose responsibility is to ensure the safety of financial institutions and the soundness of our financial markets. Problems arise when institutions are in danger of failing, and customers lose confidence in the system. At such times, troubled financial institutions may experience a liquidity crisis in which investors either hesitate to provide capital to meet the institution's ongoing borrowing needs, or seek to withdraw their investments, or both.

A number of events over the past 35 years have threatened the liquidity, and therefore the safety and soundness, of the financial system. Such events include the stock market crash of October 1987, the currency crisis of 1997, the Russian debt crisis of 1998 and the resulting problems for the Long Term Capital Management hedge fund, the meltdown of the mortgage markets in 2007 and 2008, and most recently the rapid rise of inflation and bank liquidity impacts. In each case, the Fed struggled to find ways to provide liquidity to the financial system, so that funds could flow to meet commitments.

Bank regulators, such as the Federal Reserve, FDIC, and Office of the Comptroller of the Currency, regularly examine individual banks to monitor their level of risk and verify that they operate within regulations. The Fed in particular has powers to determine what lines of business financial institutions can enter and to establish broad terms of lending, including margin requirements and other credit controls.

Conflicting Goals

Unfortunately, the goals discussed above are not always compatible and policy makers must prioritize policy objectives. For example, if policy makers focus on controlling inflation, traditional policies will often simultaneously slow economic growth and increase unemployment. Alternatively, efforts to lower interest rates to stimulate capital investment and real economic growth may increase inflation and inflation expectations, and thus lower the value of the dollar and U.S. exports. The difficulty is to pursue macroeconomic policies that balance growth with other objectives.

The Federal Reserve System

The Federal Reserve System (Fed) was created in 1913 to maintain the soundness of the banking system and to ensure an adequate level of liquidity in the economy. The System is often referred to as our Central Bank and today has broad responsibilities to regulate banks and implement monetary policy.

Structure

The Fed has three components: the Board of Governors, the district Federal Reserve Banks, and the member banks. The first two are responsible for implementing monetary policy and other regulations that guide the conduct of depository institutions. *Exhibit 1* illustrates the structure and policy responsibilities of the Fed.

Board of Governors: This group of seven individuals is primarily responsible for the conduct of monetary policy. The members comprise a majority of the Federal Open Market Committee (FOMC). As such, the Board sets policy for determining bank reserve requirements, changing the discount rate, and setting the pace at which the Fed buys or sells government securities, labeled open market operations. The seven members are appointed by the President of the U.S. and serve staggered 14-year terms, with one member's term expiring every other year. This staggered expiration of terms ensures that the Board is somewhat independent of the President. The chairman of the Board of Governors traditionally carries great influence in the conduct of the Fed's policy. The current chairman is Jerome Powell.

Federal Open Market Committee (FOMC): This committee of 12 individuals establishes the policies for open market operations, the primary tool of day-to-day monetary policy actions. The FOMC issues policy directives that provide target ranges for desired growth of monetary and reserve aggregates and short-term interest rates. These directives are closely monitored by the public because they provide documentation of how the Fed views current economic conditions and serve as a basis for speculating how the Fed will likely influence bank reserves, interest rates, and the availability of credit.

Federal Reserve Banks: There are 12 regional Federal Reserve districts, each with a lead Federal Reserve Bank. The general duties of each bank are listed in *Exhibit 2*. The primary functions of the regional Federal Reserve Banks are to:

- 1) supervise, examine, and regulate member depository institutions;
- 2) make discount window loans to depository institutions;
- 3) provide payment services, such as check clearing and currency exchanges; and
- 4) act as the fiscal agent for the U.S. Treasury

The regional Fed banks are also involved in monetary policy in several direct and indirect ways. Five of the 12 bank presidents serve at any one time on the Federal Open Market Committee (FOMC). The president of the Federal Reserve Bank of New York is always on the FOMC, because Fed securities transactions are handled through the New York Fed and many of the nation's largest banks are located in the New York district. The remaining four slots on the FOMC are filled on a rotating basis by the other 11 presidents of the regional Fed banks. Member banks hold required reserves at the regional Fed banks and have the privilege of borrowing reserves at the discount window.

Member Banks: Banks with state charters may choose not to be members of the Fed. Because most of the largest banks are members of the Fed, member banks control a higher percentage of total bank assets. The Fed's staff formally supervises these member banks. Even though many banks are nonmember state banks, they must still keep required reserves at the Fed and have access to Fed services in the form of discount window loans and check processing.

Tools of Monetary Policy Used by the Federal Reserve

Refer back to the way in which a change in reserves results in a multiple expansion of the money stock:

Long run change in the money stock = (change in bank reserves) x (1/r)

This relationship shows that the Federal Reserve System can influence the supply of money, by conducting any policy which affects either the reserve requirement ratio or the supply of bank reserves. In this light, the Federal

Reserve uses three main tools for conducting monetary policy: changing reserve requirement ratios, changing the discount rate, and open market operations. Each has strengths and weaknesses.

Reserve Requirements: As indicated earlier, banks must hold required reserves equal to a specified percentage of certain deposit liabilities. Banks are not required to hold the minimum reserves each day but may average their reserve holdings to meet the requirement over a 14-day maintenance period.

The Fed can use required reserves as a monetary policy tool in three ways:

1. The Fed can change the reserve requirement ratio. When the Fed increases the ratio, banks must hold more reserve assets against the same dollar amount of deposits. In this case, excess reserves decline and banks can make fewer loans with their existing reserves. An increase in the ratio thus reduces credit availability and slows the growth in bank deposits and the money stock. When the Fed lowers the ratio, the opposite occurs. Then banks are required to hold fewer reserves, excess reserves increase, and credit is more readily available. This action increases the growth rate in the money stock.
2. The Fed can change the types of deposit liabilities that are subject to required reserves. If the list is expanded, the impact is similar to increasing the reserve ratio. If fewer liabilities are subject to reserves, excess reserves and credit availability will increase.
3. The Fed can alter the types of assets that qualify as reserves. The impact depends on whether banks have to change their asset composition. If they already hold any new qualifying reserve assets, the impact will be negligible. If they can substitute earning assets for vault cash and deposits at the Fed, credit availability will improve.

Changing required reserves has the advantage of affecting all banks quickly and equally. There is also an “announcement effect” whereby market participants immediately know that the Fed is either increasing or decreasing credit availability. A disadvantage is that it is difficult for the Fed to change reserve requirements to obtain small or temporary changes in credit availability. Also, once reserve requirement ratios are changed it is difficult to reverse the policy in the near term. A change in reserve requirement ratios is usually accompanied by a temporary reserve change in the opposite direction with other policy tools, to soften the impact. For

instance, the impact of raising reserve ratios might be at least partly offset by the Fed buying securities in the open market (see below).

Discount Rate: Federal Reserve Banks periodically make reserve loans to depository institutions. The mechanism for lending reserves is the discount window, and the applicable interest rate is the *discount rate*. A bank that borrows \$1 million in reserves via the discount window, for example, evidences the following balance sheet impact:

Assets	Liabilities
Deposits at Federal Reserve Banks \$1,000,000	Borrowing from the Federal Reserve \$1,000,000

The bank pays the prevailing discount rate on the borrowing. The Fed can change the amount of reserves banks borrow by changing the discount rate.

The Fed makes three types of discount window loans:

1. Short term *adjustment credit* is a reserve loan to a bank that has experienced a temporary deficiency in reserves, usually due to unanticipated deposit withdrawals. The loan must be repaid within 14 days to ensure that it is not used as a permanent source of funds.
2. *Seasonal credit* refers to reserve loans at banks that demonstrate a predictable, seasonal loss of reserves. Banks with agriculture loans and banks in resort communities, for example, experience predictable loan demand and deposit outflows associated with seasonal planting requirements and the seasonal influx and out flux of tourists, respectively. There is no set maturity for such seasonal loans. Each bank must document seasonal patterns in its loans and deposits, then apply for seasonal credit. The seasonal borrowing privilege is being phased out for most banks.

3. *Emergency credit* represents reserve loans for special problems. A failing bank may experience a large deposit outflow because customers have lost confidence, or banks may need additional liquidity to meet temporary borrowing needs resulting from a financial crisis or a natural disaster. For example, during the recent credit crisis in the mortgage market, the Fed made reserves readily available through the discount window so that Wall Street firms generally had access to bank credit to meet ongoing commitments and customer needs.

The Fed can influence discount window borrowing by changing the discount rate or simply by denying credit to banks. Because the discount rate represents a cost of obtaining reserves, an increase in the rate raises interest expense at borrowing banks while a rate decrease lowers interest expense. The key, however, is how the discount rate compares to the federal funds rate – the interest rate on overnight reserve loans between banks. The Fed normally sets the discount rate below the federal funds rate, which is determined by prevailing supply and demand conditions.

To prevent banks from systematically borrowing reserves at the discount rate and lending reserves at the federal funds rate, the Fed normally restricts bank access to the discount window. The Fed will deny a discount loan request when it perceives that banks are taking advantage of the profit opportunity.

Discount rate policy has the obvious weakness in that it is imprecise. The Fed cannot accurately predict how banks will respond when the rate is changed, so the impact on bank reserves and the money supply is uncertain. The chief advantage is that the Fed can signal a change in policy by announcing a discount rate change. In recent years, however, discount rate changes have lost some of their "announcement effect." Frequently, discount rate changes have been delayed and implemented only in response to movements in short-term interest rates, with no well-defined policy implications.

Open Market Operations: Open market operations, the most powerful Fed tool, are Federal Reserve Bank purchases or sales of government securities. When the Fed buys or sells government securities in the open market, bank reserves change because the Fed is exchanging funds that qualify as bank reserves for government securities. All transactions are implemented by the trading desk of the New York Fed with securities firms based in New York City and other financial centers across the United States. Open market transactions may be conducted with ease and in

precise amounts, and thus they represent the primary monetary policy tool.

When the Fed buys securities, called an *open market purchase*, bank reserves increase dollar for dollar because the Fed essentially pays for the government securities with a check drawn on itself, and the selling institution receives a deposit balance at a Federal Reserve Bank. The following T-account demonstrates the impact where the seller of government securities is assumed to be a commercial bank.

Commercial Bank	
Assets	Liabilities
Deposit balance at Fed +\$100	
Government securities -\$100	

It doesn't really matter who the seller is because bank reserves increase when the Fed's check clears throughout the banking system. In general, an open market purchase increases the banking system's excess reserves and thus the banking system's ability to make new loans so that the money stock increases.

With an *open market sale*, the Fed sells securities and takes reserves out of the banking system. Private sector buyers of securities pay the Fed with checks drawn on their banks. When those checks are collected, the Fed reduces the deposit balances (reserve accounts) of the banks on which the checks are drawn.

The major advantage of open market operations is that they represent a flexible policy tool. Purchases or sales can be executed in any amount, at virtually any time. If the Fed wants to change its policy, it can do so quickly and precisely. Reserves change dollar for dollar with the amount of securities directly bought from or sold to a commercial bank. On the other hand, the relation is not necessarily one-to-one for transactions with non-bank dealers in government securities. In any event, the Fed can accurately predict what the ultimate impact will be on bank reserves, and to a lesser degree predict the impact on the money stock. A disadvantage is the lack of any announcement effect. Open market transactions may be conducted daily and do not receive much public scrutiny.

The Fed has used a variety of policy targets throughout its history. Recently, it has framed its operating targets in terms of prevailing interest rates and growth. The federal funds rate serves as the interest rate measure that is typically targeted by the Fed. (Federal funds are effectively collected balances held at the Fed or other depository institutions. They are loaned between institutions at the federal funds rate.) The *monetary base* equals currency in circulation and bank reserves and serves as an indicator of aggregate potential reserves. These policy targets have been increasingly administered loosely to the frustration of Fed watchers. During intervals when interest rates represented the primary target, the monetary base and money stock exhibited considerable volatility. In contrast, during periods when the Fed targeted the monetary aggregates, such as 1979-1983, interest rates exhibited considerable volatility.

SUMMARY OF MONETARY POLICY TOOL EFFECTS ON BANK RESERVES

<u>Tool</u>	<u>Impact on Reserves</u>	<u>Impact on Money Stock</u>
Raise reserve requirement ratios	Decrease excess reserves	Slow growth
Lower reserve requirement ratios	Increase excess reserves	Increase growth
Increase discount rate	Little or none	Slow growth slightly
Decrease discount rate	Little or none	Increase growth slightly
Open market purchase	Increase reserves	Increase growth
Open market sale	Decrease reserves	Slow growth

Money Velocity: Who Keeps It and Who Spends It?

Most people prefer to spend money rather than hold it. Thus, money moves through the economy from spenders to recipients. The rate of movement plays an important role in determining economic growth and serves to link the money stock to total spending. Formally, the **velocity of money** is defined as total spending (GDP in current dollars) divided by the money stock:

$$\text{Velocity} = \text{Gross Domestic Product} / \text{Money Stock}.$$

It measures the rate of turnover of money, that is, the number of times that the average dollar is spent on buying goods and services during a given period.

IMPACT OF MONETARY POLICY ON THE ECONOMY

Money and Inflation

It is widely believed that a continued increase in the nation's money stock will lead to continued inflation. Some monetarist observers argue that money growth, by itself, determines the fundamental rate of inflation on the explicit assumption that money velocity is constant or predictable over long periods of time. However, increases in the money supply do not necessarily increase inflation, however, especially in the short run. For example, if the economy is in recession, an increase in the money stock may increase output and employment without pushing prices higher. On the other hand, when the economy is nearer to full employment, price changes generally follow money growth and total expenditures more closely.

Money and Gross Domestic Product

Many monetarist economists point to a predictable relation between money growth rates and economic growth as evidence of money's primary role in influencing economic conditions. Of all the money measures, M2 exhibits the closest relation with GDP.

Money and Interest Rates

On many occasions we have seen politicians clamor for the Fed to increase the money stock so that interest rates will decline. Is this the normal, expected relation between money growth and interest rates? There are, in fact, several factors that influence the relation and may produce different results.

Liquidity Effect: A sudden increase in the money stock immediately lowers interest rates because individuals and businesses suddenly find themselves holding more money than they desire at prevailing rates. As individuals convert money balances to interest-bearing assets, they bid interest rates lower. Consider the case where the Fed buys securities from a bank (open market purchase). The bank now has more excess reserves than it can use to make new loans or buy securities. This increased bank demand for loans and securities should lower interest rates. The impact will fall immediately on the federal funds market where banks trade reserves among themselves. In contrast, with an open market purchase banks will have more excess reserves. Thus they will either lend more reserves (federal funds) to other banks, or, if they were previously a borrower of reserves, they will borrow less. Both of these actions should lower the federal funds rate.

Price Level and Expected Inflation Effect: An increase in the money stock in excess of the increase in the stock of goods and services will generally raise prices over time. Many market participants recognize this and incorporate the impact of changes in the money stock into their inflation forecasts. Any increase in actual and/or expected inflation will then put upward pressure on interest rates, because investors require a higher return to compensate themselves for the anticipated loss of purchasing power. If these price effects dominate the rate-reduction (liquidity) effect of money growth, the level of interest rates will increase.

Recent experience suggests that the liquidity effect dominates in the short run but that persistent high money growth is generally associated with higher inflation and interest rates over time. For example, money growth rose sharply during the 1970s, and inflation and interest rates rose coincidentally. This outcome is consistent with investors demanding higher yields when inflation is expected to increase.

Money and International Trade

Monetary policy influences U.S. international trade through exchange rates, prices of goods and services, and relative interest rates at home and abroad:

- First, in the short term, when the Fed increases the U.S. money stock faster than other countries increase their money stocks, the dollar typically declines in value relative to other currencies. A depreciating dollar makes foreign goods more expensive (in terms of U.S. dollars) relative to domestic goods. The direct effect would be an increase in U.S. exports and a parallel decline in U.S. imports, and thus an increase in the trade balance.
- Second, over time, excess money growth relative to the growth in goods and services available puts upward pressure on U.S. prices relative to prices in foreign countries. Higher relative prices, in turn, make U.S. goods less attractive to foreigners and foreign goods more attractive to Americans, resulting in an increase in imports relative to exports and a decline in the trade balance.
- Finally, financial capital will flow to the U.S. if real interest rates in the U.S. rise above rates abroad. Of course, if U.S. rates fall relative to rates abroad, capital will flow outside the U.S. The final impact on the value of the dollar depends on the relative magnitudes of the merchandise trade flows and financial capital flows.

The Impact of Fiscal Policy on the Economy

Fiscal policy refers to the federal government's use of taxation and public spending to influence economic conditions. Lowering taxes increases the disposable income of consumers and the profits of businesses so that more income is available for spending. An increase in government spending similarly increases the income of those who receive the government's outlays. Both types of policies expand nominal GNP and employment, unless offset by autonomous effects in the private sector. The latter occurs, for example, when investor uncertainty jumps due to misunderstood public policy. Higher taxes and reduced government spending, in turn, lower national income and reduce inflation pressures with similar caveats.

Federal Budget Deficits and Surpluses

Increased government spending can be financed either by raising taxes or by borrowing. If the government borrows to finance a deficit, the Treasury must issue Treasury bills, notes, and bonds. The impact of fiscal policy on the economy depends on the amount of spending, how the spending is financed, and the distribution of the tax and spending recipients. For example, a balanced budget may still stimulate aggregate expenditures if taxes are drawn from otherwise idle funds and spending goes to recipients with high propensities to spend.

Additional stimulus is provided when the government spends borrowed funds as well as its tax receipts. Such stimulation occurs whether a federal deficit stems from increased expenditures or lower taxes, or both. In general, every dollar that is spent in excess of tax receipts must be borrowed from various sources. The various sources relied on by the government, in turn, make a difference in the economic impact of the deficit. The implications of borrowing to finance federal spending can be best understood in terms of the relation cited on the next page.

Specifically, the amount of deficit spending must equal the change in the amount of government bonds owned by the public (ΔBonds) plus the change in the monetary base (ΔMB):

$$\text{Deficit} = \Delta \text{Bonds} + \Delta \text{MB}$$

where MB equals the sum of currency in circulation and bank reserve balances.

This relation suggests four important points:

- If increased government spending is financed with increased taxes, the deficit is unaffected and no new borrowing is required.
- If a deficit exists and is financed solely by issuing bonds to the public, the amount of securities outstanding increases, but bank reserves (and the monetary base) is not affected. Thus the money stock will not change as a direct result of the deficit.
- If a deficit exists and is financed by issuing bonds purchased by the Fed, bank reserves and the monetary base increase so that the money supply rises with the deficit. This is referred to as *monetizing the debt*.

- If a deficit exists and is financed by issuing bonds purchased by banks with excess reserves, the money stock increases.

If the ultimate lender is the non-bank public (private individuals and nonbank institutions), some of the government spending may be offset by restrained spending on the part of the private sector. If the bonds are sold directly to the Fed or if the Fed purchases more government securities in the open market than it normally would in the absence of a deficit, then the money stock increases and more spending stimulus will occur. If the ultimate lender is the commercial banking system using previous excess reserves, the debt is again effectively “monetized” and there is no direct offsetting spending constraint. This is comparable to when the Fed directly increases the money stock through an open market purchase.

Monetary Policy and the Deficit

The relationship between Fed monetary policy and the federal deficit is quite controversial. Most economists argue that the effect depends on whether the Fed chooses to buy additional securities simply because the federal deficit is positive or large, thus offsetting any impact the deficit might otherwise have on interest rates. If the deficit is large and interest rates are rising, the Fed may buy additional securities to keep interest rates lower. As such, the deficit indirectly causes an increase in bank reserves (the monetary base) and potentially influences expected inflation. If instead the Fed does not alter its money growth targets as a result of changing deficits, then it will not alter its open market operations and deficits are not monetized via Fed activity.

An alternative view that is popular among some supply side economists argues that deficits do not matter. The impact of fiscal policy results from government expenditures. The method of financing is unimportant. Individuals essentially recognize that all expenditures must ultimately be financed by taxes. If bonds are issued today instead of the government raising taxes, people save more to cover the expected increase in taxes later on. If this occurs, the public buys all of the bonds issued by the Treasury and the monetary base is determined independently from the deficit. In this scenario, deficits do not affect the money supply or real interest rates.

Because the normal budget process failed to reduce the federal deficit for many years, Congress passed legislation in 1985 (Gramm-Rudman-Hollings) which automatically imposed spending cuts whenever the budget

is expected to exceed predetermined targets. In the years immediately following 1985, the actual deficit exceeded the target. Gramm-Rudman-Hollings was supposed to discipline Congress when establishing the budget. In actuality, it merely produced creative budgeting to meet the mandated targets in form, but not substance.

In 1998, the government experienced a budget surplus for the first time in approximately thirty years. Congress then shifted the debate to how to structure tax policy along with spending cuts to manage future obligations of the Social Security System, as well as the size of the Federal debt. Prior to the onset of the 2001 recession, the near term projections indicated growing budget surpluses through 2010. On the other hand, projections further in the future indicated dramatic increases in spending on entitlement programs, federal interest payments on the debt, and a return to sizable federal deficits. Recent debate has focused on efforts toward cutting spending, particularly in entitlement areas, such as Medicare and Medicaid where expenditures have grown much faster than the U.S. economy.

The 2001 recession led to decreased tax revenue and increased Federal spending and thus changed all these projections toward lower future Federal surpluses and bigger deficits. The federal budget picture was further weakened with the increases in defense spending following the terrorist attacks of September 11, 2001, and the war with Iraq. Thus the debate once again shifted away from what to do with the surplus, to the problems associated with a large and growing deficit.

In 2007 and 2008, the financial system experienced severe stress as the housing market collapsed, causing a credit and liquidity crisis in the mortgage market. At the same time, energy prices rose dramatically, resulting in upward pressure on inflation. This severe market stress weakened the economy to the point that many economists agreed that the United States was in a recessionary period from 2008 to late 2009. Since the third quarter of 2009, most economists agreed that the United States economy was slowly starting to recover from this period.

The Fed's response to this economic weakness was to attempt to increase bank reserves and lower interest rates, providing liquidity to the financial markets. In such times, a focus on the long term health provided by an environment of low inflation is often dominated by concerns about unemployment and recessionary fears that call for more Federal spending and easy monetary policy.

Whether Congress is ultimately serious about implementing plans to pay down the federal debt remains to be seen. All members of Congress agree on one thing; the federal debt is too high and deficit budgets cannot continue indefinitely. However, finding a solution that all members can compromise on and agree to seems to be even a larger obstacle than the debt itself.

The Statutory Pay-As-You-Go Act of 2010 required that new legislation changing governmental receipts or mandatory spending or collections must be enacted on a “pay-as-you-go” (PAYGO) basis; that is, that the cumulative effects of such legislation not increase projected on-budget deficits. While this could be seen as a start to the solution, the future actions of Congress and the Fed will ultimately determine the size of the federal deficit and future growth rates in total spending in the U.S.

Measuring the Deficit

While the reported deficits are large, they may be inaccurate. In particular, many analysts believe the federal budget deficit figures are biased and misleading for the following reasons:

- The federal deficit ignores state and local government budget surpluses, as well as deficits.
- All expenditures on capital assets are included in government spending, rather than just depreciation charges, in contrast to how most businesses and foreign governments report capital expenses.
- Many government expenditures are excluded from official budget figures because they are “off budget.”
- Reported deficits are not inflation adjusted; that is, they are not reported in real terms. Inflation decreases the value of all fixed income federal debt outstanding, so that the real value of federal debt outstanding is overstated.

Implications of Macroeconomic Factors for Commercial Banks

It is one thing to read about macroeconomics and another to put the knowledge into practice. Understanding basic relations is critical to knowing how government policy affects economic conditions and how this all affects an individual bank. As most bankers have observed, however, these relations are not always predictable in the short run. How then should a banker use macroeconomic information?

Focus initially on common mistakes:

- When setting strategic plans and eventually budgets, bankers often specify unrealistic growth targets. If, for example, the economy is expected to grow at a 3 percent real rate, what does it mean if your bank expects to grow loans at 10 percent? In general, either your bank will grow at the expense of other lenders, or your bank will have to lower asset quality to meet its growth targets. Management should formulate realistic growth expectations in light of regional economic growth or the lack thereof.

When determining the size of loan and investment portfolios, bankers often follow the business cycle at inopportune times. Interest rates generally follow the business cycle. At the peak of economic activity when loan demand is high, interest rates are at their cyclical peak and short-term rates are above long-term rates. Many bankers substitute loans for securities rather than ration loans. If they buy securities, they buy short-term instruments for liquidity and because the rates are relatively high. In fact, after the peak economic activity slows, the loan quality deteriorates in general. Thus loan losses will eventually rise. Interest rates also fall from their cyclical peaks such that the banks roll over their short-term security holdings into lower yielding instruments. At the peak, contracyclical investments are most profitable over time. The same holds for the economic trough. In the middle of a recession when loan demand is weak, many banks buy long-term or higher risk securities in search of yield. As the economy moves out of the trough, interest rates rise and loan demand picks up, but the bank may be locked in to low yielding, long-term securities. Again, a contracyclical strategy may be best.

- When making investment and/or pricing decisions, bankers often believe that they can forecast interest rates or that the yield curve accurately forecasts interest rates. It is highly unlikely that bankers

can systematically forecast rates correctly. It is well documented that forecasts based on the yield curve are systematically incorrect as well. This is not to suggest that yield curve information is not useful. Relative rates and rate changes provide a valuable guide as to where the economy is in the business cycle. The successful banker, however, views interest rate forecasts as a means to conduct simulations that assist in risk assessment and risk management decisions.

HISTORICAL PERSPECTIVE ON THE U.S. BANKING INDUSTRY

Because of the unique role of banks in the implementation of monetary policy, and hence the importance of banks to the health of the economy, the U.S. banking industry has evolved within a highly regulated environment.

In 1929 the existing structure and nature of the banking industry contributed to the depth of the crash and the great depression. There was intense competition among banks, there was no formal separation of commercial and investment banking activities, and there was no Federal Deposit Insurance protecting customers. As a result, the crash of 1929 saw many banks fail and a great deal of wealth destroyed. Following the crash, Congress enacted legislation (Glass-Steagall) that restricted bank activities and competition and created the Federal Deposit Insurance Corporation (FDIC) to insure customer deposits. The major goal of this legislation was to maintain the safety and soundness of the banking system.

Under this and subsequent legislation, banks and thrift institutions were prohibited from competing with one another through various kinds of branching activities, through paying higher interest rates for deposits, or through offering financial services beyond the basic bank-related activities of accepting deposits and making loans. Over time, other financial institutions evolved to fill the gaps in services that businesses and consumers desired, but banks could not offer. As time passed, U.S. banks and thrift institutions came to be at a competitive disadvantage with other financial institutions in the U.S. and abroad. Enterprising bankers spent much energy devising means to get around the regulations in order to compete in the ever-changing world of financial services.

During the 1970s, the U.S. economy suffered poor performance in the form of two recessions, growing inflation, and rising and increasingly volatile interest rates. The U.S. banking industry faced increasing pressure

from innovation and competition throughout the broader financial services sector. Because they could not compete effectively within their regulatory environment, U.S. banks were losing market share to other providers of financial services.

This situation spawned deregulation of the banking industry in the 1980s. This deregulation represented a dramatic change in the environment in which banks and thrift institutions could operate. It meant that banks and thrifts could suddenly pay higher rates of interest to compete for deposits; it opened the door for branching activities across state borders; and it paved the way for a future in which banks could offer services beyond the traditional activities of accepting deposits and making loans.

As the 1980s arrived, therefore, banks were suddenly confronted with competition from other banks and thrift institutions, as well as from other segments of the broader financial services sector. In this environment, it is not surprising that the 1980s witnessed turmoil in the banking industry. Bank profitability suffered, not only from intensified competition at home, but also from global economic events that hampered the ability of less developed countries to repay their extensive debt to U.S. banks. Bank and thrift failures accumulated at alarming rates throughout the 1980s, prompting Congress to enact further legislation that created agencies (the OTS and RTC) to deal with problem institutions and their troubled balance sheets.

This legislative action helped to cleanse the economy of the illness embodied in a growing number of sick banking and thrift institutions (although at great cost). But it took the recession of the early 1990s to lower interest rates in the U.S. economy, thereby reducing banks' cost of funds and helping remaining institutions to regain profitability. The 1990s then progressed as a healthy decade for the banking sector.

The Changing Financial Services Industry

The deregulation and stress experienced in the U.S. banking industry during the 1980s offered an opportunity for profitable banks to expand their operations through acquisitions. Laws against interstate banking were relaxed, resulting in consolidation across state boundaries, and the growth of large regional banks.

Behind this evolution has been the overwhelming force of economies of scale in the banking business, which tends to favor banks that can expand their operations. If the high fixed costs associated with a bank's operations can be spread over a larger amount of banking business, the bank can operate with lower average cost and greater profitability. Furthermore, geographic expansion enhances a bank's ability to diversify its loan portfolio across economic sectors (agriculture, real estate, energy, etc.), thus lowering its exposure to the risk that a downturn in any single sector might cause the bank to fail.

Another important outcome of the ebbs and flows in stress and volatility that have characterized financial markets since the 1970s, is the evolution of derivative markets (forwards, futures, options, swaps, and so forth). These derivative markets have evolved as a response to meet the needs of market participants (including banks) who must manage their risk exposure in the face of increasing uncertainty embodied in market volatility. While these derivative instruments offer flexible, cheap, and powerful tools to manage various forms of risk, they can also be misunderstood, difficult to value, and misused. Some of the biggest problems in the financial services industry in the last 30 years have involved the misuse of derivatives.

For example, the crisis in the mortgage market and the liquidity problems at major financial institutions starting in mid-2007 all involved difficulties in valuing and managing portfolios of complex derivative products. Much of this industry involves over-the-counter trading of these products among major financial institutions which are counterparties. When the markets underlying these derivatives experience volatility, huge sums of money can be won or lost in a short period of time. It is not surprising that the market's response to such stress is to hesitate in providing the vast sums of liquidity that have recently been required to meet the short term borrowing needs of financial institutions involved in these complex trades.

One problem is that these over-the-counter derivative markets have avoided the normal scrutiny of Federal regulators that is routinely placed on the operations of commercial banks and on exchanges. The recent severe and lingering liquidity problems at major financial institutions have sparked fears of a here-to-fore hidden systemic risk that could threaten the safety and soundness of the financial system. One result of these recent developments has been a growing chorus of calls for expanded regulatory control over nonbank financial institutions which manage the

huge portfolios of complex over-the-counter derivatives that have gone largely unregulated.

The banking industry faces many challenges and opportunities. These include intensifying competition throughout the financial services sector, continued consolidation, the opening of new markets in the U.S. and globally, continued occasional liquidity crises and recessions that require dramatic policy actions, and ongoing evolution in derivative markets that will enable banks to manage exposures to various new forms of risk and opportunity, but will also require continued vigilance.

THE ECONOMY'S PERFORMANCE: AN OVERVIEW

After eight consecutive years of economic growth accompanied by moderate inflation and low unemployment from 1982 through 1990, the U.S. economy fell into a recession late in 1990. This recession was forecast some time in advance, given the numerous indicators that suggested it was forthcoming. For example, money growth rates in the preceding years were relatively low; the federal budget deficit was still quite large in terms of current dollars; and the U.S. had experienced a substantial trade deficit. In late 1989 Congress approved the thrift bailout legislation which added to government spending and borrowing needs and brought about the closing of many failed institutions. Real estate markets throughout the U.S. were hampered by the amount of foreclosed property that regulators controlled and were trying to sell. The yield curve for Treasury securities inverted.

By late 1991 the recession had ended as real GDP growth again became positive. Over the next two years the U.S. economy was expanding, albeit at a very slow rate. This recovery was atypical because economic growth often accelerates sharply following a recession. The experience in 1992-1993 differed because employment was relatively stable and real spending was up, but at historically low levels. Thus unemployment rates remained relatively high and only in late 1993 started to decline. There are several reasons for the relatively slow growth immediately following the 1991 recession:

- Consumer confidence was relatively low. Many of the nation's largest and best known corporations were downsizing. The list of companies who announced substantial reductions in employees included IBM,

Boeing, Westinghouse and Sears as well as virtually all large commercial bank holding companies. Consumers who had jobs were generally apprehensive about the security of their jobs.

- There was no sector of the economy that was robust enough to lead the nation into high growth. Housing and real estate were adversely affected by demographic trends and the overhang of existing property. Even declining interest rates did not stimulate much consumer or business spending.
- Other nations around the world had also recently experienced the economic difficulties that the U.S. felt during the early 1990s. Specifically, many of the industrialized nations experienced recessions or slow growth in 1994-1995. As a result, U.S. exports did not spur the U.S. economy.
- Finally, there was continuing concern regarding the U.S. federal deficit, and a feeling that something must be done about it. Most Americans assumed that cutting the deficit in the short run would require spending cuts and/or tax increases. It was feared that such fiscal policy actions would serve to reduce aggregate demand and slow growth.

On the positive side, these economic conditions following the 1991 recession set the stage for businesses to cut costs and become more efficient and productive. Immediately after the 1991 recession, companies contained and slowed the growth in employment costs. Furthermore, nominal interest rates were low and declining over much of the 1990s, and inflation only averaged approximately 2-3 percent annually.

As a result, the decade of the 1990s experienced healthy economic growth, along with relatively mild inflation and interest rates. On the negative side, asset inflation was rather dramatic throughout the 1990s. Stock market valuation grew to levels that reflected unrealistic expectations for continued business health. It became more commonplace for major U.S. businesses to practice questionable accounting practices, to dress up their balance sheets and try to sustain the illusion of continued earnings growth, in an attempt to meet the unrealistic expectations of investors. Given the rapid increases in stock prices, wealth-holders acted on their increased paper net worth by accelerating their spending. Consumer spending through this wealth effect rose to very high levels and sustained the economic expansion of the late 1990s into the twenty-first century.

As the unrealistic expectations for continued business success inevitably failed to be met, the stock market unraveled during 2000 and 2001, resulting in the loss of much wealth that had appeared on paper. As wealth-holders cut back their spending in response to their declining paper wealth, the wealth effect worked in reverse to slow down the economy. Consumers in general felt less confident in their jobs and also cut back spending. Businesses suffered and also cut back their spending and laid off workers. The result culminated in negative growth in real GDP in late 2001.

In terms of real GDP, U.S. real GDP growth (annualized) has averaged 3.3 percent since 1947, with a high quarterly rate of 17.2 percent in Q1 of 1950 and a quarterly low rate of -10.40 percent in Q1 of 1958. 2025 real GDP growth was just over 2 percent. (*Exhibit 3*) Going forward, GDP growth is expected to tick up slightly in 2026. (*Exhibit 4*).

The inflation picture has also recently become a source of concern. *Exhibit 5* shows recent growth rates in the Consumer Price Index (CPI) with and without food and energy prices since 2015. In 2016-17, increases in manufacturing, wages, and stimulus from the Trump administration resulted in a climbing CPI. In 2020, it dipped once again, due to the COVID-19 pandemic. (*Exhibit 6*). However, moving into 2021-2022 the CPI soared, due to price increases in fuel, shelter, and food. It has since steadied.

Exhibit 7 shows the civilian unemployment rate since 1985. In the early 21st Century, the rate peaked at over 6% of the labor force around the beginning of 2003, then the unemployment rate declined over the next three years, reaching a low of approximately 4.4% during 2006. However, in 2007 this downward trend in the unemployment rate reversed, and the unemployment rate steadily increased before skyrocketing to right at 10% in late 2009. From 2010 to early 2020 the economy slowly recovered, and the unemployment rate steadily dropped. The unemployment rate was under 4% as of December 2019.

However, when the COVID-19 pandemic hit in early 2020, many business sectors had huge layoffs due to business closures. There was a huge spike in unemployment during the second quarter of 2020, hitting 14.8%. As businesses started to reopen, the unemployment rate dropped to 6.7% by December 2020. Now, in early 2026, the unemployment rate is 4.4%.

How have conditions in the banking industry interacted with general economic conditions? *Exhibit 8* focuses on the federal fund rates. The federal funds rate was trending steadily upward to just over 5% until the last half of 2007, when the Fed began a series of rate reductions in response to the liquidity crisis in the mortgage market. The federal funds rate has sat at nearly zero since late 2008. The Fed started to raise rates in late 2016, and through 2019, the effective federal funds rate was 2 – 2.50%. (*Exhibit 9 Long Term rates*) However, in March 2020, in response to the economic impact of the COVID-19 pandemic, the Federal Reserve dropped rates back to down to 0.00-0.25%. In March 2022, in response to growing inflation, the Federal Reserve raised the target range for the federal funds rate by 25 basis points. After several cuts in 2024, the Federal Reserve have let rates stabilize while trying to continue to fight inflation.

Let us now turn to evaluating the recent performance of the banking industry. *Exhibit 10* shows the percentage of FDIC-insured institutions with gains in quarterly net income during the 2006-2025 period. For a historical perspective, this percentage had gains above 40% in early 2013, and continued in that range until the fourth quarter of 2017, when bank earnings fell to 25.2 billion. This was a one-time hit due to the passing of the 2017 Tax Cuts and Jobs Act. The decline was due to lowered values of deferred tax assets because of the cut in the corporate tax rate. The repatriation of income from foreign subsidiaries also had a negative effect on earnings. However, in 2018, quarterly gains soared, led by higher net operating revenue and lower income tax expenses. 54.5% of insured institutions reported quarterly gains at the end of 2019. Banks took a hit in early 2020 due to the COVID-19 pandemic but bounced back in late 2020-2021.

Exhibit 12 shows quarterly movements in the annualized return on assets (ROA) and return on equity (ROE) for depository institutions since 2015. In 2008, (not shown) there was a dramatic drop in ROA/ROE for the banking sector, with the arrival of the problems in the housing market, and 2008 had an overall negative ROA. 2009 and 2010 signaled a return to positive, although still extremely low ROA figures. In 2015-2019, there was a steady increase back to right around 1.3-1.4% ROA and 12% ROE, with the exception of the 4th Quarter of 2017, again due to the tax legislation. In 2021-2022 returns dipped slightly before upticking once again. As *Exhibit 13* shows, noncurrent loan rates at banks were high in 2011 with a steady decline continuing through 2019. In 2020, there was a slight increase due to the COVID-19 Pandemic, but once federal aid started to flow to the

business sector noncurrent rates started to stabilize. As *Exhibit 14* shows, the number of FDIC-insured “problem” institutions was high in 2011 and since then has decreased significantly.

Other indicators of the U.S. economy showed slow but steady growth until the 2020 COVID-19 Pandemic. The U.S. inflation rate appeared to be edging up in 2019 but then decreased in 2020. In 2020, COVID-19 stimulus spending combined with slightly declining revenue resulted in more than \$3.1 trillion added to the federal debt. (*Exhibits 15 and 16*).

Finally, *Exhibit 17* and *Exhibit 18* show the nation’s money supply M1 and M2. It should be noted in May 2020, savings deposits were added to M1, due to the deletion of the six-per-month transfer limit on savings deposits in Regulation D. This significantly changes the amounts in M1.

Going forward, the health of the banking sector and the overall economy will depend upon whether the problems in the credit markets, and the balance sheets of the nation’s major financial institutions, can be shored up without too much stress on the economy.

Current Issues

There are several key issues currently confronting the U.S. economy. The future rate of economic growth will depend on how these issues are addressed.

Federal Deficit/Surplus

Early in 1993 the federal budget deficit was forecast to exceed \$300 billion and appeared likely to persist for years, unless fundamental structural changes were made in federal spending and revenues. However, the economic expansion of the 1990s, along with changing demographics in the U.S., led to steadily increasing government revenues that ate into the deficit. By the end of 1998 the deficit had turned into a surplus. The debate then turned to how to manage the surplus projected for the near future, in order to meet the immense but more distant future demands for Social Security and for future interest payments on the Federal debt.

One major political debate of the late 1990s centered on whether the President, Congress, and U.S. taxpayers were willing to make the difficult choices to meet the future demands on the Federal budget. Key questions included the following: Should we lower or raise taxes, buy down the

federal debt, or finance new spending? A major theme of the Bush budget involved proposed tax cuts and limits on spending. However, federal spending continued at a rapid pace throughout the Bush and Obama administrations, and continued with the Trump and Biden administrations.

The 2001 recession, combined with the terrorist acts of September 11, 2001, and the war with Iraq, changed the focus of this debate. Both the recession and the U.S. military response to the terrorist acts required dramatic increases in Federal spending. President Bush and Congress implemented substantial increases in military spending in the federal budget, along with substantive tax cuts. These developments once again changed the projections to indicate large and growing Federal deficits.

Following the 2001 recession, the economy experienced somewhat sluggish growth in economic activity, and mild but increasing rates of inflation. At the same time, asset markets continued to attract substantial amounts of financial investment, and experienced significant gains. In 2007 and 2008, however, energy prices increased dramatically while the housing market collapsed. These factors combined to weaken the economy, as homeowners felt less wealthy and act on this decline in wealth by spending less. At the same time, the prices of energy and other commodities spiraled upward, intensifying the stress on the consumer and the health of the economy.

The economy slowly strengthened in 2013-2016, and in 2017, the newly elected Trump Administration and a Republican-controlled Congress worked to make their mark on the economy, with varying degrees of success. The Trump Administration made it a legislative priority to eliminate or amend the Affordable Care Act (ACA) in 2017, which was unsuccessful. Any change to the ACA would have had significant economic implications, as the health sector represents over 15% of total GDP.

However, Congress passed the 2017 Tax Cuts and Jobs Act, in which the immediate impact was relatively straightforward. It left more money in the private sector, which in turn would encourage economic growth. Many economists argued that inflation would increase due to the tax cuts, which did not materialize. Meanwhile, after the 2018 midterm elections, the Republican party controlled the Senate, and the Democratic party controlled the House. The environment in Washington, D.C. was not one conducive to compromise and progress.

From 2016 – 2018, the Federal Reserve raised interest rates eight times, an indicator that the Fed believed that the economy was improving. In 2019, they cut rates three times down to 1.5-1.75%, responding to market trends.

The effect of the COVID-19 Pandemic of 2020 on the economy in the short term, and the federal deficit in the long term, cannot be overstated. The Federal Reserve immediately went into action in March 2020, dropping interest rates back down to historic lows, and implementing a \$700 billion round of quantitative easing. The Federal Government passed enormous stimulus relief packages designed to help both businesses and individuals affected by the pandemic. These unprecedented monetary and fiscal policy moves helped the U.S. economy recover in many sectors much more quickly from the pandemic than originally anticipated.

Starting in early 2022, inflation started rising at a rate not seen since the late 1970's. Many factors contributed to this, including oil and grain supplies impacted by the Russian invasion of Ukraine, pandemic-related supply chain issues, and rising wages, all which put upward pressure on prices. From March 2022 to July 2023 the Federal Reserve raised the target range for the federal funds rate eleven times. In March 2024 the federal funds rate was 5.25 – 5.50%. Starting in September of 2024, the Federal Reserve responded to a softening labor market by decreasing the rate three straight times through the end of 2024 to 4.25-4.50%. With the advent of the second (non-consecutive) Trump administration in 2025, the Federal Reserve has started to modestly cut rates even further based on their mandate, even though the administration has encouraged them to move faster. The current fed funds rate as of this publishing (March 2026) is 3.5% to 3.75%. There are many question marks in the U.S. economy.

There are many other unresolved issues related to the federal deficit as we look to the future. Consider the following questions:

1. What impact will changing marginal tax rates have on spending?
2. As baby boomers continue to retire, how will these changing demographics affect consumer spending and saving patterns, social security and Medicare entitlement expenditures, tax policies, and the overall economy?
3. Does the progressive income tax regime currently in place need overhaul? Aren't sin taxes, taxes on energy use, and a broad-based

consumption tax regressive? What are the pros and cons of a flat tax system? What type of tax policy is best?

4. What federal spending programs should be cut? Is it possible to reduce spending enough without cutting social security benefits? Should social security be altered either by changing the age at which retirees claim benefits or taxing payments to high income/wealthy individuals (a means test)?
5. Should the government attempt to pay down the federal debt? This could drastically reduce the projected future increases in government interest expense. Along another vein, should Social Security tax revenues be set aside to pay for future expenses? If so, should part of these government funds be invested in the stock market in an attempt to increase the future funds available to support the system? Would the creation of private Social Security accounts alleviate the impending future budget problems associated with the Social Security System? What are the costs and impacts of such a program in the near term?
6. Why should the deficit be cut at all? Shouldn't we just focus on managing the size of the deficit relative to GDP?

Rolling Recessions

The U.S. economy is prone to experiencing “rolling recessions” in which specific geographic segments of the country suffer. Consider, for example, the 1980s when the steel industry suffered its problems in the Northeast, the farm crisis in the Midwest, the energy crisis in the Southwest, the real estate crisis along the Eastern and Western states, and California's economic slump in 1993. Has the U.S. economy changed structurally so that recessions will be alternately felt in various regions across the U.S.? What roles do banks play in influencing regional and national economic conditions?

The ‘Great Recession’

The economic recovery following the slowdown of 2001 led to several years of increasing valuation in asset markets until the last half of 2007. Then the housing market collapsed and brought with it a decline in equity markets as well. This collapse in asset values led to a reverse wealth effect, as homeowners felt the pinch of their declining net worth and translated those declines into less consumer spending. This stress on the economy was exacerbated in 2008 by the continuing spiral in commodity prices in general, and energy prices in particular.

From late 2007-2009, the Dow Jones lost over 50% of its value, which resulted in devastating losses for many Americans who had the majority of their lifetime savings invested in the stock market. The net worth of American households dropped more than 20% during this time. This period of time is now widely known as the 'Great Recession'. It was the longest recession in U.S. history since World War II.

The Federal Reserve jumped into action, reducing interest rates from 5.25% in the fall of 2007 to 0.00% by the end of 2008. The Fed also implemented quantitative easing (QE), buying \$600 billion of mortgage backed securities in late 2008 in hopes of adding liquidity and reserves to the United States financial system. This was the start of three rounds of quantitative easing, from 2008 – 2014. The Fed went from \$900 billion to carrying over \$4.5 trillion on its balance sheet at the peak of QE. The Fed's actions, while widely questioned at the beginning, are now considered one of the pillars of the economic recovery starting in 2010.

Links between Global Economies and Financial Markets

In the current environment, economic conditions in one country have an immediate impact on economic conditions in other countries. Thus, if interest rates and prices change in the U.S., these changes affect interest rates and prices in Japan, China, the U.K., Germany, etc., and vice versa. The 1994 Mexican crisis, the 1997 Asian currency crisis, and the 1998 Russian debt crisis offer dramatic examples of how reliance on capital inflows to finance trade deficits can eventually cause problems for a country and its trading partners. All these international crises contributed to strengthening in the U.S. dollar until the recession of 2001. This recession, combined with falling real interest rates and stock markets in the U.S., caused a reversal in capital flows that resulted in a weakening dollar since 2002.

The European Community embarked on Monetary Union in January 1999. What are the implications of success or failure of the European Monetary Union for Europe, the U.S., and the rest of the world? What effect will the exit of Great Britain have on the EU? Over a longer time horizon, all countries will have to coordinate economic policies to stabilize growth across national boundaries. Is this a reasonable goal?

While economic activity steadily improved from 2010 – 2019, the 2020 COVID-19 pandemic brought economic activity to a standstill around the

world. In 2021, the U.S. economy started recovering due in large part to both monetary and fiscal policy decisions.

In early 2022 into mid-2023, inflation was growing in the United States at a rate not seen since the late 1970's. Many factors contributed to this, including oil prices due to the Russian invasion of Ukraine in early 2022, continuing supply issues, rising wages, consumer prices, and housing prices, to name a few.

At the end of 2024, numerous economic indicators showed the economy was remaining strong as inflation slowed. A transition in Presidential administrations in 2025 introduced new areas of economic focus, such as decreasing the U.S. trade deficit and utilizing trade tariffs. Though there is no way to predict the long-term outcome of these changes, it is evident that these shifts will increase uncertainty in the economy. This increase in uncertainty will likely lead to higher volatility in many economic indicators in the near term.

The Federal Reserve has many factors, both domestic and global, to ponder as they try to help manage the U.S. economy moving forward.

SUMMARY

1. The economic role of financial institutions is to facilitate the transfer of funds from savers to dissavers. Savers are willing to lend, while dissavers want to spend more than their current earnings and are willing to borrow.
2. Money is anything that is generally accepted as a means of payment. The Federal Reserve distinguishes among three categories of money: M1, M2, and M3 representing the most liquid types of assets.
3. The demand for money is driven by three specific motives – transactions, precautionary and speculative. The money supply is determined by the U.S. Treasury and commercial banking system.
4. The Federal Reserve influences the money stock by providing reserves to banks. Banks use these reserves to make loans and buy securities, but they must retain minimum reserves indicated by reserve ratios to meet regulatory requirements.

5. The Federal Reserve implements monetary policy to help promote the nation's primary economic goals: real economic growth, high employment, price stability, and a stable exchange rate combined with balanced international trade. In many cases, these objectives cannot be achieved simultaneously with existing policy tools.
6. The Federal Reserve uses three main tools for conducting monetary policy. Increases (decreases) in reserve requirement ratios force banks to hold more (less) non-earning reserve assets against the same dollar amount of deposit liabilities and thus reduce (increase) credit availability. Increases (decreases) in the discount rate serve to raise (lower) the cost of banks borrowing reserves at the discount window. Discount rate changes have little direct impact on reserves activity in the current environment. Finally, the Federal Reserve buys or sells securities in the open market. An open market purchase adds to the banking system's reserves and credit availability, while an open market sale has the opposite impact.
7. Positive growth in the money stock is typically associated with an increase in total spending. It can also contribute to inflation if the money stock (times money velocity) increases at a faster rate than the supply of goods and services. Interest rates often decline in the short run with increases in money growth, but they may increase over time with increases in expected inflation. Global capital flows to the U.S. tend to decrease with falling interest rates and rising inflation relative to those factors in other countries. As a result, the value of the dollar in foreign exchange markets tends to move in the same direction as global capital flows to the U.S., at least in the short run.
8. In the late 1990s, the federal budget switched briefly from a deficit to a surplus, but it has now been in a deficit since 2002. Increases in government spending beyond tax revenues must be financed by Treasury borrowing and may lead to excessive money growth and inflation if the Federal Reserve buys more securities than that intended in the absence of a deficit. Increased spending may also be monetized if banks buy the Treasury securities with previous excess reserves.
9. Following the economic slowdown of 2001, like most other economic downturns, the U.S. economy experienced subsequent growth in employment and upward pressure on prices. These pressures were intensified by the terrorist attack of September 2001, and the continuing war in Iraq. In 2007, the trend toward increasing valuation

in the housing sector and stock market came to an abrupt halt. The subsequent declines in asset prices led to a reverse wealth effect that has slowed economic activity as homeowners spent less in response to their declining net worth. In addition, the declining housing sector led to a bloodbath in the mortgage market and resulted in a lingering liquidity crisis for major Wall Street firms.

10. At the same time, increases in the prices of energy and other commodities continued to put upward pressure on inflation. As a result, the Fed was faced with the difficult task of providing sufficient liquidity to ensure the safety and soundness of the financial system, while at the same time refraining from providing too much liquidity that would promote increased inflation and a continuing decline in the value of the dollar.
11. The 'Great Recession' of 2007-2009 forced the Fed to take dramatic action. They dropped interest rates to 0.00% for the first time in U.S. history, and began an extensive quantitative easing program, which extended until 2014 and helped stabilize the U.S. financial industry.
12. In 2019, the United States was in a period of extended slow but steady economic growth. However, the 2020-21 COVID-19 pandemic changed everything. The Federal Reserve once again lowered interest rates to 0.00-0.25% and started another round of quantitative easing.
13. In 2022, inflation rose at a rate not seen since the late 1970's. Many factors contributed to this, including oil prices impacted by the Russian invasion of Ukraine, supply chain issues, and rising wages, all which put upward pressure on prices. From March 2022 – July 2023 the Federal Reserve raised the target range for the federal funds rate from .25-50% to 5.25 – 5.50% in hopes of slowing down inflation. As the labor market softened, the Federal Reserve dropped the target range three times in late 2024 to 4.25-4.50%. At the end of 2024, numerous economic indicators showed the economy was remaining strong as inflation slowed. A transition in Presidential administrations has introduced new areas of economic focus. Though there is no way to predict the long-term outcome of these changes, it is evident that these shifts will increase uncertainty in the economy. How the financial markets react to this, and how the Federal Reserve continues to deal with multiple challenges, will determine the health of the banking sector and the economy going forward.

Exhibit 1
**STRUCTURE & RESPONSIBILITY OF THE FEDERAL
RESERVE SYSTEM**

The Federal Reserve System is the central bank of the United States. It was founded by Congress in 1913 to provide the nation with a safer, more flexible, and more stable monetary and financial system. Over the years, its role in banking and the economy has expanded.

<https://www.federalreserve.gov/aboutthefed/bios/board/default.htm>

Current Members of the Board (As of 3/24/2026)



Jerome H. Powell took office as Chairman of the Board of Governors of the Federal Reserve System on February 5, 2018, for a four-year term. He was reappointed to Chairman and sworn in for a second four-year term on May 23, 2022. Mr. Powell also serves as Chairman of the Federal Open Market Committee, the System's principal monetary policymaking body. Mr. Powell has served as a member of the Board of Governors since taking office on May 25, 2012, to fill an unexpired term. He was reappointed to the Board and sworn in on June 16, 2014, for a term ending January 31, 2028.

Board Members



Jerome H. Powell
Chair



Philip N. Jefferson
Vice Chair



Michelle W. Bowman
*Vice Chair for
Supervision*



Michael S. Barr



Lisa D. Cook

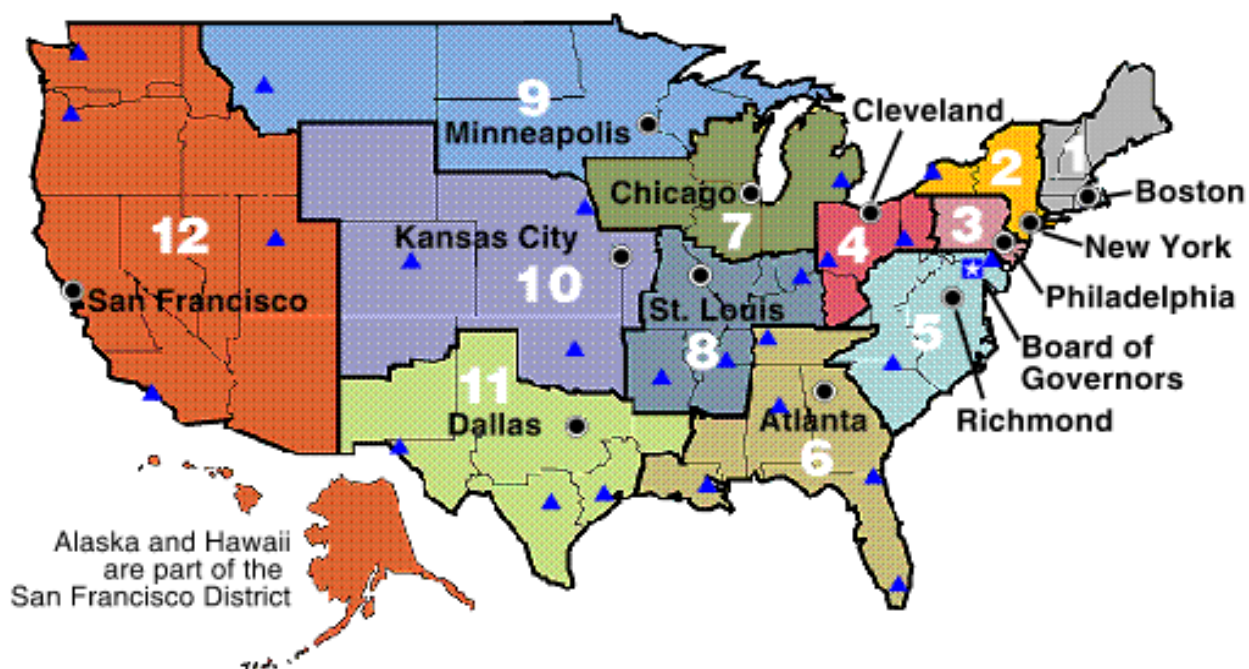


Christopher J. Waller



Stephen I. Miran

Exhibit 2 ROLE OF THE 12 REGIONAL FEDERAL RESERVE BANKS



Board of Governors of the Federal Reserve System, Washington, D.C.



Federal Reserve Bank city:

Atlanta, Boston, Chicago, Cleveland, Dallas, Kansas City, Minneapolis, New York, Philadelphia, Richmond, San Francisco, St. Louis



Federal Reserve Branch city, by District:

- (2) Buffalo
- (4) Cincinnati, Pittsburgh
- (5) Baltimore, Charlotte
- (6) Birmingham, Jacksonville, Miami, Nashville, New Orleans
- (7) Detroit
- (8) Little Rock, Louisville, Memphis
- (9) Helena
- (10) Denver, Oklahoma City, Omaha
- (11) El Paso, Houston, San Antonio
- (12) Los Angeles, Portland, Salt Lake City, Seattle

Federal Reserve District Banks and Branches

Number	Letter	Bank	Branch
1	A	Boston	
2	B	New York	Buffalo, New York
3	C	Philadelphia	
4	D	Cleveland	Cincinnati, Ohio Pittsburgh, Pennsylvania
5	E	Richmond	Baltimore, Maryland Charlotte, North Carolina
6	F	Atlanta	Birmingham, Alabama Jacksonville, Florida Miami, Florida Nashville, Tennessee New Orleans, Louisiana
7	G	Chicago	Detroit, Michigan
8	H	St. Louis	Little Rock, Arkansas Louisville, Kentucky Memphis, Tennessee
9	I	Minneapolis	Helena, Montana
10	J	Kansas City	Denver, Colorado Oklahoma City, Oklahoma Omaha, Nebraska
11	K	Dallas	El Paso, Texas Houston, Texas San Antonio, Texas
12	L	San Francisco	Los Angeles, California Portland, Oregon Salt Lake City, Utah Seattle, Washington

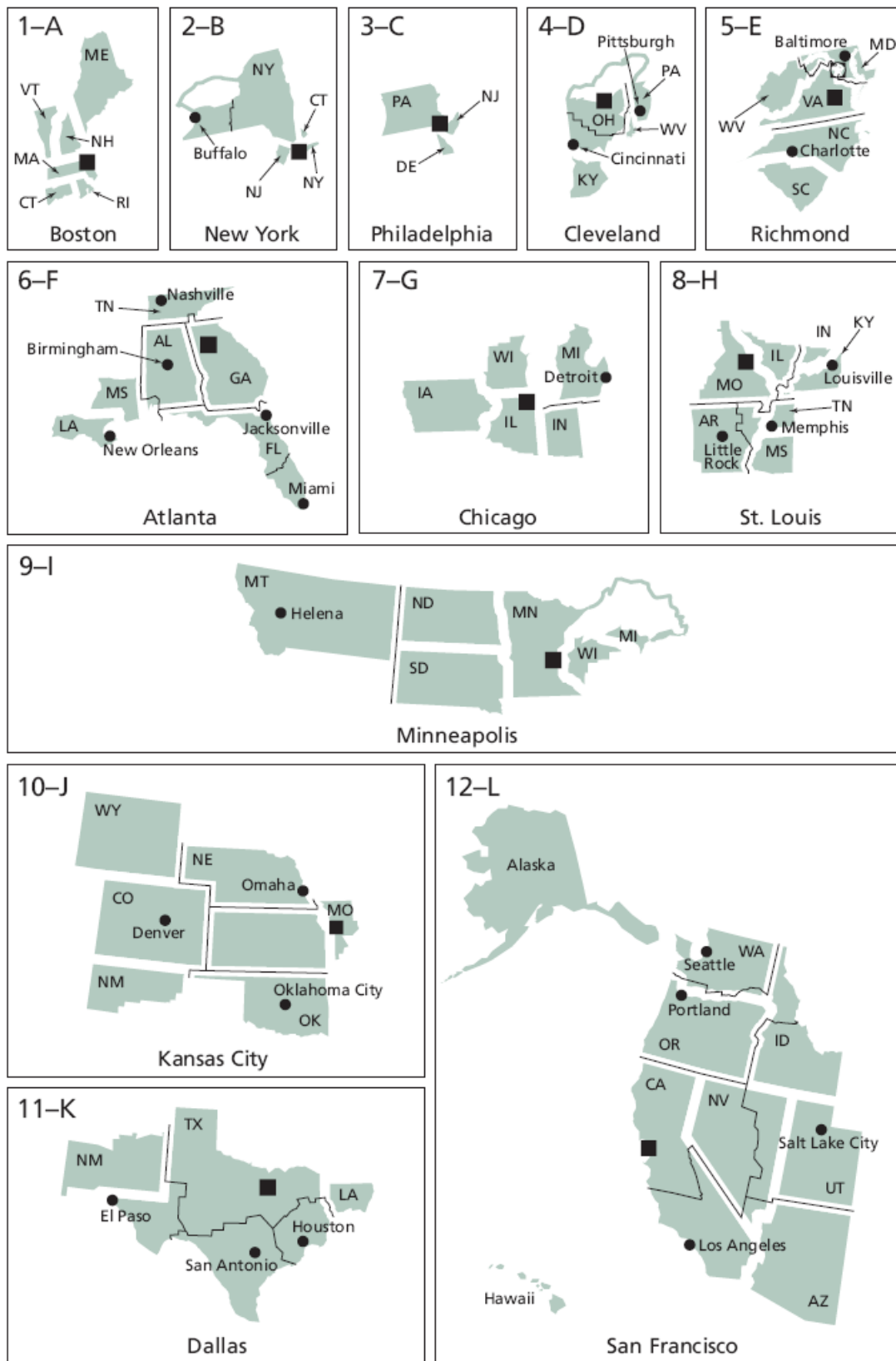


Exhibit 3
REAL GDP

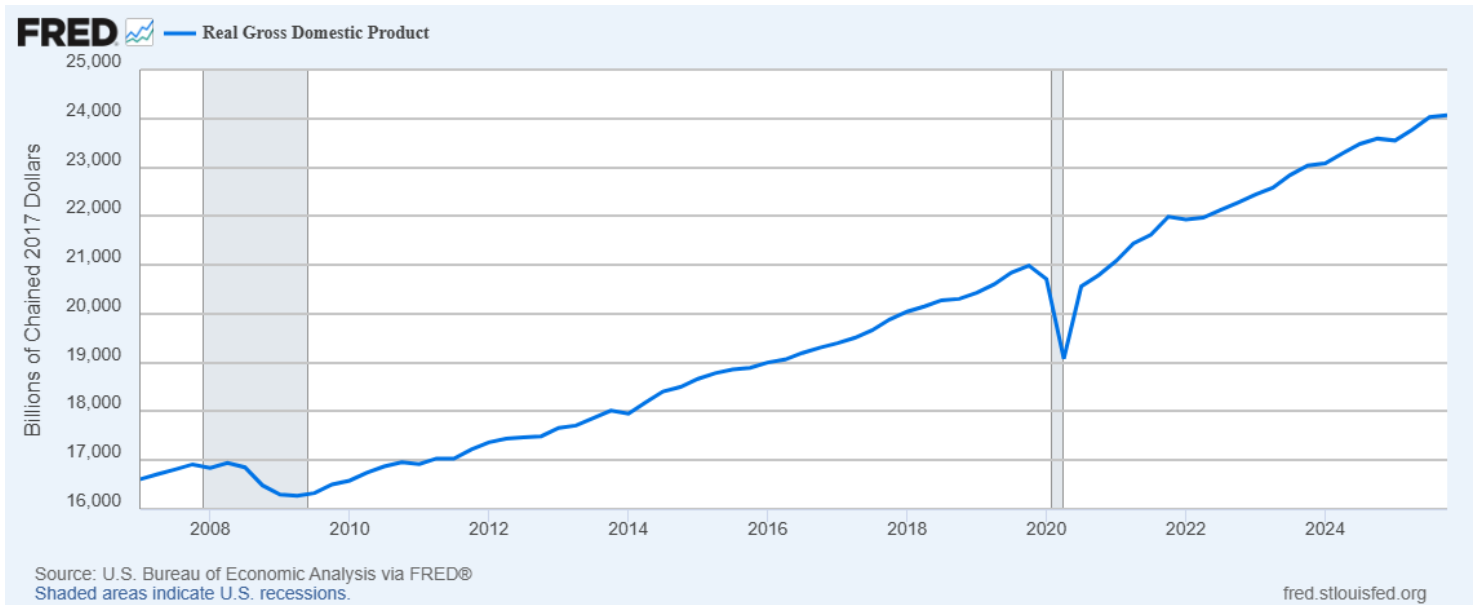
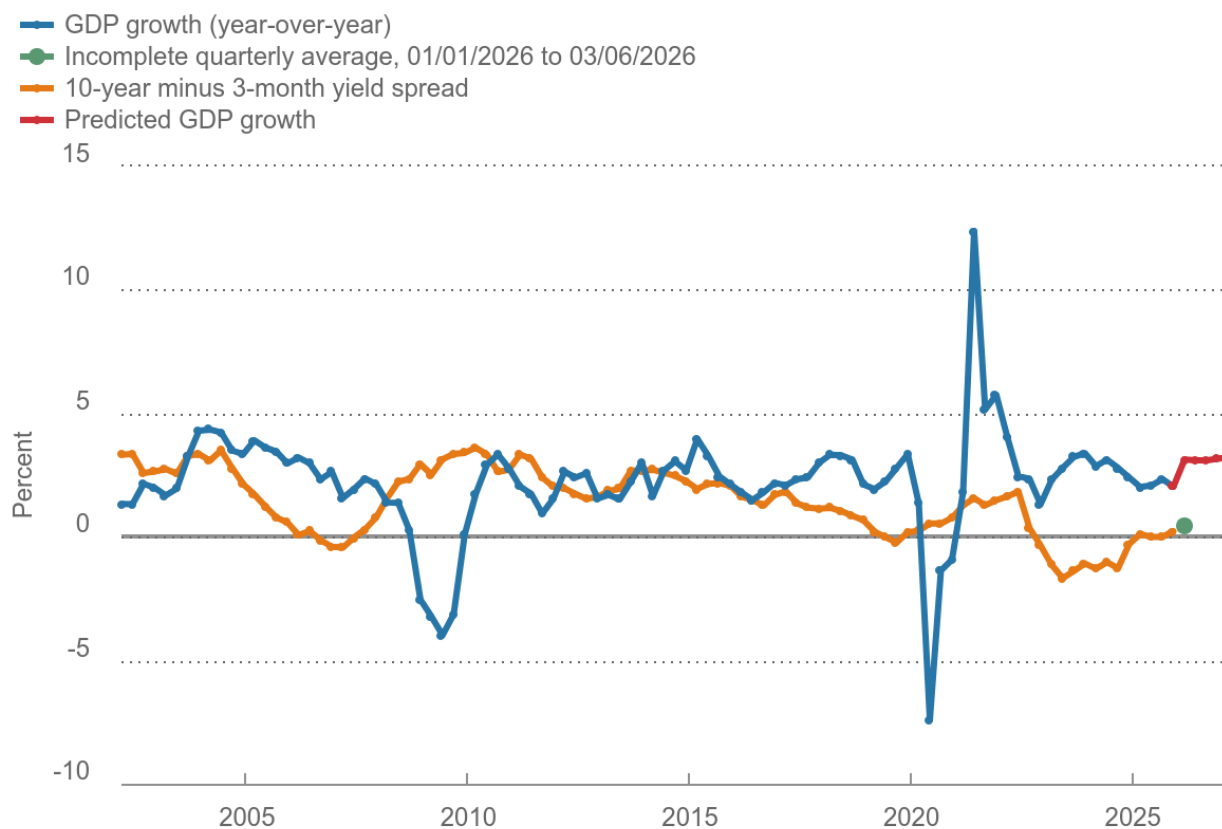


Exhibit 4 YIELD CURVE PREDICTED GDP GROWTH

Yield-Curve-Predicted GDP Growth



Source: Bureau of Economic Analysis, Federal Reserve Board, Federal Reserve Bank of Cleveland, Haver Analytics

<https://www.clevelandfed.org>

Exhibit 5
CONSUMER PRICE INDEX MEASURES

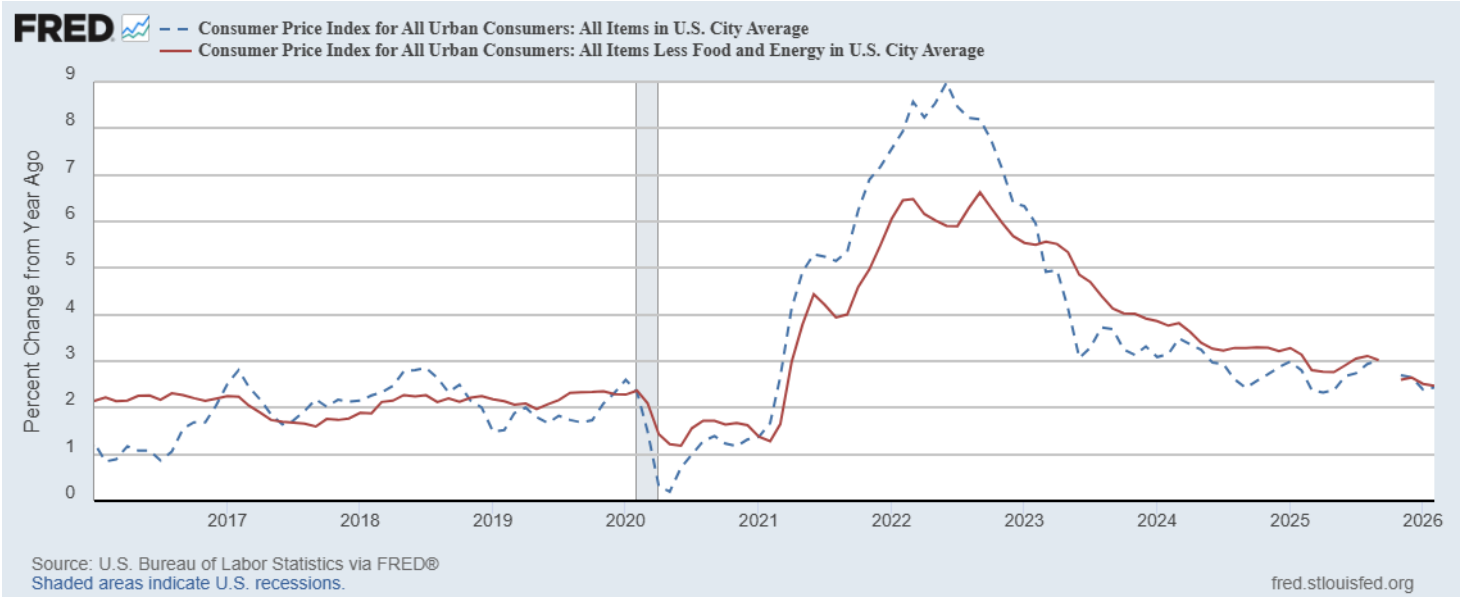


Exhibit 6

CONSUMER PRICE INDEX FORECAST

U.S. CPI Forecast

U.S. Consumer Price Index CPI Forecast Values

Consumer Price Index, CPI-U. 1982-1984=100. NSA.

Month	Date	Forecast Value	<u>Avg Error</u>
0	Feb 2026	326.785	±0.000
1	Mar 2026	329.45	±0.21
2	Apr 2026	330.59	±0.29
3	May 2026	330.65	±0.34
4	Jun 2026	330.70	±0.38
5	Jul 2026	331.00	±0.40
6	Aug 2026	331.60	±0.43
7	Sep 2026	331.62	±0.44
8	Oct 2026	331.91	±0.46

Updated: March 18, 2026

Source: <http://www.forecasts.org/cpi.htm>

Exhibit 7
UNEMPLOYMENT RATE

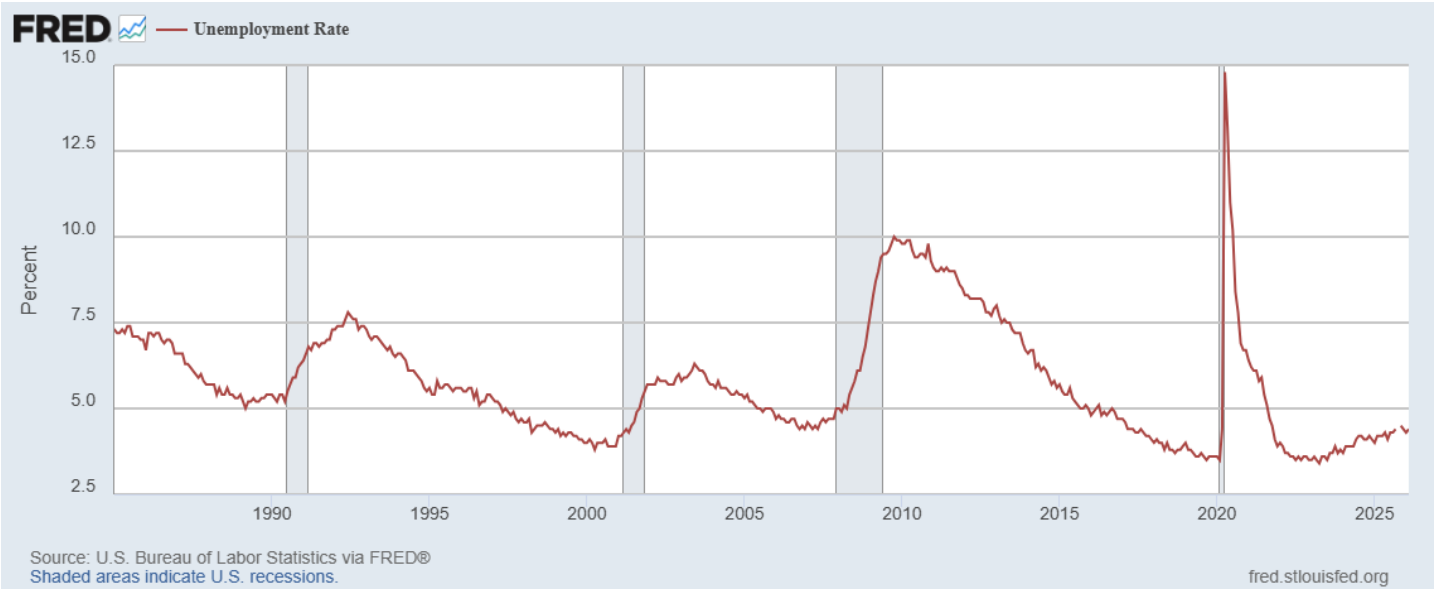


Exhibit 8
EFFECTIVE FEDERAL FUND RATE

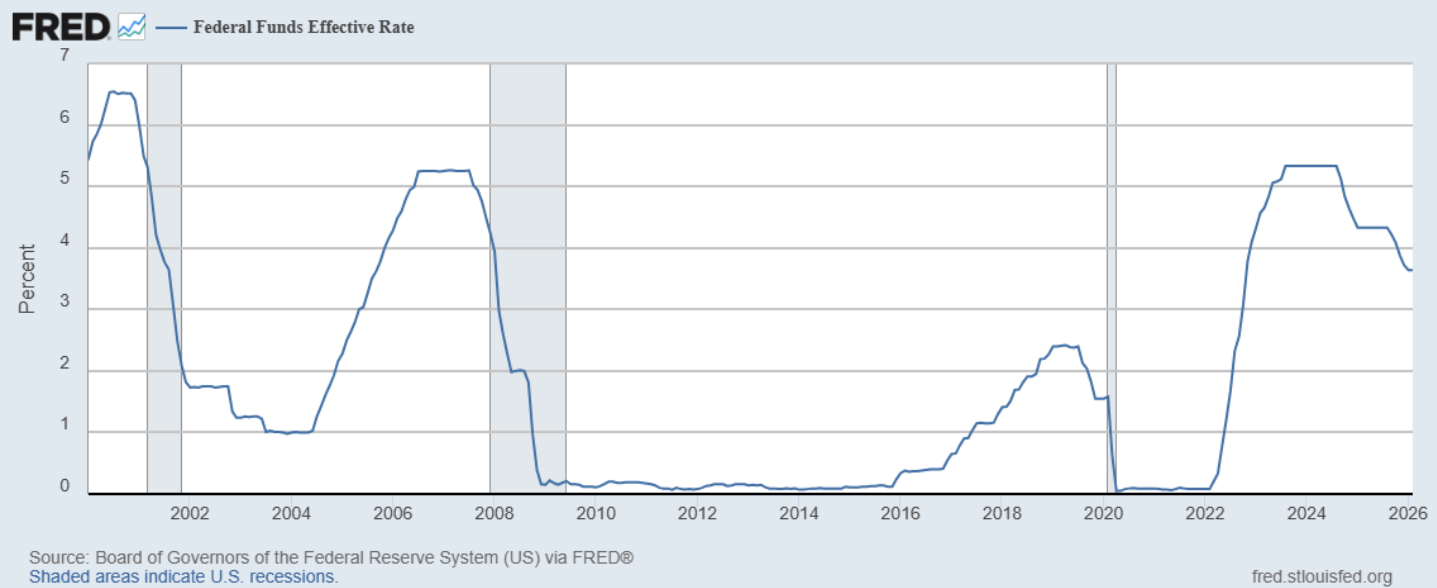


Exhibit 9 LONG TERM INTEREST RATES

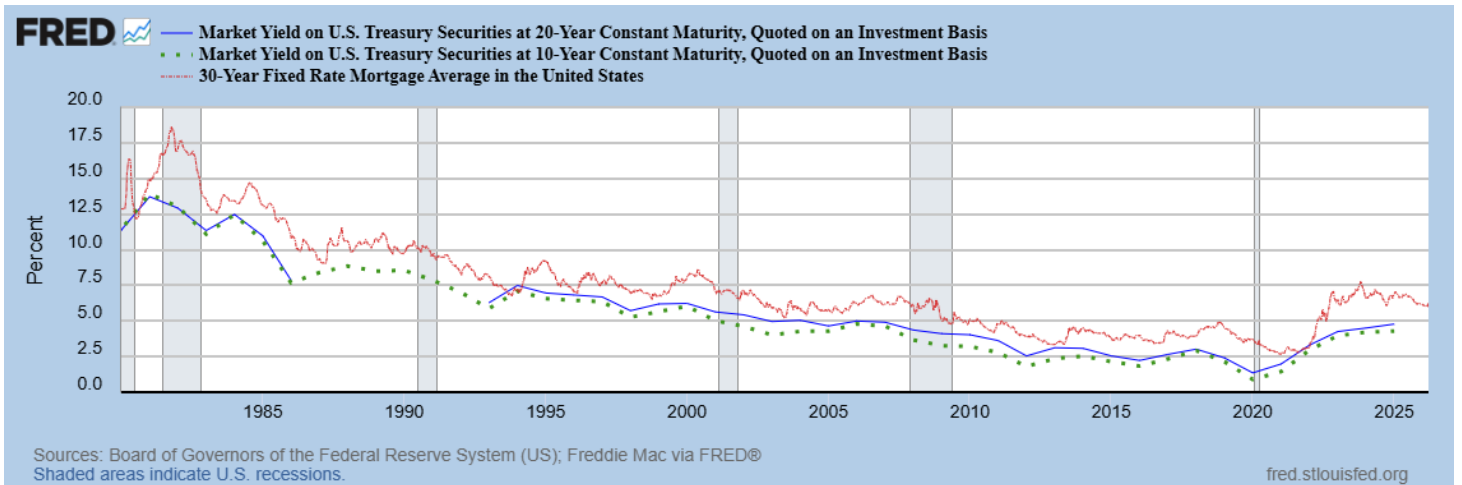
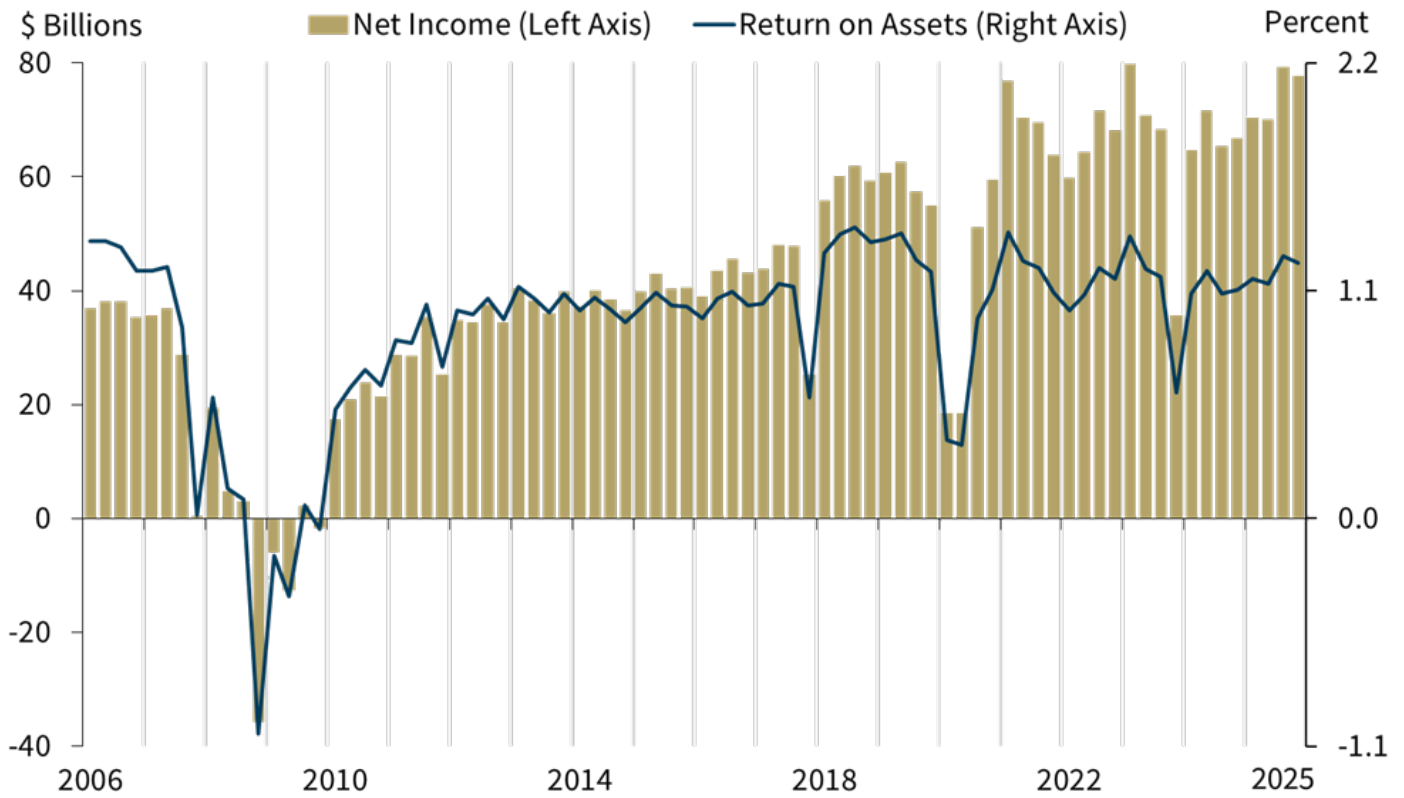


Exhibit 10
QUARTERLY NET INCOME



Source: FDIC.

Exhibit 11

TABLE IV-A. Full Year 2025, All FDIC-Insured Institutions

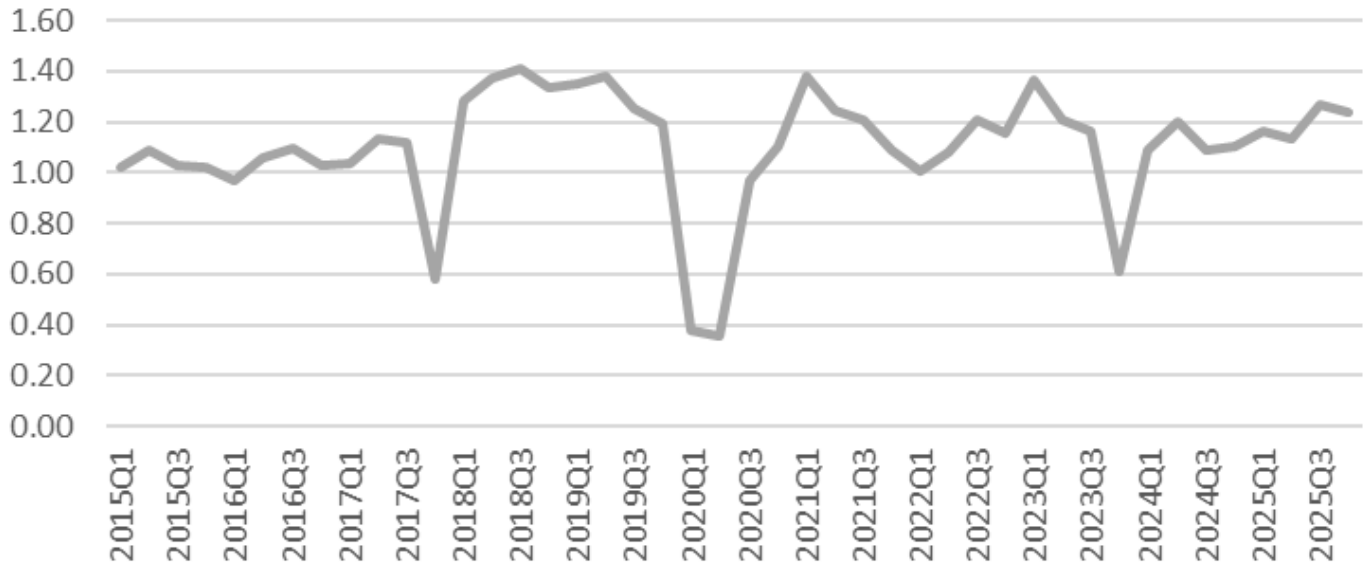
FULL YEAR (The way it is...)	All Insured Institutions	Asset Concentration Groups*								
		Credit Card Banks	Inter- national Banks	Agricultural Banks	Commercial Lenders	Mortgage Lenders	Consumer Lenders	Other Specialized <\$1 Billion	All Other <\$1Billion	All Other >\$1 Billion
Number of institutions reporting	4,336	10	4	945	2,427	311	36	169	354	80
Commercial banks	3,815	9	4	933	2,196	100	33	156	315	69
Savings institutions	521	1	0	12	231	211	3	13	39	11
Total assets (in billions)	\$25,257.9	\$1,067.3	\$6,126.2	\$316.5	\$7,976.2	\$549.7	\$303.4	\$38.2	\$82.6	\$8,797.8
Commercial banks	24,067.9	955.2	6,126.2	310.5	7,512.7	107.4	302.5	35.5	72.8	8,645.2
Savings institutions	1,190.0	112.1	0.0	6.0	463.5	442.3	0.9	2.8	9.8	152.6
Total deposits (in billions)	20,077.2	821.3	4,588.9	267.6	6,528.6	470.0	249.9	30.0	70.7	7,050.2
Commercial banks	19,100.0	737.9	4,588.9	264.2	6,162.5	88.1	249.2	28.4	62.5	6,918.2
Savings institutions	977.2	83.4	0.0	3.4	366.1	381.9	0.7	1.6	8.1	132.0
Bank net income (in millions)	295,595	16,145	69,551	4,104	89,950	5,922	3,932	639	941	104,411
Commercial banks	282,602	12,892	69,551	3,923	86,186	1,156	3,932	550	887	103,526
Savings institutions	12,993	3,253	0	181	3,764	4,766	1	88	54	885
Performance Ratios (annualized, %)										
Yield on earning assets	5.56	12.59	5.27	5.79	5.59	3.57	8.04	4.88	5.28	4.96
Cost of funding earning assets	2.26	3.19	2.42	2.02	2.07	1.35	3.36	1.22	1.57	2.25
Net interest margin	3.30	9.40	2.86	3.77	3.52	2.22	4.67	3.66	3.71	2.71
Noninterest income to assets	1.37	4.46	1.64	0.53	0.86	1.06	1.43	4.80	0.86	1.32
Noninterest expense to assets	2.45	7.57	2.30	2.37	2.39	1.76	3.02	5.72	2.94	2.04
Credit loss provision to assets**	0.38	3.46	0.38	0.16	0.21	0.02	0.79	0.20	0.09	0.20
Net operating income to assets	1.21	1.59	1.15	1.35	1.19	1.10	1.49	1.68	1.18	1.23
Pretax return on assets	1.52	2.05	1.51	1.52	1.45	1.38	1.75	2.24	1.29	1.52
Return on assets	1.20	1.63	1.16	1.34	1.16	1.08	1.36	1.73	1.16	1.21
Return on equity	11.82	12.77	12.91	13.21	10.51	11.63	14.14	10.53	11.00	12.21
Net charge-offs to loans and leases	0.62	3.62	0.81	0.15	0.26	0.03	1.15	0.70	0.11	0.47
Loan and lease loss provision to net charge-offs	110.34	129.67	107.68	148.36	113.22	160.56	90.70	101.65	147.80	86.06
Efficiency ratio	55.60	56.96	54.67	57.90	57.68	55.20	50.77	70.27	66.44	53.68
% of unprofitable institutions	5.10	10.00	0.00	2.01	4.74	15.11	2.78	10.06	5.65	1.25
% of institutions with earnings gains	80.83	50.00	50.00	81.48	82.41	79.74	86.11	60.36	81.36	73.75
Condition Ratios (%)										
Earning assets to total assets	90.86	91.06	89.07	93.72	91.64	96.10	91.92	90.33	93.88	90.88
Loss Allowance to:										
Loans and leases	1.65	5.76	1.87	1.27	1.28	0.56	2.45	1.51	1.23	1.28
Noncurrent loans and leases	171.18	351.17	229.73	165.76	132.24	113.73	321.95	167.11	146.88	132.28
Noncurrent assets plus other real estate owned to assets	0.54	1.23	0.32	0.56	0.70	0.22	0.58	0.27	0.52	0.50
Equity capital ratio	10.28	13.42	9.02	10.51	11.33	9.09	9.69	18.12	11.05	9.86
Core capital (leverage) ratio	9.26	10.90	7.95	11.10	10.29	11.21	10.70	19.05	12.17	8.74
Common equity tier 1 capital ratio***	14.03	13.07	14.91	13.84	13.01	27.61	13.25	49.67	19.30	14.20
Tier 1 risk-based capital ratio***	14.09	13.15	14.98	13.85	13.07	27.61	13.29	49.70	19.30	14.25
Total risk-based capital ratio***	15.29	14.97	15.85	14.93	14.38	28.12	14.34	50.46	20.37	15.49
Net loans and leases to deposits	66.02	91.29	49.28	79.18	82.07	48.93	89.11	33.58	65.57	59.08
Net loans and leases to total assets	52.48	70.25	36.91	66.95	67.18	41.83	73.39	26.36	56.09	47.34
Domestic deposits to total assets	73.00	76.94	53.19	84.55	81.72	85.50	82.36	78.48	85.52	76.74
Structural Changes										
New reporters	4	0	0	0	0	0	0	3	1	0
Institutions absorbed by mergers	136	1	0	33	70	9	1	15	5	2
Failed institutions	2	0	0	1	0	1	0	0	0	0
PRIOR FULL YEARS (The way it was...)										
Number of institutions	2024 4,487	10	4	993	2,487	317	40	186	377	73
	2022 4,706	10	5	1,053	2,502	320	35	300	411	70
	2020 5,002	11	5	1,163	2,667	291	36	277	485	67
Total assets (in billions)	2024 \$24,101.0	\$529.1	\$5,660.0	\$311.1	\$8,021.6	\$599.8	\$279.8	\$42.5	\$85.8	\$8,571.2
	2022 23,595.4	452.9	5,743.3	298.4	8,145.6	720.6	590.4	70.3	96.0	7,478.0
	2020 21,868.8	492.6	5,539.4	287.7	7,591.0	684.0	144.8	51.5	105.7	6,972.0
Return on assets (%)	2024 1.12	2.94	1.24	1.16	0.98	0.63	1.11	2.86	1.05	1.08
	2022 1.11	3.66	0.95	1.22	1.18	0.86	1.33	1.99	1.01	1.03
	2020 0.72	1.92	0.70	1.29	0.74	0.92	1.59	2.59	1.10	0.53
Net charge-offs to loans & leases (%)	2024 0.68	4.55	0.80	0.12	0.26	0.03	1.27	0.43	0.09	0.78
	2022 0.27	2.12	0.32	0.05	0.11	0.01	0.38	0.13	0.06	0.31
	2020 0.50	3.73	0.69	0.15	0.25	0.05	0.52	0.19	0.07	0.43
Noncurrent assets plus OREO to assets (%)	2024 0.55	1.43	0.32	0.44	0.66	0.19	0.67	0.22	0.43	0.57
	2022 0.39	1.06	0.23	0.35	0.48	0.15	0.34	0.22	0.33	0.42
	2020 0.61	0.92	0.38	0.69	0.76	0.30	0.26	0.34	0.56	0.66
Equity capital ratio (%)	2024 10.00	10.88	9.22	9.64	10.68	8.64	9.07	13.96	9.89	9.94
	2022 9.34	10.56	9.27	8.65	9.77	5.27	8.15	10.27	8.35	9.37
	2020 10.17	12.61	8.95	11.37	11.23	8.40	9.21	15.79	11.81	9.90

Source: FDIC

Exhibit 12

Quarterly Return on Assets

Source: FDIC



Quarterly Return on Equity

Source: FDIC

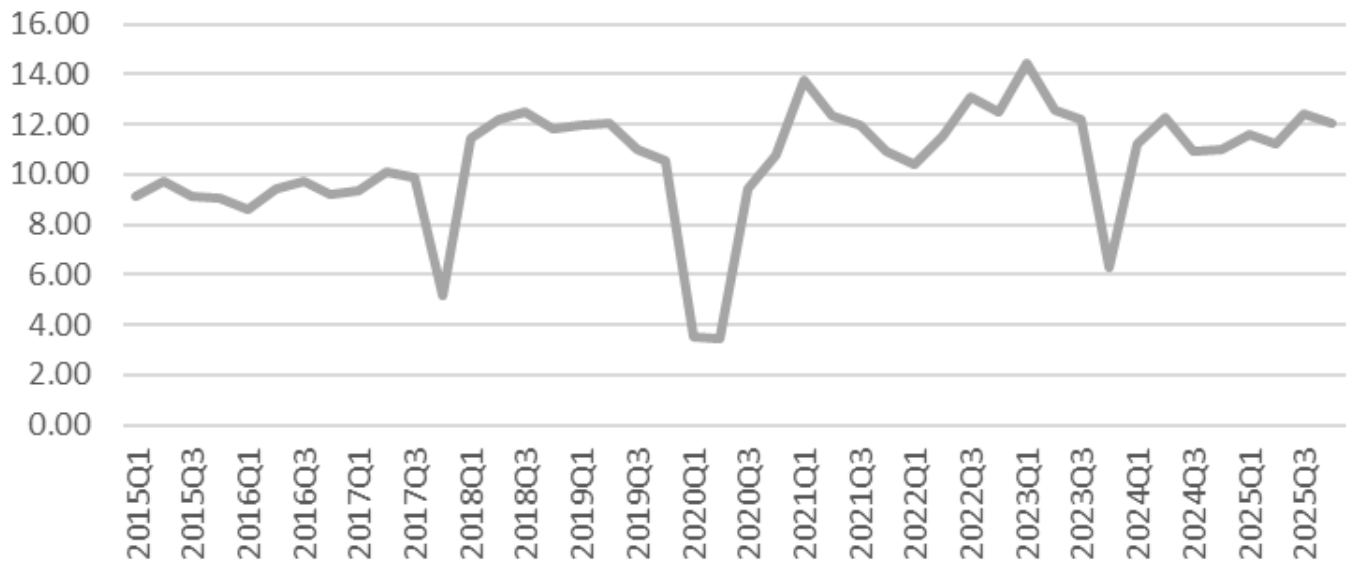
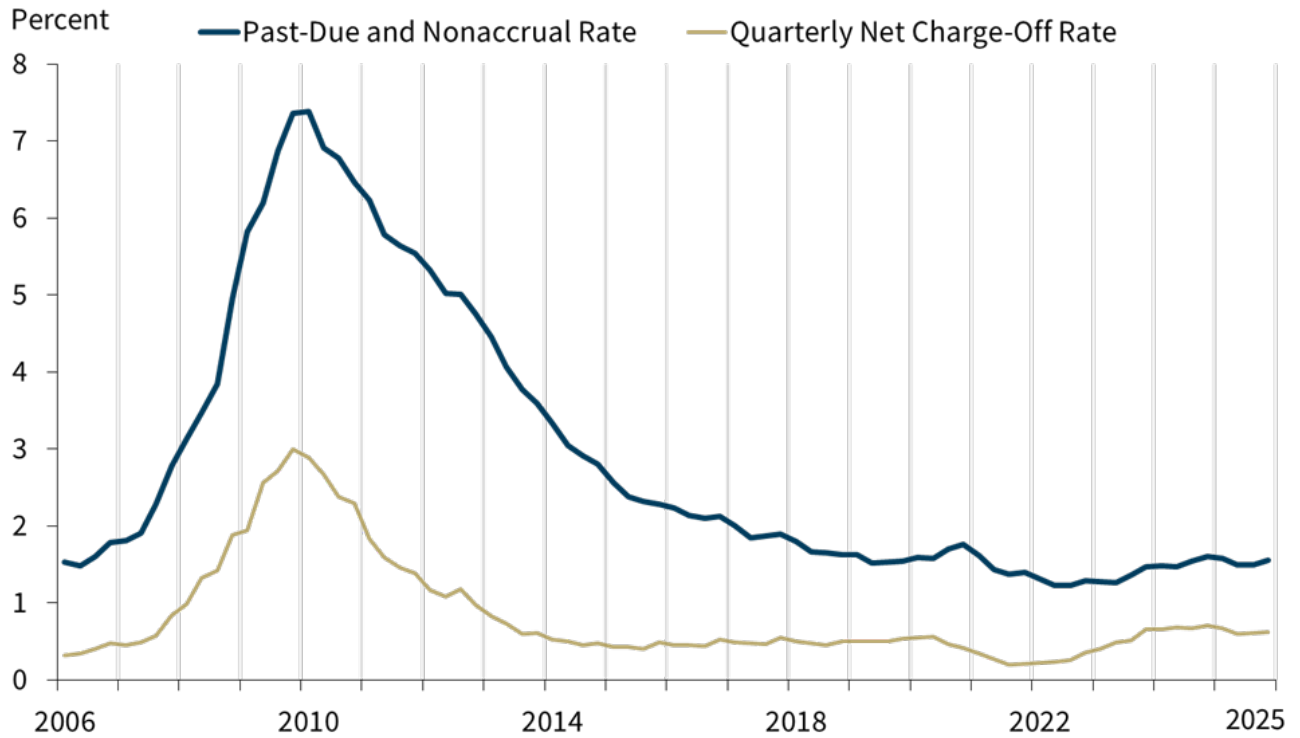


Exhibit 13

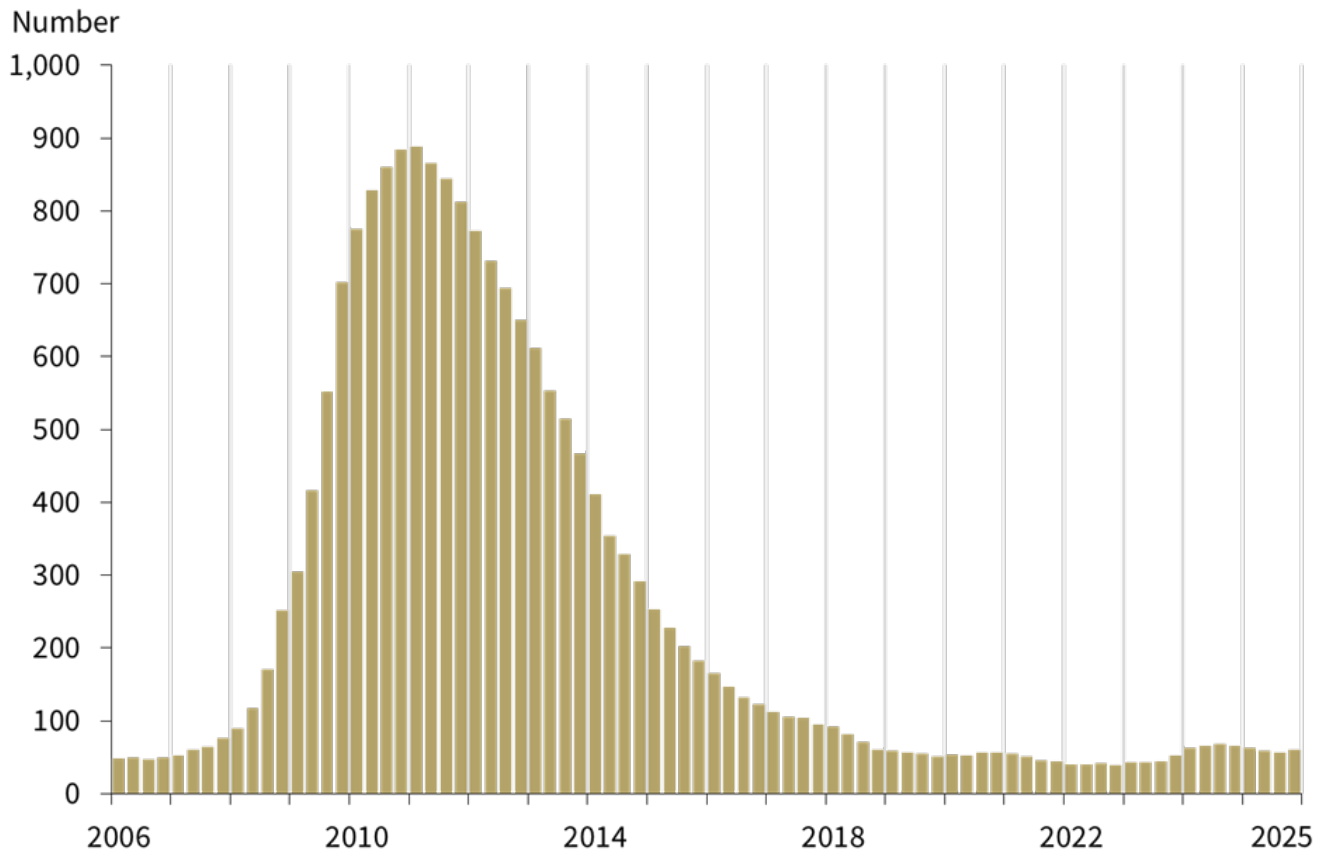
Past-Due and Nonaccrual Rate and Quarterly Net Charge-Off Rate



Source: FDIC.

Exhibit 14

Number of Banks on the "Problem Bank List"



Source: FDIC.

Exhibit 15 GROSS FEDERAL DEBT

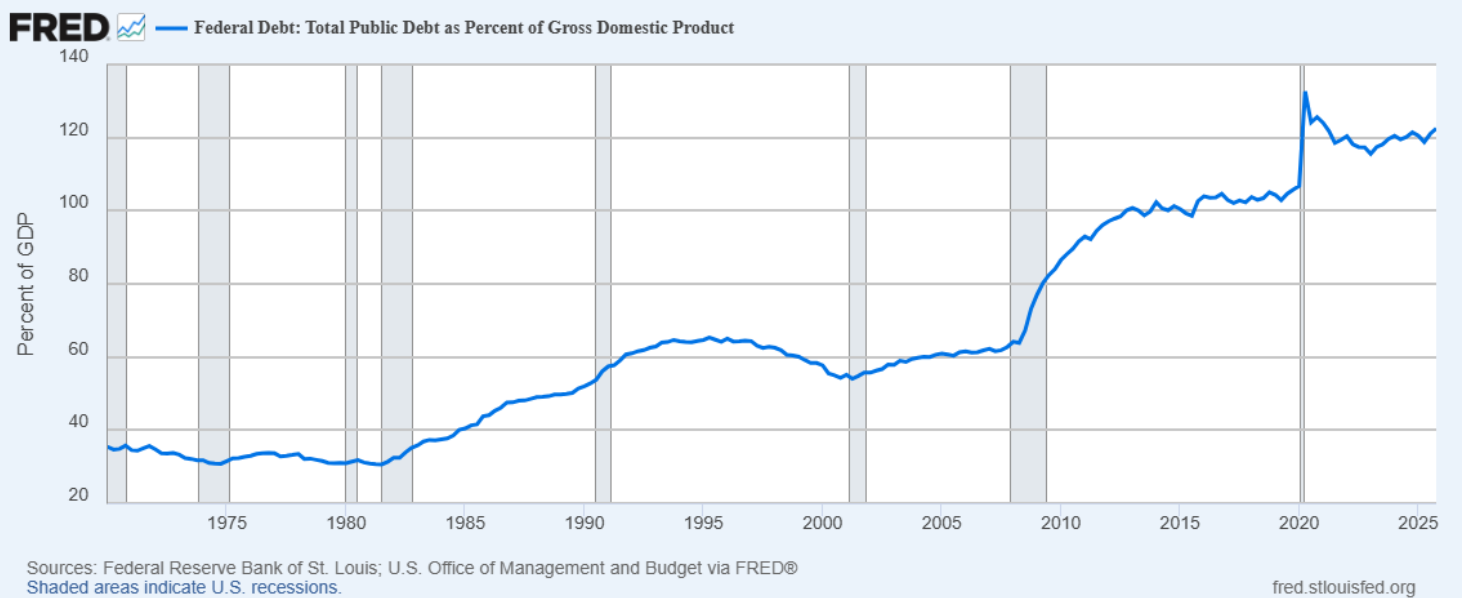
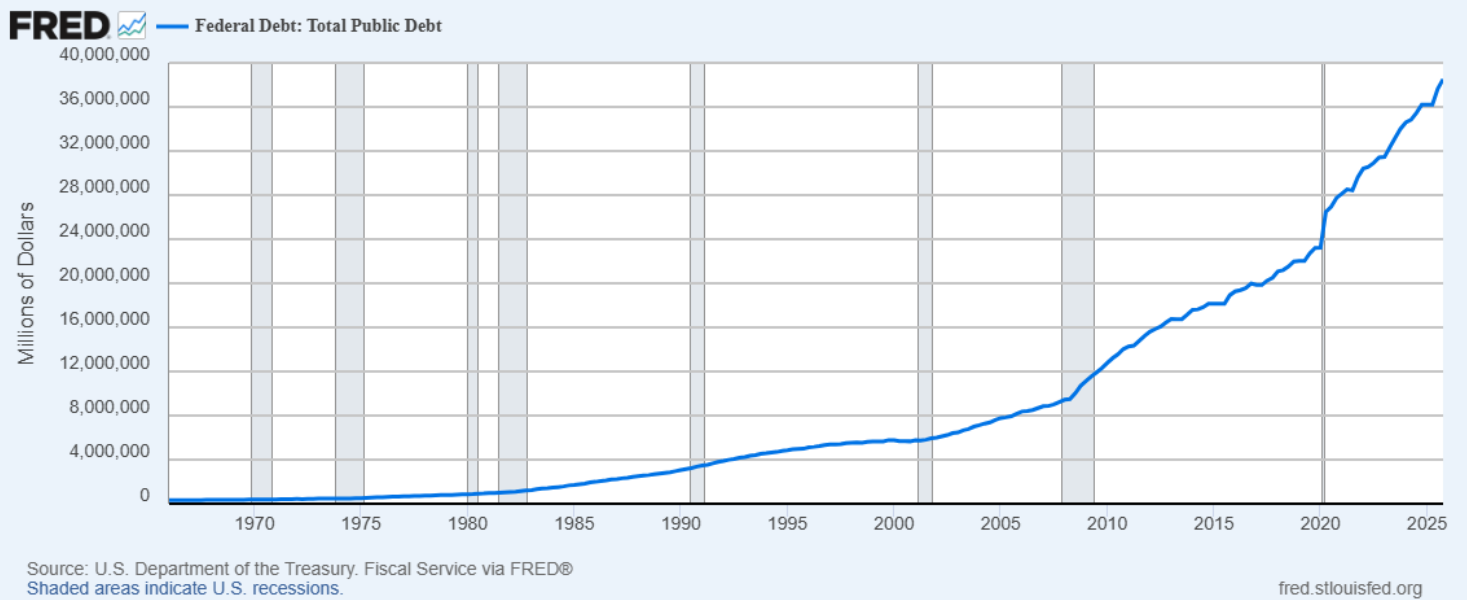


Exhibit 16 FEDERAL SURPLUS OR DEFICIT

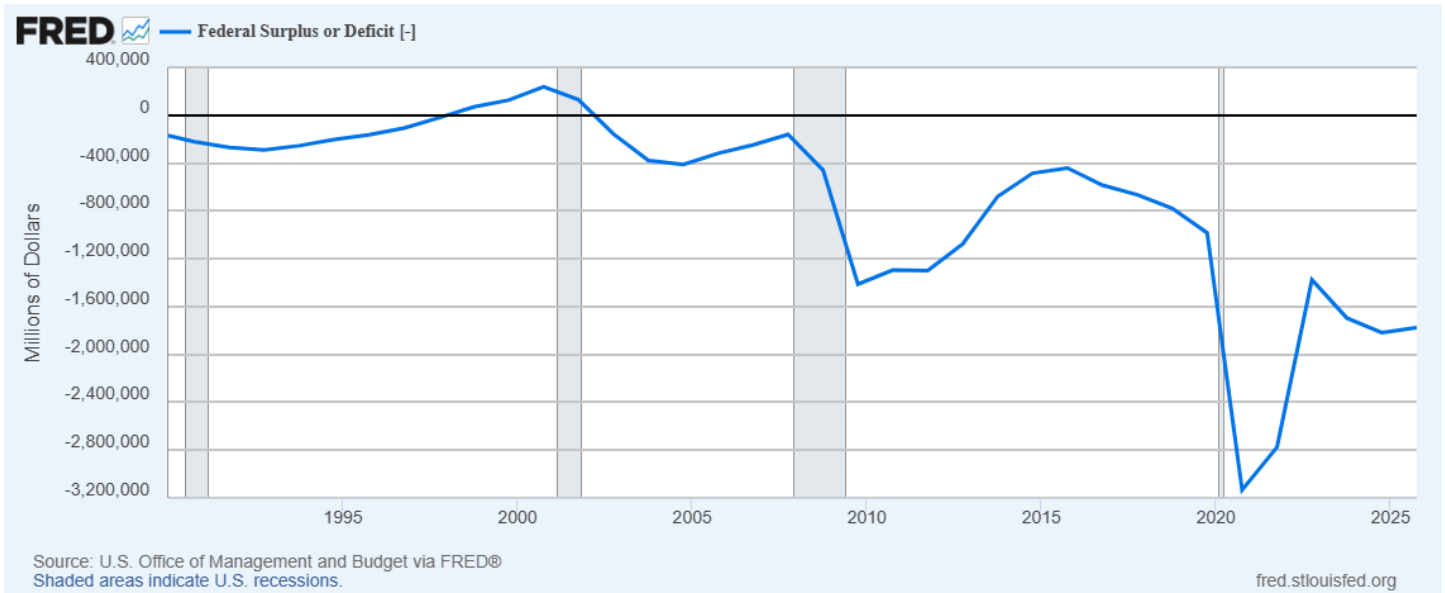
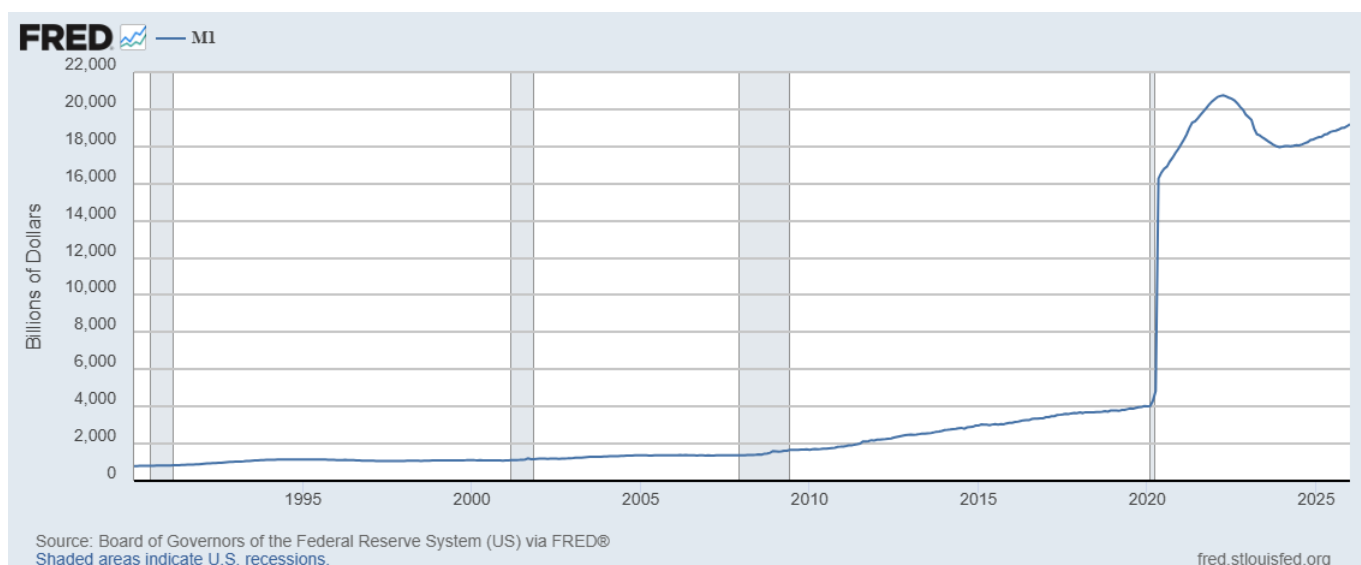


Exhibit 17

MONEY STOCK – M1



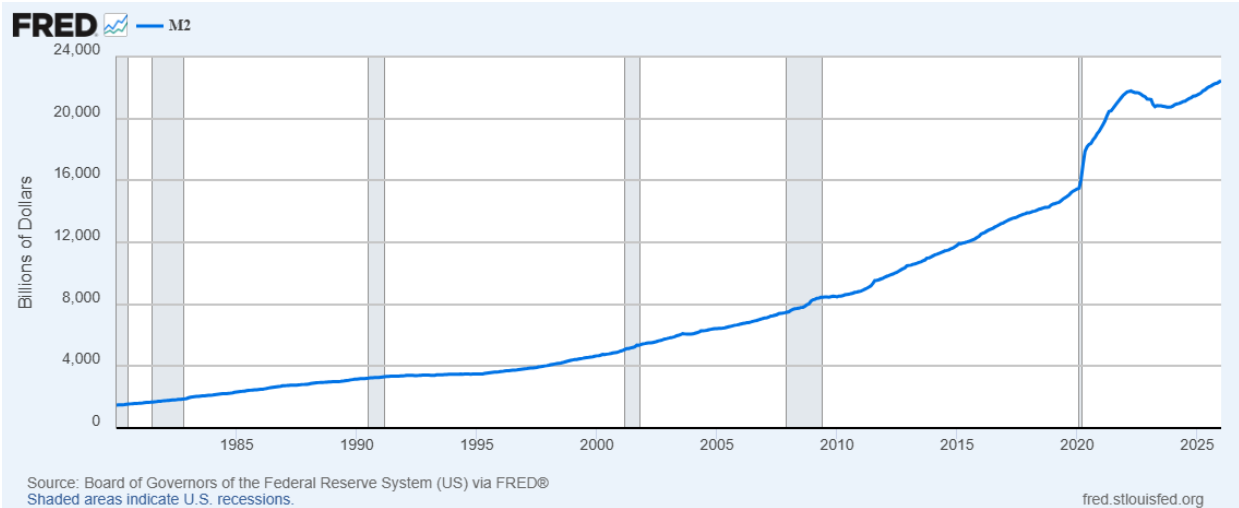
Starting on February 23, 2021, the H.6 statistical release is now published at a monthly frequency and contains only monthly average data needed to construct the monetary aggregates. Weekly average, non-seasonally adjusted data will continue to be made available, while weekly average, seasonally adjusted data will no longer be provided. For further information about the changes to the H.6 Statistical Release, see the [announcements](#) provided by the source.

Before May 2020, M1 consisted of (1) currency outside the U.S. Treasury, Federal Reserve Banks, and the vaults of depository institutions; (2) demand deposits at commercial banks (excluding those amounts held by depository institutions, the U.S. government, and foreign banks and official institutions) less cash items in the process of collection and Federal Reserve float; and (3) other checkable deposits (OCDs), consisting of negotiable order of withdrawal, or NOW, and automatic transfer service, or ATS, accounts at depository institutions, share draft accounts at credit unions, and demand deposits at thrift institutions.

Beginning May 2020, M1 consists of (1) currency outside the U.S. Treasury, Federal Reserve Banks, and the vaults of depository institutions; (2) demand deposits at commercial banks (excluding those amounts held by depository institutions, the U.S. government, and foreign banks and official institutions) less cash items in the process of collection and Federal Reserve float; and (3) other liquid deposits, consisting of OCDs and savings deposits (including money market deposit accounts). Seasonally adjusted M1 is constructed by summing currency, demand deposits, and OCDs (before May 2020) or other liquid deposits (beginning May 2020), each seasonally adjusted separately.

SOURCE: Board of Governors of the Federal Reserve System (US), M1 [M1SL], retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/M1SL>, March 24, 2026.

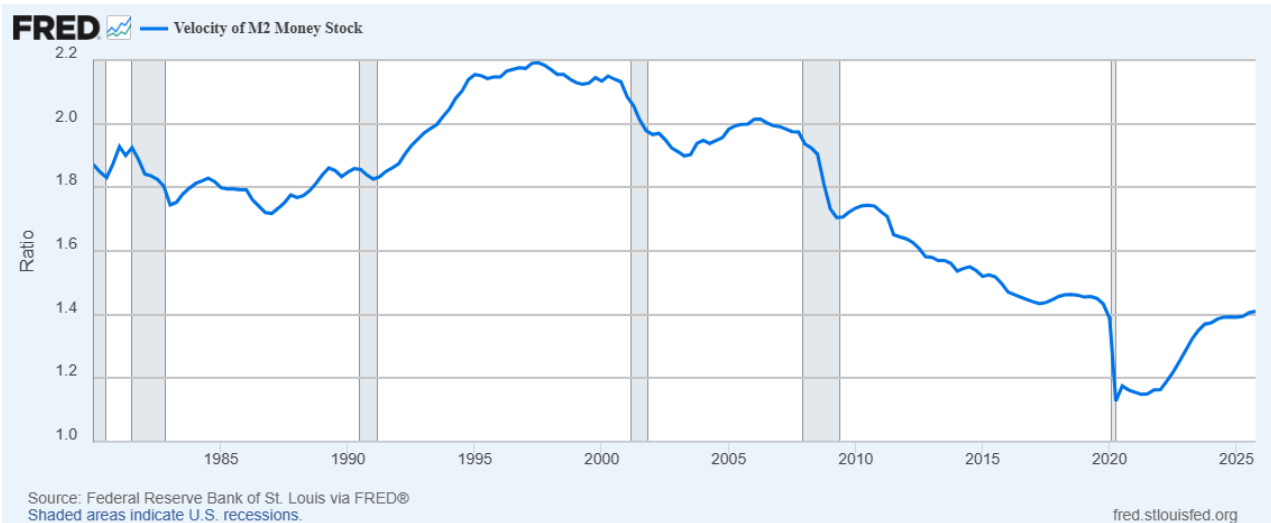
Exhibit 18 MONEY STOCK – M2



Before May 2020, M2 consists of M1 plus (1) savings deposits (including money market deposit accounts); (2) small-denomination time deposits (time deposits in amounts of less than \$100,000) less individual retirement account (IRA) and Keogh balances at depository institutions; and (3) balances in retail money market funds (MMFs) less IRA and Keogh balances at MMFs.

Beginning May 2020, M2 consists of M1 plus (1) small-denomination time deposits (time deposits in amounts of less than \$100,000) less IRA and Keogh balances at depository institutions; and (2) balances in retail MMFs less IRA and Keogh balances at MMFs. Seasonally adjusted M2 is constructed by summing savings deposits (before May 2020), small-denomination time deposits, and retail MMFs, each seasonally adjusted separately, and adding this result to seasonally adjusted M1.

SOURCE: Board of Governors of the Federal Reserve System (US), M2 [M2SL], retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/M2SL>, March 24, 2026.



INVESTMENTS

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OVERVIEW

Investment securities represent an important source of interest income at commercial banks. Along with loans, bonds and money market investments comprise a bank's earning assets. Importantly, investment securities have different risk and return characteristics compared with loans, so they help diversify a bank's asset holdings. Because banks are generally restricted to holding investment grade securities with lower default risk than other securities, they typically exhibit smaller charge-offs, if any. Not surprisingly, they typically generate lower returns.

In addition to providing a return, investment securities are used to meet pledging requirements and may serve as a liquidity source when managers choose not to issue new liabilities. In 2007-2008, bank managers found that some securities were far riskier than anticipated at purchase. Specifically, managers discovered that some securities linked to problem mortgages and problem loans could not be sold as buyers were unwilling to submit bids. This environment made it difficult to establish values for the securities and many institutions were forced to report losses on their holdings.

Historically, most banks managed their investments passively because their primary focus was on making loans to businesses and individuals. In many cases banks purchased securities, held them to maturity, and then replaced them with similar instruments as they matured. Recent competitive pressures on loan yields and net interest income, however, have forced banks to manage their securities portfolios more actively. Active management involves paying closer attention to maturity and repayment patterns, occasionally selling securities before they mature, and investing in new types of instruments.

Two events dramatically altered the types of investment securities that banks buy and the strategies that banks employ in managing their securities portfolio. The Tax Reform Act of 1986 largely eliminated banks as investors in most municipal securities. Changes in regulatory reporting, in turn, under the Statement of Financial Accounting Standards Number 115 (SFAS 115) required that banks value certain investment securities at current market values rather than historical cost in their financial reporting.

As a consequence, many banks designate long term securities with substantial price risk as instruments they anticipate holding to maturity which allows them to avoid reporting fluctuations in market values. For securities that banks retain the option to sell prior to maturity at their discretion, reporting under SFAS 115 increases the volatility of stockholders' equity because changing interest rates affect reported stockholders' equity on bank financial statements.

LEARNING OBJECTIVES

Following the successful completion of this session, you should be able to:

- Understand why banks own bonds and money market investments.
- Understand the overall objectives of a bank's investment portfolio.
- Understand how SFAS 115 potentially affects investment decisions.
- Describe the principles and factors that influence investment strategies and policy.
- Recognize the specific risk and return characteristics of U.S. Treasury securities, Federal agency securities, state and local government securities, certain types of mortgage-backed securities, and other investments.
- Describe the role of a securities trading account.
- Understand the components of total return.
- Understand how to calculate and compare after-tax yields on taxable versus municipal securities.
- Explain why banks buy only bank qualified municipals.
- Identify the basic features of investment policy guidelines.
- Explain how the prevailing interest rate environment provides information regarding the state of the economy and potentially affects the choice of securities.
- Identify the different shapes of U.S. Treasury yield curves and explain what factors affect the yield curve.

OBJECTIVES OF THE INVESTMENT PORTFOLIO

Commercial banks purchase securities primarily to meet liquidity needs and generate interest income or capital gains. Other purposes include satisfying pledging requirements, diversifying risk, financing the needs of state and local government units, and managing the interest rate-risk exposure of the balance sheet. Only when specific objectives have been established and quantified can management devise strategies, allocate funds and evaluate performance.

Preservation of Capital

For many bank managers, the overriding concern with the investment portfolio is to preserve capital or protect the principal amount of the investment. The risk of default should be negligible. Thus, bank security holdings are often concentrated in the obligations of the U.S. Treasury or other types of securities that carry investment grade ratings (Baa or higher, BBB or higher) from the rating agencies or at least are of equivalent default risk.

In recent years, many banks bought higher risk securities in search of yield. Higher risk securities generally involved some type of asset-backed securities, such as those collateralized by mortgages, where the mortgages were of dubious value. Rating agencies (see Moody's and S&P following) compounded the problems by designating many securities as investment grade when, in retrospect, they were of much greater credit risk.

Liquidity Needs

Community banks often use their securities holdings to obtain cash when they experience unanticipated deposit withdrawals or new loan demand. Short term, highly marketable securities are typically the most liquid because they can be easily sold at prices near cost. In practice, however, any security with a current market value (price) above book value (cost) that is categorized as available-for-sale and not pledged as collateral can be readily sold and represents a liquid asset. The fact that the current price exceeds cost allows banks to report a gain on the sale rather than a loss which would reduce ROA and ROE. Treasury bills are generally the most liquid securities that banks own because they mature near-term, trade in an active secondary market and have no default risk.

In 2007, with declining economic conditions and difficulties in the subprime mortgage market, portfolio managers struggled to determine exactly what they owned in terms of the quality of collateral and how to assign a value to the securities. In some cases, buyers did not exist for many securities.

Seemingly low risk securities, such as auction-rate municipals with yields that reset weekly or monthly, could not be sold. Such securities are illiquid and under accounting requirements may necessitate management taking a loss from writing down the value to current market prices.

Interest Income and Capital Gains

Securities generate interest income just as loans do. If the security is a discount instrument, it sells for less than its maturity value and increases in value as time passes. This price appreciation represents interest income to the holder. If a security is a short term, interest-bearing instrument, it accrues interest against the principal amount which is paid when the security matures. A coupon-bearing security pays interest on specific dates, typically every six months after issue, and repays the principal at final maturity. The amount of annual coupon interest divided by the principal amount of the security is referred to as the **coupon rate**. Finally, mortgage-backed securities are collateralized by a specific pool of mortgages from which the investor receives interest and principal associated with payments on the mortgages underlying the pool. Payments may be as frequent as monthly, which coincides with most residential mortgage payments.

Some interest is fully taxable, some is partially taxable, and some is entirely tax-exempt. It is therefore important to determine whether and how much interest on a specific security is subject to federal income taxes and state or local government income and property taxes. Interest yields on securities can be accurately compared only on an after-tax basis, after adjusting for default risk and marketability.

The owner of a security can also earn a capital gain if the security increases in value above the initial purchase price prior to maturity and the owner sells the security. This occurs when the market interest rate on the security declines after purchase. The market rate may fall due to a general decrease in rates or a market perception that credit risk associated with the security has decreased. Of course, the security can also decrease in value after purchase when the price falls. This occurs when market interest rates increase. A bank that sells a security in this environment will report a capital loss. Securities gains and losses are reported on the income statement as a form of non-interest income and expense. All gains are taxed as ordinary income.

Pledging Requirements

In many instances, commercial banks must pledge securities as collateral against certain liabilities. For example, liabilities that require collateral include: 1) securities sold under agreements to repurchase (repos), 2) borrowing from the Federal Reserve Bank at the discount window, 3) deposits owned by the U.S. Treasury and most state and local governments (public deposits), and 4) advances from the Federal Home Loan Bank (FHLB).

The types of assets that qualify as collateral are usually stipulated by the deposit holder or by contract. Most banks use Treasury securities or qualifying U.S. agency securities as collateral against discount window borrowings because they already hold them in bookkeeping form at the Federal Reserve. Repos are similarly negotiated with a specific underlying security, typically Treasury securities, pledged as collateral.

Banks that accept public deposits pledge securities against the uninsured portion of the deposits. The deposit owner can influence what securities are pledged by specifying that certain instruments can be valued above par value for collateral purposes, while other instruments are valued at less than par. For example, a municipality that wants to increase the demand for its securities might value its bonds for collateral purposes at 120% of par (each \$1 million of securities is valued as \$1.2 million in collateral), while Treasury securities are valued at just 95% of par (each \$1 million of Treasuries is valued at \$950,000 in collateral). The different values encourage banks to buy the municipality's security to pledge against deposits rather than other securities. Finally, banks that borrow via advances from the FHLB must pledge qualifying assets as collateral and certain securities qualify along with certain loans. The portion of a bank's securities that is pledged as collateral appears at the bottom of page 10 in a bank's UBPR.

Financing the Needs of State and Local Government Units

Municipal bonds represent an attractive investment vehicle for most commercial banks. If they meet the criteria for **'bank qualified,'** the promised yields exceed the yields on otherwise comparable taxable securities. In addition, community banks that purchase in-state municipals generally do not have to pay any applicable state income taxes on the interest. Importantly, when the issuers are local government units, the banks effectively provide financing, analogous to making direct loans, to support local infrastructure and community development.

Diversification of Credit Risk

Securities essentially represent loans to the issuer of the debt instrument, such as the U.S. Treasury or a local government unit. Various issuers exhibit substantially different credit risk compared to a bank's loan customers. Treasury securities will not default as the U.S. government backs promised payments by its full faith, credit, and taxing authority. Thus, if the need arises, the Treasury will borrow or raise taxes to make debt payments. Other issuers exhibit some amount of default risk. U.S. government agencies, such as the Federal Home Loan Banks (FHLBs) or Federal National Mortgage Association (FNMA), issue securities that carry a moral obligation of the U.S. government to support debt service such that yields on the securities are slightly higher than those on otherwise comparable Treasury securities. At the other extreme, some banks buy corporate bonds and non-rated municipal bonds that carry substantial risk of default. Not surprisingly, securities with greater default risk carry higher promised interest rates.

A bank's investment portfolio spreads credit risk across different borrowers so that any single default is less likely to seriously affect overall performance. Banks attempt to control concentrations of risk by imposing position limits, which specify the maximum amount of securities of each type that can be owned. They also generally restrict their purchases to securities that carry an investment grade rating (Baa or higher; BBB or higher) or non-rated securities that credit analysis suggests are the equivalent to investment grade in terms of default risk.

Managing Interest Rate Risk Exposure

Securities are standardized instruments that are traded in broad markets; therefore, buying and selling securities is quite impersonal compared with making loans or denying loan requests. Transactions can be handled electronically with little face-to-face negotiation. Securities also come in all shapes and sizes, with different maturities, floating rate and/or fixed rate features, and different degrees of default risk. Portfolio managers can readily sell one type of security and buy another without damaging long standing customer relationships. They thus find it is easier to use securities rather than loans in adjusting a bank's interest rate risk position. For example, a bank that needs to increase the rate sensitivity of its assets relative to its liabilities might purchase short term securities funded with longer-term CDs.

TRADING ACCOUNT SECURITIES

Many of the largest banks operate dealer departments that hold securities for trading purposes. This means that they buy and sell securities for profit without expecting to hold the securities to maturity. Typically, they hold a specific security for only a few days. Dealer departments perform three basic services. First, they offer **investment advice and assistance** to customers who manage their own portfolios. For example, they might assist a small bank in determining what type of security best suits the bank's investment needs. Second, they **make a market** by standing ready to buy securities that holders want to sell and sell securities that customers want to buy. Third, banks **speculate on interest rate movements** and adjust their inventories of securities to profit when rates move as anticipated.

Banks earn trading account profits in several ways. When making a market, they charge a higher price (lower interest rate) on securities they sell and pay a lower price (higher interest rate) on securities they buy. Thus, a customer can get two quotes for the same security: a **bid price** is what the dealer will pay and the **ask price** is the price, at which the dealer will sell, with the ask price above the bid price. This bid-ask (price) spread is referred to as a **trading profit**. In addition, while the bank earns interest on its inventory of securities, it must also finance the inventory.

The difference between the interest earned and interest paid on borrowing contributes to the dealer department's **financing profit**. Of course, the borrowing rate is typically a short-term repo rate that changes quickly when market interest rates change. Thus, when interest rates rise unexpectedly, a dealer may be caught with an inventory of long term securities at fixed rates that decrease in market value while financing costs increase. Trading departments essentially take interest-rate risk and may adjust their inventories and financing to reflect anticipated changes in interest rates. Securities dealers can make a **position profit** by correctly anticipating interest rate changes and adjusting their inventories accordingly in advance.

IMPORTANCE OF SFAS 115

Prior to the implementation of SFAS 115 in 1994, banks were able to report the value of all investment securities that they intended to hold for long periods at amortized cost, without recognizing that the market value differed from this value due to changes in market interest rates. In contrast, SFAS 115 forces banks to classify securities into one of three categories – securities held to maturity, securities available for sale, and trading securities – depending on

the objective for buying the security and the planned holding period. The accounting treatment then differs across categories.

Securities Held to Maturity: Management intends to hold these securities to maturity. Thus, under normal circumstances, the securities are reported at amortized cost and unrealized gains or losses are not recognized. These securities may be sold or moved to one of the other categories if: 1) the issuer's creditworthiness deteriorates; 2) the tax status of the security changes; 3) there is a change in the risk weights associated with the instrument under capital adequacy guidelines; 4) there is a significant change in the structure of the underlying business borrower; or 5) there is a change in regulation of the allowable percentage exposure to an issuer.

Other factors that might encourage a sale or shift in classifications, such as a need for liquidity or change in market interest rates, are not acceptable reasons. While penalties for unauthorized sales are not known, it is likely that regulators will require guilty banks to reclassify their entire portfolio under adverse circumstances.

Trading Account Securities: Management intends to hold these securities a short time because they will be sold near-term. The securities are reported at market value on the balance sheet, and unrealized gains and losses are recognized as income.

Securities Available for Sale: Management intends to sell these securities prior to maturity, but they are not held in a trading account. The securities are reported at market values, and unrealized gains and/or losses (net of taxes) are recorded as a separate component of a bank's stockholders' equity. There is no income statement impact.

COMPOSITION AND CHARACTERISTICS OF SECURITIES

Bank investment portfolio managers try to maximize returns from holding securities while controlling risk. Returns arise from interest income, reinvestment of coupon interest, and gains or losses on sales. Key features of bonds include:

- **Par value:** the face value of the principal amount of the bond,
- **Coupon rate:** the stated rate of interest that the issuer pays the holder of the bond, generally quoted as a percent of par value,
- **Maturity date:** period of time until the final principal payment is made.

- **Market rate of interest:** typically measured as a bond's yield to maturity which equals the discount rate that equates the present value of expected coupon and principal payments with the purchase price,
- **Basis point:** 1/100 of a percentage point; 100 basis points equals 1%.

Most bonds are priced off of U.S. Treasuries with yields quoted relative to Treasury yields of comparable maturity. In January, 2022 the United States, replaced LIBOR with the Secured Overnight Financing Rate (SOFR). SOFR represents the cost of borrowing cash overnight in the repurchase agreement (repo) market using U.S. Treasuries as collateral. It is fully based in observable transactions, calculated using data from multiple segments of the Treasury repo market.

Specific risks include:

- The potential nonpayment of interest and principal,
- The potential depreciation in price due to a forced sale,
- The potential depreciation in price due to an increase in interest rates,
- Different inflation expectations than customers,
- Prepayments of principal on mortgage-backed securities that differ from that expected,
- Return of principal on callable bonds prior to maturity.

The basic premise of most bank investment policies is that the securities portfolio must be virtually free of default risk. Regulators strongly encourage banks to concentrate their investments in the highest quality (investment grade) securities. They similarly prohibit buying common stock and many other corporate securities for a bank's own investment portfolio. Still, banks accept a wide range of risks when buying fixed-income securities.

Risk Characteristics

Credit Risk: Banks that buy securities are subject to the risk that the issuer of the security will not make the promised principal and interest payments on a timely basis. This risk is negligible for Treasury securities, but it may be significant for corporate or state and local government securities. Most banks do not directly analyze the probability of default for each issue but instead rely on quality ratings assigned by agencies, such as Moody's or Standard & Poor's. These agencies classify securities into categories that presumably differentiate among borrowers' abilities to repay. *Exhibit 1* summarizes the various rating categories of state and local government (municipal) securities. The first four categories are labeled **investment grade securities**.

Regulators strongly encourage banks to restrict their investments to these rating classes. If a security does not receive a rating (it is nonrated), banks must demonstrate through credit analysis that it would fall within the investment grade classification. Many municipal bonds issued by state and local governments are not rated, such that investment managers must document the credit risk of these entities. Securities rated below Baa or BBB and non-rated securities are labeled **junk bonds**.

One of the hot topics today is the role that ratings agencies, such as Moody's and S&P, played in the credit and liquidity crises of 2007-2008. The formal process for an issuer of a security to obtain a rating effectively made the issuer a partner with the rating agencies as each group wanted to see the deal completed. Without a deal, no one got paid. The rating agencies subsequently misidentified the true credit risk of a large number and volume of issues from 2004-2007 such that many securities that were rated investment grade at issue, quickly fell into default and/or the rating agencies were forced to lower their rating below investment grade shortly after issue. Rating agencies took significant losses on their own investments and found themselves to be undercapitalized. Today, there are serious questions as to whether investors can believe that ratings accurately reflect risk.

Liquidity Risk: Some securities cannot be easily sold prior to maturity. The underlying borrower may not be known, such as with a small municipality, or the issue may be small and non-rated. If a bank needs to sell the security, it may have to lower the price substantially. Holding such illiquid securities involves considerable risk. Again, U.S. Treasury and federal agency securities are traded in well-established secondary markets after original issue, such that volume is large and the securities are highly marketable. Municipal securities and many types of mortgage-backed securities are less liquid because the issuer is not well known and the security may carry complex features that are difficult to value. Trading volume is relatively small in the secondary market such that a seller must often accept a lower price. Finally, some bank managers view any security that trades at a discount as relatively illiquid. The reasoning is that management doesn't typically want to sell securities at a loss and have to report reduced net income due to a one-time sale of securities.

Interest Rate Risk: Changes in market interest rates affect the returns that investors earn in two ways. First, the prices of fixed-rate securities without options (securities that are non-callable, non-putable and not subject to prepayment) vary inversely with interest rates. As such, prices decrease when rates rise and increase when rates fall. Second, investors are subject to reinvestment risk on securities that make interim payments prior to maturity. For example, when rates rise, the interim cash flows can be reinvested at

higher rates than those initially available. When rates fall, reinvestment is at lower rates, and the total return might be below that initially expected.

If a security is held to maturity, the bank receives the interest payments and the entire principal unless default occurs. If not held to maturity, a bank may realize a gain or loss when it sells the security prior to maturity. The bank gains if the sale price exceeds the initial cost of the security, and it loses if the sale price is lower than amortized cost. Potential price variation after purchase depends on the bank's planned holding period and each individual security's characteristics. In general, long maturity and low coupon securities exhibit the greatest price variation.

Exhibit 2 shows the Flow of Funds Chart for U.S. commercial banks' from 2023 - 2025. Note that the agency category includes most mortgage-backed securities as well as bonds issued by the Federal National Mortgage Association, Federal Home Loan Banks, and other quasi-public agencies of the federal government.

TYPES OF SECURITIES

As indicated, banks buy many different types of securities issued by various government and corporate entities. The general categories are U.S. Treasuries, Agencies, Municipals, and Corporate securities. While most bonds make interest payments to investors prior to final maturity, some – labeled zero coupon bonds – do not. Some corporate bonds are also convertible into stock in the issuing company. *Exhibit 3* summarizes the basic features of these different types of securities. It also lists some important terminology.

U.S. Treasury Securities

There are two basic types of Treasury securities: Treasury bills and Treasury notes and bonds. Treasury bills are marketable obligations of the U.S. government that, by law, have an original maturity of one year or less. They exist in book entry form with the investor simply holding a dated receipt. Each week the Treasury auctions 4-week, 13-week and 26-week bills where all investors have an opportunity to buy the new securities. All Treasury bills are discount instruments with interest obtained from price appreciation.

Treasury notes and bonds differ from Treasury bills in terms of original maturity and form of interest. Notes have original maturities between one and ten years; bonds can carry any maturity but typically have original maturities beyond ten years. Most notes and bonds pay coupon interest at

fixed rates semiannually (every six months). Some Treasury bonds are sold as zero-coupon discount instruments that pay interest through price appreciation, similar to that with T-bills.

Treasury notes and bonds are also sold at auction, but the offerings occur whenever funds are required. In October of 2001 the U.S. Treasury stopped offering 30-year Treasury bonds in part due to a series of large federal budget surpluses during the previous years. With the large budget deficits in subsequent years, the Treasury reinstated auctions of 30-year Treasuries in February of 2006.

All Treasury securities are free of default risk because the U.S. government provides its full faith, credit and taxing authority behind the issues. The volume of outstanding issues is large with a well-established secondary market. Interest income carries the additional advantage that it is exempt from state and local income taxes. For these reasons, Treasury securities are quite attractive to banks, especially to meet liquidity needs.

Federal Agency Securities

Federal agency securities are obligations issued by federally-related institutions and similar groups that are government sponsored but privately owned. Federally-related institutions represent entities of the U.S. government and, except for the Tennessee Valley Authority and Private Export Funding Corporation, their securities are backed by the full faith, credit and taxing authority of the U.S. government.

Government-sponsored enterprises (GSEs) issue securities directly to investors in the capital markets. Except for Farm Credit Financial Assistance Corporation (FACO) bonds, securities issued by these groups are not backed by the full faith, credit, and taxing authority of the U.S. government. Securities include both short term discount notes and long term debt issued by:

Federally Related Entity Examples:

- Federal National Mortgage Association (Fannie Mae)
- Federal Agricultural Mortgage Corporation (Farmer Mac)
- Federal Home Loan Mortgage Corporation (Freddie Mac)
- Federal Home Loan Banks (FHLB)
- Federal Housing Administration

- Federal Farm Credit Banks Funding Corporation
- Student Loan Market Association (Sallie Mae)

Maturities on the notes range from zero to 360 days. Maturities on long term bonds extend up to 30 years. As indicated, these institutions provide funds primarily in the areas of housing, agriculture and education. Default risk is considered to be low for GSE securities because investors generally believe that Congress will provide assistance in the event of default. Like Treasuries, the secondary market for agency securities is broad and widely supported by the nation's largest banks and securities dealers. Agency securities are subsequently viewed as close substitutes for Treasury securities.

GSE Problems

During 2003-2006, many regulators and analysts argued that GSEs, particularly Fannie Mae and Freddie Mac, were growing too fast and did not have adequate control over their growth. Both Fannie Mae and Freddie Mac reported problems with their financial statements, with the senior management teams of both Freddie Mac and Fannie Mae ultimately replaced due to improper financial reporting and lack of institutional control. Both groups restated earnings several times and both reported large losses in 2007. Given the critical role that these agencies play in supporting the mortgage market and ultimately the values of housing, in 2008 these entities were taken into conservatorship under the U.S. Treasury. Such actions demonstrated the extremely difficult times in the housing market. Implicitly, they also signaled that the U.S. government would not allow these entities to fail.

The recent growth in agency securities at banks reflects an emphasis on mortgage-backed securities. These and other agency securities generally trade at yields 15 to 150 basis points above yields on comparable maturity (or duration) Treasury securities, although the spread may be much greater depending on prevailing economic conditions.

State and Local Government Securities

State and local government securities, commonly referred to as municipals; represent debt issues of states and U.S. territories, local governments, and their political subdivisions (such as school corporations and toll road or river authorities). Short term municipals are issued to provide operating funds and consist of tax warrants, tax anticipation notes and other revenue anticipation notes. These securities provide interim financing until a government collects revenues to repay the interest and principal. Project notes and tax-exempt commercial paper are similar types of short term municipal debt associated with housing expenditures or other outlays of large municipalities. Long term municipals include general obligation and revenue bonds issued for specific capital expenditures. Interest and principal on **general obligation bonds** are backed by the full faith, credit and taxing power of the issuer. Interest and principal on **revenue bonds** are backed by specific revenues of the underlying project that the bond proceeds are used to finance.

Municipals are subject to default, as evidenced by the \$2.25 billion failure of the Washington Public Power Supply System in 1983; the default by the City of Miami, Florida in late 1996; and defaults by health care providers in the late 1990s. This belies the widespread impression that municipals are somehow guaranteed and default-risk free. In fact, many of the nation's largest municipalities, such as New York City and Philadelphia, have come close to bankruptcy. Detroit did declare bankruptcy in 2013, the largest municipal filing in U.S. history by debt, estimated at \$18-20 billion dollars. *Exhibit 1* lists the categories for municipal bonds that are rated. However, given the diverse nature of state and local government units, many municipal securities are non-rated. In 2007-2014, many municipal borrowers in the auction-rate were forced to pay dramatically higher rates on their outstanding debt as investors and the investment banks that underwrote the securities refused to purchase them at auction. As such, some municipalities were forced to pay (annualized) rates as high as 17 percent and others faced default. The key point is that there are credit and liquidity risks with municipals.

The primary attraction of municipals is that the interest income is exempt from federal income taxes and usually from state and local taxes. Most states with state income taxes exempt investors from paying tax on municipal interest if the issuer is located in-state. Taxes are not exempt on interest paid by municipal borrowers located outside the state. The Tax Reform Act of 1986, however, altered each bank's federal income tax position in terms of its municipal investments by making borrowing costs nondeductible in certain cases. Unless a municipal meets specific criteria and qualifies as a small-issue, public-purpose bond, bank financing (carrying) costs associated with buying it

are nondeductible. For qualifying small-issue, public-purpose municipals, banks can deduct 80 percent of their associated financing costs.

From a bank's perspective, municipals can be divided into qualified and nonqualified securities, where the lost deductibility of interest effectively represents a tax on municipal interest. Because they cannot deduct any of their financing costs with nonqualified municipals, the tax is high. Therefore, only qualified municipals offer attractive after-tax yields.

Because the volume of qualified municipals was small, there were not enough of them to meet the tax shelter needs of all banks. As such, banks have reduced their holdings of municipals.

Corporate and Foreign Securities

Banks purchase a variety of corporate securities with most carrying short term maturities. The most common types include negotiable CDs and Eurodollar deposits of other banks, banker's acceptances and commercial paper. A banker's acceptance is a negotiable time draft that represents an order to pay a specified amount of money at a designated future date. It is used to finance imports and exports and is typically created when a bank accepts a draft drawn by an importer or exporter, which means that it guarantees it will remit the face value due at maturity.

Commercial paper is the short term, unsecured promissory notes of corporations. Because they are unsecured, these notes are issued by well-known firms with strong reputations and (presumably) low default risk. Banks also purchase long term corporate obligations, but in small amounts relative to other securities.

Banks invested relatively few funds in corporate or foreign securities until 1990. The recent interest reflects an increased search for yield as bank net interest margins have been under pressure from competitive loan pricing and the loss of tax-exempt interest from nonqualified municipals. In addition, the relative attractiveness of Treasury securities by foreign central banks has generally raised spreads on other securities versus Treasuries. Banks now purchase traditional corporate and foreign bonds as well as asset-backed securities, such as instruments backed by credit card loans, automobile loans, home equity loans and leases.

Some banks view corporate bonds as substitutes for direct business loans when they are having difficulty competing for loans in their local trade area. This category also includes mutual fund shares, which small banks occasionally buy.

Mortgage-Backed Securities

Many banks have recently substituted mortgage-backed securities for nonqualified municipals and Treasury securities in their investment portfolios. A mortgage is a pledge of real property to secure a debt. A mortgage borrower gets a loan to purchase a property that he or she then pledges as collateral in the event of default. Most residential mortgages are self-amortizing, with constant monthly principal and interest payments over the life of the loan. The term mortgage-backed security refers to a wide range of securities in which the underlying collateral is mortgages and mortgage payments are used to service the principal and interest obligations.

The most common mortgage-backed security is the **pass-through**. Such instruments are created when similar mortgages are pooled together and the originator sells certificates representing an undivided ownership interest in the pool. Investors receive a pro rata share of all interest and principal payments whether the payments are made as scheduled or are prepaid. Actual mortgage payments on the underlying mortgages are essentially "passed through" to investors, less a servicing fee. Mortgage-backed securities are closely linked with government housing agencies.

Ginnie Mae securities are backed by FHA and VA loans with the principal and interest guaranteed by the U.S. government. Thus, the holder of a Ginnie Mae pass-through assumes no credit risk.

Freddie Mac Participation Certificates may be backed by conventional mortgages or FHA and VA loans. They subsequently pay slightly higher yields to investors than Ginnie Maes.

Fannie Mae mortgage-backed securities are similarly backed by a combination of FHA, VA or conventional loans and thus are not direct obligations of the U.S. government. Yields are similarly above those on Ginnie Maes.

Collateralized Mortgage Obligations (CMOs) are issued by private financial institutions, such as banks, savings and loans, and securities firms, or government agencies and are backed by conventional mortgages. The securities are divided into classes, labeled *tranches*, each with a guaranteed final maturity. In the most basic type of CMO, principal payments on the underlying mortgages are dedicated first to the shortest maturity tranche. When that class of securities is retired, principal payments are allocated to the second maturity class, and so on. Thus, CMOs essentially create maturity

classes of securities rather than treating all mortgage-backed securities equally in terms of the timing of repayment and thus final maturity.

Banks have traditionally bought first or second tranche CMOs because their maturities are shorter and more predictable, such that there is less interest-rate risk. Of course, the promised yields on these high priority tranches are lower than yields on securities in the other tranches. While not discussed here, mortgage-backed securities, including CMOs, are subject to prepayment risk whereby an investor does not know precisely when all principal will be returned.

Money Market Securities as Investments

In addition to the above securities, banks purchase large amounts of money market instruments for investment purposes. In particular, banks sell federal funds and purchase securities under agreements to resell (reverse repos) which have maturities ranging from overnight to several weeks. They also purchase bankers' acceptances, commercial paper and other institutions' deposits in the form of CDs and Euros.

The attractiveness of money market instruments is that they are short term and thus tie up funds only temporarily. They all pay market rates of interest that change quickly when economic conditions change. Finally, there is a well-established secondary market in which the holder can sell the instrument to obtain cash quickly.

Different Types of Securities

Bullets: Non-callable/Non-putable securities with a stated final maturity and coupon rate. Most Treasuries and federal government agency securities are bullets.

Callables: Securities in which the issuer has the option (is allowed) to call the bonds and repay the outstanding principal at a predetermined value prior to final maturity.

Putables: Securities in which the investor has the option or right to redeem the bond (demand payment of principal) prior to final maturity.

INVESTMENT POLICY GUIDELINES

Every bank is required by the regulators to have a formal investment policy. Normally the asset and liability management committee in conjunction with the board of directors establishes investment policy guidelines. These guidelines indicate goals and constraints regarding the composition of securities, maturity structure, division between rating classes, the choice of securities to meet pledging requirements, and specific strategies for portfolio adjustments. The objective is to ensure that bank investments fit the overall mission and strategy.

In broad terms, an investment policy addresses:

- Basic objectives of the investment portfolio,
- Authority guidelines indicating who can transact, in which instruments, and in what amount,
- Credit guidelines indicating which firms a bank can conduct business with and quality standards for credit risk assumed,
- Composition guidelines regarding the maximum amount (position limits) invested in each type of security,
- Return objectives and whether managers will actively trade securities,
- Accounting considerations, and
- Safekeeping of securities.

Return Objectives

The policy statement normally indicates how much the securities portfolio is expected to contribute to overall return objectives. It will address how much taxable interest should be generated relative to tax-exempt interest as well as the costs and benefits of taking securities losses and gains. It will also indicate whether management should use total return when evaluating portfolio performance.

Portfolio Composition and Risk Profile

Policy guidelines directly address the desired size of the securities portfolio along with the bank's targeted liquidity risk, credit risk and interest-rate risk position. In particular, the guidelines indicate:

- The types of securities that can be purchased and the minimum percentage of the portfolio in each category,
- What credit ratings are acceptable,
- What maturities are preferred at various stages in the business cycle,
- Maximum allowable maturities,
- What securities should be pledged as collateral,
- What securities should be available for liquidity needs, and
- How large the portfolio should be.

Implementation and Review

A policy statement should specify which individuals may buy or sell securities and in what amounts. It defines whether decisions need to be authorized and/or reviewed by an investment committee or whether individuals have independent discretion. A policy should also establish procedures for monitoring performance and reporting requirements.

GENERAL PRICE-YIELD RELATIONSHIPS FOR FIXED INCOME SECURITIES

Investors should be aware of the mathematics of interest rates and implications regarding investment strategies. Consider the pricing of fixed income securities. The fundamental fact is that market interest rates and security prices move in the opposite direction. This can be readily demonstrated with the pricing of a three-month Treasury bill.

Assume that you purchased a three-month T-bill at a 4% discount rate and that the T-bill paid \$1 million at maturity. The entire return to an investor is in the form of price appreciation. The current price is calculated according to the following formula where the T-bill has 91 days to maturity.

$$\begin{aligned}\text{Price} &= \$1,000,000 - .04 (91/360) \$1,000,000 \\ &= \$ 989,989\end{aligned}$$

Because T-bills do not pay coupon interest, they are labeled discount instruments where all the interest (\$1,000,000 - \$989,989 in this example) is price appreciation. Thus, if held to maturity, the T-bill would generate \$10,011 in interest income over the 91 days.

Suppose that 31 days after purchase, you want to sell the T-bill because you need cash immediately. The T-bill has 60 days remaining to maturity. Even if the market rate on a 60-day T-bill is the same 2.5%, the T-bill's price would rise because interest has accrued over the 31 days.

$$\begin{aligned}\text{Price} &= \$1,000,000 - .04 (60/360) \$1,000,000 \\ &= \$ 993,333\end{aligned}$$

Now, suppose that immediately after you bought the T-bill, the general level of interest rates increased by one percent. With the same 91 days to maturity, the T-bill's price would decline from \$989,989 to \$987,361.

$$\begin{aligned}\text{Price} &= \$1,000,000 - .05 (91/360) \$1,000,000 \\ &= \$ 987,361\end{aligned}$$

This results because investors in "new" comparable T-bills could get a discount yield of 5%, so the yield on this old T-bill would have to increase to be competitive. Thus, its price falls immediately.

Suppose, instead, that the interest rate on a 91-day T-bill immediately fell to 3.5%. This 50 basis point decline (0.50%) in the discount rate is associated with an increase in the T-bill's price to \$991,153.

$$\begin{aligned}\text{Price} &= \$1,000,000 - .035 (91/360) \$1,000,000 \\ &= \$ 991,153\end{aligned}$$

The key point is that, ignoring any change in maturity, the T-bill's price falls when the market rate rises, while the T-bill's price rises when the market rate falls. Over time, however, the T-bill's price moves closer to its maturity value as interest accrues. This inverse price-yield relationship applies to par value coupon-bearing securities as well as discount instruments. The only difference is that with a coupon security interest is paid periodically (semiannually for most bonds) as a distinct cash flow and not in the form of price appreciation.

Relative Price Sensitivity Rules

The following general definitions and relationships apply to option-free coupon-bearing securities that carry fixed coupons. They are labeled straight fixed income instruments. The term option-free refers to the situation where the securities are not callable by the issuer, cannot be put back to the issuer by the investor and there is no prepayment risk. The coupon rate on a fixed income bond is defined as the coupon interest payment (annualized) divided by the bond's face value at maturity. Thus, if a bond pays \$10,000 at maturity

and \$400 in coupon interest every six months, the coupon rate is $\$400 \times 2$ divided by \$10,000, or 8%. This coupon and coupon rate are fixed over the life of the bond.

<u>Type of Bond</u>	<u>Market Yield versus Coupon Rate</u>
Par Bond	Yield = Coupon Rate
Discount Bond	Yield > Coupon Rate
Premium Bond	Yield < Coupon Rate

In the above example, if the market interest rate is initially 8%, the bond would be priced to equal \$10,000. If the market interest rate rises above 8%, the bond's price would fall below \$10,000 and the bond is a discount (from par or maturity value) bond. If the market interest rate falls below 8%, the bond's price would rise above \$10,000 and the bond is a premium bond.

- For a given change in market interest rates, the percentage increase in a bond's price will exceed the percentage decrease.

Using the previous example, assume that the market interest rate is either 9% (discount bond) or alternatively, seven percent (premium bond). The percentage increase in price when rates fall to seven percent will exceed the percentage decrease in price when rates rise to nine percent.

- Short term and long term bonds exhibit different price volatility. For bonds that pay the same coupon rate, long term bonds change proportionately more in price than short term bonds for a given change in interest rates.

Suppose that you currently own two \$10,000 par bonds priced to yield 8%. One has a two-year maturity while the other has a year maturity. If the market rate on both bonds rises to nine percent, the percentage decrease in the price of the year bond will exceed the percentage decrease in the two-year bond. The same holds for the case where interest rates fall as the price of the year bond will exceed the price of the two-year bond (will rise proportionately more) when the rate change is identical.

- High coupon rate and low coupon rate bonds of the same maturity exhibit different price volatility. The low coupon bond is more price volatile.

Suppose that you own two \$10,000 par value bonds, both with five years remaining to maturity. One carries a six percent coupon while the other carries an eight percent coupon. The lower coupon (6%) bond exhibits greater price volatility when rates rise and when rates fall. This means that while both prices will either rise or fall when rates change, the six percent bond will change proportionately more in price.

Total Return

Some banks have moved to making investment decisions based on total return analysis. Conceptually, this involves recognizing that management may not simply buy and hold securities but may actively trade them. As such, they might choose to sell securities prior to maturity to take advantage of potential earning opportunities.

Total return analysis applied to fixed-income securities recognizes that an investor generates a return from buying a security in three ways. First, an investor receives coupon interest. It may then reinvest this coupon interest and any principal received, which constitutes the second form of return. The third is the principal amount received at maturity or the sale value if the security is sold prior to maturity.

Total return components:

- Coupon interest
- Reinvestment income (interest-on-interest)
- Principal at maturity or sale price prior to maturity

Banks should calculate their expected total return and compare it among alternatives when they make portfolio decisions. This analysis provides a better sense of the exposure the bank might have to changing interest rates. It is especially valuable when a security has embedded options, as is the case with mortgage-related securities and callable bonds.

COMPARATIVE YIELDS ON TAXABLE AND MUNICIPAL SECURITIES

Qualified Versus Nonqualified Municipals

Prior to 1983, commercial banks could borrow funds, invest the proceeds in municipals, and still deduct the full amount of their interest expense. In 1983 Congress revised the tax law to allow banks to deduct just a fraction of the interest expense associated with the purchase of new municipals. The Tax Reform Act of 1986 revised the tax law further to eliminate all interest deductions associated with the purchase of nonqualified municipals. Banks can still deduct 80 percent of the carrying costs for qualified municipals.

The American Reinvestment and Recovery Act of 2009 was signed into law on February 17, 2009. "ARRA" provided several new financing options designed for schools and municipalities. The programs were designed to provide stimulus to the economy as well as provide valuable assistance to schools and municipalities. This act provided two important new financing alternatives, the taxable bond option (Build America Bonds (BAB's) and Qualified School Construction Bonds. The taxable BAB's are attractive to the school district or municipality because they receive a direct subsidy from the government to pay the interest. Issuers were required to issue this type of debt in 2009-2010. One other important aspect of the "ARRA" was that it raised the issuance limit per year for the issue to be bank qualified (BQ). The issuance limit on bank qualified tax-exempt bonds was temporarily increased from \$10-\$30 million for the bonds issued in 2009 and 2010.

After-Tax Yield Effects

The lost interest deduction for banks on municipal investments essentially represents a tax on municipal interest income. Only when banks buy tax-exempt municipals do they lose a deduction, so the increased tax due can be viewed as lost interest income.

A bank's effective tax rate against municipal interest (tb) can be expressed as the product of the bank's pooled interest cost of debt (c), the corporate income tax rate (tc), and the fraction (z) of lost interest deductibility divided by the pretax yield on the underlying municipal security.

$$\text{effective bank tax rate (tb)} = \frac{(\text{tc})(z)(c)}{\text{municipal interest rate}}$$

If state and local income taxes apply, the rate can be added to tb. Note that z takes on a value of 0.20 for qualified municipals and 1.00 for nonqualified municipals.

If we let:

Rt = pretax rate on a taxable security

Rm = pretax rate on a municipal security

the after-tax yield comparison between comparable maturity and risk taxable and municipal securities is:

$$\begin{array}{l} > \\ R_t (1 - t_c) = R_m (1 - t_b) \\ < \end{array}$$

For example, suppose a bank-qualified municipal carries a pretax yield of eight percent, while a taxable security of comparable risk pays 10.2 percent; the corporate tax rate (tc) equals 34 percent; z equals 20 percent; and your bank's pooled cost of funds (c) equals six percent. No state and local taxes apply. The effective bank tax rate (tb) on municipal interest is:

$$tb = \frac{(.34)(.20)(.06)}{.08} = .051$$

The after-tax yield comparison is:

$$\begin{array}{rcl} 10.2\% (1 - .34) & < & 8\% (1 - .051) \\ 6.73\% & < & 7.59\% \end{array}$$

For qualified municipals, $R_t (1 - tc) < R_m (1 - tb)$ because the effective bank tax rate on municipal interest is low with $z = 0.2$. Thus banks still find that qualified municipals yield more than comparable taxable securities. Unfortunately, it is often difficult to find qualified municipals from known borrowers because the volume of issues is small. The heavy bank interest in qualifieds also drives their yields lower relative to other municipals and taxable securities. For nonqualified municipals, $R_t (1 - tc) > R_m (1 - tb)$ because tb is large and nonqualified yields have not increased enough to offset the high tax rate.

THE INTEREST RATE ENVIRONMENT

In order to implement investment strategies, portfolio managers must understand the interest rate environment. This includes knowledge about the relationship between long- and short term yields, general movements in the level of interest rates and changing yield spreads between different risk classes of securities.

Yield Curves

A yield curve shows the comparative yields (market interest rates) available to investors on similar securities that differ only in terms of maturity. It is represented by a two-dimensional graph where yields appear on the vertical axis and number of years to maturity appears on the horizontal axis. A Treasury security yield curve, for example, compares market interest rates on different maturity Treasuries at the same point in time.

Treasury rates were at all-time lows during 2008, occasionally going negative. There was a huge premium on the return of money along with tremendous liquidity in the marketplace. On December 2, 2008, the National Bureau of Economic Research (NBER) declared that the United States was officially in a recession. This recession began in December 2007. This was after 11 months of layoffs, home foreclosures and bank failures. It took several years for the economy to begin to slowly recover.

In early 2019, the United States was in a period of economic growth (albeit very slow) and the Federal Reserve was raising rates in a very conservative manner. In 2020, the coronavirus/COVID-19 pandemic caused complete economic upheaval and the Federal Reserve immediately lowered rates in response. Some treasury rates went negative for the first time since the Great Recession. In early 2022, many factors contributed to inflation in the United States, and the Federal Reserve started to take action by steadily raising interest rates once again. In March 2024, the Federal Funds rate was 5.25-5.50, but seeing signs of economic stabilization, the Federal Reserve started dropping rates slowly in mid-2024. As of this printing in March 2026, the rate is 3.50-3.75.

In general, there are three shapes that the yield curve takes: upward sloping, downward sloping, and flat.

An **upward (or normal) sloping yield curve** shows that market yields increase with maturity. Thus long term yields exceed short term yields. This type of yield curve is usually found in the latter stages of an economic contraction, a recession, or the early stages of recovery.

A **downward sloping (inverted) yield curve** shows that market yields decrease with maturity. Thus long term yields are lower than shorter-term yields. This type of yield curve is usually found during the latter stages of economic expansion, when loan demand is strong and inflation is rising. It also appears when the economy initially begins to contract.

A **flat yield curve** indicates that market yields are virtually identical regardless of maturity. It typically appears briefly during transition periods between contraction and expansion. Often, there is a slight "hump" in short term yields that rise over very short intervals before long term yields decline.

An upsloping yield curve typically represents an expanding economy. The United States has been in a period of extremely low rates in historical terms since 2008. However, the Federal Reserve started raising rates in early 2022 to combat inflation.

An upsloping shape may, in fact, reflect a variety of conflicting explanations. The key question has been to understand why long term rates did not increase along with short term rates with the Federal Reserve's tightening during the Great Recession. The longest maturity rates were relatively low because inflation expectations were low over the long term. Given the aging population and significant investments by pension funds and insurance companies, the demand for high quality long term bonds has been strong. Such demand puts downward pressure on long term rates. Similarly, foreign investors, primarily Asian central banks, were buying substantial portions of long term U.S. debt during this period in response to substantive cash flows arising from budget surpluses. One argument is that this extraordinary demand for long bonds drove long term rates artificially low.

Bank investment portfolio managers use Treasury yield curves as a guide to consensus forecasts of movements in the general level of interest rates. Many managers use the information to time changes in the maturity structure of a bank's securities portfolio to increase interest income and potentially realize capital gains.

In addition, Treasury yields are used as an input to the pricing of non-Treasury securities. For example, other security yields are often negotiated as the comparable Treasury yield plus some fraction, such as 0.25 percent to 2.50 percent. *Exhibit 5* lists some other key interest rates as of March 23, 2026.

These low-rate levels, even after over a decade, reflect a flight to quality following serious problems in sub-prime mortgage lending. During 2007-2008 several mortgage lenders filed for bankruptcy and numerous others reported significant losses and saw their stock prices collapse to single digits. Many banks and investment banks that purchased mortgage-backed securities, collateralized debt obligations, and other asset-backed securities reported significant losses within their portfolios that produced sharp losses overall. Many of the largest banks were forced to raise external capital and cut their dividends. Consider the following list of institutions that reported large losses and capital problems in 2007 -2008: Citigroup, Merrill Lynch, Wachovia, UBS, etc. Of course, Bear Stearns effectively failed in early 2008 and the Federal Reserve helped bail out the firm's creditors and counterparties as it authorized J.P. Morgan Chase to take control of the firm.

Expectations Theory

According to the **expectations theory** of yield curves, the shape of the yield curve reflects market participants' average forecast of future interest rates.

- Yield curves slope upward when market participants expect short term interest rates to increase.
- Yield curves slope downward when market participants expect short term interest rates to decrease.
- A flat yield curve indicates that market participants expect yields to remain relatively constant.

Under the expectations theory, the different shapes suggest widely different rate expectations. The Treasury yield curve has been consistently upsloping since 1990, but the level of interest rates has generally fallen. Thus, even though the expectations theory would have suggested that interest rates would rise given the upsloping shape, rates have declined. The important point is that expectations are not always realized, particularly in the short run.

A diagram of the current yield curve appears daily in the *Wall Street Journal* or can be found on the internet at any number of financial web sites. Data for *Exhibit 4* is taken from the Bloomberg.com web site. Examine recent data to determine the shape of the prevailing Treasury yield curve. Did the December, 2024 yield curve accurately forecast near-term rate movements going forward?

Market Segmentation

Alternatively, yield curves may reflect the fact that market participants concentrate their borrowing or lending only at selected maturities. From this point of view, the shape of the yield curve indicates whether borrowing or lending pressure is greatest at different maturities. Securities are essentially traded in **segmented markets** where participants are restricted to specific maturities because of legal requirements or risk management preferences. For example, commercial banks focus their investments in short term securities because they have short term liabilities. This enables them to better balance the interest rate sensitivity of their assets and liabilities.

- Yield curves slope upward when lending pressure is greater relative to borrowing activity at short term maturities than longer-term maturities.
- Yield curves slope downward when lending pressure is greater relative to borrowing activity at long term maturities than shorter-term maturities.

- Yield curves are flat when relative lending and borrowing activity is comparable at all maturities.

Many analysts claim that the yield curve for municipal securities is determined by market segmentation. *Exhibit 6* presents the summary of terms for the pricing of \$30 million of general obligation bonds issued by the Sequoia Union High School District. Of the \$30 million, \$8,650,000 was term bonds with a fixed 29-year maturity. The shorter-term securities were serial bonds that matured anywhere from one to 25 years. Note that the bonds carried a call option in that the issuer (Sequoia Union High) could call the bonds (prepay them prior to final maturity) at its discretion.

Examine the interest rate data for these serial bonds. As maturity lengthens, the yield, or market interest rate, increases. For example, the one-year security paid a seven percent coupon, but was priced to yield just two percent. At each successive maturity the market yield increased through the 29-year maturity term bonds which were priced to yield 5.21 percent. Thus, the municipal yield curve for this security was upsloping.

In general, the municipal yield curve has been upsloping regardless of the shape of the Treasury yield curve. Long term municipal rates virtually always exceed short term municipal rates. Most analysts attribute this to market segmentation, whereby municipal investors have a strict preference for short term securities. States and municipalities, in contrast, can only issue long term securities to finance capital expenditures.

INTEREST RATES AND THE BUSINESS CYCLE

Most analysts believe that both the level of interest rates and aggregate economic growth vary systematically over time. Interest rates tend to rise when total spending rises and to fall when total spending falls. In other words, interest rates follow a pattern relative to changes in real gross domestic product (GDP).

Exhibit 7 summarizes the relationship by tracking general changes in the levels of short term and long term interest rates over the business cycle. If the economy follows a cycle, expansionary periods are followed by contractionary periods until a recession appears. As indicated, the Federal Reserve then stimulates a recovery by adding reserves and liquidity to the financial system to spur lending and investment. The economy recovers and reenters an expansionary period.

Interest rates generally rise during expansion periods because consumers increase spending and businesses must expand production to maintain inventories and meet demand. Thus, loan demand increases. If the Federal Reserve is concerned about inflation, it slows the rate of growth in the money supply so interest rates rise. After an economic peak, consumer spending declines because rates are high and individuals cannot take on more debt without substantial risk. Businesses start to accumulate excess inventory so they reduce their loan demand. Concerned about a recession, the Federal Reserve may then increase money growth so rates fall.

Note that according to this chart, once the yield curve inverts, a recession follows. This generally reflects what happens in the U.S. economy as the U.S. generally experiences a recession 12 to 20 months after the yield curve first inverts. In fact, many economists view the first shift to an inverted yield curve as an indicator that a U.S. recession is soon forthcoming. The Federal Reserve also monitors the shape of the yield curve to determine the state of the economy and help define the appropriate monetary policy.

An inverted yield curve usually persists for only a short time ranging from six months to a year. As economic activity declines, the yield curve assumes its normal, upward sloping shape. Growth periods, in contrast, persist for much longer periods. Thus, during the Reagan Administration and Clinton Administration the U.S. experienced the longest peacetime expansions in history.

Trading Strategies and the Business Cycle

Portfolio managers who trade securities actively often try to time investment purchases relative to the business cycle. With an objective of maximizing yield and total return, they try to buy long term securities when rates are at cyclical peaks and buy short term securities when rates are at cyclical lows.

Consider the pattern of yields implied by the figures in *Exhibit 8*. Once the yield curve inverts, the U.S. economy has moved into a recession within approximately 20 months. An aggressive investor might try to time security purchase to correspond to this signal. Specifically, once the yield curve inverts, the investor would consider substituting securities for loans to reduce default risk because loans will deteriorate in quality when the economy moves into recession. The investor would similarly buy long term securities in an attempt to lock-in yields and high coupon interest rates before rates move lower as the economy slows down.

If rates follow the pattern indicated, the securities will appreciate in value and could be sold later for a gain if the bank didn't want to keep the risk of owning

long term securities. Of course, the cost of this strategy is that long term securities are more price volatile than short term securities. If rates rise and remain high, the bank will own securities with market values below cost. Also, at the time that rates rise and the yield curve inverts, loan demand is strong. A bank that substitutes securities for loans has to restrict loan growth by telling loan customers that they will not receive the credit they want. This leads to obvious problems with customer-borrower relationships.

ISSUES IN BANK INVESTMENTS

Total Return Analysis

An increasingly popular approach to making investment decisions follows from total return analysis. Total return analysis recognizes that investors often sell securities prior to maturity that securities carry embedded options that affect value, and that reinvestment risk is a critical component of determining the true realized yield from an investment. In general, total return analysis calculates a yield from the estimated contribution of coupon interest received, interest-on-interest (reinvestment income), and the value of the security at maturity or sale. It allows the holder to estimate the impact of embedded options risk (from securities being called, from yields subject to a cap, etc.) on the realized yield and thus the costs and/or benefits of buying the instrument.

Securities with Embedded Options

Many of the securities that banks buy have embedded options that make pricing a security difficult and may substantially alter the actual cash that a bank receives. Thus, the securities are generally riskier than securities without options, such as Treasury bills and non-callable Treasury bonds. The most common embedded options are call options on federal agency securities and some municipals and the option that mortgage borrowers have to refinance their outstanding mortgages.

A call option gives the borrower, typically a federal agency, state and local government, or mortgage borrower, the right to repay outstanding principal prior to maturity of the security. Non-mortgage contracts typically have set call dates. Even though a security is originally sold with a fixed coupon rate and final maturity, if rates on comparable newly-issued securities fall enough, the borrower may prepay because cheaper financing is available and the bank as an investor in the security gets its principal back earlier than anticipated. In this case, the bank would have to reinvest the principal at lower rates. The

Sequoia Union High School bond summarized in *Exhibit 6* is such a callable bond.

The same holds when mortgages prepay. A bank as an investor receives the principal back earlier than anticipated and generally can invest the proceeds in similar securities only at lower rates. The uncertainty associated with this prepayment risk makes it difficult to determine fair value on these securities because banks must value the embedded options. Of course, investors demand a higher promised yield to compensate them for accepting the risk. With a decline in rates, many banks find that issuers call bonds so that they lose high coupon interest-bearing securities and need to replace them with lower yielding securities.

Securities Issued by Government-Sponsored Enterprises (GSEs)

During 2003-2006, Congress investigated the financial performance of both Fannie Mae and Freddie Mac. The concern was that both entities were reporting information that was misleading to investors and the regulatory authorities. In fact, both entities revealed that they had misstated earnings during the prior year or years. Freddie Mac, in particular, had underreported profits by an astounding \$4.1 billion while Fannie Mae restated profits by over \$12 billion over this period. Things did not improve significantly as both firms reported large losses in 2007 and early 2008.

On September 7, 2008, Fannie Mae and Freddie Mac were placed into conservatorship run by the FHFA (Federal Housing Finance Agency), which was created by the Federal Housing Finance Regulatory Reform Act of 2008. The Federal Reserve and Treasury Dept. also took steps to improve the liquidity of Fannie Mae and Freddie Mac.

Many commercial banks in the United States owned Freddie and Fannie preferred shares. Those shares had their dividends suspended and were considered junior to the senior preferred stock issued to the Treasury in the restructuring of the two companies. The market value of the preferred shares plunged after the restructuring announcement and suspension of dividends. Banks were required to write down the value of Freddie and Fannie preferred stock held in their portfolios, compounding capitalization concerns for certain U.S. banks.

However, in 2012-2017, the housing recovery helped both entities turn record profits. After their December, 2017 dividend payments, taxpayers had received \$278 billion for their support, \$90.5 billion more than the \$187.5 billion provided in bailout funds the two companies needed after being seized by the government in 2008.

Both were boosted by an agreement (amended several times) between the Federal Housing Finance Agency and the Secretary of the Treasury that allowed Freddie Mac and Fannie Mae to retain their earnings and build capital. Because of this agreement, Freddie and Fannie are not currently paying dividends to the U.S. Treasury.

While both Freddie Mac and Fannie Mae have continued to increase in net worth over the nearly 15 year conservatorship, the late 2022 housing downturn cut significantly into their net income, and both remain undercapitalized. There is no official indication that there are any immediate plans for Freddie Mac and Fannie Mae to leave conservatorship.

SUMMARY

1. The basic objectives of a bank's investment portfolio are to provide income, meet liquidity requirements, diversify credit risk, satisfy pledging requirements, and assist in balancing the interest-rate risk profile of the entire balance sheet.
2. Bank investments fulfill two potential functions. Large banks manage trading accounts in which they offer investment advice, make a market in government securities, and speculatively trade securities to take advantage of anticipated interest rate changes. All banks also own securities for income and risk management purposes.
3. Different securities involve different amounts of credit risk, liquidity risk, purchasing power risk, and interest-rate risk. Securities that are classified as held-to-maturity can generally not be sold prior to maturity and are illiquid regardless of their risk and return features.
4. Most bank investments are concentrated in U.S. Treasury securities, federal agency securities including mortgage-backed securities, tax-exempt state and local government (municipal) securities, and corporate or foreign securities. The relative importance of state and local government securities is declining, while banks are systematically shifting into mortgage-backed securities.
5. Mortgage-backed securities are subject to prepayment risk. To reduce this risk and the uncertainty about when principal will be returned, banks often buy bonds in the first tranche of a collateralized mortgage obligation.

6. For fixed income securities, interest rates and bond prices vary inversely. If market interest rates rise, security prices fall and vice versa. In general, low coupon and long maturity securities are more price volatile than high coupon, short maturity securities.
7. The Tax Reform Act of 1986 differentiated between qualified and nonqualified state and local government securities by eliminating bank deductions for carrying costs associated with the purchase of nonqualified municipals. This lowered the after-tax yield on nonqualified municipals below that on comparable risk taxable securities. Banks thus currently purchase only qualified municipals.
8. A yield curve shows the relationship between market interest rates and maturity on securities that differ only in terms of maturity. Yield curves take three basic shapes: upward sloping, downward sloping, and flat. The shape of the yield curve is potentially influenced by interest rate expectations and market segmentation.
9. The level of interest rates typically follows the business cycle, rising during expansionary periods and falling during contractionary periods. Investment managers that actively trade their portfolios often try to time their purchases and sales in line with expected decreases and increases in interest rates.
10. Many banks, particularly large commercial and investment banks, have realized significant losses from securities holdings in recent years, largely reflecting problems with sub-prime mortgages and related mortgage-backed and other asset-backed securities. Forced write-downs of security values have led to cuts in dividends and required raising of capital from external sources.

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Exhibit 1 RATING CLASSIFICATIONS

Corporate and Municipal Bonds

	Standard & <u>Poor's</u>^a	<u>Moody's</u>^a	<u>Description</u>
<i>Investment Grade</i>			
	AAA	Aaa	Highest quality
	AA	Aa	High quality, slightly more risk than top rating
	A	A-1, A	Upper-medium grade, possible future impairment
	BBB	Baa	Medium grade, lacks outstanding investment characteristics
<i>Noninvestment Grade</i>			
	BB	Ba	Some speculative characteristics
	B	B	Highly speculative, small assurance of interest and principal payments
	CCC	Caa	Low quality, probable default
	CC	Ca	Low quality, poor prospect of attaining investment standing
	C, D	C	Lowest quality, in default

Municipal Notes and Commercial Paper

Standard & Poor's Commercial Paper	Moody's Commercial Paper	Moody's Notes	Description
A-1+	P-1	MIG 1	Highest quality
A-1	P-1	MIG 2	High quality
A-2	P-2	MIG 3	Strong degree of safety
A-3	P-3	MIG 4	Satisfactory degree of safety

^aStandard & Poor's ratings within each category may also be assigned relative rankings within each class denoted by a plus, representing highest quality, or a minus, representing lowest quality. Moody's attaches a numerical value from 1 to 3 with a similar interpretation.

Exhibit 2

Z.1, March 19, 2026

F.111 U.S.-chartered depository institutions

Billions of dollars; quarterly figures are seasonally adjusted annual rates

			2023	2024	2025	2024:Q4	2025:Q1	2025:Q2	2025:Q3	2025:Q4
1	FA766000105	Gross saving less net capital transfers paid	107.6	117.9	126.4	126.5	133.3	124.5	129.2	118.7
2	FA765013005	Fixed nonresidential investment	74.2	82.8	106.4	89.6	98.4	102.7	110.5	114.1
3	FA764090005	Net acquisition of financial assets	194.9	246.7	815.2	-107.9	1515.4	965.3	280.5	499.6
4	FA764010005	Interbank assets	316.6	-160.9	-72.9	-2.5	243.1	-506.9	-261.8	234.1
5	FA763013005	Reserves at Federal Reserve	360.7	-143.5	-152.1	185.5	-17.9	-349.7	-395.3	154.6
6	FA754112205	Due from domestic banks	3.6	2.8	1.7	9.1	24.2	7.3	-24.8	0.2
7	FA764016005	Due from rest of the world	-47.6	-20.1	77.5	-197.1	236.7	-164.5	158.3	79.3
8	FA763025000	Currency (vault cash)	-2.9	2.7	-0.9	7.8	-12.4	-2.9	9.5	2.2
9	FA403197033	Other deposits (FHLB deposits)	2.8	1.2	1.7	1.6	0.8	8.2	-3.7	1.5
10	FA762050005	Federal funds and security repos	-9.2	16.1	40.4	-102.1	46.3	165.0	-131.8	82.2
11	FA764022005	Debt securities	-386.7	99.5	131.0	-83.4	397.0	237.3	218.4	-328.8
12	FA763069175	Open market paper	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	FA763061100	Treasury securities	-90.1	194.3	178.7	302.9	-17.6	345.2	331.1	55.9
14	FA763061705	Agency- and GSE-backed securities	-165.0	-9.0	-36.5	-21.1	105.0	-49.7	-75.5	-125.8
15	FA763061805	Residential mortgage pass-through securities	-57.7	-15.7	-49.2	-14.9	37.7	-70.6	-78.9	-84.9
16	FA763061503	Commercial mortgage pass-through securities	-6.6	17.1	17.3	40.5	25.2	6.9	16.3	20.9
17	FA763061603	Residential CMOs and other structured MBS	-58.1	24.4	22.9	19.3	60.6	32.6	22.9	-24.7
18	FA763061403	Commercial CMOs and other structured MBS	-20.6	-15.4	-4.0	-42.0	2.6	-4.5	-13.4	-0.8
19	FA763061795	Other	-22.1	-19.4	-23.5	-24.0	-21.1	-14.2	-22.5	-36.2
20	FA763062005	Municipal securities	-57.2	-35.9	-22.1	-53.0	-4.5	-5.9	-13.0	-64.8
21	FA763063005	Corporate and foreign bonds	-74.3	-50.0	10.9	-312.3	314.1	-52.2	-24.2	-194.1
22	FA763063673	Private residential mortgage pass-through securities	-1.8	-0.3	0.3	-0.9	0.3	0.3	0.1	0.7
23	FA763063653	Private commercial mortgage pass-through securities	-0.1	0.0	-0.0	0.4	0.1	-0.5	-0.1	0.3
24	FA763063663	Private residential CMOs and other structured MBS	-3.7	-4.9	-4.4	0.3	-6.0	-1.1	-7.6	-3.0
25	FA763063693	Private commercial CMOs and other structured MBS	-2.6	-5.5	-6.2	-6.4	-4.4	-4.3	-8.3	-7.9
26	FA763063095	Other	-66.0	-39.3	21.3	-305.6	324.2	-46.7	-8.3	-184.2
27	FA764023005	Loans	284.6	283.7	665.7	387.1	425.8	817.2	513.2	906.6
28	FA763068005	Depository institution loans n.e.c.	1.3	151.5	461.6	247.7	338.6	594.7	321.7	591.4
29	FA763069005	Other loans and advances	5.1	6.6	3.0	2.6	10.5	6.3	-8.9	4.0
30	FA763065005	Mortgages	206.7	78.4	126.2	24.9	48.3	151.4	136.0	169.0
31	FA763066005	Consumer credit	71.4	47.3	75.0	111.9	28.4	64.8	64.5	142.2
32	FA763092305	U.S. direct investment abroad: intercompany debt	1.8	-0.3	-1.7	7.0	5.0	-10.3	1.5	-2.7
33	FA763064103	Corporate equities	2.5	11.7	3.6	-1.6	0.5	-2.2	5.5	10.8
34	FA763092100	U.S. direct investment abroad: equity	-2.5	8.0	12.0	16.8	11.3	25.1	-11.5	22.9
35	FA763094905	Miscellaneous other equity	1.1	-3.0	-0.6	-1.2	-6.4	11.8	-8.9	1.1
36	FA763064203	Mutual fund shares	-1.0	-0.6	1.4	4.0	7.7	2.8	2.1	-7.1
37	FA763040005	Life insurance reserves	-2.0	4.3	6.2	3.8	5.2	6.8	6.3	6.4
38	FA763090005	Miscellaneous assets	-10.1	-15.8	29.4	-345.2	391.6	213.5	-58.1	-429.5
39	FA764194005	Net increase in liabilities and equity	248.9	322.6	855.9	165.7	1110.6	1258.1	178.0	877.1
40	FA764190005	Net increase in liabilities	147.4	219.4	684.4	228.1	915.3	1001.3	27.2	793.7
41	FA764110005	Interbank liabilities	204.8	-149.4	33.6	-67.6	89.0	-174.5	6.6	213.2
42	FA713022003	Federal Reserve float	-0.0	-0.5	-0.0	-1.6	1.6	0.1	-0.1	-1.7
43	FA713068715	Borrowing from Federal Reserve banks	125.0	-125.4	1.0	-285.4	-19.6	19.5	-1.8	6.1
44	FA764112205	Due to domestic banks	9.6	11.3	0.3	95.9	92.0	-231.3	58.6	81.9
45	FA764116005	Due to rest of the world	70.2	-34.8	32.2	123.6	15.0	37.3	-50.1	126.8
46	FA763127005	Checkable deposits	-240.1	501.3	1327.4	652.9	522.3	721.6	144.2	3921.4
47	FA763130005	Time and savings deposits	-154.8	-74.5	-648.6	-316.4	243.1	270.8	101.6	-3209.8
48	FA762150005	Federal funds and security repos	59.0	17.6	15.7	-88.7	57.2	195.5	-122.9	-67.2
49	FA764122005	Debt securities	-3.7	-27.4	16.4	-128.4	97.2	173.1	-89.9	-114.9
50	FA763169175	Open market paper	1.7	-12.4	11.8	-62.1	48.0	98.2	-40.8	-58.1
51	FA763163005	Corporate bonds	-5.5	-15.0	4.5	-66.3	49.1	74.9	-49.1	-56.8
52	FA763169305	Loans (other loans and advances)	-27.1	-81.1	-69.7	-52.4	-31.2	-3.7	-184.9	-58.8
53	FA763178000	Taxes payable (net)	26.4	4.6	23.1	-66.2	-17.4	28.6	79.5	1.8
54	FA763190005	Miscellaneous liabilities	283.0	28.4	-13.4	294.9	-44.8	-210.0	92.9	108.1
55	FA763194705	Other investment by holding company parents	67.2	2.0	-3.8	-50.7	24.9	-75.8	36.0	-0.4
56	FA763193005	Other	215.8	26.4	-9.6	345.6	-69.7	-134.2	56.9	108.5
57	FA763181105	Net equity issues	101.6	103.2	171.6	-62.5	195.3	256.7	150.8	83.4
58	FA763164105	Corporate equities	-8.5	-12.5	-0.6	10.0	-13.3	2.2	2.7	6.0
59	FA763194603	Equity investment by holding company parents	110.1	115.7	172.2	-72.5	208.6	254.5	148.1	77.4
60	FA767005005	Discrepancy	87.3	111.0	60.8	310.4	-369.9	314.6	-83.8	382.1
Memo:										
61	FA763066303	Consumer leases not included above ¹	-1.0	0.9	0.2	1.2	0.6	0.1	0.1	0.2
62	FA763139105	Uninsured deposits ²	-916.5	392.1	520.1	836.2	146.1	714.2	341.0	879.2
1. Receivables from operating leases, such as consumer automobile leases, are booked as current income when payments are received and are not included in financial assets (or household liabilities). The leased automobile is a nonfinancial asset; depreciation is included in line 1, and fixed investment is included in line 2.										
2. Includes checkable deposits (line 41) and time and savings deposits (line 47) not insured by the Federal Deposit Insurance Corporation.										

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Source: Flow-of-Funds Accounts of the U.S., Board of Governors of the Federal Reserve System

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Exhibit 3

A BOND MARKET PRIMER

Type of Bond	Minimum	Maturity	Pros	Cons
AGENCY Issues by federal agencies; the most popular of these are mortgage-backed securities	\$1,000	30 days to 20 years	Higher yields than Treasury bonds; backed by explicit or implied government guarantees	Bonds pay semi-annual coupons; monthly payments on mortgage-backed securities combine interest and return of principal; fully taxable; if underlying mortgages are prepaid, you get your money back early and must reinvest at lower rates
CONVERTIBLES Corporate bonds that can be converted into stock	\$1,000	Varies	Can collect bond interest; if stock of company rises, you can switch bond to stock	Don't make as much return as with a straight bond; callable
CORPORATE Debt issued by companies to raise capital; includes high-yield, low-rated, junk bonds	\$1,000	1 to 20 years	Higher yields than Treasuries	Taxable; often callable after 5 to 10 years; may be hard to sell in secondary market; risk of default or reduction in credit rating
MUNICIPALS Issued by cities and states for schools, roads, etc.	\$5,000	One month to 30 years	Income exempt from federal taxes -- often state and city taxes, too; may be insured	Risk of default or reduction in credit rating; may be hard to sell in secondary market; callable
TREASURIES Loans to the federal government that are backed by its full faith, credit, and taxing authority	\$10,000 for bills; \$1,000 for notes, bonds	T-bills: 3 months to 1 year; T-notes: 2-10 years; T-bonds: over 10 years	Completely safe, highly liquid, usually not callable; exempt from city and state taxes; can buy direct from a Federal Reserve bank and avoid broker fee; interest is exempt from state income tax	Lower yields than other bonds of like maturity; subject to federal income tax
ZERO COUPONS Bonds sold at a deep discount to par that pay interest only at maturity	Varies	6 months to 30 years	You can plan to receive a large fixed amount at a specific time in the future (to pay for college, for example)	Have to pay yearly taxes on interest even though you don't get it; hard to sell in secondary market; some are callable

IMPORTANT TERMINOLOGY

CALL – A provision that allows the issuer to redeem a bond before the stated maturity on a given call date, ranging from one month to 20 years after issue. Issuers call bonds if interest rates fall and they can borrow money more cheaply. Such bonds are labeled “callable.”

COUPON – A bond's percentage yield at face value, or par, usually paid out semi-annually. For example, if the bond has a \$1,000 face value and pays out \$70 a year in interest, the coupon rate is 7%.

CURRENT YIELD – The annual interest payout divided by the price of the bond. If the 7% bond is selling for \$1,200, you would divide the \$70 a year in interest by \$1,200, for a current yield of 5.8%.

DISCOUNT – The amount below par a bond will sell for if it loses value in the secondary market.

MATURITY – Date on which the loan becomes due and you get paid the face value of the bond.

PREMIUM – The amount above par a bond will fetch if it gains value in the resale market.

Exhibit 4

TREASURY DATA FOR MARCH 23, 2026

U.S. Treasury Data

Source: Bloomberg.com

NAME	COUPON	PRICE	YIELD	1 MONTH	1 YEAR
3 Month	0.00	3.62	3.70%	+4	-5
6 Month	0.00	3.62	3.74%	+11	-4
12 Month	0.00	3.61	3.76%	+27	-2
2 Year	3.38	99.12	3.85%	+42	---
5 Year	3.50	97.89	3.97%	+39	---
10 Year	4.13	98.19	4.35%	+31	+1
30 Year	4.75	97.39	4.92%	+22	+3

Exhibit 5

Investments

FEDERAL RESERVE STATISTICAL RELEASE
As of March 20, 2026

H.15 SELECTED INTEREST RATES (Yields in percent per annum)

Instruments	2026 Mar 13	2026 Mar 16	2026 Mar 17	2026 Mar 18	2026 Mar 19
Federal funds (effective) 1 2 3	3.64	3.64	3.64	3.64	3.64
Commercial Paper 3 4 5 6					
Nonfinancial					
1-month	3.72	3.75	3.76	3.76	3.75
2-month	3.74	3.75	3.78	3.78	3.75
3-month	3.77	3.75	3.78	3.79	3.75
Financial					
1-month	n.a.	n.a.	n.a.	n.a.	n.a.
2-month	n.a.	n.a.	3.70	3.65	n.a.
3-month	n.a.	3.75	3.73	3.66	n.a.
Bank prime loan 2 3 7	6.75	6.75	6.75	6.75	6.75
Discount window primary credit 2 8	3.75	3.75	3.75	3.75	3.75
U.S. government securities					
Treasury bills (secondary market) 3 4					
4-week	3.64	3.65	3.64	3.63	3.63
3-month	3.61	3.61	3.61	3.62	3.62
6-month	3.56	3.57	3.57	3.59	3.61
1-year	3.50	3.49	3.48	3.53	3.58
Treasury constant maturities					
Nominal 9					
1-month	3.75	3.75	3.74	3.73	3.73
3-month	3.72	3.72	3.72	3.73	3.73
6-month	3.70	3.72	3.71	3.74	3.76
1-year	3.66	3.64	3.63	3.68	3.73
2-year	3.73	3.68	3.68	3.76	3.79
3-year	3.74	3.69	3.68	3.76	3.79
5-year	3.87	3.80	3.79	3.87	3.88
7-year	4.07	4.00	3.98	4.05	4.06
10-year	4.28	4.23	4.20	4.26	4.25
20-year	4.89	4.83	4.81	4.84	4.82
30-year	4.90	4.86	4.85	4.88	4.83
Inflation indexed 10					
5-year	1.26	1.22	1.17	1.21	1.27
7-year	1.61	1.56	1.51	1.55	1.59
10-year	1.92	1.87	1.83	1.86	1.88
20-year	2.41	2.37	2.34	2.36	2.36
30-year	2.66	2.62	2.60	2.61	2.60
Inflation-indexed long-term average 11	2.59	2.54	2.51	2.53	2.52

Exhibit 5

Investments

Key Rates

March 23, 2026

Year Ago

Based on data compiled weekly by [Bankrate.com](https://www.bankrate.com)

Fed funds rate	3.50 – 3.75	4.25 – 4.50
Prime rate	6.75	7.50
HOME MORTGAGES		
FIXED		
15-year fixed	5.81	5.98
30-year fixed	6.43	6.72
ADJUSTABLE		
5/1 adj. rate	5.73	6.03
HELOC		
\$30K line	7.17	7.90
AUTO LOAN RATES		
60-mo. new car	6.98	7.40
SAVINGS		
Money market	.43	.46
1-year C.D.	1.89	1.89
5-year C.D.	1.68	1.57

Exhibit 6
SEQUOIA UNION HIGH SCHOOL DISTRICT
GENERAL OBLIGATION BONDS

General Obligation Bonds Election of 2011

Dated: May 1, 2012

Due: July 1, 2013 through July 1, 2041

Callable: July 1, 2021 at 102.0% of par, declining to par as of July 1, 2023

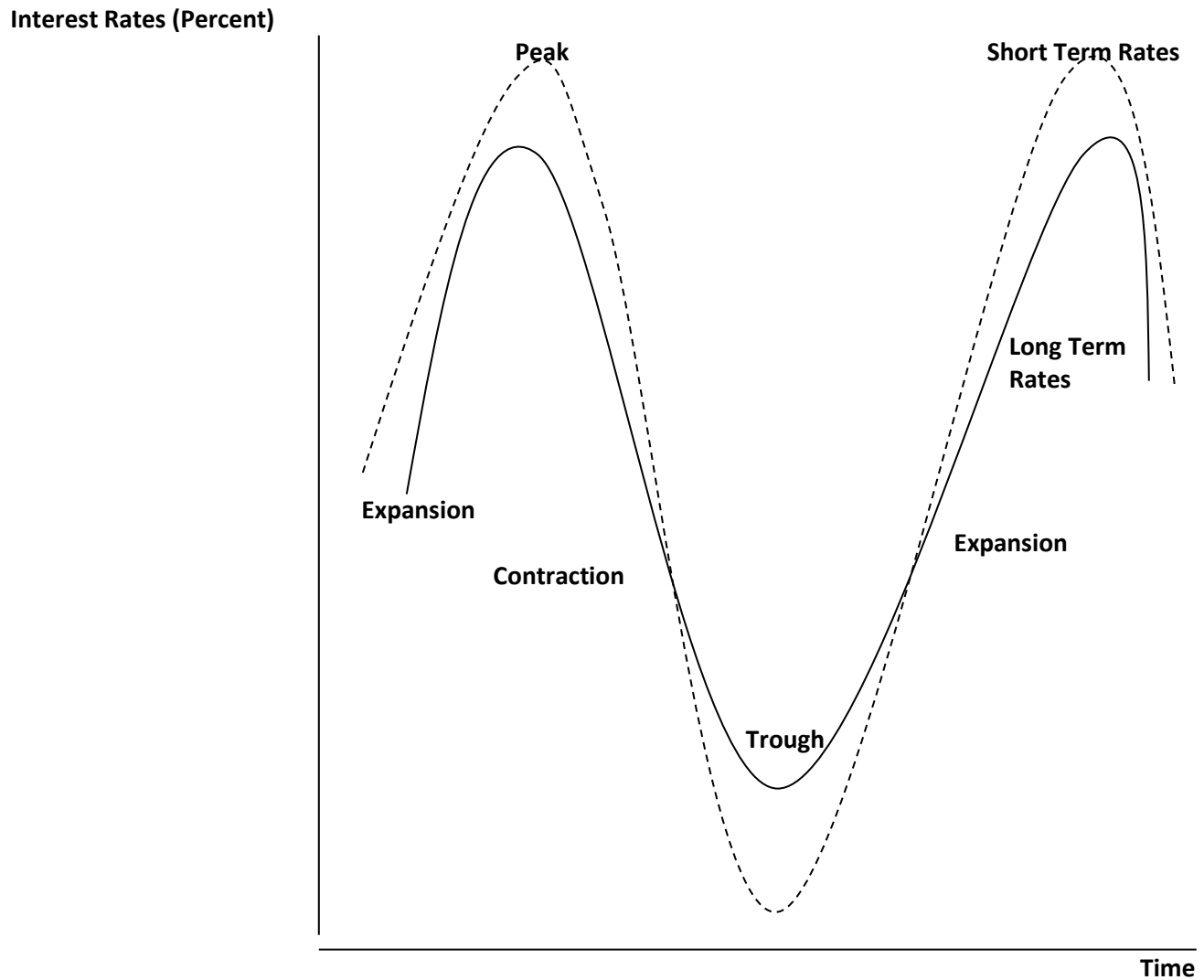
Winning Bid: Salomon Smith Barney, at 100.0000

True interest cost (TIC) of 5.0189%

Other Managers: CIBC World Markets Corp.

Due Date	Amount	Coupon	Yield
07/01/13	\$225,000	7.00%	2.00%
07/01/14	\$520,000	7.00%	2.50%
07/01/15	\$545,000	7.00%	3.00%
07/01/16	\$575,000	7.00%	3.25%
07/01/17	\$605,000	7.00%	3.50%
07/01/18	\$635,000	7.00%	3.70%
07/01/19	\$665,000	7.00%	3.90%
07/01/20	\$700,000	4.00%	3.90%
07/01/21	\$735,000	4.00%	4.00%
07/01/22	\$765,000	4.125%	4.125%
07/01/23	\$800,000	4.25%	4.25%
07/01/24	\$835,000	4.375%	4.375%
07/01/25	\$870,000	4.50%	4.50%
07/01/26	\$910,000	4.60%	4.60%
07/01/27	\$950,000	4.70%	4.70%
07/01/28	\$995,000	4.80%	4.80%
07/01/29	\$1,045,000	4.90%	4.90%
07/01/30	\$1,095,000	5.00%	5.00%
07/01/31	\$1,150,000	5.00%	5.00%
07/01/32	\$1,210,000	5.00%	5.00%
07/01/33	\$1,270,000	5.00%	5.00%
07/01/34	\$1,335,000	5.00%	5.00%
07/01/35	\$1,405,000	5.00%	5.20%
07/01/36	\$1,480,000	5.00%	5.21%
07/01/41	\$8,650,000	5.125%	5.21%

Exhibit 7
INTEREST RATES OVER THE BUSINESS CYCLE
WITH CONSTANT INFLATION EXPECTATIONS



Expansion: increasing consumer spending, inventory accumulation, and rising loan demand. Federal Reserve begins to slow money growth.

Peak: monetary restraint, high loan demand, little liquidity.

Contraction: falling consumer spending, inventory contraction, falling loan demand, Federal Reserve accelerates money growth.

Trough: monetary ease, limited loan demand, excess liquidity.

ASSET AND LIABILITY MANAGEMENT

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ASSET AND LIABILITY MANAGEMENT

OVERVIEW

Every investment and funding decision affects a bank's profitability and risk position. Most banks have established an asset and liability management committee (ALCO), or risk management committee, which is responsible for formulating and implementing key decisions regarding aggregate performance and strategies. The ALCO meets regularly to evaluate changes in the composition of bank assets and liabilities, asset quality, liquidity needs, the bank's capital position, changes in net interest income and the market value of bank equity, changes in noninterest income and expenses, and different pricing decisions. The basic components of the asset and liability management process include:

- Economic environment and its impact on local and regional activity
- Asset composition and pricing strategies
- Liability composition and pricing strategies
- Net interest margin and net income analysis
- Interest rate sensitivity and earnings volatility analysis
- Duration of assets/liabilities and sensitivity in economic value of equity analysis
- Liquidity analysis and planning
- Capital management
- Noninterest income and expense analysis
- Profit planning
- Operational risk
- Enterprise risk
- Strategies and recommendations

For community banks, ALCO members typically include the chief executive officer (CEO), president, the chief lending, investment, funds management, and operations officers, and the comptroller. Decisions in each functional area must be coordinated to meet overall bank objectives, which is the purpose of the ALCO. ALCO members compare performance data with the bank's policy targets and determine strategies to achieve desired results. The combination of significant strategic errors and economic conditions during 2004-2009 produced strong criticisms of many banks' risk management practices. Large commercial and investment banks, in particular, reported significant losses from subprime loans and holdings of related mortgage-backed securities, collateralized debt obligations, and collateralized loan obligations in 2007-2009 in response to overly aggressive lending practices in prior years. Not surprisingly, many institutions cut back on lending which created a liquidity crunch across much of the world.

This session focuses on the role of the ALCO or risk management groups in making decisions regarding interest rate risk management. Interest rate risk management encompasses the first six functions listed above. Special attention is paid to factors that affect changes in net interest income and the economic (market) value of bank equity. Limited attention is paid to the other ALCO functions, which are discussed in detail in other sessions.

LEARNING OBJECTIVES

Following the successful completion of this session, you should be able to:

- Identify factors that cause a bank's net interest income to change.
- Describe the features of assets and liabilities that make them rate sensitive.
- Interpret a bank's GAP and rate sensitivity report.
- Identify certain embedded options in assets and liabilities that affect rate sensitivity.
- Understand the importance of spread adjustments.
- Analyze the strengths and weaknesses of GAP as a measure of interest rate risk. Understand how to evaluate a bank's risk, given its GAP position.

- Understand the basic features of earnings sensitivity analysis.
- Explain how duration represents an elasticity measure and can thus be used to estimate how potential interest rate changes will affect the economic value of bank equity.
- Understand how ALCO members use sensitivity analysis to make decisions regarding adjustments in the securities portfolio and loan portfolio relative to a bank's funding base.

DEFINITIONS OF KEY TERMS

Collateralized Debt Obligations (CDOs): Securities which represent an interest in a pool of assets, typically loans or bonds. The assets consist of corporate bonds, bank loans, asset-backed securities, and sovereign debt which serve as collateral for investors. Investors in CDOs bear the risk that the assets may not make the promised principal and interest payments.

Collateralized Loan Obligation (CLOs): Securities which represent an interest in a pool of commercial loans. The underlying commercial loans are the collateral for investors.

Duration: An approximate elasticity measure that indicates approximately how much an asset or liability will change in market value when interest rates change; alternatively, it is a weighted average of the time until cash flows are made where the weights are the present value of each cash flow.

Earning assets: Assets that produce interest income; typically loans plus investment securities.

Earnings-at-risk: An estimate of how much net income will change when interest rates change by a specific amount.

Earnings change ratio: An estimate of the percentage change in the interest rate on a rate-sensitive asset or liability relative to a 1% change in some index or base rate.

Economic value of equity (EVE): Market value of assets minus the market value of liabilities; estimated as the residual difference between these values.

GAP: The dollar value of rate-sensitive assets minus the dollar value of rate-sensitive liabilities.

GAP ratio: The dollar value of rate-sensitive assets divided by the dollar value of rate-sensitive liabilities.

Market value of (portfolio) equity (MVPE): Market value of assets minus the market value of liabilities.

Net interest margin (NIM): Net interest income divided by average earning assets.

Net portfolio value (NPV): Market value of assets minus the market value of liabilities. Used by thrift institutions in their rate shock analysis.

Rate-sensitive assets (RSAs): The dollar value of assets that either mature or can be repriced within a specific time interval, such as 30 days.

Rate-sensitive liabilities (RSLs): The dollar value of liabilities that either mature or can be repriced within a specific time interval, such as 30 days.

Spread: The average interest yield on earning assets minus the average interest cost of interest-bearing liabilities.

Value-at-risk: An estimate of how much the market value of portfolio equity will change when interest rates change by a specified amount.

REGULATION OF INTEREST RATE RISK

FDICIA directed that regulators develop a procedure to measure a bank's interest rate risk and relate it to their CAMELS rating. In February 1996, regulators formally dropped the duration based model that had been in development for years. Instead, they stated that banks would be expected to monitor their interest rate risk and demonstrate board of director and senior management understanding of aggregate risk exposure. Interest rate risk is formally assessed under the S of CAMELS, which refers to the sensitivity of market risk. The rating formally considers how much price risk banks take regarding the potential loss to earnings from changes in interest rates, foreign exchange rates, commodity prices and equity prices. A bank's aggregate interest rate risk exposure is described in terms of the magnitude of a bank's **earnings-at-risk** and **economic value-at-risk**. Any bank with a material weakness in its risk management process will be directed to take specific corrective actions. Earnings-at-risk is linked primarily to the management of a bank's net interest income. Economic

value-at-risk is linked to a bank's economic value of equity (EVE), which represents the market value of bank assets minus the market value of bank liabilities plus or minus the market value of off-balance sheet activities. Bank managers subsequently use a variety of techniques to best understand their risk exposure. The following analysis focuses on GAP and earnings sensitivity analysis which are associated with earnings-at-risk. It then briefly introduces duration gap analysis.

INTEREST RATE RISK MANAGEMENT OBJECTIVES

Maintain Stable or Increasing Net Interest Income

Bank managers focus on managing net interest income and the economic (market) value of bank equity when making decisions regarding a bank's interest rate risk position. Some small institutions without complex balance sheets use basic GAP models to help manage net interest income and a bank's net interest margin (NIM). Interest rate risk can be measured in different ways. GAP models measure interest rate risk by calculating the difference between rate-sensitive assets (RSAs) and rate-sensitive liabilities (RSLs) over various time intervals.

The framework involves five basic steps:

1. Forecast interest rates.
2. Select time intervals to assess rate sensitivity. These time intervals are sequential (0-30 days, 31-90 days, etc.)
3. Classify assets and liabilities as rate sensitive within each time interval based on the bank's ability and expectation to reprice the principal amount. Where appropriate, estimate the balance sheet impact of off-balance sheet exposures in terms of their effective sensitivities to the repricing of principal. Estimate when and how embedded options will affect the amount of RSAs and RSLs.
4. Calculate the periodic and cumulative GAPs over different time intervals.
5. Conduct sensitivity and/or simulation analysis to interpret GAP data, estimate changes in net interest income, and understand the institution's aggregate interest rate risk position.

All assets and liabilities are grouped into time intervals on the basis of when the instrument can (or effectively will) be repriced. This reflects the assumptions of management regarding when the underlying assets and liabilities will reprice given the interest rate forecast. The timing of repricing may reflect the number of days until a periodic principal reduction, final maturity, or when a base rate that is used to price a loan or deposit changes. It may also reflect when management believes that a loan customer will refinance a loan, or a depositor may withdraw funds prior to maturity.

The GAP for each time interval equals the dollar difference between rate-sensitive assets (RSAs) and rate-sensitive liabilities (RSLs):

$$\text{GAP} = \text{RSAs} - \text{RSLs}$$

A positive GAP means that rate-sensitive assets exceed rate-sensitive liabilities, such that more assets than liabilities will reprice within the time interval. A negative GAP indicates that rate-sensitive liabilities exceed rate-sensitive assets, such that more liabilities will reprice.

GAP presumably measures interest rate risk because a bank's net interest income may vary when the level of interest rates changes. If the dollar value of rate-sensitive assets differs from the dollar value of rate-sensitive liabilities, interest income will vary relative to interest expense when rates rise or fall. GAP information and rate forecasts are used either to hedge, to reduce volatility in net interest income, or to speculatively adjust the bank's portfolio to take advantage of anticipated changes in interest rates.

With GAP analysis the target measure of performance is thus net interest income, or net interest margin (NIM), which equals net interest income divided by average earning assets. GAP models are useful when a bank has a simple balance sheet and limited off-balance sheet activity.

$$\text{NIM} = \frac{\text{Interest Income} - \text{Interest Expense}}{\text{Earning Assets}}$$

Economic (Market) Value of Stockholders' Equity

Many ALCOs also monitor the bank's overall interest rate risk position by using duration-based measures. The typical target measure of performance is the market (fair) value of stockholders' equity, which equals the market value of bank assets minus the market value of bank liabilities. This is also referred to as the economic value of equity, market

value of portfolio equity, or net portfolio value. While duration formulas appear to be complex mathematical relationships, the concept can be best understood as a measure of interest rate elasticity. If you know the duration of an asset or liability, you can estimate approximately how much the price of the instrument will change when the underlying market interest rate changes. Alternatively, an asset's or liability's duration equals the weighted-average time until the underlying cash flows are realized.

Duration analysis consists of estimating the durations of specific assets and liabilities. Managers often try to match asset and liability durations to ensure that any interest rate change alters the value of the asset by the same amount as it alters the value of the liability. Matching can be accomplished by matching the timing of cash receipts and payments for the underlying cash flows of a specific asset and liability or matching the average durations of a group of assets and a group of liabilities.

As such, interest rate changes will not dramatically affect the market value of bank equity. Much like GAP analysis, a bank can calculate the duration of all assets combined and compare this to the duration of all liabilities to get an overall picture of its aggregate risk position.

The concept of duration is introduced here to emphasize that managers should focus on more than just GAP, net interest margin, and potential variation in earnings when evaluating their bank's interest rate risk exposure. Federal regulators believe that duration-based information is important because they want banks to focus on aggregate value of equity which also reflects assets and liabilities with longer maturities and durations.

GAP MANAGEMENT

Factors Affecting Net Interest Income

Three basic factors can cause a bank's net interest income to change from one period to another:

- Changes in the level of interest rates and changes in the slope of the yield curve,
- Changes in the volumes of earning assets and interest-bearing liabilities outstanding,
- Changes in the composition (mix) of assets and liabilities.

Some of these factors are at least partially controllable, while others are determined externally. The following discussion introduces the basics of GAP analysis. The section on earnings sensitivity analysis identifies weaknesses with this basic analysis and offers improvements.

Interest Rates

A bank's net interest income typically rises or falls when interest rates change because different amounts of assets and liabilities are repriced at different intervals. A bank's GAP presumably provides information concerning how net interest income will change when rates change. A negative GAP, for example, indicates that rate-sensitive liabilities exceed rate-sensitive assets over a set time interval. If interest rates rise, interest income normally rises because assets that mature will be reinvested at higher rates and floating rate assets will earn higher rates. Interest expense will also increase because the bank will have to pay more on repricable liabilities. Because there are more RSLs than RSAs, interest expense will generally increase more than interest income. Thus, net interest income will decline. If interest rates fall instead, net interest income will increase with a negative GAP because interest expense will fall more than interest income falls. A bank that exhibits this response is labeled **liability sensitive**.

A positive GAP produces the opposite relationship between interest rate changes and changes in net interest income. Because there are more RSAs than RSLs, interest income will increase more than interest expense when interest rates rise as more assets are repriced at the higher rates. Thus,

net interest income will also increase. If interest rates fall, net interest income will decrease because interest income falls more than interest expense as more assets are repriced at the lower rates. A bank that exhibits this response is labeled **asset sensitive**.

Exhibits 1 and 2 demonstrate the relationship between GAP and net interest income when interest rates increase by one percent. *Exhibit 1* provides basic balance sheet data for Community Bank along with average asset yields and interest costs. Note that Community Bank has a negative GAP (-\$100) measured over one year because RSAs equal \$400 while RSLs equal \$500. If the balance sheet composition and rates remain constant at the levels projected, the bank's net interest income will equal \$41 for a net interest margin of 4.82 percent. This also produces a spread of 4.67 percent.

$$\text{Spread} = \frac{\text{Interest Income}}{\text{Earning Assets}} - \frac{\text{Interest Expense}}{\text{Interest Bearing Liabilities}}$$

Suppose now that interest rates on all rate-sensitive assets and rate-sensitive liabilities increase by one percent. By assumption, rates on fixed-rate assets and liabilities are unchanged. In this scenario, summarized in *Exhibit 2*, net interest income falls to \$40, or \$1 less than before, and net interest margin falls to 4.71 percent. The spread similarly falls to 4.53 percent. The reason is that interest expense rises by \$5, while interest income rises by just \$4 due to the negative GAP.

This can be summarized by the following simplified relationship:

$$\text{Change in net interest income} = \text{GAP} \times \text{change in interest rates}$$

In the above case, $-\$1 = (-\$100) \times .01$.

Suppose instead that Community Bank with a GAP of -\$100 found that rates on rate-sensitive instruments fell by 1.5 percent during the year. As described earlier, net interest income should increase. Using the above relationship, net interest income will rise by \$1.50 because interest expense falls by more than the decline in interest income.

$$(-\$100) \times -.015 = +\$1.50$$

Both calculations assume that all interest rates change by the same amount, at the same time, and in the same direction. Of course, this type of rate move, referred to as a **parallel shift in the yield curve**, is highly unlikely. This assumption, which makes it easy to interpret GAP, is one of

the reasons that GAP analysis can be misleading. More detailed analysis allows for rates on different assets and liabilities to change by different amounts and in different directions.

In the case of a parallel shift in the yield curve, a bank with a positive GAP will find that net interest income varies in the same direction as interest rates. *Exhibit 3* demonstrates this for Community Bank, assuming its initial GAP position is \$50 (\$550 - \$500). The top part of the exhibit indicates that net interest income is expected to equal \$38 for a net interest margin of 4.47 percent.

If rates on all rate-sensitive securities increase by one percent, net interest income will rise to \$38.50 and net interest margin will increase to 4.53 percent. This occurs because interest income rises by \$5.5 while interest expense rises by just \$5.0, as more assets are repriced at higher rates than liabilities. The formula provided above again applies, yielding $\$0.50 = \$50 \times .01$. The reader should verify that net interest income will fall if interest rates fall during the year.

If a bank has a zero GAP, the volume of rate-sensitive assets is matched with the volume of rate-sensitive liabilities. With a parallel shift in the yield curve, net interest income will not vary when rates change because interest income and interest expense rise or fall by the same amount. Of course, a zero GAP is extremely difficult to achieve, and rates don't move in concert. *Exhibit 4* summarizes the general relationships between negative, positive, and zero GAPs and the directional change in net interest income due to changes in interest rates.

GAP as a Measure of Risk

The simple formula introduced above,

$$\Delta \text{ Net interest income} = \text{GAP} \times \Delta \text{ interest rates}$$

suggests that net interest income will change whenever interest rates change as long as a GAP is non-zero. The larger GAP is (in absolute value), the greater will be the change in net interest income for a given rate move. For example, if GAP equals \$100 and rates decrease by one percent, net interest income will decline by \$1. The same one percent decrease in rates will lower net interest income by \$3 for a bank with a GAP of \$300.

GAP can be best interpreted as a static measure of risk. Here risk refers to the potential variation in net interest income. Regardless of whether GAP is positive or negative, the farther it is from zero, the greater will be the

change in net interest income when rates change. Many banks use a bank's cumulative one-year GAP figure as the appropriate target measure for risk assessment.

Measuring GAP in dollars alone, however, can be misleading because it does not account for the size of the bank. One bank with a \$100 million GAP may be less risky than another bank with a \$10 million GAP if they differ in size. Suppose, for example, that the first bank has \$1 billion in total assets while the second bank has just \$50 million in assets. As a fraction of total assets, the two banks' GAP ratios are 10% and 20%, respectively. An unanticipated change in rates will alter the smaller bank's net interest margin more than the larger bank's.

$$\text{GAP to assets} = \frac{\$100}{\$1,000} = .10 \quad \text{GAP to assets} = \frac{\$10}{\$50} = .20$$

A better measure incorporating GAP is the absolute value of GAP, denoted as $|GAP|$, divided by total (or earning) assets.

$$\text{Risk measure} = \frac{|GAP|}{\text{Earning Assets}}$$

The closer $|GAP|$ and this ratio are to zero, the less risk a bank faces. Thus, a bank with \$100 million in earning assets faces equivalent interest rate risk when its GAP is +\$10 million or -\$10 million because the proportionate change in net interest income will be identical whether rates rise or fall. Dividing $|GAP|$ by earning assets allows a comparison of risk between different size banks and ties performance to NIM. Many community banks cite such a target measure for GAP by indicating that the amount of interest rate risk that is acceptable limits the bank's one-year GAP to + or -15 % of assets.

Similar measures compare the amount of RSAs with RSLs over a specific time frame. Suppose that the \$50 million asset bank described above has \$26 million in RSAs and \$16 million in RSLs. It would report a **GAP ratio** of 1.625.

$$\text{GAP Ratio} = \frac{\text{RSAs}}{\text{RSLs}}$$

A bank with a positive (negative) GAP would report a GAP ratio above (below) one. A bank with a zero GAP would report a GAP ratio equal to one. The farther this ratio is from one, the greater is presumed risk. Some

banks set policy targets that emphasize a GAP ratio within reasonable range of one, such as a gap ratio that ranges between 0.9 and 1.1.

Caveats

The previous discussion is quite simplistic. The rate changes or “shocks” assumed are labeled a “parallel shift in the yield curve” whereby all rates are assumed to change immediately, by the same amount, and in the same direction. Obviously, this does not occur with any regularity. Thus, the analysis best serves as a basis for understanding the type of risk exposure a bank faces rather than the actual amount. By modifying the assumptions and conducting sensitivity analysis, ALCO managers can get a better sense of how volatile net interest income and NIM might be in subsequent periods. Note the first step in GAP analysis. Sensitivity analysis involves varying the interest rate environment and assumptions regarding the composition of assets and liabilities, how much yields and costs on specific assets and liabilities change relative to some base interest rate and forecasting the impact on net interest income. The potential volatility in net interest income indicates how much risk a bank is taking.

Portfolio Composition

Any shift in portfolio composition will also change net interest income, even if interest rates remain constant. This occurs because different assets and liabilities earn or pay different rates. *Exhibits 1 and 3* demonstrate this for Community Bank. In the initial scenario (*Exhibit 1*), Community Bank is expected to generate net interest income of \$41 per \$1,000 in assets. Suppose that management shifts \$150 of fixed-rate assets to rate-sensitive assets.

This might be accomplished by selling fixed-rate mortgages and buying three-month Treasury bills. The shift produces a portfolio like that in *Exhibit 3*, where rate-sensitive assets now equal \$550 and fixed-rate assets equal \$300. Interest income falls because the bank earns less on rate-sensitive assets than fixed-rate assets. This appears as a decline in interest income from \$77 (*Exhibit 1*) to just \$74 (*Exhibit 3*).

Whether net interest income rises or falls from changes in portfolio mix depends on the type of change. If a bank shifts from low-yielding to high-yielding assets, net interest income will increase. A bank can also change the nature of its liabilities by shifting from rate-sensitive to fixed-rate liabilities, or vice versa. Again, net interest income will increase if the bank

shifts to lower cost funds, but it will decrease if the bank shifts to higher cost funds.

Volume

The dollar amount of net interest income varies directly with changes in the total size of a bank's earning assets or interest-bearing liabilities, regardless of the level of interest rates. A bank with a positive net interest margin and spread will find that net interest income increases if the bank simply grows in size because more assets are booked at a positive net yield over the cost of liabilities financing the assets. Shrinking the bank would have the opposite effect. Consider a case where interest rates remain the same as in *Exhibit 1*, but the bank is exactly twice as large. In this instance, net interest income would also be twice as large at \$82 while net interest margin remains constant at 4.82 percent ($\$82/\$1,700$). The key point is that net interest income is determined partly by bank size. Growth and/or shrinking the size of a bank affect net interest income independent of changing interest rates.

Rate Sensitivity Reports

Over time, interest rates will change by different amounts and at different times for assets and liabilities, banks will shift funds between asset and liability categories, and total firm size will change. GAP analysis requires that the time frame for rate sensitivity be fixed so that assets and liabilities can be classified as rate-sensitive or fixed-rate. Even within these time intervals, such as one year in the previous exhibits, assets and liabilities will reprice at different intervals. Thus, actual cash flows may differ substantially from that suggested by a single GAP figure.

For example, if all \$400 in rate-sensitive assets in *Exhibit 1* were overnight federal funds sold, while all \$500 in rate-sensitive liabilities were one-year CDs, the bank's actual GAP is positive for any time interval less than one year. The -\$100 GAP figure would be quite misleading, as asset cash flows are more sensitive than liability cash flows within one year.

To minimize this problem, most banks analyze GAP using a framework like that presented in *Exhibit 5*. The report is dated December 31, 2024 with the data segmented according to the number of days from year-end. In *Exhibit 5*, the data are presented in several sequential time intervals rather than just one. Each column of data thus reflects the dollar magnitude of repriceable assets and liabilities within each interval. A bank's **periodic GAP** represents the difference between rate-sensitive assets and rate-

sensitive liabilities within a specific interval. Thus, Security Bank has \$6.3 million in RSAs and \$22.3 million in RSLs within the next one to seven days, for a one to seven day GAP of -\$16 million. The eight to 30-day GAP similarly equals \$9 million.

A bank's **cumulative GAP** equals the sum of periodic GAPs through the longest time frame considered. The sum of the one to seven day and eight to 30-day periodic GAPs thus equals the cumulative GAP from 0 to 30 days, in this case, -\$7 million. Both GAP figures provide information about the bank's interest rate risk profile. Periodic GAPs indicate how many assets and liabilities can be repriced at specific intervals. Cumulative GAPs indicate a bank's overall risk position through the last day in each interval and can be interpreted in light of *Exhibit 4*.

Earnings Sensitivity Analysis

The previous discussion addresses traditional static GAP analysis. The examples assume that all interest rates on rate-sensitive assets and liabilities change at the same time by the same amount. Obviously, not all rates change coincidentally or by the same percentage. If yields on assets rise or fall by different amounts than rates paid on liabilities, interest income may change differently from interest expense. Consider, for example, what occurs after the Federal Reserve changes the targeted federal funds rate. When the Federal Reserve increases the rate by 25 basis points, banks typically respond by immediately raising their prime lending rate by the same 25 basis point. In contrast, they raise core deposit rates by less than 25 basis points if they increase them at all. As such, the spread (difference between asset yields and liability costs) increases. Such spread adjustments are common. Thus, the formula provides only a base approximation of the potential change in net interest income. The analysis also assumes that GAP is constant or stable over time. As the following discussion notes, this is generally not the case.

Many banks extend static GAP analysis to examine the "effective sensitivity" of assets and liabilities. This encompasses adjusting classifications of assets and liabilities to reflect effective repricings based on what management believes will happen in the prevailing rate environment. As such, what constitutes a rate-sensitive asset or liability varies with the level of interest rates. For example, a callable bond owned by a bank will likely be called if rates fall sharply and thus will be rate-sensitive because the bank must reinvest the proceeds as the borrower returns the principal when the bond is called. The same bond will not be called if rates rise such that it is not rate-sensitive in this environment.

Small time deposits bearing fixed rates may, in turn, be withdrawn if rates rise sharply, thus being rate-sensitive, but will remain at the bank if rates fall. Similarly, many banks classify money market deposit accounts (MMDAs) as rate-sensitive in the shortest sensitivity category (1-30 days). Yet, they do not actually reprice MMDAs in equal increments when rates change.

In the first case, callable bonds will be rate-sensitive if rates fall, not if rates rise, such that the bank will lose more than expected in a declining rate environment. Interest expense will similarly rise unexpectedly in the second case when rates rise and deposits are withdrawn. Finally, in the last case, the amount of rate-sensitive liabilities listed would thus overstate the true rate sensitivity of liabilities and suggests that an increase in interest rates would be more harmful than that likely realized. A meaningful GAP figure should allocate only that portion of assets or liabilities of each type that are rate-sensitive within each time interval.

Earnings sensitivity analysis refers to the process of examining changes in earnings when rates change, and both the volume and composition of assets and liabilities change. It allows what constitutes a rate-sensitive asset or liability to differ depending on how rates change and how bank customers will likely respond to these rate changes. It specifically recognizes that some loans will prepay, some depositors will withdraw their funds prior to maturity, and some base rates may change more or less frequently than that observed historically.

Earnings sensitivity analysis allows for varying amounts of rate-sensitive contracts and different interest rate changes within each asset or liability category. Thus, the yield rate on rate-sensitive assets may increase by one percent, while the interest rate on rate-sensitive liabilities rises by 1.5 percent. The amount of rate-sensitive loans within 90 days may differ if the general level of rates rises versus when it falls. Without these adjustments, simple static GAP calculations can be misleading. Finally, earnings sensitivity analysis requires that management forecast growth in key balance sheet items along with the assumed rate changes. When rates rise will loan demand increase or decrease and will deposit growth change accordingly? Such forecasts should be incorporated in the estimated amounts of repriceable assets and liabilities.

GAP Adjustments

The same caveats apply to interpreting rate sensitivity reports as those presented earlier regarding traditional GAP. The GAP measures provided in *Exhibit 5* are meaningful only to the extent that assets and liabilities are

categorized according to their effective rate sensitivity. Suppose, for example, that Security Bank's management will change rates paid on the \$17.3 million in MMDAs at most every 45 days. Rate-sensitive liabilities within one to seven days then decrease to just \$5 million, which makes the effective one to seven day GAP \$1.3 million instead of -\$16 million. From one to 30 days the cumulative effective GAP equals \$10.3 million, and not -\$7 million. Both figures suggest that net interest income would actually increase if all rates increased equally, instead of decrease. The key point is that each figure should reflect only the effective repricing sensitivity of the underlying asset and/or liability.

GAP figures may also be misleading depending on how frequently base rates change. In *Exhibit 5* Security Bank is assumed to change base rates against which floating-rate loans are priced every eight to 30 days. The footnote to the exhibit thus indicates that there are \$10 million of floating-rate loans classified as repriceable from eight to 30 days. This is, of course, highly subjective. If the bank changes its base rates other than at this frequency, the GAP data are not meaningful in projecting changes in net interest income. Suppose, for example, that base rates remain unchanged for six months. In this case the effective GAP figures beyond seven days would be more negative than that indicated because \$10 million in assets are no longer rate sensitive. Again, effective GAP analysis recognizes that rates on different assets and liabilities will change with different frequencies and by different amounts.

In recent years ALCO managers have recognized that GAP analysis has ignored prepayments on loans and the mortgages underlying mortgage-backed security investments. Thus, as rates have fallen, prepayments have risen above that expected and assets have been more rate sensitive than anticipated. These changes have lowered earnings from plan because the bank has had to reinvest the principal at lower rates (which stimulated the prepayments). Many investment officers have observed the same phenomenon with callable agency securities that have been taken from the bank's portfolio well before final maturity. This same phenomenon can happen with deposit withdrawals prior to maturity. Earnings sensitivity analysis forces ALCO managers to forecast prepayments and early deposit withdrawals.

To address these issues, most banks use simulation and/or sensitivity analysis to determine the range of potential outcomes for net interest income in different economic and portfolio scenarios. This involves varying assumptions regarding the magnitude and timing of interest rate changes and the dollar amounts of rate-sensitive assets and liabilities that reprice, and anticipated shifts in portfolio composition. The output is net

interest income under each set of conditions. The result is that an analyst can examine a wide range of potential outcomes for net interest margin that cover worst case to best case scenarios. Rather than view any one outcome as realistic, it is easier to get a sense of the volatility in net interest income in many situations.

Earnings Sensitivity or Earnings-at-Risk Reports

Exhibit 6 summarizes one popular format used by many community banks to assess earnings sensitivity or earnings-at-risk. The report lists each asset and liability that is assumed to be rate-sensitive and the total dollar value reported on the balance sheet. It then presents an earnings change ratio (ECR) that indicates how much management estimates the interest rate on the specific asset or liability will change relative to a change in some base rate (such as the prime rate) or index rate (such as a T-bill rate).

These ratios appear as percentages from 0% to 100% where 100% signals that the instrument will change one-to-one with the change in the base rate and any smaller percentage indicates a less than one-to-one change in the proportion noted. In the example provided, the bank's prime rate is the base rate. The 71% ECR for Treasuries indicates that a 1% decrease in prime will be matched by a 71 basis point (0.71%) decrease in the effective rate earned on T-bills during the year. Maturing loans, in contrast, will be repriced at 1% lower with the 1% decrease in prime.

Data under the column headed Income Statement Gap indicates the effective dollar amount of each rate-sensitive asset and liability that will be repriced as a result of the change in the base rate. Thus, the effective one year GAP for this bank is +\$7,332,000 and not a -\$8,684,000 as indicated on the balance sheet. If the prime rate falls 1%, the bank's net interest income will also fall an estimated \$73,320.

Note from the block of data on the right where the prime rate is assumed to rise 1%, that the bank's effective GAP is just \$1,729,000 such that net interest income will rise an estimated \$17,290. The report demonstrates two essential points. First, what is rate-sensitive varies with the actual change in interest rates. Second, all rates change by different amounts when the general level of rates changes. Managers should conduct this sensitivity analysis to assess the bank's risk exposure.

Exhibit 7 provides a summary table of how management can readily assess earnings sensitivity. The framework assumes that management identifies a most likely interest rate scenario, labeled the most likely (base case) scenario. It then conducts sensitivity analysis by forecasting net interest

income in this base case, and then allowing the level of rates to vary by +1%, +2%, +3%, and -1%, -2%, -3%. In each subsequent case, the bank can compare estimated net interest income with the forecast under the base case. The potential variation in net interest income is what is defined as earnings sensitivity.

Many banks evaluate their risk exposure and set policy limits in terms of the allowable percentage variation across these different rate environments. The bank summarized in *Exhibit 7* is exposed to substantial losses only if rates were to rise 2% or more according to the potential variation in net interest income reported. Rate decreases of one percent raise net interest income modestly; with no additional changes if rates fall farther. Risk is evidenced by the range of potential outcomes.

Variance Analysis

Most ALCOs meet regularly to analyze GAP reports and develop strategies to adjust the bank's risk and return position. Changes in net interest income due to changing rates, portfolio composition, and volume can be readily determined by comparing GAP reports over time and the bank's associated income statement. Part of each ALCO meeting is spent analyzing specific changes or variances in actual and planned performance.

Variance analysis examines differences in average balance sheet accounts, average asset yields, and average liability costs between two periods of time. It measures the portion of change in net interest income that can be attributed to changes in interest rates, portfolio composition, and volume. As such, managers can determine the underlying cause of changing net interest income and restructure a bank's portfolio accordingly.

GAP MANAGEMENT STRATEGIES

GAP strategies typically focus on minimizing the size of the GAP or adjusting the GAP in line with the bank's interest rate forecast. Remember, however, that GAP simply identifies whether a bank's net interest income will rise or fall when interest rates change. There is no single best GAP value, unless ALCO members can consistently forecast interest rates accurately, which is unlikely.

A bank that attempts to minimize its GAP tries to match the rate sensitivity of assets with liabilities. The target is thus a zero GAP where net interest income will be stable regardless of how interest rates change. This is difficult to achieve because of measurement problems and the inability to

change rate-sensitive assets and liabilities in predictable magnitudes over time.

Most managers are also unwilling to accept a zero GAP position because it eliminates potential profits due to rate changes. Instead they adjust GAP in line with interest rate forecasts and the business cycle according to the following general principles. The intent is to make the GAP more positive when rates are expected to increase, and to make the GAP more negative when rates are expected to decrease.

Expansion: Early stages, large GAP as rates are expected to increase; later stages, start to reduce the GAP by lengthening the maturity of assets and shortening liability maturities.

Peak: GAP should be its smallest; lock in fixed-rate assets at rate peaks and shorten all liabilities. (Rates are expected to decrease).

Contraction: Early stages, small GAP as rates are expected to decline; later stages, start to increase the GAP after the slowdown persists by shortening asset maturities and lengthening liability maturities.

Trough: GAP should be its largest; lock in fixed-rate liabilities and shorten asset maturities. (Rates are expected to increase).

This strategy is risky because it requires accurate forecasting. It is clearly difficult to time GAP changes with the business cycle and interest rate changes. Economic and interest rate forecasts are often wrong. More importantly, a bank must be able to forecast rates better than the market for net interest income to increase above that expected. This is because interest rates already reflect consensus forecasts of rate changes. Suppose that the yield curve slopes upward because the consensus forecast is that short-term interest rates will increase in the near future. Thus long term rates currently exceed short term rates.

A bank that also forecasts an increase in rates may try to change its GAP by increasing rate-sensitive assets, decreasing rate-sensitive liabilities, and obtaining more fixed-rate liabilities in order to increase earnings if rates rise. To induce depositors to lengthen maturities, the bank will have to pay a premium because depositors have a preference for short-term liabilities given their forecasts of higher future rates. As it shifts investments to short-term assets, the bank will also sacrifice income because short-term rates are below long term rates. Thus the bank may improve its GAP position, but it will likely sacrifice net interest income near-term because its spread will initially decline.

Strengths and Weaknesses of GAP

The attraction of GAP analysis is that it is easy to understand. GAP models and computer software are readily available, so it is relatively easy to provide summary GAP reports. Furthermore, a bank's managers who conduct a thorough sensitivity analysis which incorporates a variety of assumptions about alternative rate environments, prepayment patterns on loans, changes in base rates, and deposit flows can give a reasonably accurate picture of a bank's risk exposure. Earnings sensitivity analysis that incorporates these factors is thus quite useful.

There are many weaknesses of GAP analysis, however. First, GAP analysis ignores the time value of money. In particular, periodic time intervals do not accurately differentiate between the timing of actual cash flows. Asset repricings, for example, may be concentrated at the early parts of an interval while liability repricings may be later in the interval so that rate changes affect net interest income differently than that anticipated. Second, it is difficult to accurately classify floating rate loans.

Management does not know precisely when base rates, such as the prime rate or fed funds rate, will change. If base rate loans are allocated to the wrong time interval, the GAP figure will be misleading. Third, GAP measures should be constructed over the entire range of balance sheet repricings, but most GAP analysis focuses only on rate effects over the next year. Finally, GAP analysis does not explicitly recognize interest rate risk associated with demand deposits that pay no interest. Banks typically lose deposits when rates rise, which affects their net interest income and cash flow position.

DURATION ANALYSIS

Duration analysis is a way of measuring changes in the market value of assets and liabilities, and thus the market value of bank equity, when interest rates change. Duration rather than maturity is used because it directly links rate changes to a specific asset or liability's market value.

Consider the following simple balance sheet for a bank with all assets and liabilities measured in market values. Given the current values, the bank's economic value of equity (EVE) equals the difference between the market value of assets and market value of liabilities, or \$8.

Market Value of:

Assets	Liabilities + Equity
Assets = \$100	Liabilities = \$92 Equity = \$ 8

Now assume that all interest rates increase. Because market values of fixed-rate securities fall when rates rise, the market value of total bank assets will decline. Similarly, bank liabilities are also marketable instruments that change in value when rates change (think of CDs) such that the market value of total bank liabilities will also decline when rates rise. If the market value of assets drops to \$95 while the market value of liabilities drops to \$90, the economic value of bank equity is the difference between the market value of bank assets and liabilities, so it drops to \$5.

Market Value of:

Assets	Liabilities + Equity
Assets = \$95	Liabilities = \$90 Equity = \$ 5

The economic value of equity declines because the market value of assets falls by more (-\$5) than the market value of liabilities (-\$2). If instead the market value of assets drops to just \$99 (net change = -\$1) and the market value of liabilities drops to \$90, the market value of equity rises to \$9.

The difference in the duration of assets versus liabilities measures the potential change in the economic value of equity when interest rates change. As demonstrated above, it indicates whether the change in the market value of assets will be greater or less than the change in the market value of liabilities when interest rates change; that is, whether the first or second situation described above occurs.

In general, there are two key summary points about duration.

- Duration is measured in units of time and indicates how price sensitive a security or a portfolio is to a change in interest rates.
- The longer (shorter) is duration the greater (lesser) is the underlying security or portfolio's price sensitivity.

Measuring Duration

Each interest bearing asset and liability has a duration represented as some measure of time. An instrument's duration is calculated by: 1) converting each interest and principal payment to its present value amount, 2) multiplying the present value by the number of periods until the cash flow arises, 3) adding each of these products, and 4) dividing the sum by the present value of the asset or liability's cash flows (typically its prevailing market price).

A sample calculation is provided in *Exhibit 8* for a bond that has a four-year maturity, \$100,000 in par value, and pays \$9,000 in interest at the end of each year. The bond has four interest payments and returns the \$100,000 principal at the end of the fourth year. The market yield is assumed to be nine percent so that the current price equals \$100,000. As indicated, the bond's duration is 3.53 years. Duration is measured in time because each present value cash flow is multiplied by the time in years (1, 2, 3 and 4 years) until the cash flow is received.

Conceptually, duration equals the weighted-average present value of cash flows as a fraction of price. It is an estimate of the average life of a security.

Implications

Duration conveys important information. If managers know the durations of different assets and liabilities, they can rank them in order of their durations. This facilitates a comparison of which items are the most and least price sensitive. The longer a security's duration, the more it will change in value when interest rates change. Similarly, price changes vary proportionally with duration. A bond with 6-year duration will change twice as much in value as a bond with 3-year duration, if their yields change by the same amount. The market value of assets and liabilities with the same duration will change by the same amount if their rates change equally.

Economic Value-at-Risk

As with earnings sensitivity analysis, banks can estimate an economic value-at-risk associated with interest rate changes. To do so, management estimates the potential change in the market value of bank assets and liabilities and examines the difference, which equals the change in the market value of stockholders' equity. It does this under a most likely rate

scenario and allowing rates to vary up and down by 1%, 2%, and 3%. Economic value-at-risk equals this potential change in market value of equity across the interest rate environment.

RELATED ALCO RESPONSIBILITIES

ALCO responsibilities extend well beyond interest rate risk management. Asset and liability management involves managing a bank's entire balance sheet and constantly monitoring changes in risk. Thus, the ALCO regularly addresses profit considerations associated with controlling noninterest income and noninterest expense and managing the bank's tax position. It also examines aggregate risk in terms of overall asset quality, the bank's capital position and access to capital, and the bank's ability to meet liquidity requirements in line with prevailing and forecasted economic conditions.

Noninterest Income and Expense

With constant pressure on net interest income, most banks have pursued strategies of cutting costs and expanding noninterest income as sources of additional profit. Banks generally cut costs by reducing personnel, eliminating unprofitable branch systems, and increasingly automating operations in order to raise productivity. At each ALCO meeting, members monitor periodic expense reports to identify potential savings and develop strategies to lower cost further.

Banks have similarly attempted to increase noninterest income by raising service charges and increasing the number of fee-based products or services offered. ALCO members spend considerable time and effort in evaluating pricing policies and marketing efforts in support of new products and services. In recent years, banks have generally increased service charges and generated greater fee income so that noninterest income covers a greater fraction of noninterest expense. Community banks typically see noninterest income change inversely with the level of interest rates. As rates fall, these banks originate more mortgages such that fee income rises. When rates rise, the opposite occurs.

Tax Planning

Tax planning involves structuring asset acquisitions to reduce tax liabilities while maximizing net income. With recent tax reform legislation, banks have been limited in the types of investments that shelter income from

taxes. Small banks historically looked to municipal bonds to shelter income with tax-exempt interest. The Tax Reform Act of 1986 eliminated all but qualified municipals as attractive investments. Large banks often relied on nonbank subsidiaries that produced accelerated depreciation allowances or investment tax credits, but these tax savings have also been largely eliminated. Banks still earn tax-sheltered income from loans made to Employee Stock Ownership Plans (ESOPs), but even this tax feature could be eliminated. The net effect is that most banks have little flexibility in managing their tax position.

Risk Management

A bank's ALCO continuously monitors credit risk, capital risk and liquidity risk. Specific risk management tools and strategies are discussed in other sessions. A brief summary of various risk factors follows. It is important, however, to note that changes in risk are evaluated at each regular meeting of the ALCO. Recent asset quality and liquidity problems have forced bank managers to spend considerable effort in implementing more precise credit monitoring systems with precise risk ratings by type and location of credits and specific contingent liquidity and capital plans.

Credit Risk and Asset Quality Factors

ALCO members pay close attention to the quality of a bank's loans and securities. Defaults reduce cash inflows from principal and interest payments and raise expenses associated with collections. A major function of asset and liability management is thus to monitor changes in asset quality and select strategies to price credits and improve quality. The ALCO also determines the appropriate size of the loan loss reserve and thus the size of periodic transfers to the reserve. This appears as provisions for loan losses that are reported as an offset to interest earned on a bank's income statement.

Capital Risk and Dividend Policy

A bank's ALCO will make decisions regarding the adequacy of bank capital under regulatory guidelines and relative to economic conditions and the market's perception of the bank's profit versus risk profile. Committee members determine how much the bank should pay in dividends in line with market conditions and the need for internally generated capital (retained earnings). Clearly, dividend payments reduce retained earnings, but enhance the value of bank stock and thus the bank's ability to issue new stock.

Many banks with earnings problems cut or omit dividends to support their capital position. The ALCO will also determine when the bank should issue subordinated debt, trust preferred stock, or common stock externally. ALCO members may also examine strategies to buy back the bank's stock or allocate capital to specific products to assess their profitability.

Liquidity Risk and Liability Pricing

The ALCO is responsible for ensuring that the bank has access to borrowed funds. It may negotiate credit lines with upstream correspondents. It reviews the security portfolio to ensure that some unpledged securities can be sold at reasonable prices if necessary. It makes decisions regarding the pricing of liabilities based on past pricing for the bank and its competitors, national economic conditions and trends, and local economic conditions and trends. In short, it has a plan as to where the bank can access immediately available funds at reasonable cost.

The ALCO also formalizes a contingency funding plan. In the event of a liquidity crisis, a bank needs ready access to liquid funds. Management thus arranges for borrowing capacity with the Federal Home Loan Bank, the Federal Reserve Bank, and both bankers banks and related correspondent banks.

Strategic Planning

As noted in the module on strategic planning, a bank's ALCO determines and implements the overall strategic plan. Each decision must be coordinated to help meet overall bank objectives, emphasizing bank strategy and improving performance where weaknesses exist.

SUMMARY

1. Asset and liability management involves making decisions that affect all aspects of a bank's risk and return profile, ranging from managing interest rate, credit, and liquidity risk, to identifying sources of capital and instituting expense controls.
2. In the early years of the 21st century, bank risk management was widely criticized as many institutions failed to adequately measure, monitor, and manage credit risk, liquidity risk, interest rate risk, and operational risk. Large U.S. and global commercial and investment banks reported large losses starting in 2007, and banks continued to report losses

through 2008-2012. These losses reflected asset write-downs typically associated with problem loans.

However, as the U.S. economy slowly recovered from late 2012-2019, banks returned to profitability. In 2020, the economic impact of the coronavirus/COVID-19 pandemic was devastating to businesses, particularly small businesses, across the country. However, banks responded to the crisis by providing many types of assistance, both directly and through government-subsidized programs, to their customers. Banks continued to perform well in 2021 and into early 2022.

In early 2023, the failure of three U.S. banks concentrated in start up techs, venture capitalism, and cryptocurrencies once again brought national attention to the importance of asset/liability management and liquidity in banking. While the vast majority of U.S. banks are well-capitalized, these failures serve as a sobering lesson on what can go wrong without proper risk management in place.

3. GAP analysis is used to manage interest rate risk in terms of how interest rate changes affect a bank's net interest income. The absolute value of GAP relative to total assets is the best measure of risk. Static GAP analysis assumes that GAP remains constant over time. Earnings sensitivity analysis allows assets and liabilities that are rate-sensitive to exhibit different sensitivities in different economic and rate environments. It thus presents a more meaningful picture of a bank's risk exposure.
4. Net interest income will change whenever interest rates change, portfolio composition changes and the size of the portfolio changes.
5. Changes in interest rates do not affect assets and liabilities equally. When rates change, a bank's spread typically changes as loan rates change by different amounts and at different times than deposit rates. These spread adjustments may increase or decrease a bank's earnings.
6. Duration represents an approximate elasticity measure. As such, it indicates how much a security or portfolio's market value will change when interest rates change. The longer is duration, the more the market value of an asset or liability will change when interest rates rise or fall.
7. In addition to interest rate risk issues, a bank's ALCO reviews decisions associated with credit risk (asset quality), liquidity risk, the adequacy of bank capital, dividend policy and overall bank strategic planning.

SUGGESTED READINGS

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Exhibit 1
EXPECTED BALANCE SHEET COMPOSITION
AND AVERAGE INTEREST RATES FOR COMMUNITY BANK

	<u>Assets</u>	<u>Average Interest Yield</u>	<u>Liabilities</u>	<u>Average Interest Cost</u>
Rate Sensitive ^a	\$400	8%	\$500	4%
Fixed Rate	\$450	10%	\$320	5%
Non-Earning/Non-Paying	\$150		<u>\$100</u>	--
Equity			\$920	
			\$ 80	
Total		<u>\$1,000</u>		<u>\$1,000</u>

A. Interest income = $.08(\$400) + .10(\$450) = \$32 + \$45 =$
Interest expense = $.04(\$500) + .05(\$320) = \$20 + \$16 =$
Net interest income =

B. Net interest margin = $\$41.00/\$850 =$

C. Average yield on earning assets = $\$77/\$850 =$
Average cost of interest bearing liabilities = $\$36/\$820 =$
Spread =

D. GAP = $\$400 - \$500 =$

^aThe time frame for rate sensitivity is one year.

Exhibit 2
IMPACT ON EXPECTED NET INTEREST INCOME OF
COMMUNITY BANK WHEN ALL INTEREST RATES INCREASE BY 1%^a

	Assets	Average Interest Yield	Liabilities	Average Interest Cost
Rate Sensitive	\$400	9%	\$500	5%
Fixed Rate	450	10%	320	5%
Non-Earning/Non-Paying	150		100	--
Equity			\$920	
			\$80	
Total	1,000		\$1,000	

A.	Interest Income = $.09(\$400) + .10(\$450) = \$36 + \$45 =$ Interest Expense = $.05(\$500) + .05(\$320) = \$25 + \$16 =$ Net interest income =	<u>\$81.00</u> <u>\$41.00</u> \$40.00	<u>Change</u> <u>+\$4</u> <u>+\$5</u> -\$1
B.	Net interest margin = $\$40/\$850 =$	4.71%	-0.11%
C.	Average yield on earning assets = $\$81/\$850 =$ Average cost of interest bearing liabilities = $\$41/\$820 =$ Spread =	9.53% <u>5.00%</u> 4.53%	+0.47% <u>+0.61%</u> -0.14%
D.	Change in net interest income = (change in rates) (GAP) = (.01) (-\$100) = -\$1.00		

^aThe time frame for rate sensitivity is one year.

Exhibit 3
IMPACT ON NET INTEREST INCOME OF COMMUNITY BANK
WHEN ITS INITIAL GAP IS POSITIVE

I. Expected Balance Sheet Composition and Average Interest Rates

	Average Interest		Average Interest	
	Assets	Yield	Liabilities	Cost
Rate Sensitive	\$550	8%	\$500	4%
Fixed Rate	300	10%	320	5%
Non-Earning/Non-Paying	150		100	--
Equity			\$920	
			\$80	
Total	1,000		1,000	

A. $\text{Interest income} = .08(\$550) + .10(\$300) = \$44 + \$30 =$
 $\text{Interest expense} = .04(\$500) + .05(\$320) = \$20 + \$16 =$
Net interest income =

B. Net interest margin = $\$38/\850

C. GAP = $\$550 - \500

II. Change in Net Interest Income If All Rates Increase By 1%

A. $\text{Interest income} = .09(\$550) + .10(\$300) = \$49.50 + 30 =$
 $\text{Interest expense} = .05(\$500) + .05(\$320) = \$25 + \$16 =$
Net interest income =

B. Net interest margin = $\$38.50/\850

C. Change in net interest income = $(.01) (\$50)$

Exhibit 4
GAP SUMMARY

GAP	Change in Interest Rates	Change in Interest Income		Change in Interest Expense	Change in Net Interest Income
Positive	Increase	Increase	>	Increase	Increase
Positive	Decrease	Decrease	>	Decrease	Decrease
Negative	Increase	Increase	<	Increase	Decrease
Negative	Decrease	Decrease	<	Decrease	Increase
Zero	Increase	Increase	=	Increase	None
Zero	Decrease	Decrease	=	Decrease	None

Source: *Bank Management* by Timothy W. Koch and Scott MacDonald

Exhibit 5
RATE SENSITIVITY ANALYSIS FOR SECURITY BANK
DECEMBER 31, 20XX (MILLIONS OF DOLLARS)

	Time Frame for Rate Sensitivity							
	1-7 Days	8-30 Days	31-90 Days	91-180 Days	181-365 Days	Over 1 Year	Nonrate Sensitive	Total
ASSETS								
U.S. Treasury & agency securities		\$0.7	\$3.6	\$1.2	\$0.3	\$3.7		\$9.5
Money market investments			1.2	1.8				3.0
Municipal securities			0.7	1.0	2.2	7.6		11.5
Federal funds sold & repurchase agreements	\$5.0							5.0
Commercial loans ^a	1.0	13.8	2.9	4.7	4.6	15.5		42.5
Installment loans	0.3	0.5	1.6	1.3	1.9	8.2		<u>13.8</u>
Earning assets								\$85.3
Cash and due from banks							\$9.0	9.0
Other assets							5.7	<u>5.7</u>
Nonearning assets								\$14.7
Total assets	\$6.3	\$15.0	\$10.0	\$10.0	\$9.0	\$35.0	\$14.7	\$100.0
LIABILITIES AND EQUITY								
Money market deposit accounts	\$17.3							\$17.3
Interest checking accounts	2.2				7.4			9.6
CDs under \$100,000	0.9	\$2.0	\$5.1	\$6.9	\$1.8	\$2.9		19.6
CDs over \$100,000	1.9	4.0	12.9	10.1	1.2			30.1
Federal funds purchased & repurchase agreements								
Savings accounts						1.9		<u>1.9</u>
Market-rate liabilities								\$78.5
Demand deposits							13.5	13.5
Other liabilities							1.0	1.0
Equity							7.0	<u>7.0</u>
Nonpaying liabilities & equity								<u>21.5</u>
Total liabilities and equity	\$22.3	\$6.0	\$18.0	\$17.0	\$10.4	\$4.8	\$21.5	\$100.0
Periodic GAP	\$-16.0	\$9.0	\$-8.0	\$-7.0	\$-1.4	\$30.2		
Cumulative GAP	-16.0	-7.0	-15.0	-22.0	-23.4	6.8		

^aFloating-rate loans total \$10 million and are classified as repriceable in 8 to 30 days given the bank's most likely rate forecast. There is no guarantee that base rates will change in this time period.

Source: *Bank Management* by Timothy W. Koch and Scott MacDonald

Exhibit 6

EARNINGS-AT-RISK USING THE EARNINGS CHANGE RATIO

Amounts in Thousands

Call Report data as of 6/30

Rate Sensitive Assets

Loans

Maturing

Repricing

Securities

Principal Cash Flows:

Treasuries

Agencies

Agency Callables

Municipals

MBS Fixed

Fed Funds Sold

Floating Rate:

CMO Floating

Total Rate Sensitive Assets

Rate Sensitive Liabilities

Savings

Money Market Accounts

NOW

Fed Funds Purch/Repo

CDs > 100M

CDs < 100M

Total Rate Sensitive Liabilities

Rate Sensitivity Gap (Assets-Liabilities)

Total Assets

Gap as a % of Total Assets

Change in Net Interest Margin

Change in Net Interest Margin

Net Interest Margin

Percentage Change in Net Interest Margin

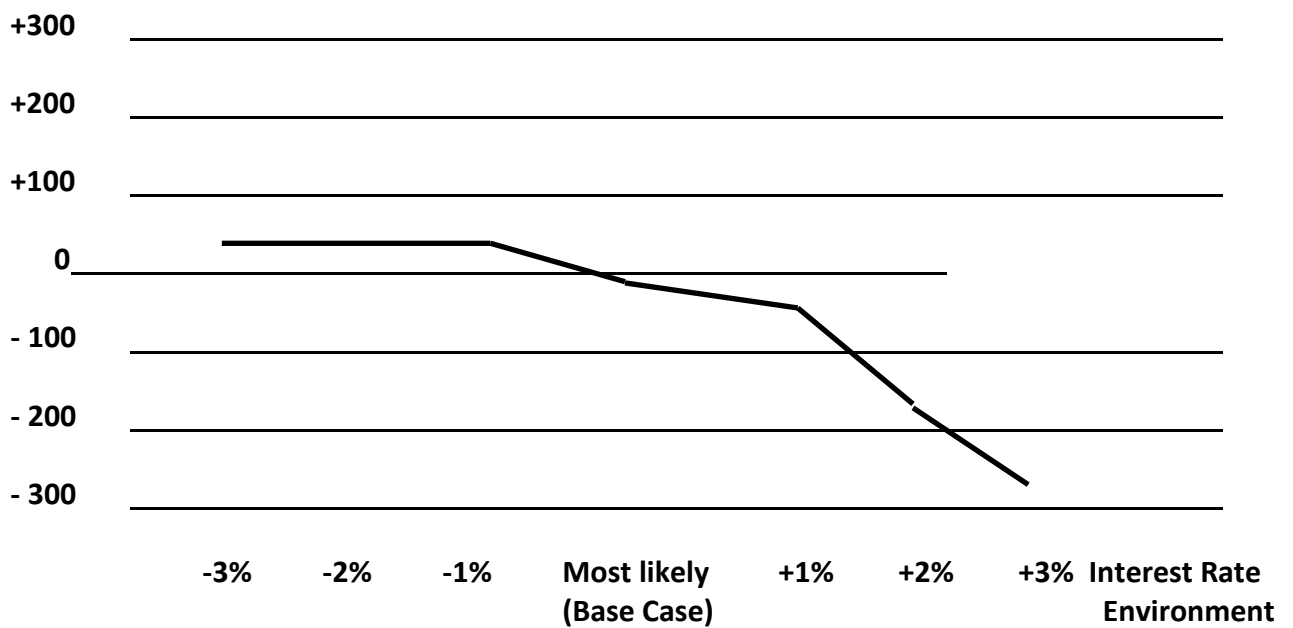
(1) One Year Balance Sheet Gap includes all balances that may change in rate in the next 12 months.

(2) The Earnings Change Ratio is an estimate of the change in rate of a rate sensitive instrument per 100 bp move in Prime.

Prime Down 100bp				Prime Up 100bp			
Balance Sheet Gap (1)	ECR (2)	Income Statement Gap	A x B	Balance Sheet Gap (1)	ECR (2)	Income Statement Gap	C x D
A	B		A x B	C	D		C x D
\$ 10,378	100%	\$ 10,378		\$ 10,378	100%	\$ 10,378	
4,356	100%	4,356		4,356	100%	4,356	
650	71%	462		650	71%	462	
2,550	71%	1,811		2,550	71%	1,811	
5,870	71%	4,168		250	71%	178	
256	7%	18		205	7%	14	
14	58%	8		8	58%	5	
1,250	96%	1,200		1,250	96%	1,200	
16	94%	15		16	94%	15	
\$25,339		\$22,414		\$19,663		\$ 18,417	
\$ 3,109	9%	\$ 280		\$ 3,109	17%	\$ 529	
6,708	17%	1,140		6,708	17%	1,140	
7,985	0%	0		7,985	17%	1,357	
0	96%	0		0	96%	0	
3,672	85%	3,121		3,672	85%	3,121	
12,549	84%	10,541		12,549	84%	10,541	
\$ 34,023		\$ 15,083		\$ 34,023		\$ 16,689	
(\$8,684)		\$ 7,332		(\$14,360)		\$ 1,729	
\$ 55,054		\$ 55,054		\$ 55,054		\$ 55,054	
-15.77%		13.32%		-26.08%		3.14%	
		(\$73)				\$17	
		-0.13%				0.03%	
		4.34%				4.34%	
		-3.07%				0.72%	

Exhibit 7
SENSITIVITY ANALYSIS OF NET INTEREST INCOME
IN DIFFERENT RATE ENVIRONMENTS

Change in Net
Interest Income
From Most Likely Forecast

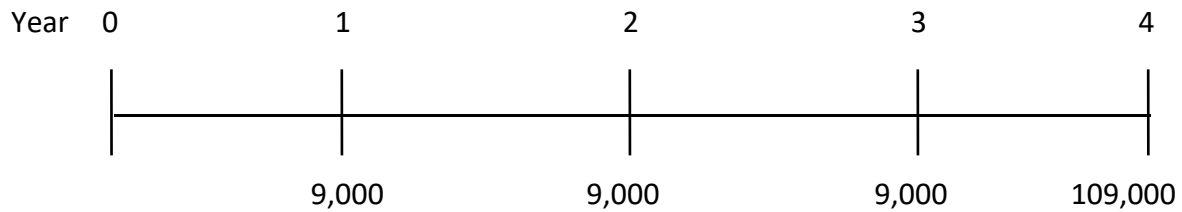


Most likely forecast is for rates to remain constant at current levels.

Exhibit 8
MEASURING A BOND'S DURATION

- A. Suppose that you own a bond that is currently priced at par = \$100,000. It pays \$9,000 in interest at the end of each of the next 4 years. After the fourth year, the bond will return the principal of \$100,000. The current coupon rate and market rate or interest on the bond equals 9%.

Cash Flows



- B. Estimated duration of the bond

$$\begin{aligned}
 \text{Duration} &= \frac{\frac{9000(1)}{(1.09)^1} + \frac{9000(2)}{(1.09)^2} + \frac{9000(3)}{(1.09)^3} + \frac{109,000(4)}{(1.09)^4}}{\$100,000} \\
 &= \frac{\$8,257 + 15,150 + 20,849 + 308,873}{\$100,000} \\
 &= 3.53 \text{ years}
 \end{aligned}$$

LENDING

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LENDING

Notes

OVERVIEW

Lending is the basic business of commercial banking. Loans comprise the highest proportion of bank assets and generate the largest portion of operating income. Bank loan practices typically play an important role in determining how fast a community grows and what type of business develops. Loan officers are visible participants in community activities and work closely with borrowers and community leaders to attract business and improve the economic viability of the area.

Bank loans vary widely in terms of the type of borrower, size, maturity, repayment source, use of proceeds, collateral, yield opportunities and degree of risk. The broad objective of a loan policy is to maximize the return on loans while controlling the bank's risk exposure. The task is not easy because loan demand is typically uneven and because increases in the demand for loans cannot always be accommodated. Many problems cannot be accurately predicted, so some loans default. A bank's loan portfolio should thus be diversified to maintain balance across types of borrowers, trade areas, and the business cycle. Managers must determine where their expertise is and what types of loans to pursue. Generally, community banks choose to emphasize business loans, real estate loans, consumer loans, or agriculture loans. The largest banks typically emphasize large commercial and industrial loans, foreign loans, real estate loans, and any loans that can be securitized, such as credit card loans and mortgages.

Understanding lending is critical to managing a bank as loans typically comprise the largest earning asset. They also exhibit the highest default risk. Banks that fail generally fail because of asset quality problems as management charges off loans as uncollectible. While all banks suffer loan losses, managing default (credit) risk is one of the keys to generating strong earnings within acceptable risk limits.

LEARNING OBJECTIVES

Following the successful completion of this session, you should be able to:

- Identify the major categories of bank loans and their characteristics.
- Document how loan portfolio composition differs in small versus large banks.

- Understand the factors and procedures that should be included in a bank's written loan policy.
- Describe the basic issues involved in a credit decision.
- Understand the importance of cash flow versus earnings in assessing repayment prospects.
- Explain how a consumer credit scoring model is structured.
- Explain why loan participations are used.
- Recognize the sources of income and expense involved in lending; the role of fees, compensating balances, and interest income; and the importance of a bank's cost of funds, loan administration expense and overhead, and credit risk.
- Describe the role of the commercial lender and the role of the consumer lender.
- Document recent trends in loan quality and problem assets.

TYPES OF LOANS

Commercial banks make loans to different types of borrowers for many different purposes. For most customers, bank credit is the primary source of debt financing. For banks, loans offer relatively high pretax yields, but they involve relatively high credit risk and are costly to administer. Many factors can lead to customer defaults. An entire industry, such as energy, agriculture or shipbuilding, can decline due to general economic conditions. Firm-specific problems may also arise from changing technology, labor strikes, fraud, or bad management. Lenders try to assess the risk of default prior to making loans and price loans accordingly.

Exhibits 1 and 2 document the composition of U.S. commercial bank loan portfolios as of December 31, 2025. Loans are classified by the type of borrower.

First, real estate loans (nonfarm nonresidential, residential, construction) represent far and away the largest single category of loans for all banks, on average, with commercial and industrial loans ranked a distant second. Real estate loans accounted for over 40 percent of assets.

Second, agriculture loans are only 1% of loans at all banks. However, agriculture loans are significant at many smaller banks. This is not surprising given that such loans are typically unique to a local geographic area and are often held in portfolio by the original lender. The features of agriculture loans are not standardized such that the loans are not easily securitized or sold.

Also, larger banks have substantially greater exposure to consumer loans versus other banks. This reflects the fact that large banks dominate credit card lending among commercial banks because of the economies of scale required.

Commercial and Industrial Loans

Any loan made to an individual, partnership or non-financial corporation (excluding farmers) for business or professional purposes is considered a commercial loan. Because banks lend heavily to manufacturing companies, the formal label is commercial and industrial loans. Commercial loans may be short-term or long-term, depending on the use of the proceeds and method of repayment; priced on a fixed-rate or floating-rate basis; and either secured by collateral or unsecured.

Many commercial loans are **working capital loans** with maturities ranging from one month to one year. Such loans typically finance a firm's temporary build-up of inventory or accounts receivable, and they are repaid as the firm collects on receivables. They often take the form of loan commitments or line-of-credit agreements, where a bank and borrower agree in advance that the firm can draw against a credit line as needed up to a maximum amount. The borrower determines the timing of borrowings. Loan officers complete a detailed analysis of the loan application and negotiate specific terms and pricing before extending credit.

Businesses also have credit needs that persist for periods beyond one year, such as the purchase of a new piece of equipment or start-up costs for a new venture. Banks use **term loans**, which have a maturity of more than one year, in these cases. The characteristics of term loans vary with the use of proceeds. When a borrower buys a depreciable asset, the loan principal is normally advanced in its entirety after the agreement is signed.

The loan maturity is determined by the asset's useful life and the borrower's ability to generate cash to service the debt. Some term loans are bullet loans that call for a single repayment of principal at maturity. Others are amortized such that they are repaid on an installment basis

where each periodic payment includes both principal and interest. The normal source of funds to repay term loans is cash generated from operations. For new ventures, banks advance the proceeds as needed. If a borrower needs different amounts over time, the loan may be structured as a loan commitment during the initial stages, with the outstanding principal later converted to a term loan.

Real Estate Loans

Real estate loans are classified by the type of collateral. A loan secured by a mortgage, deed of trust or some other lien on real property is included on the bank's books as a real estate loan. Collateral agreements typically enable the bank to take title to the underlying property if the loan terms are not met. Short-term real estate loans consist primarily of loans to businesses for construction and land development. Construction loans represent interim financing on commercial, industrial, or residential property. A bank extends credit to a builder to pay for materials and labor necessary in completing a project. The builder repays when the project is finished and long-term permanent financing is obtained. Land development loans finance the construction of roads and public utilities in areas where developers plan to build.

Developers repay when customers buy the property. These loans often carry substantial default risk. Banks try to limit their risk by working with well-known developers and by requiring third-party appraisals. They also compensate by requiring upfront fees and pricing the loans at high mark-ups over the bank's cost of funds. In 2006, Ben Bernanke, then the chairman of the Federal Reserve, expressed concerns that many banks had loan portfolios that were too concentrated in commercial real estate. The various bank regulators then followed with guidance stipulating that banks with high concentrations of commercial real estate loans needed to have 'heightened risk management practices appropriate to the degree of concentration risk'. Not surprisingly, when the sub-prime mortgage crisis hit, regulators grew concerned that problems in valuing residential housing would lead to problems in construction lending and commercial real estate overall. They subsequently increased scrutiny further.

In order to determine whether a bank has a concentration in commercial real estate lending that necessitates heightened risk management practices, regulators suggested the following thresholds as those identifying banks with a high concentration in commercial real estate:

- 1) total loans for construction, land development, and other land represent 100% or more of the institution's total (risk-based) capital;

- 2) total loans secured by multifamily and nonfarm nonresidential properties and loans for construction, land development, and other land represent 300% or more of the institution's total (risk-based) capital.

Loans secured by owner-occupied properties were excluded from this designation given their different risk profiles.

Most long-term real estate loans are residential mortgages. The borrower uses the property as long as the principal and interest payments are made. If the borrower defaults, the bank can exercise the mortgage lien and claim the property after a reasonable amount of time has elapsed. Historically, the primary problem with mortgage loans has been interest-rate risk because most mortgages carried fixed rates. From 2001 through mid-2006, lenders aggressively marketed adjustable rate mortgages (ARMs) that provide for periodic adjustments in the interest rate charged (or similar modifications to the periodic payment), depending on the general movement in interest rates. When rates increase, yields on ARMs increase, albeit with a lag. Such mortgages put the impact of rising rates on borrowers and potentially increase default risk. With rising property values making it more difficult for many borrowers to afford new homes, many lenders aggressively marketed 'exotic mortgages', particularly interest only (IO) loans and option-ARMs where the borrower had the right to choose each month what payment to make. With option ARMs, borrowers could make a minimum monthly payment that failed to cover the required interest and principal to fully amortize the loan. As such, any unpaid amount was added to the outstanding principal. This negative amortization made it increasingly difficult for borrowers to repay their loans as rates increased through 2006 and then real estate values generally fell in 2007. For example, housing values in Florida, California, and markets such as Las Vegas and Phoenix fell by 20 - 25 percent in 2007, and continued to fall, reaching a 35 – 50% decrease through 2012.

The crisis in housing put the brakes on new home construction and raised concerns regarding how to value many real estate projects. Many banks subsequently cut back on lending creating a liquidity and credit crisis. In addition, over time banks have not been successful in pricing mortgages to compensate for prepayments. When mortgage rates rise, fixed-rate borrowers gain because they have locked in relatively low rates. When mortgage rates fall, borrowers with fixed-rate loans refinance. Prepayment charges compensate the bank for giving the borrower the option to refinance.

Loans to Individuals

Loans to individuals, or consumer loans, are made for personal expenditures other than real estate or securities. The usual purpose is to buy some durable good, such as a car or boat, or to finance expenditures on education and medical care. The average loan is relatively small. Most have maturities from one to five years and are repaid in installments. Recently, more consumer loans have been priced to float with market interest rates, but most consumer loans carry fixed rates.

Consumer loans are typically classified as installment, credit card or non-installment credit. Installment loans require a partial payment of principal and interest each period until maturity. Credit card and non-installment loans, in contrast, require either a single payment of principal plus interest or a gradual repayment of principal and interest at the borrower's discretion. The latter is common with credit card loans and home equity loans, two of the most popular forms of consumer credit.

The federal and state governments have approved a wide range of regulations to protect individuals when they obtain credit. Most address discrimination, billing practices, customer liability, the proper disclosure of finance charges, and reasons for denying credit.

The small dollar amounts and substantial paperwork with each loan suggest that loan administration costs are high. Default rates are also high compared to other types of loans. Still, interest rates on consumer loans are among the highest loan rates, so consumer loans offer attractive returns after expenses and charge-offs. Thus, many of the largest banks in the U.S. have recently gone after additional consumer business, especially in the areas of credit cards and home equity loans.

Agriculture Loans

Loans to farmers or ranchers for any purposes associated with operating the farming or ranching business are classified as agriculture loans. Most loans finance seasonal operating expenses associated with planting or harvesting crops or caring for livestock. Like working capital loans for businesses, the proceeds are used to purchase inventory and the loan is repaid when the crops or livestock are sold. Long-term loans finance the purchase of livestock, equipment, and land and are similarly repaid out of operating cash flow.

The strength in commodity prices in mid-2008 through early 2013 meant that agriculture loans generally produced strong returns with limited problems. Smaller agriculture-oriented banks did not experience the problems that many larger institutions had, with the possible exception of not enough producers actually utilizing their lines of credit. However, a downward trend in commodity prices in 2015-2019 proved problematic for producers, as many faced cash flow issues that need to be addressed.

The COVID-19 pandemic saw prices continue to drop until the fall of 2020, when commodities began to rebound due to worldwide stockpiling and expected poor harvests due to drought. In 2021, strong exports and increased ethanol demand helped keep prices up. In early 2022, the war in Ukraine pushed prices even higher, as Ukraine is often referred to as the 'bread basket' of Europe. Prices softened in 2023-24, but volatility in commodity markets has continued into 2025.

International Loans

Many banks have extended credit to borrowers based outside the U.S. The borrowers may be private businesses, individuals or governments. In many ways the loans are similar to domestic loans. The use of proceeds may be for working capital or durable goods, or they may be production loans that facilitate a country's long-term economic development.

International loans carry substantially different risks, however, than domestic loans. Borrowers outside the U.S. may operate under different rules and regulations and often conduct business in a different currency than the U.S. dollar. These risks are labeled **foreign exchange risk** when the uncertainty is due to fluctuations in currency values and **country risk** when repayment uncertainty is associated with country-specific political and economic risk. For example, in both 1987 and 1989 many of the largest U.S. money center banks charged off significant portions of their international loan portfolios.

In essence they recognized that many of the loans, particularly those to developing countries in South America, would not be repaid as originally anticipated or as restructured from prior periods. Interestingly, during the early 1990s, many foreign borrowers renegotiated credit terms and began to repay their outstanding debts. Again in 1998, 2001 and 2002, many of the largest banks in the U.S. had to charge-off loans to borrowers in Russia and Argentina, respectively, as economic conditions deteriorated in these countries and many borrowers defaulted. The Russian government actually defaulted on some of its outstanding bonds that were held by U.S. and foreign banks.

Other Loans

Loans to Brokers and Dealers: Loans to securities brokers and dealers to enable them to buy securities for their own account or for customers.

Loans to Financial Institutions: Loans to commercial banks and other institutions.

Loans for Leveraged Buyouts: Loans to businesses to help purchase a controlling interest in another firm, typically bridge loans or temporary financing until the borrower sells assets of the acquired firm to pay down the debt.

SBA-Guaranteed Loans: Loans to small businesses in which a participating bank obtains a guarantee from the Small Business Association (SBA) for 80-90% of the loan principal.

Loans to Nonprofit Organizations: Loans to churches, hospitals and other not-for-profit enterprises.

Prime Brokerage: Services offered to hedge funds including securities loans.

Sub-prime Loans: Loans to high-risk borrowers.

Loan Participations

Loan participations arise when two or more lenders share in a loan to a borrower. Correspondent banks or several banks that are part of the same holding company often book part of the principal of a loan made to a business, even though a lead bank negotiates the basic terms. Banks participate loans to other lenders when the principal amount is large and the bank either cannot make the entire loan without exceeding its legal lending limit or wants to reduce its overall default risk by diversifying. Banks are subject to regulatory loan limits that restrict the size of any single loan to a fraction of the bank's capital.

Syndicated Loans

Many of the largest banks have been active participants in the syndicated loan market. Syndicated loans are made by groups of lenders, hence the label syndicate, to a borrower with a substantial borrowing requirement. One or more banks serve as the lead lender who negotiates the basic terms of the loan agreement, with other lenders agreeing to extend credit on the same basic terms. Members of the syndicate receive a pro-rata share of the principal and interest payments based on their share of the initial credit extended. During 2001-2003, many large banks suffered significant losses with syndicated loans. This experience reappeared in 2007-2008 especially with loans for leveraged buyouts. Large commercial and investment banks made such loans expecting that they could readily sell them to investors. Instead, they found that buyers disappeared with the liquidity crisis and they were forced to hold them in inventory. In order to sell the loans, they had to discount them and take losses on the transactions. Not surprisingly, they largely withdrew from funding buyouts in late 2007.

Recent Trends in Loan Quality

Banks take substantial credit risk when making loans to most borrowers. They are specifically allowed to establish loan loss reserves in anticipation of losses, which helps smooth earnings over time. *Exhibit 1* documents loan composition and performance at FDIC-insured community banks as of December 31, 2025. The following is an excerpt from the FDIC Quarterly Profile for 4th Quarter, 2025, regarding Community Banks.

Loan Balances Continued to Expand

Total loan and lease balances increased \$267.8 billion (2.0 percent) from the prior quarter to \$13.5 trillion. The largest dollar increases among reported categories were in loans to non-depository financial institutions and credit card loans. Loans to purchase or carry securities, including margin loans, nonfarm nonresidential CRE loans, and commercial and industrial loans, also contributed to the industry's quarterly loan growth. The industry's loan growth rate in the fourth quarter was 5.9 percent, the fastest annual growth rate in 11 quarters. (Emphasis added by Schools of Banking, Inc.)

End of excerpt from FDIC Quarterly Profile, 4th Quarter, December, 2025

Loan Yields

Different loans have different risk features and loan administration costs and therefore, priced accordingly. In general, consumer loans carry the highest gross yields. Consumer advocacy groups and bank analysts have focused considerable attention in recent years on "high" credit card rates that appear to be "sticky downward" which means that rates tend to remain high and are slow to be reduced. As the general level of interest rates declined, many banks kept credit card rates at high levels. Commercial and industrial loans are priced to reflect the cost of bank funds and administrative costs, plus a mark-up to reflect risk. Large loans with low default risk may thus be priced close to money market interest rates. High-risk loans may, in turn, be priced at a large (three to six percent) mark-up over a bank's base rate.

Foreign loans produced the lowest yields even before loan loss provisions. In order to reduce interest-rate risk and increase the sensitivity of a bank's interest income to changing interest rates, banks price many loans on a floating rate basis. Here the contract rate varies periodically and is typically tied to some market index or base rate such as the prime rate, jumbo CD rate, or a government rate index as with adjustable rate mortgages.

ELEMENTS OF A WRITTEN LOAN POLICY

A bank's loan policy provides operating guidelines for employees involved in lending activities, and for senior management to use in assessing the risk and return profile of the loan portfolio.

Key elements of a written loan policy include the following:

- Statement of lending philosophy
- Loan policy objectives
- Compliance with laws and regulations
- Loan standards
- General loan approval criteria
- How exceptions to policies will be handled
- Loan pricing objectives

- Loan administration procedures
- How problem loans will be handled

Essential Components

The Comptroller of the Currency has identified essential components of each bank's loan policy including:

- **Geographic limits of the bank's trade area:** Loan officers need to be aware of the bank's primary service area and concentrate their lending activities accordingly. Credit problems often arise when officers make loans outside their trade area or to borrowers in unfamiliar lines of business because they know less about both the borrower and the nature of the business activities.
- **Types of and Composition of Loans:** This forces management to assess the costs and benefits of concentrating assets among similar types of borrowers, such as loans to energy-related firms and associated individuals. It also serves to focus lending in areas where the bank has a demonstrated expertise. The types of loans to be avoided should be identified.
- **Allowable maturities:** Credit should be extended with realistic repayment prospects related to the use of the loan proceeds and the anticipated sources of funds for repayment.
- **Pricing:** This policy should recognize alternative sources of income and expense associated with making loans. It should address the proper role of fees and compensating balance requirements. Interest rates should be established in line with the bank's cost of funds, loan administration expense and estimated default risk on the loan. An appropriate balance between fixed-rate and variable-rate loans should be specified.
- **Collateral values:** This policy should state who is responsible for determining collateral values, what methods should be used and what appraisal standards should be employed. Situations in which independent appraisals are necessary should be detailed as well as procedures to follow when appraisals are not required.
- **Financial information:** High credit standards require careful credit analysis. This policy should indicate financial statement requirements by type of borrower. It should also state whether audited statements are necessary and the type of information that a borrower should provide, such as receivables agings, cash flow projections and operating budgets.

- **Collections and Charge-offs:** Management should state how and when problem loans will be identified and recognized on the bank's financial statements. It should also indicate the method by which loans will be placed on non-accrual status and charged off.

Loan Objectives and Strategies

The loan policy statement should formally state the bank's mission regarding its primary credit focus or market niche, expected profitability and service to the community. It should specifically quantify loan growth targets and the anticipated contribution to earnings. The following objectives are often addressed:

- Establish the degree of aggressiveness for establishing market share. Loans contribute the largest portion of interest income. If losses are controlled, loans contribute greatly to bottom line profitability. A policy that is too aggressive often encourages officers to lower credit standards and potentially approve marginal loans with excessive risk.
- Decide whether to enter new lending areas, such as credit cards, home equity loans and leveraged buyout loans. A bank must assess the cost of entering the market and the potential returns.
- Determine the maximum percentage of the loan portfolio in any one industry or type of loan. Diversification reduces risk. Still, it is difficult for many community banks to spread risk because their trade area is often geographically limited to borrowers in certain industries that are all affected by the same economic events. Small banks in agriculture and energy regions have demonstrated this. The use of loan participations and loan sales, however, may help lower this risk.
- Establish internal procedures for securing credit information about consumers and businesses and for evaluating the source of funds for repayment.
- Delegate credit authority to loan officers that specifies the maximum size of loan that each officer can make to any single borrower.
- Structure the review procedures before loans are granted; identify the nature of prior loan losses to determine whether default risk is being adequately priced.
- Establish procedures for audits of loan activities. Loan policies should be reviewed at least annually by senior credit officers, the bank's asset and liability management committee, and the board of directors.

General Responsibilities of a Lender

The basic function of a loan officer is to conduct the following activities when evaluating, structuring, and approving a loan:

- Identify and quantify the risk to the bank,
- Match the loan purpose, size, maturity and source of repayment to the borrower's expected cash flows,
- Price the loan (with assistance from the funding department or internal funds transfer pricing group, where appropriate),
- Periodically audit the borrower's performance, quality of inventory, accounts receivable, etc. and management stability/strength,
- Promote and monitor the entire customer relationship, and
- Package and sell noncredit services with credit services.

A bank's success depends on whether its employees serve customer needs profitably. A lender must work to ensure an open and trusting relationship with the borrower. He or she must be aware of the customer's noncredit needs as well as credit needs and be able to offer advice regarding the best alternatives. A lender must know the customer's business, operations, management, and strategic plan. With this information there will be fewer surprises and a more satisfied customer.

MANAGING CREDIT RISK

Credit risk is the current and potential risk to earnings and capital associated with the failure of a borrower or counterparty to make contractual interest and principal payments as promised or to perform as agreed on an off-balance sheet contract.

There are four general sources of credit risk:

Transactions Risk:	Risk of loss inherent in any single loan evidenced by a borrower's willingness and ability to repay.
Intrinsic Risk:	Risk of loss associated with features of a specific line of business or industry.
Concentration Risk:	Risk of loss related to excessive exposure by type of borrower, line of business, and geography.
Country Risk:	Risk of loss associated with borrowers outside the U.S. attributable to factors signifying economic and political risks unique to a country.

A loan officer is responsible for measuring and managing transaction risk associated with individual loans. A bank's credit risk managers are responsible for managing the overall risk and return of the loan portfolio. The objective is to achieve the bank's target risk profile and return.

EVALUATING LOAN REQUESTS

Transactions Risk

Basic Loan Procedures

It is absolutely essential that credit managers develop a high quality portfolio of loans and price the associated risks correctly. For this reason, most banks have a formalized lending decision process. The process typically begins with an application by a borrower and personal interview. The lender's objective is to obtain as much information as possible about the purpose and amount of the loan, the repayment source and schedule, the individual's background (if a consumer loan) or the business history (if a commercial loan), and where the borrower currently has a banking relationship.

After the initial interview, a lender creates a credit file that serves as the central information source for anyone who works on the loan. The file will contain all notes, correspondence, financial information and memoranda related to the borrower's request. A file should be maintained even when a loan request is rejected.

The next step for loan requests that are not immediately rejected is to verify the information collected and obtain additional financial statements or other documents where necessary. Loan officers then conduct a formal credit analysis that involves both quantitative and qualitative assessments of a borrower's true credit needs, and ability and willingness to repay a loan if granted. The results of a credit analysis are typically condensed in a formal credit report that is reviewed by senior lenders.

In the case where a loan officer believes that a loan should be made, he or she works with the borrower to structure the loan in terms of amount, maturity, repayment schedule, required collateral and loan covenants. Depending on the size of the loan and the bank's loan policy, the loan officer may either make the loan or must present a proposal to a loan committee where senior credit officers review and modify the terms and make the final accept/reject decision. The results are then conveyed to the borrower. If the loan is made, the lending officer then establishes a periodic review procedure to monitor the borrower's performance.

Basic Credit Issues

Credit analysis involves assessing the risk that a borrower will repay in a timely manner. There are five basic factors that must be evaluated:

- The borrower's character,
- What the loan proceeds are going to be used for,
- How much the customer needs to borrow,
- What the primary source of repayment is expected to be and, thus, when the loan will be repaid, and
- What the secondary source of repayment is or what collateral is available.

Character

The foremost issue in assessing credit risk is determining a borrower's willingness and ability to repay. Willingness or commitment is typically evidenced by an individual's track record of honesty, integrity, and work ethic; or by the same traits of a firm's management team. It is often difficult to identify dishonest borrowers. The best indicators are the borrower's financial history and personal references. Borrowers with a record of paying prior debts are likely to repay future loans. When borrowers have missed payments or demonstrated other credit problems, a loan officer must document why to determine whether the reasons were justified.

Use and Amount of Proceeds

Loans to individuals typically result from a specific transaction, such as the purchase of a car or home, or payments for medical expenses. The purpose of the loan is thus apparent from the type of payment that arises at the time the loan is negotiated.

Loans to businesses are more difficult to assess. Most short-term loans finance the build-up of inventories and accounts receivable. Term loans are often made for asset acquisitions. One of the primary objectives of analyzing historical and projected financial statements is to add precision to the loan officer's assessment of why and how much a firm needs to borrow. Typically, trends in financial ratios and internally generated cash flows reveal actual funding needs.

Primary Source and Timing of Repayment

Loans are repaid from cash flows. For individuals this generally means disposable income or funds from the sale of an asset. The basic sources of cash flow for businesses are the liquidation of assets, other borrowings, new issues of stock and cash flows from operations. Seasonal working capital loans, for example, are typically repaid when the firm collects on receivables following the liquidation of inventory. Term loans are normally repaid out of cash flows from operations, specifically earnings and non-cash charges above that for working capital needs and capital expenditures.

Credit analysis evaluates the risk that a borrower's anticipated cash flows will not be sufficient to cover mandatory operating expenses plus interest and principal payments on the loan. A comparison of expected cash flows with debt service requirements indicates how much debt can reasonably be serviced and the appropriate maturity of a loan. Unless specifically stated in a loan agreement, a lender should not rely on new borrowings from other lenders or new equity contributions from owners as the primary source of repayment.

Secondary Source of Repayment

As protection against losses, a bank can reduce its exposure if it can look to a secondary source of cash in case the primary cash flow does not materialize. Banks often require that a borrower pledge collateral against a loan for this reason. Collateral refers to the security that a bank has in assets owned and pledged by a borrower against a loan. The best collateral is readily marketable and retains its value over the business cycle.

Liquidating collateral is a second best source of repayment for three reasons. First, there are significant transaction costs in the form of employee time and legal fees when foreclosing. Second, bankruptcy laws allow borrowers to retain possession of collateral long after they have defaulted, and the quality of the asset may deteriorate or the asset may disappear.

Third, when a bank takes possession of collateral, the borrower loses its use and the opportunity to generate additional cash. Banks also may require a third party to cosign a loan or guarantee the borrower's performance. This effectively adds the guarantor's assets in support of the loan. Banks often must sue guarantors, however, for actual payment.

Reported Profits vs. Cash Flow

Most lenders agree that business managers and investors pay too much attention to a firm's earnings and not enough attention to cash flow. A firm can report large and rising net income for a year but actually be worse off because it doesn't generate cash flow from its operations. Consider a firm that records \$1 million in credit sales during a year but doesn't collect on any of its accounts receivable. Even though it may report a profit, it will not have received any cash flow. Is it better to look at cash flow or earnings?

While there are many different methods to estimate cash flow, the basic concept is to generate a cash-based income statement for the borrower. Instead of an earnings figure, an analyst can determine how much cash flow from operations the business is producing.

A general format is provided below:

$$\begin{aligned} & \text{Cash receipts from sales} \\ & - \text{Cash purchases} \\ & = \text{Cash margin} \\ & - \text{Cash operating expenses} \\ & = \text{Cash operating profit} \\ & + \text{Other income} \\ & - \text{Other non-interest expense} \\ & = \text{Cash before interest and taxes} \\ & - \text{Interest expense} \\ & - \text{Income taxes paid} \\ & = \text{Cash flow from operations} \end{aligned}$$

Cash receipts from sales are essentially net sales adjusted for the change in outstanding receivables. Cash purchases are the cost of goods sold adjusted for the change in inventory and accounts payable. Clearly, cash flow from operations may differ substantially from reported net income plus depreciation, especially if a firm is rapidly growing inventory and accounts receivable.

As an example, consider the balance sheet and income statement data for Story Inc. in *Exhibit 3*. Total assets grew by \$100,000 in 2024 and Story reported \$55,000 in net income. The traditional cash flow measure of net income plus non-cash expenses equals \$106,000 (\$55,000 + \$51,000). A firm's cash flow from operations will differ from the traditional cash flow measure by changes in current assets and current liabilities, changes in taxes payable, and changes in other balance sheet items.

Exhibit 4 provides a calculation for cash flow from operations, incorporating both balance sheet data for 2024 and 2025 and income statement data for 2025. The format is essentially a cash-based income statement. Note that:

- Cash receipts from sales are less than reported sales because accounts receivable increased; some sales are on credit and remain uncollected at the time of accounting,
- Cash purchases exceed the cost of goods sold because both the inventory and accounts payable increased; cash is used up with these changes,
- Cash margin exceeds cash operating expenses, other net cash non-interest expense and cash tax payments, and
- Cash flow from operations equals \$75,000.

Cash flow from operations is \$31,000 lower than net income plus non-cash expenses in 2024 largely because inventory and accounts receivable growth was so large. This indicates potential problems for Story if the growth is not controlled. Note that Story's cash flow from operations is enough to cover the \$35,000 in principal payments on the firm's long-term debt plus the \$20,000 in cash dividends paid. Story, Inc. paid an additional \$76,000 in capital expenditures and made \$9,000 in long-term investments. These payments were generally financed by increasing notes payable from the bank in addition to the cash flow from operations. In the aggregate, cash and marketable security holdings increased by \$5,000.

The key question from a lender's perspective is: *Can Story, Inc. assume additional debt and service it with operating cash flow?* This is normally answered by identifying a new loan request, forecasting the borrower's balance sheet and net income over the relevant period in the future, and comparing estimated cash flow from operations with required debt service. If cash flow from operations is sufficiently large to cover interest, principal, and cash dividend payments, the loan meets the bank's criteria regarding the borrower's ability to repay the loan.

In general, cash flow from operations after interest payments are subtracted should be sufficient to make obligated principal payments on outstanding debt and pay dividends. Otherwise, a firm must borrow or issue new stock for these purposes, which is generally a signal of forthcoming problems. In order to know how much cash is actually available for new borrowing, capital expenditures that are necessary to

maintain the existing plant and equipment should also be subtracted from the estimate of cash flow from operations.

The cash-based income statement for Story, Inc. in 2025 indicates that the firm had \$75,000 in cash flow from operations after interest; paid \$35,000 in principal due on long-term debt; and paid \$20,000 in dividends, which left \$21,000 for capital expenditures and long-term investments. Story's capital expenditures totaled \$75,000 and long-term investments another \$9,000, which were effectively financed with the incremental cash flow and borrowing via notes payable. Unless Story's management expected to finance these latter expenditures with cash flow from operations, the firm performed reasonably well in 2025.

Risk Ratings

Many banks quantify the amount of transactions risk by assigning a risk rating to each individual loan. The risk rating process involves evaluating the characteristics of the prospective borrower and features of the loan request. Depending on the strength of the borrower, it determines the overall transactions risk and categorizes the loan according to a predetermined rating scale. Importantly, both quantitative and qualitative factors may be used to assign the rating.

Exhibit 5 represents a sample risk rating scale. A risk rating of "1" signals the highest quality loans with the expected risk increasing with lower ratings. In this scale, ratings "1" through "5" are for healthy borrowers. Ratings "6" through "10" are for high-risk loans that do not meet the bank's credit standards for acceptable loans. Obviously, a lender would not intentionally approve a new loan rated below "5" according to this scale. Loans in these grades reflect once acceptable loans that have gone bad.

Credit Scoring

Banks also use credit-scoring models to analyze and quantify transactions risk and assign risk ratings. Most banks use a third-party professional service that utilizes the FICO credit scoring system. FICO's scoring system assigns a numerical representation of creditworthiness that ranges from 300 to 850. The higher the number, the higher the individual's credit score.

A credit-scoring model uses a borrower's historical financial and nonfinancial information to quantitatively assign a grade, or score, to a loan application.

Statistical methods are used to identify the traits of prospective borrowers and characteristics of a loan request that effectively differentiate between borrowers that repay as scheduled versus borrowers that default. Recent trends see banks credit score most consumer loans, home equity loans, and some small business loans.

Consumers typically offer less financial data than businesses when requesting a loan. Banks employ both judgmental and quantitative credit scoring procedures when evaluating these loans. In both cases, a loan officer collects information regarding a borrower's character, financial capacity to take on debt, and available collateral.

With a purely judgmental approach, the officer interprets the information in light of the bank's loan policy and historical loss experience and either accepts or rejects the loan. With a pure quantitative system, the loan officer grades a loan request according to a statistically sound credit-scoring model. Such a model assigns points to selected characteristics of the loan request and borrower. The officer adds the points and compares the total with statistically determined accept or reject scores. Any total that exceeds the minimum accept score signals a loan that should be approved. If the total falls below the reject score, the officer denies the loan request.

Exhibits 6 and 7 characterize a loan application from James Smith and a sample credit-scoring model. In this example, any loan with a total credit score over 200 is automatically approved, while the request is denied if the score is below 150. Scores in between are evaluated subjectively before a determination is made. The use of credit-scoring models raises many issues. First, is the model accurate? Will it be accurate over different types of loans and different stages of the business cycle? If not, what will happen to asset quality when the next recession hits? Second, does management periodically evaluate the outputs of credit-scoring models to validate their effectiveness? If not, the models may be outdated and lead to incorrect accept and reject decisions. Finally, should a bank make loans without any qualitative assessment of the borrower and loan request? As indicated in the bottom of *Exhibit 7*, Smith's score was 185 so that the request was neither automatically accepted nor rejected.

Small business loans are among the most profitable loans that banks make. Regional firms with limited sales and geographic outlets do not have the wide range of financing available to larger firms and do not typically have the in-house expertise of a treasurer or chief financial officer to manage finances. A bank, through its loan officers, offers services that are quite attractive to the owners of these firms and profitable to the bank.

Many banks credit score small business loans. Banks use credit reports provided by national services or in-house scoring models based on their own historical loan portfolios to assess the risk of the key individual of the firm and then make a decision as to how much to lend according to the credit score if the individual qualifies. Some banks mail unsolicited offers of unsecured credit lines to small businesses for as much as \$250,000. Such loans compete with local banks' lending and may have the advantage of fewer loan covenants. They have the distinct disadvantage of not being based on an established customer relationship. Still, a critical issue is for bankers to know what alternative sources of financing exist for their customers.

Problem Loans and Losses

The lending process is, by nature, imperfect. Credit analysis may be incomplete or based on faulty data. Loan officers may overlook the true financial condition of the borrower in hopes that conditions will improve, or conditions may simply worsen to such an extent after a loan is granted that a borrower cannot repay. In any event, loans that are not being repaid in a timely manner are classified as problem loans.

Most borrowers experience a serious cash crisis before defaulting. Firms often follow a cycle. First, liquidity becomes strained as inventory accumulates and receivable collections slow. Second, cash management becomes the firm's top priority. Capital expenditures are eliminated, employees are let go, and expenses are capped. At this stage, the borrower's bank relationship starts to deteriorate. In the final stage, the firm is close to bankruptcy. It overdraws its accounts and misses loan payments. Such a firm must be restructured or it enters bankruptcy. *Exhibit 8* provides a checklist of early warning signals for problem loans.

When a loan proves to be uncollectible, a bank must charge it off. Most banks use the reserve method to account for loan losses where the valuation reserve represents a deduction from assets (contra-asset) on the bank's balance sheet. Each loan charge-off reduces the reserve dollar-for-dollar. Each loan recovery adds to the reserve. A bank's provision for loan losses is then reported on the income statement as a deduction to indicate how much the bank will add net of charge-offs to its reserve. This deduction essentially recognizes that some loans will ultimately be charged off, and income reported in the absence of these expected losses will overstate the bank's true financial condition.

EVALUATING INTRINSIC RISK FOR THE LOAN PORTFOLIO

Many banks segment their loan portfolios by the type of loan, such as commercial and industrial, real estate, agriculture, and consumer loans. Commercial loans are also frequently categorized by the specific line of business or industry of the borrower. In most cases, loans of the same type will exhibit similar risks based on general economic conditions.

Intrinsic risk is the risk of loss associated with a general deterioration in the performance of borrowers within a specific type of loan, line of business, and/or industry. Banks can evaluate the intrinsic risk of the portfolio along standard dimensions.

Barrickman, Bauer and McKinley (1998) provide a worksheet to analyze intrinsic risk that appears as *Exhibit 9*. In this framework, loan portfolio managers assign scores to each line of business to reflect historical credit performance, line of business stability, the customer's risk profile, related predictive factors associated with the economic/regulatory environment and competition, and specific lending risks associated with collateral and the maturity of the loan.

EVALUATING CONCENTRATION RISK

To assess credit risk, portfolio managers should examine whether any type of loan is concentrated in a single industry, line of business, or geographic area. If concentrations exist, the bank might be exposed to extraordinary losses when transactions risks and intrinsic risks worsen. To measure concentration risk, a bank should identify the amount of loans outstanding at any time by borrower, line of business, industry and geographic market. It should compare these outstanding balances with the bank's total loans and capital.

These ratios are labeled **concentration ratios**. As with loan risk ratings and intrinsic risk scores, the portfolio manager might assign a concentration risk score. High concentration risk scores would signify high risk and low scores would signify low concentration risk. The loan portfolio manager should then track the scores over time.

POSITION LIMITS

Banks should attempt to control or limit portfolio credit risk by establishing position limits. Position limits refer to the maximum allowable exposure to any single borrower, and line of business, and any geographic area. Typically, the amount of each position limits is tied to a bank's capital. As such, the maximum exposure will be some fraction of the bank's capital that will not put the bank at risk of failure. When intrinsic risk and concentration risk scores signal increasing risk, position limits should be reduced.

LOAN PRICING

When pricing loans, managers attempt to generate revenues that cover all expenses associated with making and servicing the loan, plus pay stockholders a reasonable return on their investment. Expenses range from bank overhead to the cost of funds for financing the loan. A bank can earn revenues from direct fees, investing customer deposit balances, and loan interest.

Loan Expenses

In most cases the largest expense is the cost of funds acquired by a bank to finance a loan. When pricing loans the relevant cost is the marginal cost of acquiring the next dollar of loanable funds. This marginal cost can be the rate on federal funds purchased, the rate on jumbo CDs, the Secured Overnight Financing Rate (SOFR) or a weighted combination of the rates paid on all sources of funds.

Another expense that is difficult to measure and allocate is overhead. Overhead includes the direct cost of lending plus the costs of support, such as loan tellers, credit analysis and review, loan administration and senior management. These costs are referred to as acquisition, transaction, and administration costs. Banks allocate these costs in several ways including specifying the cost as a percentage of outstanding loans or charging per loan transaction. Other direct expenses should also be covered. These include deposit activity charges if the loan customer maintains a transaction account, the cost of letters of credit, and wire transfer charges if applicable.

The final expense is default risk expense, or the cost of potential loan losses. This cost is allocated across the entire loan portfolio often as a fraction of outstanding loans by type, where the fraction reflects historical

loss ratios for loans of that type. Alternatively, banks assign loans to a risk class with a different percentage applied to loans within each class. Again, the percentage reflects historical loss experience.

Target Return to Stockholders

Management should also select a target profit on each loan that supports general objectives for growth and dividends. The typical procedure is to specify a target profit in terms of return on equity (ROE), then convert this to a pre-tax required return on any earning asset.

A sample formula appears below:

$$\text{Target Profit} = \frac{\text{Equity}}{\text{Total Assets}} \times \text{Target Pre-tax Return} \times \text{Loan Amount}$$

A bank with an eight percent equity-to-asset ratio that targets a 20 percent pretax return on equity will have a profit target equal to 1.6 percent of the outstanding loan amount.

Loan Revenues

There are three basic sources of loan revenue: fee income, investment income from deposit (compensating) balances and interest income. Fee income has become increasingly important because many loan customers prefer to pay directly for bank services rather than indirectly via required deposit balances. The types of fees range from commitment and facility fees for agreeing to extend credit, to origination, inspection and prepayment fees on loans. Banks may also charge directly for noncredit services such as wire transfers, security safekeeping, trust services, acting as an agent and transaction account activity.

From the borrower's perspective, fees may be preferred over balances because corporate treasurers would rather manage excess cash aggressively, fees are tax deductible while balances are not, and accounting requirements mandate the disclosure of true borrowing costs. From a bank's perspective, fees may be more attractive because managers can better monitor compliance, and many borrowers would reduce their balances below the allowable minimum without penalty.

Banks also earn investment income from customers who maintain deposit balances. Presumably the cost of handling the deposit and any interest paid is included in the estimate of loan expense. Typically a bank provides

the customer an earnings credit when pricing loans, where the credit indicates what the bank can earn on the customer's balances. Of course, a bank should recognize that not all balances that appear on the books are investable. For one, there are checks in process of collection. For another, a bank must hold reserves against balances. The actual earnings credit thus reflects different costs that the bank passes on to the customer by reducing the dollar amount of the customer's balances that are assumed to be invested.

Interest income represents the largest source of loan revenues. The interest rate is applied against the customer's actual borrowings. Interest may be payable periodically, such as every quarter, or when a loan matures. In today's environment of volatile interest rates, most commercial loans are priced at rates that vary with market conditions. Thus when some base index, such as the bank's prime rate or internal base rate, changes with economic conditions, the interest rate on a loan priced at a mark-up over the index also changes. This pricing technique essentially transfers interest-rate risk to the borrower. Most consumer installment loans are fixed-rate, however, with each payment including both principal and interest.

The interest rate on a loan is normally the last item negotiated. It is set so that expected total revenues on the customer relationship at least equal total expenses plus the target profit.

It thus reflects:

- 1) the cost of bank funds,
- 2) default risk expense,
- 3) loan administration costs,
- 4) any term premium if the bank must assume interest-rate risk,
- 5) the required return to stockholders, and
- 6) revenues from other sources, such as fees and investment income from compensating balances.

Competition

Pricing decisions must, of course, reflect competitive conditions. If a customer determines that the combined cost is out of line with that from other lenders and is willing to sacrifice the known bank-customer service relationship, he or she will take the business elsewhere. All costs must

therefore be carefully measured and allocated. Loan revenues should also reflect the total customer relationship, recognizing yield from all relevant sources. Unrealistic (too high or too low) profit objectives should also be monitored and modified when appropriate. In the face of strong price competition, a bank is forced to emphasize product/service differentiation, promote other products, or alter its pricing strategy.

EQUAL CREDIT OPPORTUNITY

Bank lending practices are closely monitored by regulatory agencies to ensure bank safety and soundness. In recent years, banks have come under increasing scrutiny with regard to intended or unintended discriminatory lending practices. A variety of equal credit laws, the Fair Housing Act (FHA), Equal Credit Opportunity Act (ECOA), Community Reinvestment Act (CRA) and Home Mortgage Disclosure Act (HMDA) now mandate certain behavior to ensure that discrimination is avoided. Some laws even require banks to periodically disclose information concerning credit applications and approvals/rejections to allow government monitoring.

Nondiscriminatory lending is good business and good policy. The Federal Financial Institutions Examination Council has published a booklet, *Home Mortgage Lending and Equal Treatment – A Guide for Financial Institutions*, which identifies areas where banks often have difficulty and offers strategies to combat discrimination. Areas where difficulties often arise include:

- Minimum loan size,
- Vague loan criteria,
- Unacceptable appraisal practices,
- Unreasonable credit record requirements,
- The use of exceptions to standards,
- Prescreening and steering, and
- Use of marketing groups that do not represent an entire community.

Careful examination of policy and behavior should allow credit standards to be maintained more equitably.

SUMMARY

1. Banks make loans to many different customers for many different purposes. Loans represent the primary earning asset at most banks and best assist a community in growing.
2. Loan participations arise when two or more lenders share in a loan to a single borrower. Banks participate in loans because they want to diversify their risk, or a loan they originate is too large and would exceed the allowable size of loan to any single borrower under current regulation.
3. A bank's loan policy provides operating guidelines for employees involved in the lending function. It should indicate the bank's lending philosophy, objectives, credit approval criteria, compliance requirements, and loan pricing objectives.
4. Credit analysis is risk analysis. Lenders attempt to determine the borrower's character, use of loan proceeds, size of loan, source of repayment and available collateral.
5. There are four general sources of credit risk: transactions risk, intrinsic risk, concentration risk and country risk. Banks should measure and control each type of risk.
6. Cash flow from operations is typically more meaningful than earnings when assessing a firm's ability to service debt.
7. Credit scoring models quantitatively support, accept or reject decisions on consumer loans by grading a borrower's characteristics. The borrower's credit score reflects whether a loan meets approval criteria.
8. Banks can measure risks by assigning risk ratings for transaction risk, intrinsic risk scores for credit risk by line of business, and concentration risk scores for excessive exposures by single borrower, line of business, or geographic market.
9. The basic philosophy of loan pricing is to ensure that revenues from the account relationship at least equal expected expenses plus the required return to stockholders. Revenues include fee income, investment income from customer deposit balances, and interest income. Expenses include the bank's cost of funds, loan administration and risk expense, and direct expenses for customer services provided.

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Exhibit 1**

Table VI-B. Loan Performance, FDIC-Insured Community Banks

		Geographic Regions*					
		New York	Atlanta	Chicago	Kansas City	Dallas	San Francisco
December 31, 2025	All Community Banks						
Percent of Loans 30-89 Days Past Due							
All loans secured by real estate	0.52	0.48	0.48	0.53	0.48	0.68	0.38
Construction and development	0.50	0.46	0.32	0.47	0.46	0.57	0.74
Nonfarm nonresidential	0.39	0.40	0.34	0.42	0.36	0.42	0.36
Multifamily residential real estate	0.31	0.39	0.17	0.32	0.28	0.29	0.06
Home equity loans	0.52	0.60	0.41	0.51	0.42	0.63	0.50
Other 1-4 family residential	0.77	0.58	0.81	0.78	0.77	1.11	0.44
Commercial and industrial loans	0.59	0.44	0.76	0.48	0.55	0.66	0.95
Loans to individuals	1.94	2.62	1.19	1.00	1.41	3.00	1.70
Credit card loans	3.20	2.67	1.52	1.37	4.98	1.34	2.61
Other loans to individuals	1.89	2.62	1.19	0.99	1.10	3.03	1.57
All other loans and leases (including farm)	0.33	0.16	0.32	0.23	0.39	0.49	0.45
Total loans and leases	0.57	0.53	0.54	0.51	0.52	0.75	0.52
Percent of Loans Noncurrent							
All loans secured by real estate	0.75	0.78	0.69	0.72	0.65	0.84	0.75
Construction and development	0.92	1.53	0.62	0.55	1.01	0.75	1.34
Nonfarm nonresidential	0.80	0.75	0.76	0.88	0.79	0.86	0.73
Multifamily residential real estate	0.67	0.88	0.25	0.61	0.46	0.73	0.51
Home equity loans	0.59	0.73	0.38	0.41	0.37	0.53	1.25
Other 1-4 family residential	0.67	0.63	0.68	0.66	0.49	0.91	0.54
Commercial and industrial loans	1.22	1.44	1.42	1.04	1.26	0.98	1.33
Loans to individuals	0.78	0.55	0.52	0.54	0.69	1.37	0.93
Credit card loans	2.83	2.09	0.70	0.45	2.78	0.63	4.11
Other loans to individuals	0.68	0.52	0.52	0.54	0.50	1.39	0.49
All other loans and leases (including farm)	0.45	0.26	1.38	0.27	0.43	0.55	1.13
Total loans and leases	0.79	0.82	0.79	0.72	0.71	0.86	0.84
Percent of Loans Charged-Off (net, YTD)							
All loans secured by real estate	0.08	0.13	0.04	0.08	0.04	0.06	0.05
Construction and development	0.10	0.27	0.04	0.02	0.10	0.06	0.15
Nonfarm nonresidential	0.11	0.24	0.05	0.09	0.06	0.06	0.05
Multifamily residential real estate	0.16	0.15	0.07	0.38	0.05	0.05	0.02
Home equity loans	0.03	0.01	0.01	0.00	0.00	0.03	0.15
Other 1-4 family residential	0.02	0.00	0.01	0.01	0.02	0.07	0.01
Commercial and industrial loans	0.56	0.59	0.69	0.53	0.50	0.53	0.66
Loans to individuals	2.02	1.52	1.09	0.54	2.15	1.35	6.13
Credit card loans	9.84	5.57	2.14	1.61	14.69	2.03	10.67
Other loans to individuals	1.68	1.42	1.07	0.52	1.10	1.34	5.55
All other loans and leases (including farm)	0.17	0.14	0.54	0.20	0.09	0.21	0.35
Total loans and leases	0.21	0.23	0.17	0.16	0.19	0.17	0.47
Loans Outstanding (in billions)							
All real estate loans	\$1,518.7	\$384.2	\$153.2	\$278.4	\$261.0	\$305.5	\$136.4
Construction and development	153.0	26.2	17.6	25.7	26.7	45.3	11.4
Nonfarm nonresidential	597.7	143.6	66.0	105.1	88.5	125.8	68.8
Multifamily residential real estate	157.2	62.3	8.7	32.9	22.6	13.8	16.9
Home equity loans	56.2	12.7	7.5	13.3	7.5	8.3	7.0
Other 1-4 family residential	464.5	136.9	48.5	82.1	73.8	94.8	28.4
Commercial and industrial loans	235.0	46.8	23.3	45.7	49.7	49.0	20.6
Loans to individuals	71.5	16.5	7.8	10.9	13.0	13.5	9.8
Credit card loans	3.2	0.4	0.1	0.2	1.1	0.2	1.2
Other loans to individuals	68.4	16.1	7.7	10.7	12.0	13.3	8.6
All other loans and leases (including farm)	116.6	21.0	4.3	24.8	41.8	18.8	5.9
Total loans and leases (plus unearned income)	1,941.8	468.4	188.6	359.8	365.5	386.8	172.6
Memo: Unfunded Commitments (in millions)							
Total Unfunded Commitments	384,236	84,843	34,281	74,245	82,581	68,248	40,039
Construction and development: 1-4 family residential	31,021	4,921	4,348	4,754	5,377	9,458	2,163
Construction and development: CRE and other	80,244	17,500	8,200	15,887	12,104	18,967	7,586
Commercial and industrial	114,531	26,939	9,244	24,655	22,171	19,703	11,820

* See Table IV-A for explanation.

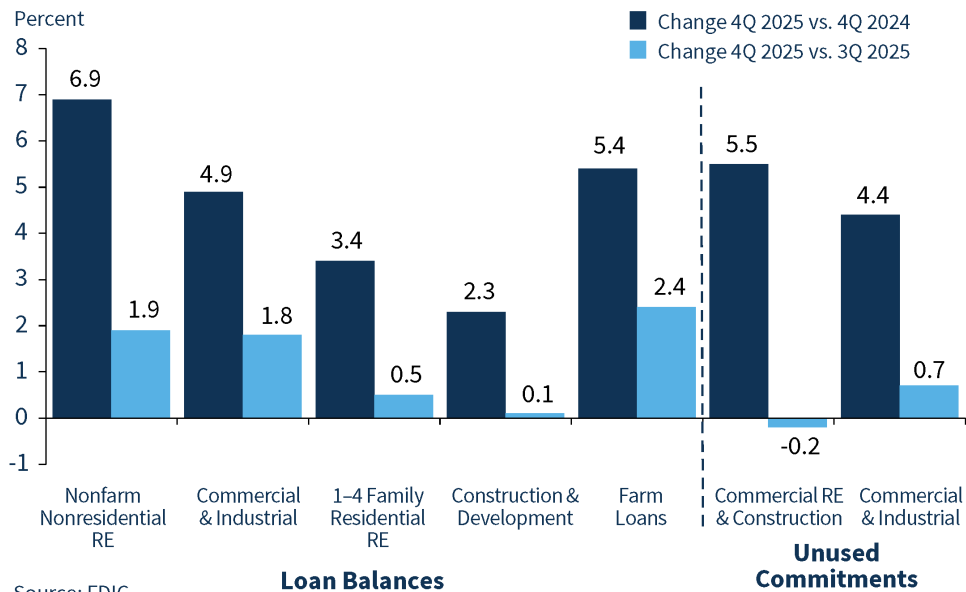
Note: Noncurrent loan rates represent the percentage of loans in each category that are past due 90 days or more or that are in nonaccrual status.

**Exhibits 1 and 2 are from the FDIC Quarterly Profile.

Exhibit 2

Change in Loan Balances and Unused Commitments

FDIC-Insured Community Banks



Past-Due and Nonaccrual Rate and Quarterly Net Charge-Off Rate

FDIC-Insured Community Banks

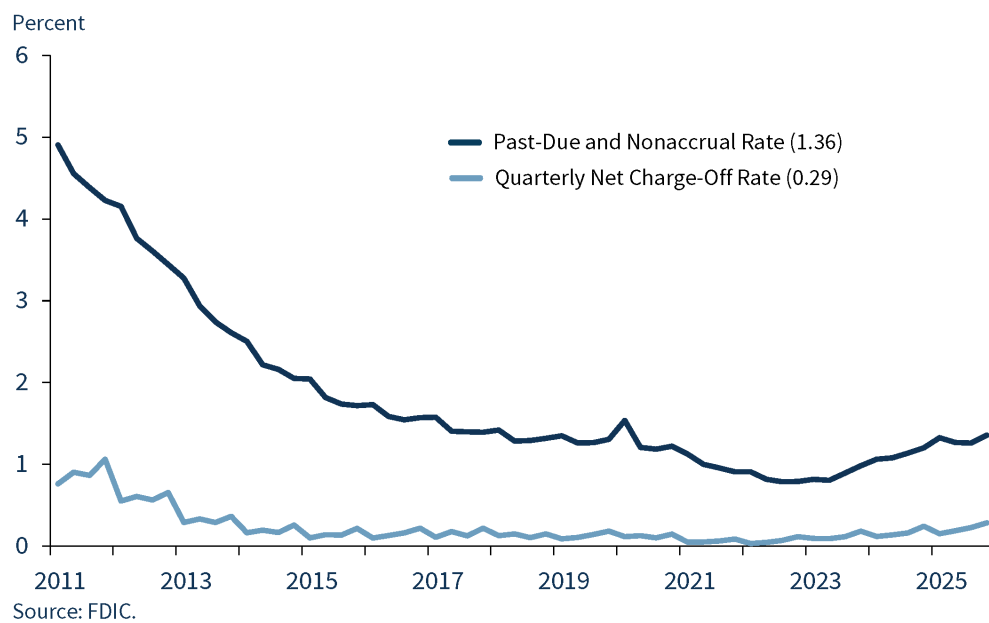


Exhibit 3
BALANCE SHEET AND INCOME STATEMENT DATA
FOR STORY INC. (THOUSANDS OF DOLLARS)

<u>Balance Sheet</u>	<u>2024</u>	<u>2025</u>	<u>Income Statement</u>	<u>2025</u>
Cash and market securities	\$ 85	\$ 90	Sales	\$2,800
Accounts receivable	141	167	Cost of goods sold	2,380
Inventory	306	345	Gross profit	420
Prepaid expenses	<u>22</u>	<u>18</u>	Selling and admin expenses	210
			Depreciation and	
<i>Current assets</i>	\$ 554	\$ 620	amortization	51
Gross fixed assets	\$ 575	\$ 645	Other operating expenses	40
Less accumulated depreciation	<u>-115</u>	<u>-160</u>	Operating profit	119
Net fixed assets	460	485	Other income	11
Long-term investments	<u>36</u>	<u>45</u>	Interest expense	34
Total assets	\$1,050	\$1,150	Other expense	12
			Profit before taxes	84
Notes payable (bank)	\$ 50	\$ 120	Income taxes	29
Accounts payable	99	106	Net profit ^a	55
Accrued expenses	15	32		
Income tax payable	6	12		
Current maturity (long-term debt)	<u>35</u>	<u>40</u>		
<i>Current liabilities</i>	\$ 205	\$ 310		
Long-term debt	<u>\$ 280</u>	<u>\$ 240</u>		
<i>Total liabilities</i>	\$ 485	\$ 550		
Common stock	\$ 325	\$ 325		
Retained earnings	<u>240</u>	<u>275</u>		
<i>Net worth</i>	<u>\$ 565</u>	<u>\$ 600</u>		
Liabilities and net worth	\$1,050	\$1,150		

^aCash dividends paid = \$20

Exhibit 4
STATEMENT OF CHANGES RECONCILED TO CASH:
DATA FOR STORY INC. (THOUSANDS OF DOLLARS)

	<u>2024</u>	<u>Cash Flow Impact</u>
Net Sales	\$2,800	<i>Revenue</i>
Change in accounts receivable	<u>-26</u>	Asset increased
Cash receipts from sales	\$2,774	
Cost of goods sold	-2,380	Expense
Change in inventory	-39	Asset increased
Change in accounts payable	<u>7</u>	Liability increased
Cash purchases	-\$2,412	
Cash margin	\$ 362	
Total operating expenses ^a	-301	Expense
Depreciation & amortization ^a	51	Noncash expense
<i>Change in prepaid expenses</i>	4	Asset decreased
Change in accrued expenses	<u>17</u>	Liability increased
Cash operating expenses	-\$ 229	
Cash operating profit	\$ 133	
Other income	11	Revenue
Other non-interest expenses	-12	Expense
Cash before interest & taxes	\$ 132	
Interest expense	-\$ 34	Expense
Income taxes reported	-29	Tax expense
Change in income tax payable	6	Liability increased
Change in deferred income taxes	0	
<i>Cash flow from operations</i>	\$ 75	
Payment for last period's current maturity	-35	Liability decreased
Dividends paid	-20	Dividend
Capital expenditures	-76	Asset increased
Change in long-term investments	-9	Asset increased
Change in other noncurrent assets	<u>0</u>	
Discretionary cash expenditures	-\$ 140	
Cash before external financing	-\$ 65	
Change in notes payable (bank)	70	Liability increased
Change in long-term debt plus end-of		
Change in stock	0	
Change in surplus	<u>0</u>	
External financing	\$ 70	
Change in cash	-\$5	Asset increased

^aTotal operating expenses include all noncash expenses as well as cash expenses. Cash expenses equal \$301-\$51, or \$250

Exhibit 5
RISK RATING SCALE FOR COMMERCIAL LOANS

<u>Risk Rating</u>	<u>Level of Risk</u>	<u>Type of Loan</u>
1	Lowest	Excellent business credit: superior asset quality, excellent debt capacity and coverage, strong management and depth. Firm is market leader.
2	Modest	Good business credit: good asset quality and debt capacity/coverage, good management in key positions. Firm is above average in size within the industry and has substantial market share.
3	Average	Average business credit: average asset quality and debt capacity/coverage, average management in key positions. Firm is of average size within the industry.
4	Acceptable	Acceptable business credit: below average asset quality with above average credit risk, little excess liquidity and modest debt capacity/coverage. Management is weak in some areas and firm requires above average supervision.
5	Acceptable with risk	Acceptable business credit but with substantial risk: below average asset quality with significant credit risk, little liquidity and limited debt capacity/coverage. Often small in size with limited market share. Firm will not be able to survive financial crises.
6	Watch	Watch-list credit: below average asset quality with substantial credit risk, strained liquidity, and serious management weakness. Firm's performance has not met lender's expectations.
7	Special Mention	Marginally acceptable business credit: below average asset quality with material weaknesses; generally undesirable business with undue risk, yet not sufficiently a problem to justify substandard classification.
8	Substandard	Unacceptable business credit: repayment is highly unlikely.
9	Doubtful	Questionable whether full payment will be made; partial recovery may occur in future; weaknesses are very pronounced with loss likely.
10	Loss	Expected total loss: may have some recovery value, but the cost will be high.

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Exhibit 6

SAMPLE CONSUMER CREDIT APPLICATION FORM

CREDIT APPLICATION**IMPORTANT: Read these directions before completing this application****Check Appropriate Box:**

- ☐ If you are applying for individual credit in your own name and are relying on your own income or assets and not the income or assets of another person as the basis for repayment of the credit requested, complete only Sections A & D. If the requested credit is to be secured, also complete the first part of Section C and Section E.
- ☐ If you are applying for joint credit with another person, complete all Sections except E, providing information in B about the joint applicant. If the requested credit is to be secured, then complete Section E.
- ☐ If you are applying for individual credit, but are relying on income from alimony, child support or separate maintenance or on the income or assets of another person as the basis for repayment of the credit requested, complete all Sections except E to the extent possible, providing information in B about the person on whose alimony support, or maintenance payments of income or assets you are relying. If the requested credit is to be secured, then complete Section E.

Amount Requested: \$20,000 Payment Date Desired: 04/01/20XX
 Proceeds of Credit to be used for: Purchase 20XX Ford Pickup

SECTION A – INFORMATION REGARDING APPLICANT

Full Name (Last, First, Middle): Smith, James Michael Birthdate: 10/22/64
 Present Street Address: 1411 Berkley Lane Years There: 11
 City: My Town State: My State Zip: 00121
 Social Security No.: 123-45-6789 Driver's License No.: G00193398
 Previous Street Address: 1911 Apple #43A Years There: 5
 City: My Town State: My State Zip: 00333
 Present Employer: Sanford & Sons Construction Co. Years There: 19 Telephone: 402-555-1212
 Position or Title Foreman Name of Supervisor: Rich Sanford
 Employer's Address: 1900 West P Street, My Town, My State, 00122
 Previous Employer: Scottie's Bar & Grill Years There: 2
 Previous Employer's Address: 2525 Reynold's Drive, My Town, My State, 00123
 Present Gross Salary or Commission: \$2500 per month No. Dependents: 2 Ages: 13 and 16

Alimony, child support, or separate maintenance income need not be revealed if you do not wish to have it considered as a basis for repaying this obligation. Alimony, child support, separate maintenance received under:

☐ court order ☐ written agreement ☐ oral understanding

Other Income: \$ 200 per year Sources of Other Income: Interest Income on Investments

Is any income listed in the Section likely to be reduced before the credit requested is paid off?

☐ Yes (Explain in detail on separate sheet.) ☒ No

Have you ever received credit from us? Yes When? May, 20XX Office: Main Bank
 Checking Account Number: 12345 Institution & Branch: Main Bank
 Savings Account Number: 98765 Institution & Branch: Main Bank
 Name of nearest relative not living with you: Mary and Joe Smith Telephone: 402-555-1181
 Relationship: Parents Address: Rural Route 11, Box 42; Their Town, My State, 00597

SECTION B – INFORMATION REGARDING JOINT APPLICANT OR OTHER PARTY (Use separate sheets if necessary.)

Full Name (Last, First, Middle): _____ Birthdate: _____
 Relationship to Applicant (if any) _____
 Present Street Address: _____ Years There: _____
 City: _____ State: _____ Zip: _____
 Social Security No.: _____ Driver's License No.: _____
 Previous Street Address: _____ Years There: _____
 City: _____ State: _____ Zip: _____
 Present Employer: _____ Years There: _____ Telephone: _____
 Position or Title _____ Name of Supervisor: _____
 Employer's Address: _____
 Previous Employer: _____ Years There: _____
 Previous Employer's Address: _____
 Present Gross Salary or Commission: \$_____ per _____ No. Dependents: _____ Ages: _____

Alimony, child support, or separate maintenance income need not be revealed if you do not wish to have it considered as a basis for repaying this obligation. Alimony, child support, separate maintenance received under:

☐ court order ☐ written agreement ☐ oral understanding

Other Income: \$_____ per _____ Sources of Other Income: _____

Is any income listed in the Section likely to be reduced before the credit requested is paid off?

☐ Yes (Explain in detail on separate sheet.) ☐ No

Have you ever received credit from us? _____ When? _____ Office: _____

Checking Account Number: _____ Institution & Branch: _____

Savings Account Number: _____ Institution & Branch: _____

Name of nearest relative not living with you: _____ Telephone: _____

Relationship: _____ Address: _____

SECTION C – MARITAL STATUS (Do not complete if this is an application for individual or unsecured credit)

Applicant: ☐ Married ☐ Separated ☒ Unmarried (including single, divorced and widowed)

Other Party: ☐ Married ☐ Separated ☐ Unmarried (including single, divorced and widowed)

SECTION D – ASSET AND DEBT INFORMATION

(If Section B has been completed, this Section should be completed giving information about both the Applicant and Joint Applicant or Other Person. Please mark Applicant – related information with an "A". If Section B was not completed only give information about the Applicant in this Section).

DESCRIPTION OF ASSETS	VALUE	SUBJECT TO DEBT? (YES/NO)	NAMES OF OWNERS
CASH	\$100	NO	JAMES SMITH
AUTOMOBILES (Make, Model, Year) 1.19XX FORD RANGER	\$2,000	NO	JAMES SMITH
CASH VALUE OF LIFE INSURANCE (Issuer, Face Value)	\$50,000	NO	JAMES SMITH
REAL ESTATE (Location, Date Acquired) 1411 BERKLEY LANE	\$125,000	YES	JAMES SMITH
MARKETABLE SECURITIES (Issuer, Type, No. of Shares) Investors Inc.	\$2,500	NO	JAMES SMITH
OTHER (List)	\$		
TOTAL ASSETS	\$179,600		

OUTSTANDING DEBTS (Include charge accounts, installment contracts, credit cards, rent, mortgages, etc. Use separate sheet if necessary)

CREDITOR	TYPE OF DEBT OR ACCOUNT NO.	NAME IN WHICH ACCOUNT IS CARRIED	ORIGINAL DEBT	PRESENT BALANCE	MONTHLY PAYMENTS	PAST DUE? YES/NO
LANDLORD OR MORTGAGE HOLDER	☐ Rent Payment ☒ Mortgage	JAMES SMITH	(Omit Rent)	(Omit Rent)		
1. ABC MORTGAGE			\$125,000	\$90,000	\$1,125	NO
2. VISA	UNSECURED	JAMES SMITH	\$2,500	\$2,200	\$100	NO
3. MASTERCARD	UNSECURED	JAMES SMITH	\$3,500	\$3,200	\$100	NO
4. DEPARTMENT STORE	UNSECURED	JAMES SMITH	\$300	\$280	\$20	NO
5.						
TOTAL DEBTS			\$131,300	\$95,680	\$1,345	

CREDIT REFERENCES

DATE PAID

1. ANY FORD DEALER

05/18/20XX

2. MY BANK

05/10/19XX

Are you a co-maker, endorser or guarantor on any loan or contract?	☒ No ☐ Yes – For Whom?	To Whom?
Are there any unsatisfied judgments against you?	☒ No ☐ Yes – Amount?	If “Yes”, To Whom Owed?
Have you been declared bankrupt in the last fourteen (14) years?	☒ No ☐ Yes – Where?	Year?

OTHER OBLIGATIONS: (For example, liability to pay alimony, child support, separate maintenance. Use a separate sheet if necessary).

SECTION E – SECURED CREDIT (Complete only if credit is to be secured). Briefly describe the property to be given as security:

PROPERTY DESCRIPTION
NAMES & ADDRESSES OF ALL CO-OWNERS OF THE PROPERTY
IF THE SECURITY IS REAL ESTATE, GIVE THE FULL NAME OF YOUR SPOUSE (If any):

SIGNATURES

Everything that I have stated in the Application is correct to the best of my knowledge. I understand that you will retain the Application whether or not it is approved. You are authorized to check my credit and employment history and to answer questions about your credit experience with me.

James M. Smith

APPLICANT'S SIGNATURE

DATE

OTHER SIGNATURE (Where Applicable)

DATE

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Exhibit 7

University National Bank Credit Scoring System^a

Category	Characteristics/Weights					
Annual Gross Income	<\$10,000 5	\$10,000-20,000 15	\$20,000-40,000 30	\$40,000-60,000 45	>\$60,000 60	
Monthly Debt Payment/ Monthly Net Income	>40% 0	30-40% 5	20-30% 20	10-20% 35	<10% 50	
Bank Relationship Checking/Saving	None 0	Checking only 30	Saving only 30	Checking & Saving 50	No answer 0	
Major Credit Cards	None 0	1 or more 30	No answer 0			
Credit History	Any derogatory within 7 yrs. -10		No record 0		Met obligated payments 30	
Applicant's Age	<50 yrs. 5	>50 yrs. 25	No answer 0			
Residence	Rent 15	Own/Buying 40	Own outright 50	No answer 15		
Residency Stability	<1 yr. 0	1-2 yrs. 15	2-4 yrs. 35	>4 yrs. 50	No answer 0	
Job Stability	<1 yr. 5	1-2 yrs. 20	2-4 yrs. 50	>4 yrs. 70	Unemployed 5	Retired 70

^aMinimum score for automatic credit approval is 200; score for judgmental evaluation, 150 to 195; and score for automatic credit denial, less than 150. James Smith's credit score is 185.

Exhibit 8

EARLY WARNING SIGNS

Early Financial Warning Signals		Early Management Warning Signals	
Balance Sheet • Failure to get statements in timely fashion • Slowdown in receivables collection period • Deterioration in customer's cash position • Sharp increase in dollar amounts or percentage of accounts receivable • Sharp increase in dollar amounts or percentage of inventory • Slowdown in inventory turnover • Decline in current assets as percentage of total assets • Deterioration of liquidity working capital position • Marked changes in mix of trading assets • Rapidly changing concentrations in fixed assets • Large increase in reserves • Concentrations in noncurrent assets other than fixed assets • High concentration of assets in intangibles • Disproportionate increases in current debt • Substantial increases in long-term debt • Low equity relative to debt • Significant changes in balance sheet structure • Presence of debt due to/due from officer/stockholders		• Inability to plan • Poor financial reporting and controls • Fragmented functions • Venturing into acquisitions, new business, new geographic area, or new product line • Desire and insistence to take business gambles and undue risk • Unrealistic pricing of goods and services	
Income Statement • Declining sales • Rapidly expanding sales • Major gap between gross and net sales • Rising cost percentages/narrowing margin • Rising sales and falling profits • Rising levels of bad debt losses • Disproportionate increase in overhead, relative to sales • Rising levels of total assets relative to sales/profits • Operating losses		• Change in nature of company's business • Poor financial records and operating controls • Inefficient layout of plant and equipment • Poor use of people • Loss of key product lines, franchises, distribution rights, or sources of supply • Loss of one or more major, financially sound customers • Substantial jumps in size of single orders or contracts that would strain existing productive capacity	
Receivables Aging • Extended average age of receivables • Changes in credit policies • Extended terms • Replacement of accounts receivable with notes receivable • Concentrations of sales • Compromise of accounts receivable • Concentrations of seriously past due accounts • Receivables from affiliated companies		• Speculative inventory purchases that are out of line with normal purchasing practices • Poor maintenance of plant and equipment • Deferred replacement of outmoded or inefficient plant and equipment • Evidence of stale inventory, large levels of inventory, or inappropriate mix of inventory	
Early Management Warning Signals		Early Banking Warning Signals	
• Change in behavior/personal habits of key people • Marital problems • Change in attitude toward bank or banker, especially seeming lack of cooperation • Recurrence of problems presumed to have been solved		• Declining bank balances • Excessive note renewals or unanticipated note renewals • Poor financial planning for fixed asset requirements or working capital requirements • Heavy reliance on short-term debt • Marked changes in timing of seasonal loan requests • Sharp jumps in size/frequency of loan requests • Loans where more than single source of repayment cannot be easily or realistically identified	
• Failure to perform personal obligations • Changes in management, ownership, or key personnel • Illness or death of key personnel • Inability to meet commitments on schedule • Neglect or discontinuance of profitable standard lines		• Loans where purpose is "working capital" • Calls from existing suppliers requesting information to evaluate requests for special terms or expanded credit information • Calls from new suppliers requesting information to open new credit lines • Appearance of other lenders in financial picture, especially collateral lenders • Evidence of checks written against uncollected funds	

Source: Jay M. McDonald and John I. McKinley, *Corporate Banking*, (Washington, D.C., American Bankers Association). © ABA. Reprinted with permission.

Exhibit 9

INTRINSIC RISK SCORING WORKSHEET

Lines of Business	L.O.B.: _____			
Historic Risk Elements	NA	Low	Mod	High
1) Credit Performance Past level of delinquencies, losses, non-performing assets Degree of volatility in credit performance				
2) Line of Business Stability/Longevity Growth characteristics (high, low, moderate, uneven) Duration and stability of lob track record Degree of change in lob lending practices/procedures				
Predictive Risk Elements				
3) Customer Risk/Profile Diversity/financial strength of customer base Payment histories, bankruptcy levels				
4) Economic Vulnerability Susceptibility to economic swings Effect of recession, interest rates, localized weaknesses				
5) Competitive Factors Reasonability of pricing margins and profitability Pressure to make accommodations on terms, advance rates, Documentation, pricing, etc.				
6) Political/Regulatory/Tax Issues Degree of impact from EPA, deregulation, tax laws, etc. Vulnerability to changes in political policies (defense)				
7) Covariance Impact from a single employer/industry/external factor (i.e., Reliance on oil industry, military base, auto industry)				
8) Natural/Environmental Impact Susceptibility to drought, freeze, flood, etc.				
Lending Risk Elements				
9) Collateral - Liquidity of collateral, breadth of market carrying c costs, ease of identifying and locating collateral Stability of collateral value, vulnerability to disputes Ease of conversion (i.e., WIP inventory)				
10) Term/Type - Long, medium, short term Balloons, bullets Monitoring requirements Documentary risk (SBA, FCIA, participations, etc.)				
Industry Rating	X-1	X-1	X 0	X 2
Score Category 0-18 green 19-30 amber 31 + red	TOTAL = _____ + 24 = _____ INDUSTRY: _____			

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Schools of Banking

Deposit/Marketing Strategies

Sean C. Payant, Ph.D.
President



1

Session Objectives

1. Overview various deposit funding and marketing strategies
2. Complete a case study of a bank and make recommendations
3. Develop specific strategies to increase your bank's profitability

2

Small Group Brainstorming

**If a financial institution
needs core customers
and deposits/funding,
what can it do?**

3

Type of Funding Options

- Borrowed funding
- Wholesale funding
- Equity funding
- Retail funding

4

Borrowed Funding*

- Federal funds purchased
 - Other banks have deposits/we need them.
- Repurchase agreements
 - Aka, REPOs – government securities
- Federal Home Loan Bank borrowings
 - Accessible to member institutions

***Good slide to know!**

5

5

Wholesale Funding

- Includes borrowed funds plus:
 - Large institutional deposits such as large CDs (over \$100,000)

6

6

Equity Funding

- Common and preferred stock
 - Common – Sell ownership on open market (higher risk/higher potential return)
 - Preferred – Traded on secondary market by investors (less risk/less return), similar to bonds
- Retained earnings

7

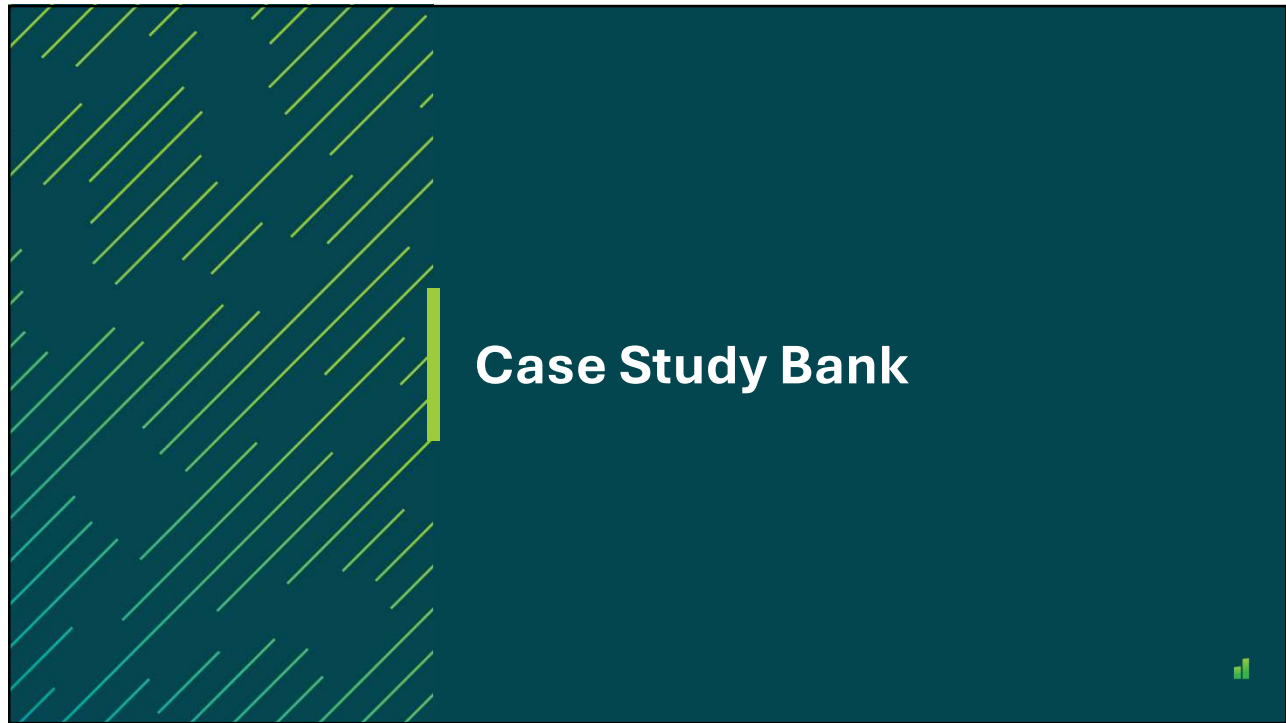
7

Retail Funding – The Most Difficult One

- Consumer and Non-Institutional Deposit Accounts
 - Transaction accounts
 - Money Market Demand Accounts
 - Savings accounts
 - Small time deposits

8

8



9

Case Study Bank

- \$80 million bank
- Three branches
- Heavily banked locations
- What can we learn?

10

10

Case Study Bank

CHARTER #00		COUNTY		SAMPLE BANK								PAGE 01	
06/30/2013		06/30/2013		06/30/2013		06/30/2013		06/30/2013		06/30/2013			
AVERAGE ASSETS \$900		150		150		150		150		150			
NET INCOME \$800		150		150		150		150		150			
NUMBER OF BANKS IN PEER GROUP		150		150		150		150		150			
EARNINGS AND PROFITABILITY		BANK		BANK		BANK		BANK		BANK			
PERCENT OF AVERAGE ASSETS		BANK		BANK		BANK		BANK		BANK			
INTEREST INCOME (TD)		5.84		5.84		5.84		5.84		5.84			
INTEREST EXPENSE (TD)		1.57		1.57		1.57		1.57		1.57			
NET INTEREST INCOME (TD)		4.27		4.27		4.27		4.27		4.27			
NON-INTEREST INCOME		0.31		0.31		0.31		0.31		0.31			
NON-INTEREST EXPENSE		0.01		0.01		0.01		0.01		0.01			
PROVISION FOR LOAN LOSS RESERVE		0.47		0.47		0.47		0.47		0.47			
PRETAX NET OPERATING INCOME (TD)		0.19		0.19		0.19		0.19		0.19			
REALIZED GAINS/LOSSES INC		0.00		0.00		0.00		0.00		0.00			
PRETAX NET OPERATING INCOME (TD)		0.19		0.19		0.19		0.19		0.19			
NET OPERATING INCOME (TD)		0.11		0.11		0.11		0.11		0.11			
AGGREGATE NET OPERATING INCOME		0.00		0.00		0.00		0.00		0.00			
NET INC. ATTRIB TO MIN INT		0.00		0.00		0.00		0.00		0.00			
NET INCOME ADJUSTED FOR		0.11		0.11		0.11		0.11		0.11			
MARGIN ANALYSIS		0.11		0.11		0.11		0.11		0.11			
AVG EARNING ASSETS TO AVG ASSETS		0.11		0.11		0.11		0.11		0.11			
AND INC. ATTRIB TO FUND TO AVG ASSET		0.11		0.11		0.11		0.11		0.11			
PERCENT OF FUND TO AVG EARN. ASSETS		0.11		0.11		0.11		0.11		0.11			
NET INC. ATTRIB TO FUND TO AVG EARN. ASSET		0.11		0.11		0.11		0.11		0.11			
LOAN & LEASE ANALYSIS		0.11		0.11		0.11		0.11		0.11			
NET LOAN TO ASSET TOTAL LNALS		0.11		0.11		0.11		0.11		0.11			
EARNING COVERAGE OF NET LOANS		0.11		0.11		0.11		0.11		0.11			
LNAL ALLOWANCE TO NET LOANS		0.11		0.11		0.11		0.11		0.11			
LNAL ALLOW TO LNALS NOT IPR		0.11		0.11		0.11		0.11		0.11			
LNAL ALLOWANCE TO TOTAL LNALS		0.11		0.11		0.11		0.11		0.11			
NON-CUR LNALS TO GROSS LNALS		0.11		0.11		0.11		0.11		0.11			
LIQUIDITY		0.11		0.11		0.11		0.11		0.11			
NET NON-CORE FUND DEPENDENCE		0.11		0.11		0.11		0.11		0.11			
NET LOAN & LEASE TO ASSETS		0.11		0.11		0.11		0.11		0.11			
MODIFIED DEPOSITS TO DEPOSITS		0.11		0.11		0.11		0.11		0.11			
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MODIFIED DEPOSITS TO DEPOSITS		0.11		0.11		0.11		0.1					

Case Study Bank

CHAPTER # 9		COUNTY	SAMPLE BANK NONINTEREST INCOME AND EXPENSE (900) AND YIELDS										PAGE(3)	
			06/30/2005			06/30/2004			12/31/2003			12/31/2002		
NONINTEREST INCOME & EXPENSES														
PERMANENT ACTIVITIES														
DEPOSIT SERVICE CHARGES														
TRADING INVENTORY OF SECURITIES INC														
FEE BANKING/ACCOUNTS INC														
INSURANCE COMMA & FEES														
NET SERVICE FEE														
LOAN & LEASE NET GAIN/LOSS														
OTHER NET GAIN/LOSS														
TOTAL NONINTEREST INCOME														
NONINTEREST INCOME														
PERSONNEL EXPENSE														
OCCUPANCY EXPENSE														
GOODWILL AMORTIZATION														
OTHER INTANGIBLE AMORTIZATION														
OTHER OPERATING EXPENSES (EXCEPT FOR)														
TOTAL OVERHEAD EXPENSE														
DOMESTIC BRANCH OFFICES														
FOREIGN BRANCHES OF														
ASSETS PER DOMESTIC OFFICE														
PERCENT OF AVERAGE ASSETS														
PERSONNEL EXPENSE														
OCCUPANCY EXPENSE														
TOTAL OVERHEAD EXPENSE														
OTHER OPERATING EXPENSES														
OTHER INCOME & EXPENSE RATION														
EFFICIENCY RATIO														
AVG PERSONNEL EXP PER EMPLOYEE														
ASSETS PER EMPLOYEE (MULTIPLY)														
YIELD ON OR COURT OF														
TOTAL LOANS & LEASES														
LOANS IN DOMESTIC OFFICES														
REAL ESTATE														
SECURED BY 1-4 FARM RESID PROP														
ALL OTHER LOANS SEC REAL ESTATE														
COMMERCIAL & INDUSTRIAL														
FINANCIAL														
CREDIT CARD														
AGRICULTURAL														
LOANS IN FOREIGN OFFICES														
TOTAL INVESTMENT SECURITIES														
TOTAL INVESTMENT SEC (MULTIPLY)														
U.S. TREAS & AGENCY (EXCL. MMF)														
MORTGAGE SECURITIES														
ALL OTHER SECURITIES														
INTEREST-BEARING BANK BALANCES														
TOTAL ASSETS														
TOTAL ASSETS														
TRADING ACCOUNTS														
OTHER SAVINGS DEPOSITS														
TIME DEPOSIT EXCEPT MMF														
ALL OTHER TIME DEPOSITS														
FEDERAL RESERVE DEPOSITS														
FEDERAL FUNDS PURCHASED & REPO														
OTHER BANKS/OTHER DEPOSITS														
TOTAL INTEREST-BEARING ASSETS														
TOTAL INTEREST-BEARING FUNDS														

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Case Study Bank

CHAPTER # 9		COUNTY	SAMPLE BANK BALANCE SHEET - PERCENTAGE COMPOSITION OF ASSETS AND LIABILITIES										PAGE 08	
			06/30/2005			06/30/2004			12/31/2003			12/31/2002		
ASSETS, PERCENT OF AVG ASSETS														
ALL NOW & A/D ACCOUNTS		BANK	70.00	60.00	96	80.09	67.54	75	81.01	67.64	78	79.43	66.47	76.73
LOANS NOT YET FOR SALE		PO	0.77	0.09	41	0.09	0.06	45	0.91	0.51	56	1.40	0.87	1.39
LEASES UNDER LEASES		PO	84.60	65.99	96	79.02	66.74	75	80.10	66.78	78	72.98	65.78	75.73
TOTAL ASSETS			0.14	2.15	29	0.01	0.83	32	0.05	1.13	24	0.68	0.67	0.01
FEDERAL FUNDS PURCHASED & REPOS			0.44	2.49	82	5.54	4.89	86	0.10	4.12	88	14.59	4.88	11.39
TRADING ACCOUNT ASSETS			0.00	N/A	99	0.00	N/A	99	0.00	N/A	99	0.00	N/A	0.00
SECURITIES TO MATURITY SECURITIES			0.00	1.00	49	0.00	1.21	66	0.00	1.26	64	0.00	1.03	0.00
AVAILABLE-FOR-SALE SECURITIES			5.41	13.02	22	7.11	14.45	34	6.53	14.93	33	8.81	14.46	8.02
TOTAL EARNING ASSETS			99.42	96.18	97	95.91	92.96	87	95.76	91.94	92	99.47	92.34	96.06
NONNET CASH & DUE FROM BANKS			1.77	1.55	14	2.52	1.00	32	2.04	1.09	31	2.22	1.30	2.34
PREPAID, PRE ASSETS & CAP LEASES			0.77	2.58	8	0.91	1.78	31	0.85	1.77	31	0.73	1.76	0.51
OTHER REAL ESTATE OWNED			0.23	0.59	39	0.60	0.12	45	0.10	0.80	44	0.09	0.11	0.09
DUE & INTEREST DUE RE VENTURES			0.00	N/A	97	0.00	N/A	98	0.00	N/A	98	0.00	N/A	0.00
DUE TO INCORPORATED BANK			0.00	N/A	99	0.00	N/A	96	0.00	N/A	97	0.00	N/A	0.00
ACCEPTANCES & OTHER ASSETS			1.39	2.59	31	1.27	2.41	23	1.24	2.62	18	1.44	2.44	1.07
SUBTOTAL			4.47	8.64	2	4.34	7.92	12	4.34	8.04	12	4.34	7.76	4.32
TOTAL ASSETS			99.09	100.00		100.01	100.00		100.00	100.00		100.00	100.00	
STANDBY LETTERS OF CREDIT			0.15	0.18	89	0.18	0.22	36	0.17	0.22	37	0.22	0.24	0.22
LIABILITIES, PERCENT OF AVG ASST														
DEMAND DEPOSITS			15.41	14.01	41	18.46	12.43	82	17.72	12.41	80	15.78	13.11	19.84
ALL NOW & A/D ACCOUNTS			14.88	10.69	7	3.25	8.76	23	12.22	8.87	21	3.31	1.09	3.01
MONEY MARKET DEPOSIT ACCOUNTS			23.43	9.33	10	25.53	10.78	90	25.53	10.74	90	27.81	10.88	27.49
OTHER BANKING DEPOSITS			16.28	8.27	76	14.62	4.31	80	11.27	6.52	86	13.46	4.21	14.45
TIME DEPOSIT LESS THAN 1 YEAR			26.64	24.35	1	0.43	20.55	1	0.40	20.40	1	3.36	20.55	6.37
TOTAL DEPOSITS			25.94	46.26	17	47.02	26.26	51	45.08	29.33	47	40.01	28.64	57.4
DUE TO OTHER BANKS			34.39	15.46	87	12.33	16.33	66	31.29	16.30	74	15.58	16.32	15.00
TOTAL LIABILITIES			60.33	61.65	99	60.35	61.76	72	60.31	62.71	79	60.61	61.46	61.45
TOTAL EARNING ASSETS			99.42	96.18	97	95.91	92.96	87	95.76	91.94	92	99.47	92.34	96.06
TOTAL LIABILITIES (INC. SHORTY)			92.81	89.04	91	90.69	89.78	68	91.22	88.69	72	90.20	88.72	89.55
ACCEPTANCES & OTHER LIABILITIES			0.31	0.58	24	0.31	0.42	18	0.31	0.59	23	0.40	0.45	0.49
TOTAL LIABILITIES			93.12	89.63	91	91.00	90.18	68	91.53	89.28	72	90.60	88.97	90.04
SUBORDINATED DEBENTURES & DEBENTURES			0.00	N/A	98	0.00	N/A	98	0.00	N/A	97	0.00	N/A	0.00
ALL CHARGES & DEFERRED CAPITAL			0.00	10.00	33	0.00	11.25	32	0.00	11.48	32	0.00	10.87	32
TOTAL LIABILITIES & CAPITAL			100.00	100.00		100.01	100.00		100.00	100.00		100.00	100.00	
MEMO: ALL CHARGES & DEFERRED CAPITAL			0.00	1.00	33	0.00	11.25	32	0.00	11.48	32	0.00	10.87	32
DEFERRED BROKERS'DRDP			0.40	1.34	48	1.82	1.73	75	1.37	1.88	71	0.29	1.33	0.52
DIRECT & INDIRECT INV IN RE			0.00	N/A	98	0.00	N/A	98	0.00	N/A	98	0.00	N/A	0.00
LOANS INV AS A COLLATERAL			0.00	0.00	80	0.00	0.00	82	0.00	0.00	82	0.00	0.00	0.00

Conclusions

What suggestions do you have for this bank?

15

Why Does Low-Cost Funding Matter?

16

Comparing Two Banks with \$750M in Total Deposits...

Bank #1	Category	Mix %	Deposits	Yield	Interest Expense
	Transaction Accounts	30%	\$225,000	0.10%	\$225
	Savings Accounts	25%	\$187,500	0.25%	\$469
	Money Market Accounts	20%	\$150,000	0.50%	\$750
	Time Deposits	25%	\$187,500	1.50%	\$2,813
	Totals	100%	\$750,000	0.57%	\$4,256

Bank #2	Category	Mix %	Deposits	Yield	Interest Expense
	Transaction Accounts	40%	\$300,000	0.10%	\$300
	Savings Accounts	25%	\$187,500	0.25%	\$469
	Money Market Accounts	20%	\$150,000	0.50%	\$750
	Time Deposits	15%	\$112,500	1.50%	\$1,688
	Totals	100%	\$750,000	0.43%	\$3,206

\$1M+

IMPACT TO
INTEREST
EXPENSE

17

Comparing Two Banks with \$750M in Total Deposits...

Bank #1	Category	Mix %	Deposits	Yield	Interest Expense
	Transaction Accounts	30%	\$225,000	0.10%	\$225
	Savings Accounts				
	Money Market Account				
	Time Deposits				
	Totals				

Bank #2	Category	Mix %	Deposits	Yield	Interest Expense
	Transaction Accounts				
	Savings Accounts				
	Money Market Accounts	20%	\$150,000	0.50%	\$750
	Time Deposits	15%	\$112,500	1.50%	\$1,688
	Totals	100%	\$750,000	0.43%	\$3,206

All of this considers a relatively low rate environment... What happens when rates increase?

\$1M+

IMPACT TO
INTEREST
EXPENSE

18

Higher Cost Scenario – Assume Yields Double...

Bank #1	Category	Mix %	Deposits	Yield	Interest Expense
	Transaction Accounts	30%	\$225,000	0.20%	\$450
	Savings Accounts	25%	\$187,500	0.50%	\$938
	Money Market Accounts	20%	\$150,000	1.00%	\$1,500
	Time Deposits	25%	\$187,500	3.00%	\$5,625
	Totals	100%	\$750,000	1.14%	\$8,513

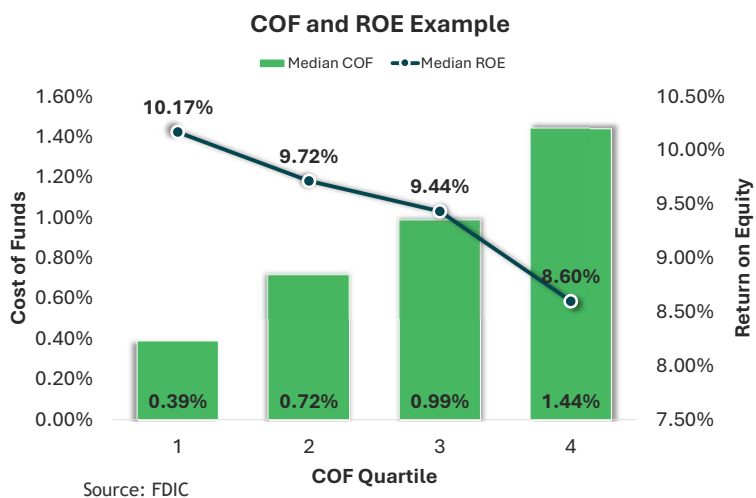
Bank #2	Category	Mix %	Deposits	Yield	Interest Expense
	Transaction Accounts	40%	\$300,000	0.20%	\$600
	Savings Accounts	25%	\$187,500	0.50%	\$938
	Money Market Accounts	20%	\$150,000	1.00%	\$1,500
	Time Deposits	15%	\$112,500	3.00%	\$3,375
	Totals	100%	\$750,000	0.86%	\$6,413

\$2.1M

IMPACT TO
INTEREST
EXPENSE

19

Better Cost of Funds Management and Income



For a typical bank
with \$750M in
deposits,

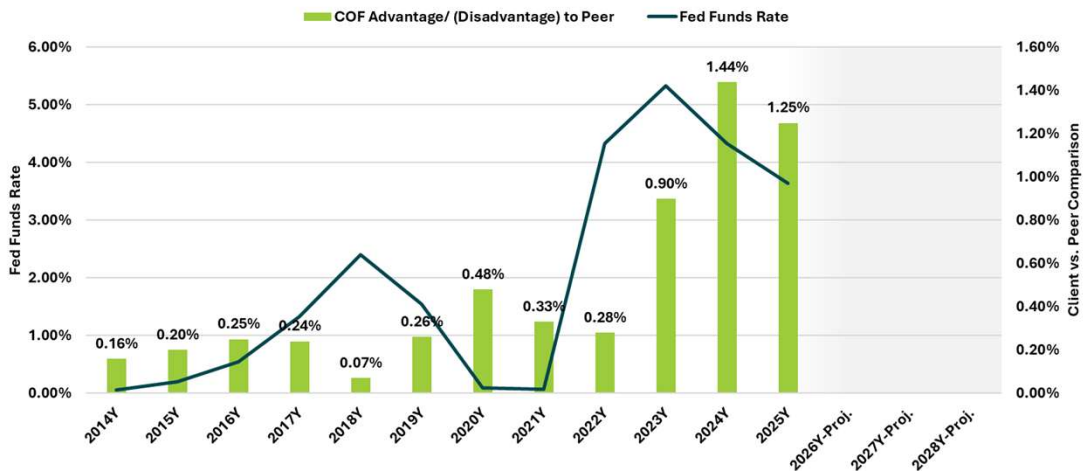
\$1.4M

DIFFERENCE IN NET
INCOME FOR TOP VS.
BOTTOM QUARTILE

20

Pioneer Bank

Cost of Funds Advantage



Estimated \$10 Million + in Interest Expense Saved!

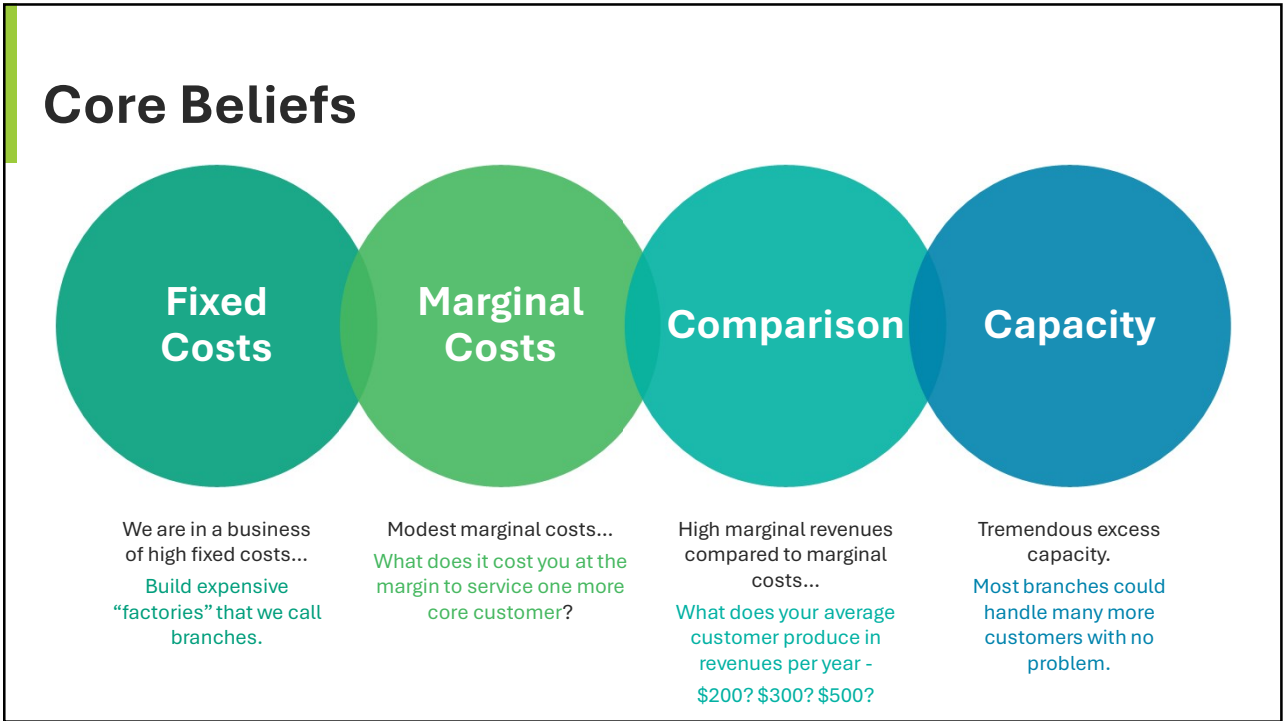
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Strategies to Grow Low-Cost Funding

22



23



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Realities of Community Banking



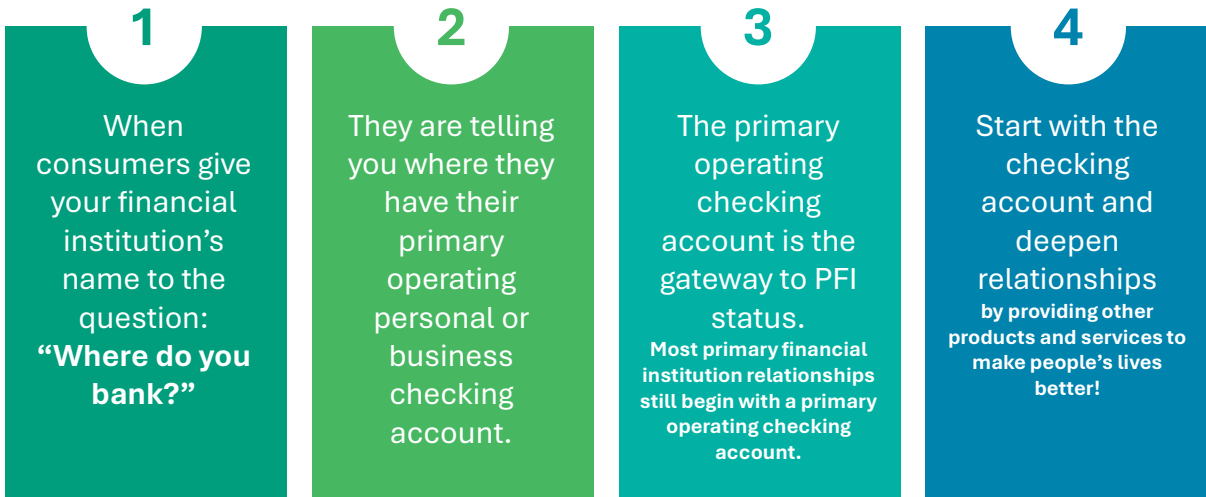
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We need as many Primary Financial Institution (PFI) customers as possible.

26

When Do You Have a PFI Customer?



27

27

Why Checking First?



67%

First product in all households is consumer checking



53%

First product in a business household is business checking



28%

First product in a business household is consumer checking

Source: 2025 Client Data

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28



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The Industry Complicates Product

- Confusing product – if your employees don't understand it, your customers never will
- Too many asterisks or too much fine print (i.e., what's the catch?)

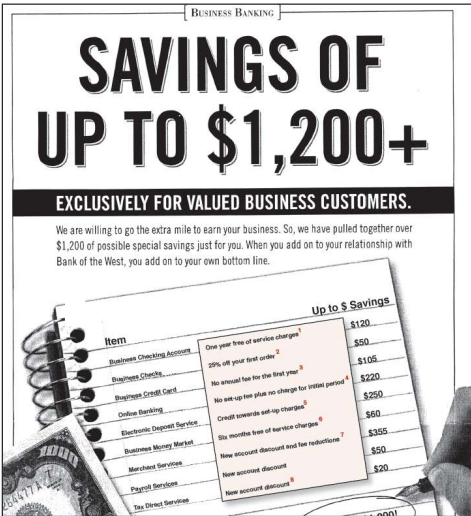
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An Offer with Fine Print

“Savings of up to \$1,200+”

- XYZ Bank’s business checking

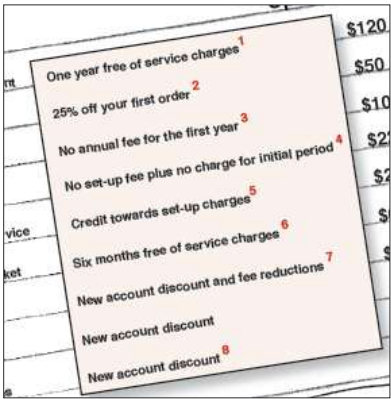


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Fine Print - Business Checking Account

One year free of service charges¹



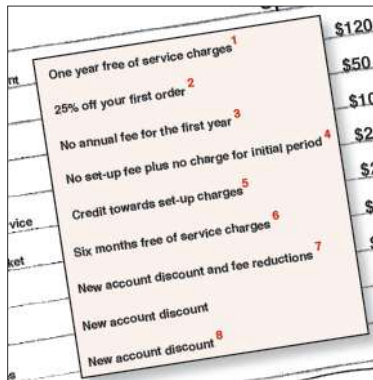
¹ Monthly Service charge (account maintenance fee) is waived for 12 months on any business checking account.

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Fine Print - Online Banking

No set-up fee plus no charge for initial period⁴



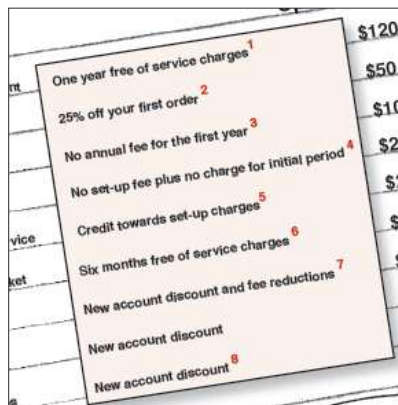
⁴ Twelve months of Basic or three months of Corporate, Mid-market, or Small-Business.

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33

Fine Print - Tax Direct Services

New account discount⁸

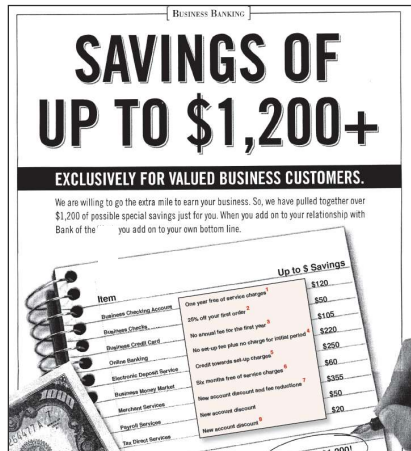


⁸ With Business Analyzed Checking. Except as noted standard fees and terms and conditions apply.

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34

Conclusion



Read the fine print,
AND after one
year, this account
is going to cost
\$1,200+!

35

35

The Industry Complicates Product

- Confusing product – if your employees don't understand it, your customers never will
- Too many asterisks or too much fine print (i.e., what's the catch?)
- Too many variables for the customer to consider

36

36

An Example of Too Many Variables

Asking customers to decide (i.e., design your own account – select **three** of the following):

- Free checks
- Free debit card
- Free foreign ATMs
- Free online banking
- Free bill pay
- Free savings account
- Free safety deposit box
- Higher interest with minimum balance
- \$25 on Anniversary
- \$50 bonus at opening
- Etc., Etc., Etc.

Which can I live without more?

37

37

Question

Why should we care about our retail product?

38

38

Two Key Questions

What do customers want/expect?

Can we make money providing it?

39

39

A Survey

Please raise your hand if you want to pay for your checking account.

Regulations do NOT change what *customers* want!

40

40

Product Conclusions

Employees think logically, customers think emotionally:

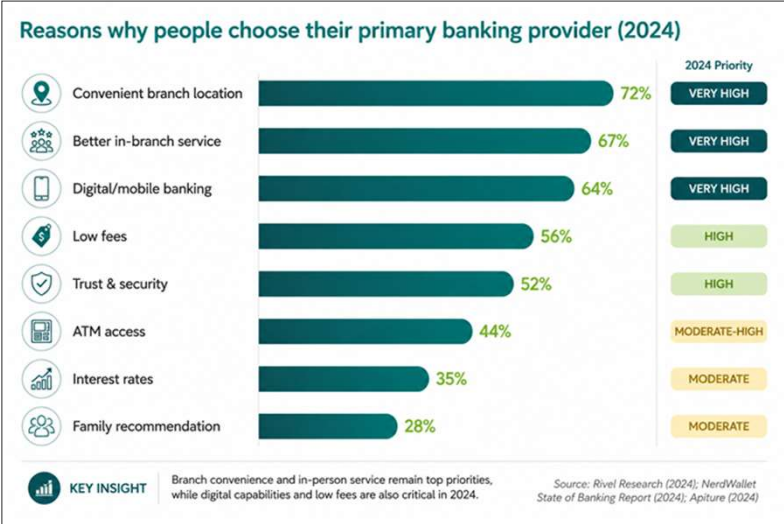
- Do your pricing variables actually make sense?
- Do your people understand your products and are they **proud** to provide them to customers?

41

41

Industry Data

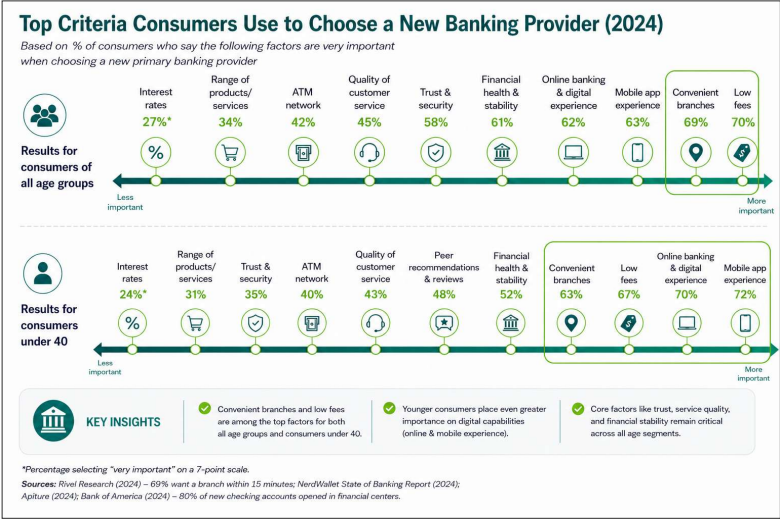
What Influences Switching



42

Industry Data

What Influences Switching



43

Two Key Questions

What do customers want/expect?

Can we make money providing it?

44

44

Deposit Funding – Retail

Brand Name	Pricing Variable	Market Segment	Take Ratio	Average Balance
Free Checking	Interest foregone	Interest indifferent	47.36%	\$3,128
50+ Interest Checking	Cross-sell potential	Mature customers	27.54%	\$7,889
Direct Interest Checking	Cross-sell reward	Direct deposit and automatic payment	19.90%	\$3,465
High Interest Checking	Higher rate for higher balance	Unusually high balance	5.20%	\$30,822
			100%	\$5,946

45

45

Customer Profitability

- What is the Net Present Value* (NPV) of a retail checking customer earned today?

*Based on client data

46

46

Retail Checking – Account Economics Per Account Per Year

Per Account Per Year:

Fee Revenue	\$	152	
Direct Back Office Expense		(31)	Includes \$6.57 loss of principal
Net Fees		122	
Interest Revenue		238	\$5,946 avg bal x 4.00%
Interest Expense		(4)	\$5,946 avg bal x 0.06%
Spread		234	
CONTRIBUTION	\$	356	
NPV Checking		2,422	10.21 Years
NPV Cross-Sell		2,522	
NPV Total Relationship	\$	4,945	

47

Retail Portfolio Cross-Sell

Product Type	Client Ratios	Client Balances
Checking	1.64	\$6,221
Savings	47.3%	\$9,841
Money Market	3.8%	\$71,968
Certificate of Deposit	10.0%	\$50,731
IRA	1.8%	\$25,395
HSA	2.0%	\$3,072
Loan	7.3%	\$13,327
Line of Credit	2.1%	\$6,167
HELOC	3.5%	\$46,610
Mortgage	4.8%	\$142,640
Business Checking	14.8%	\$25,776
Total (Products) Relationships	2.62	
Total Deposits		\$27,001
Total Loan Volume		\$9,505

48

Plus Services

Products	Client Ratios
Products	2.62
Services	Client Ratios
Debit Card	83.3%
Bill Pay	7.7%
Online Banking	81.5%
eStatements	22.3%
Mobile Banking	61.4%
ACH	55.7%
Direct Deposit	58.0%
Total Products & Services	6.31

49

A Study on Who Really Buys

Item	Free Checking	Direct Deposit/ACH Interest Checking	50+ Interest Checking	High Interest Checking
Average Products per HH	3.06	2.83	2.65	3.10
Debit Cards	0.81	0.87	0.67	0.48
ACH	0.40	0.56	0.57	0.54
Direct Deposit	0.36	0.61	0.56	0.51
eStatements	0.25	0.33	0.18	0.16
Online Banking*	0.58	0.58	0.58	0.58
Bill Pay*	0.27	0.27	0.27	0.27
Total (Products) Relationships	5.73	6.05	5.48	5.64

*Statistics not available by product type

50

50

Question

Why should we care about our business product?

51

51

Deposit Funding – Business

Brand Name	Market Segment	Take Ratio	Average Balance
Totally Free Business Checking	Businesses with low transaction volumes	92.82%	\$22,469
Business Interest Checking	Interest-bearing account	6.55%	\$95,915
Commercial Checking	Businesses with more sophisticated banking needs	0.63%	\$124,253
		100%	\$27,921

52

52

Customer Profitability

- What is the Net Present Value* (NPV) of a retail checking customer earned today?
- What is the Net Present Value* (NPV) of a business checking customer earned today?

*Based on client data

53

53

Business Checking – Account Economics Per Account Per Year

Per Account Per Year:

Fee Revenue	\$	138	
Direct Back Office Expense		(64)	Includes \$6.01 loss of principal
Net Fees		74	
Interest Revenue		1,117	\$27,921 avg bal x 4.00%
Interest Expense		(3)	\$27,921 avg bal x 0.01%
Spread		1,114	
CONTRIBUTION	\$	1,188	
Checking NPV		7,851	9.78 Years
Cross-Sell NPV		12,415	
TOTAL VALUE	\$	20,266	

54

Business Portfolio Cross-Sell

Product Type	Client Ratios	Client Balances
Business Checking	1.58	\$35,826
Business Savings	8.4%	\$26,731
Business Money Market	4.6%	\$218,773
Business CD	2.9%	\$142,226
Business Loan	16.7%	\$166,015
Business Line of Credit	3.3%	\$118,520
Business Mortgage	14.6%	\$578,769

55

55

And They Bring Their Personal Products Too...

Product Type	Client Ratios	Client Balances
Checking	93.1%	\$10,277
Savings	41.3%	\$11,264
Money Market	6.2%	\$119,671
Certificate of Deposit	10.9%	\$80,548
IRA	1.6%	\$21,454
HSA	2.0%	\$3,960
Loan	6.2%	\$21,312
Line of Credit	2.4%	\$7,421
HELOC	3.9%	\$57,559
Mortgage	6.2%	\$173,942
Total (Products) Relationships	3.82	

56

56

Generally Higher Personal Cross-Sell Balances

Product Type	All Personal	Business Customer with a Personal Account	Multiple
Checking	\$6,221	\$10,277	1.65
Savings	\$9,841	\$11,264	1.14
Money Market	\$71,968	\$119,671	1.66
Certificate of Deposit	\$50,731	\$80,548	1.59
IRA	\$25,395	\$21,454	0.84
HSA	\$3,072	\$3,960	1.29
Loan	\$13,327	\$21,312	1.60
Line of Credit	\$6,167	\$7,421	1.20
HELOC	\$46,610	\$57,559	1.23
Mortgage	\$142,640	\$173,942	1.22

57

57

Good slide to know!

Total Net Present Value of the Relationship

Personal Checking 10.21 years \$2,422 Checking \$2,522 Cross-Sale \$4,945 NPV	Business Checking 9.78 years \$7,851 Checking \$12,415 Cross-Sale \$20,266 NPV
--	---

Source: Cross-Sell is Client Data – 2025 reported in 2026

58

“Sometimes the questions are complicated, and the answers are simple.”

Dr. Seuss

59

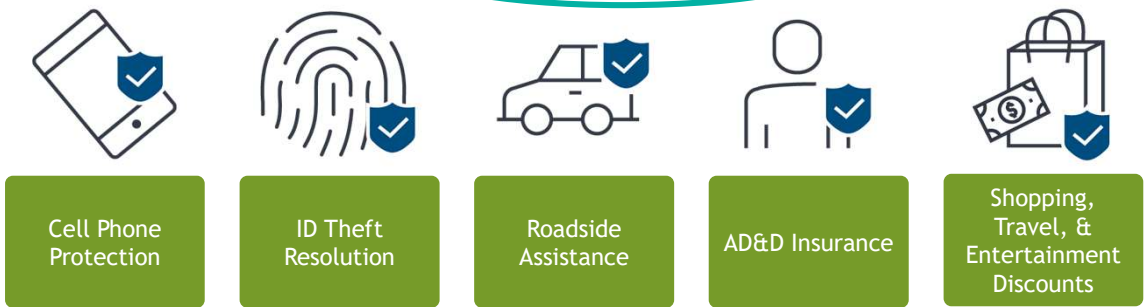
Keys to Good Product



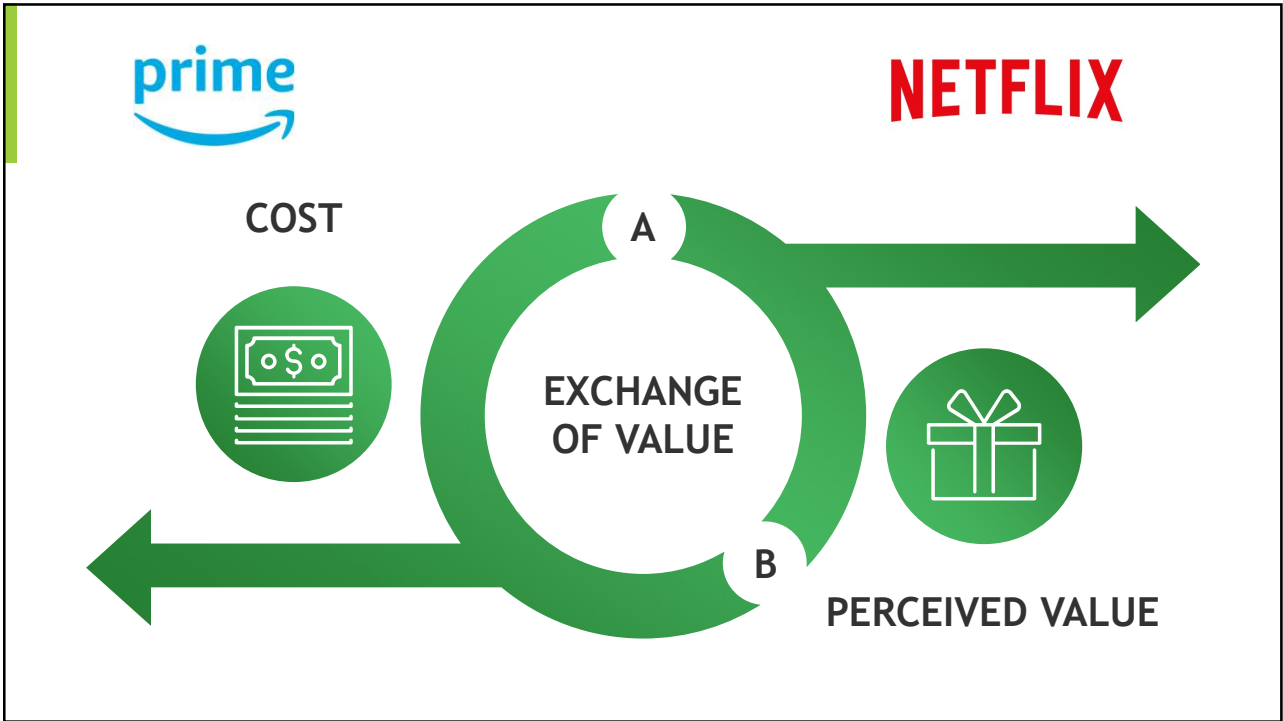
60

Consider Adding a Value-Added, Benefits-Driven Product

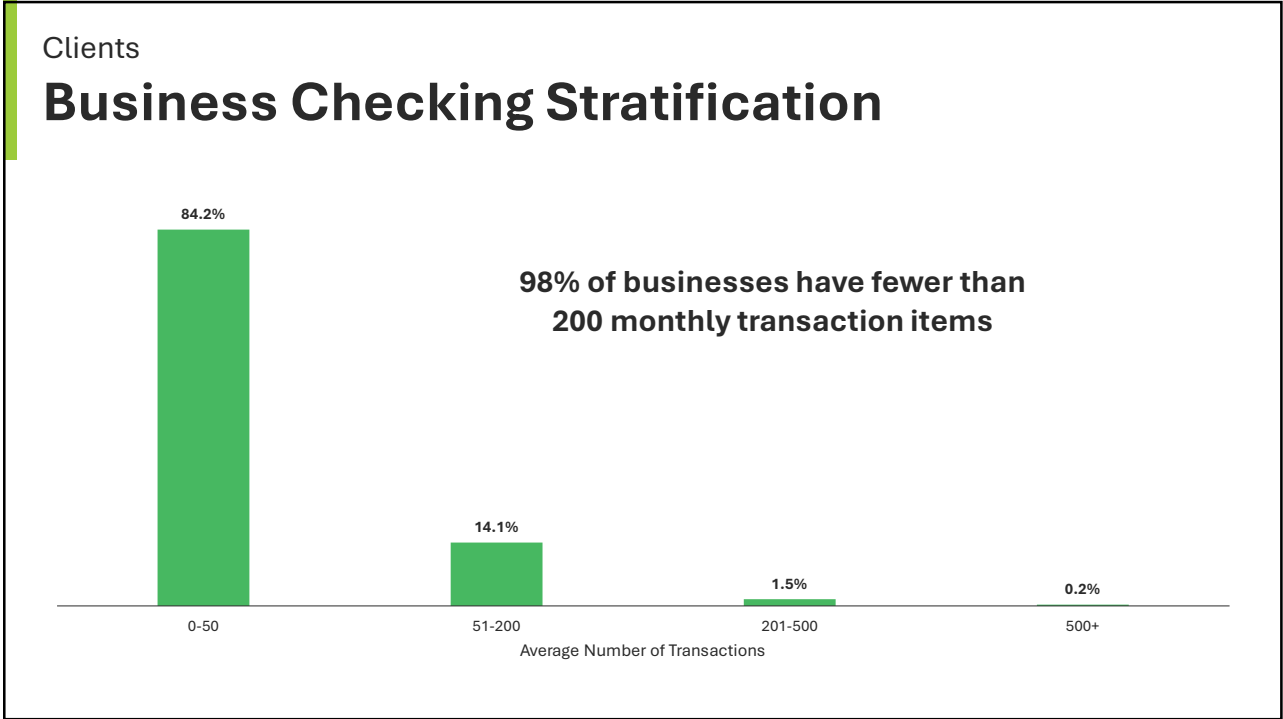
A checking product offering additional benefits to the customer for a small monthly fee, only \$6.95 per month.



61



62



63

Clients

Business Checking Stratification

Average # of Transactions	Average Balance	Net Interest Income at 300 BPs	Cross-Sell Relationships
0 - 50	\$28,746	\$862	3.7
51 - 200	\$74,262	\$2,228	4.7
201 - 500	\$250,109	\$7,503	7.2
500+	\$671,475	\$20,144	13.6

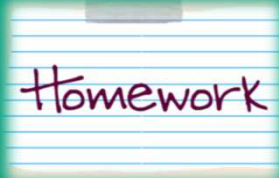
64

**In Class
Individual
Exercise**

**Use the form at the end
of this handout to
complete a brief review
of your bank's retail and
business products.**

65

65



**Conduct a thorough review of your
retail and business products. Are
they simple? Do your people
understand them? Are your people
proud to offer them to customers?**

66



67

The Right Policies

Make Rules for the 99%

DRIVER LICENSE

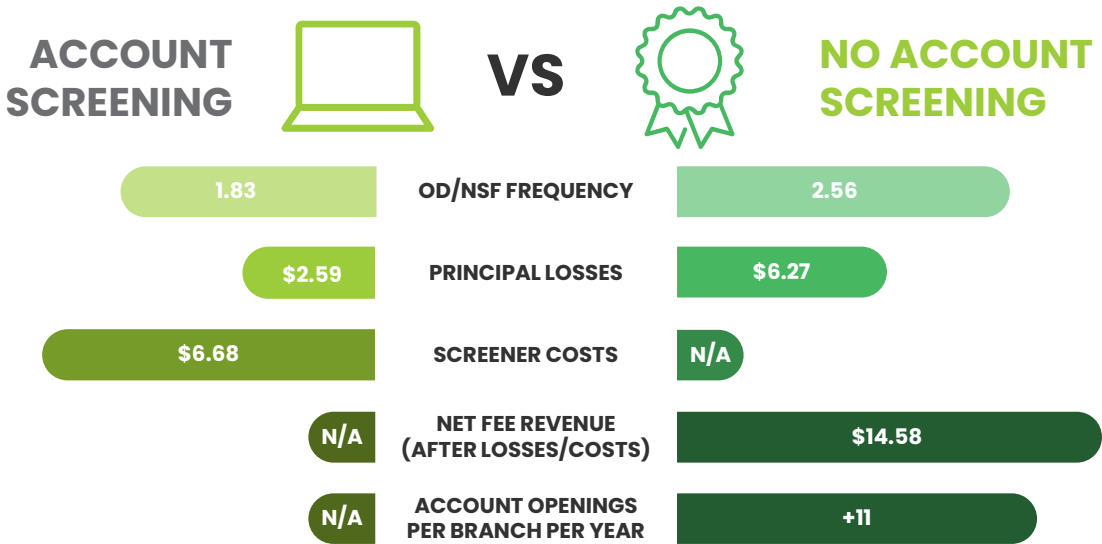
Remove friction in the account opening process.

Do your written policies actually match your frontline practices?

What do you “require” for new customers to open accounts and is it really necessary?

68

Account Screening – Client Data



69

Account Screening: eFunds (ChexSystems)

Flagged as “Would not have been opened with eFunds”			Fee Income Analysis 7 Months	
Accounts opened	202		Gross OD Income	\$15,600
Accounts still active	157	78%	Debit Card Interchange	\$4,100
Accounts with chargeoff	21	10%	Chargeoff	(\$4,612)
			Net Impact	\$15,088

Does not include savings from cessation of eFunds inquiries

70

A graphic of a notepad with the word "Homework" written in purple cursive.

**Evaluate how easy it is to become
a new customer at your bank? Are
there barriers that should be
removed?**

71

**What needs to be
in place?**

Processes

**Capitalizing on
Opportunities!**



72

**“When it comes to customers,
feelings are facts.”**

***Simon Cooper
President & CEO, Ritz Carlton***

73

Processes – Customer First

- We MUST think from the customer’s perspective at all times . . . customer perception is reality!
- **Whose** convenience do we have in mind?
 - “We require two forms of identification for all new customers.”
 - “It’s easier if your spouse is here.”

74

74

Customer First

- If we are thinking customer first, then it is about creating an EXTRAORDINARY, referral-worthy experience at all times

75

75

Customer Experience



A transaction for you*;
A dream for the customer -

**Which one is Ordinary, and
which one is EXTRAORDINARY?**

*AKA, a nightmare for the tellers

76

76

Why are the grocery stores in our business?



Maybe it's
because we
gave the
customers to
them!

77

77

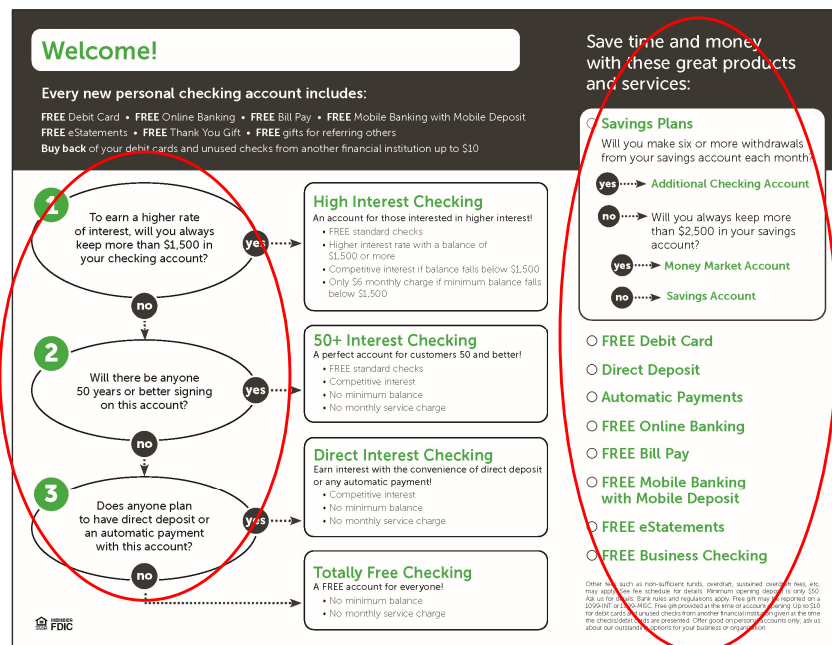
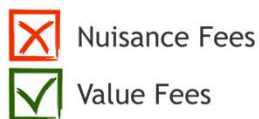
Customer First

- If we are thinking customer first, then it is about creating an EXTRAORDINARY, referral-worthy experience at all times
- Our processes must be EXTRAORDINARY, rather than Ordinary
- We must equip our employees with the tools to do business rather than send customers to the competition

78

78

Take the emotion out of the selection process when prospects are ready to change to your bank!



79

Compliance Concerns

Do we need to be in compliance?

ABSOLUTELY!

Does over compliance create unnecessary and costly barriers?

COMMONLY!

80

80

In Compliance?

The US Patriot Act:

Does **NOT** require **two** forms of identification from customers at account opening.

81

81

In Convenience?

Do we:

- Force unnecessary waiting periods for debit cards or overdraft services
- Require all personal signers to be present at account opening OR let certification of beneficial ownership impact business openings
- Credit score checking customers
- Require blood test to do business with us

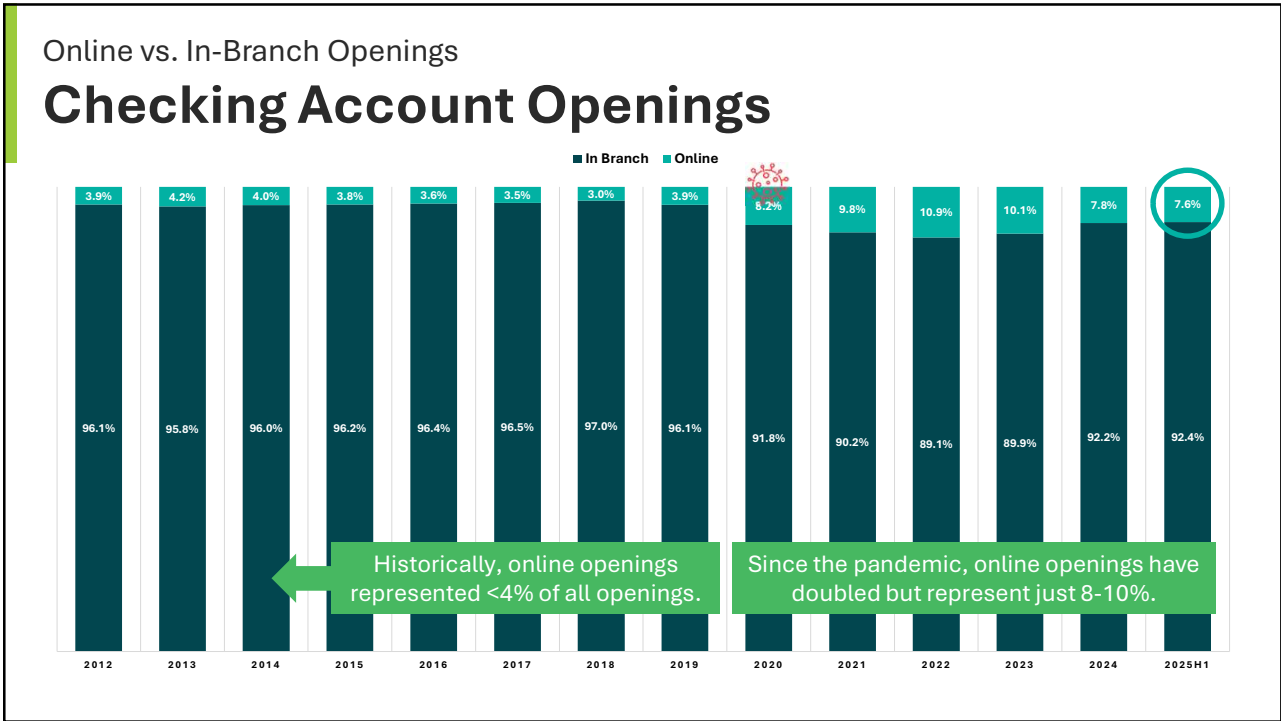
82

82

“Only in American banks can you find the pens chained to the counter and the doors wide open.”

Branden Kerr

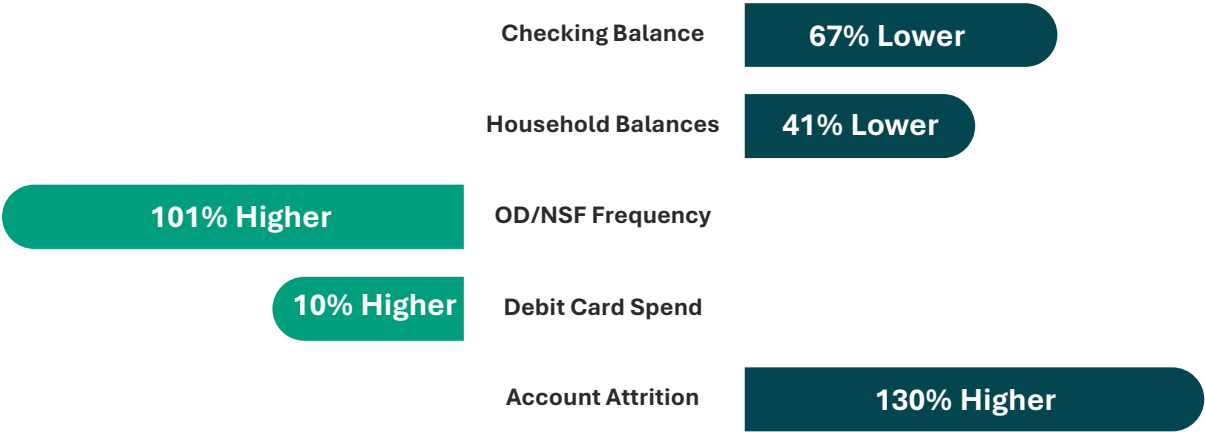
83



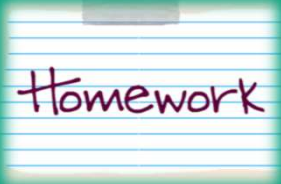
84

Checking Accounts

Online vs. In-Branch Openings



85



Review your account opening procedures – Do they lead to more business or send profitable customers away?

86



87

People – Leadership

- It all begins with leadership
- Leaders need to define the core values and the mission for the organization
 - Compelling
 - Concise

88

88

How compelling is this?

“ABC Bank will provide a diverse array of financial services to meet our customers’ deposit and lending needs. We will be a company where shareholder value is maximized. We will serve our communities as possible within budgetary guidelines.”

Do your people know what to do with this?

89

89

What about this?

“We will achieve marketplace domination because our team will deliver an experience that makes people line up to bank with us!”

Does this compel?

90

90

People – Leadership

- Core values and the mission must be regularly communicated:
 - Why it works?
 - How are we winning?
- Leader commitment is key to success.
- The result of a compelling mission is enhanced organizational performance – in the numbers!

91

91

Chick-fil-A vs. the Competition



\$4.4 million



\$2.7 million



\$1.5 million



\$2.6 million



\$1 million



\$1.3 million

92

What is the Impact?

Strategic Customer Growth and Overall Performance

Case Study Bank

1. \$2.3B with 26 locations (originally 8),
2. Mostly small cities and rural communities in Georgia, and
3. Implemented a customer growth strategy in 2003.

93

Case Study Bank

Average Checking Customers Per Branch

Community Banks
average

1,300

customers per branch

Case Study Bank
average

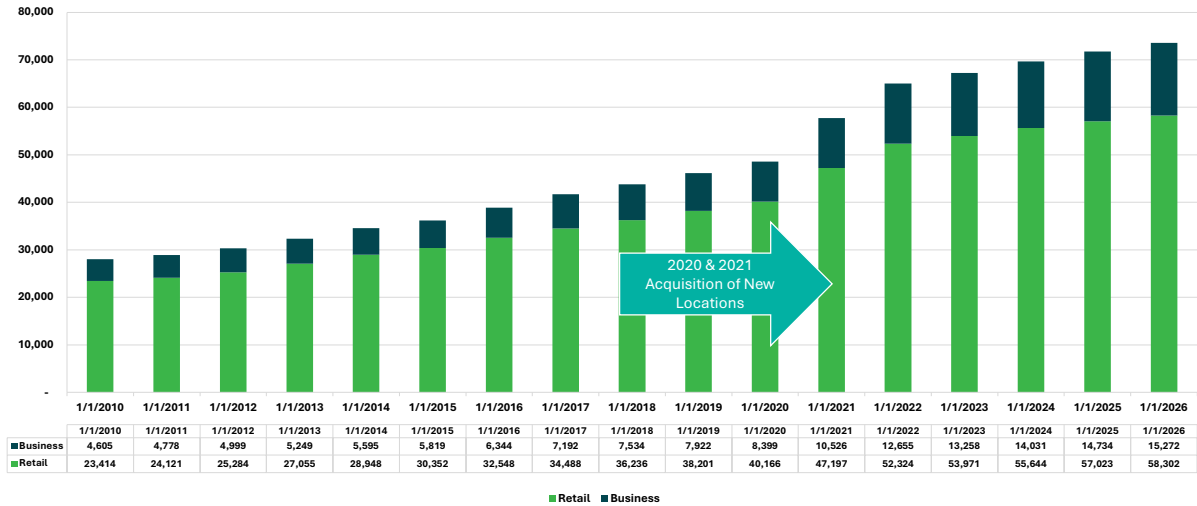
2,830

customers per branch

94

Case Study Bank

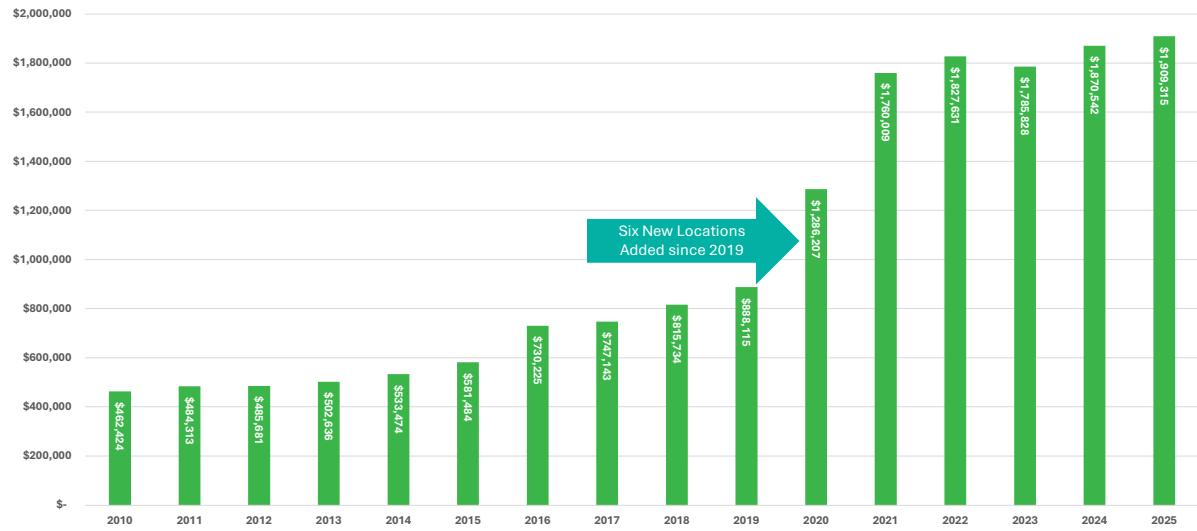
Checking Portfolio Trends



95

Case Study Bank

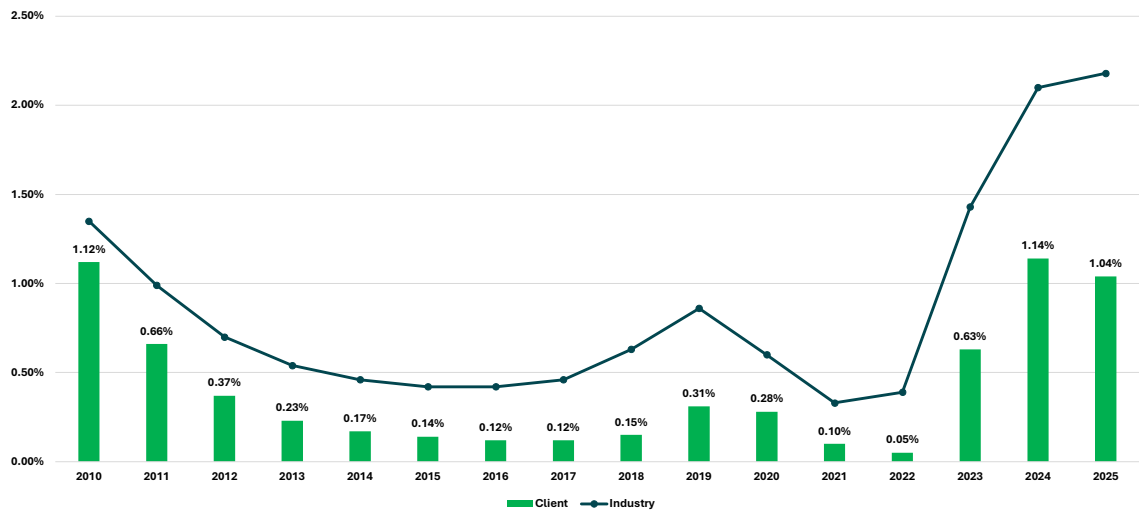
FDIC Trends – Core Deposits



96

Case Study Bank vs. The Industry

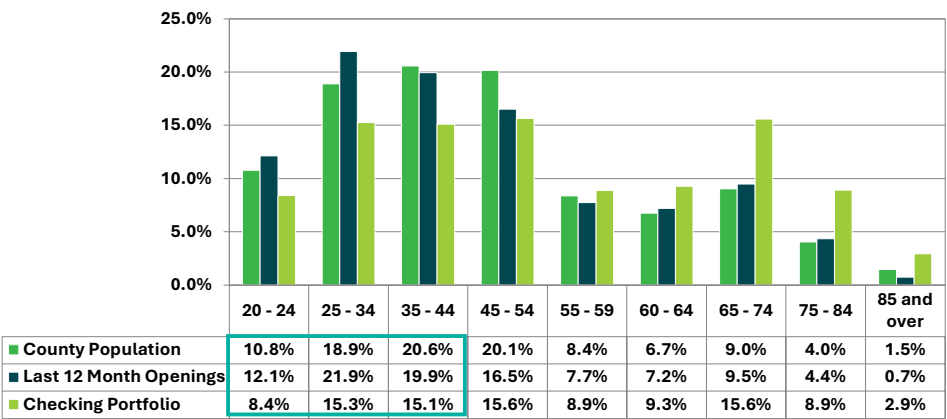
FDIC Trends: Cost of Funds



97

Case Study Bank

Retail Checking Age Demographics



53.9% of openings in previous 12 months are under age 44. That compares to 38.8% of portfolio and 50.3% of the county population in that age segment.

98

People – Leadership

- Employees watch to see if leaders actually “Walk the Talk.”
- Do they see your commitment in your actions?
- Do you model what you expect?

99

99

“You do not lead by hitting people over the head – that's assault, not leadership.”

Dwight D. Eisenhower

100



Homework

**Go back and study your bank's
values and/or mission statement –
Do they compel?**

101

Are You Delivering on Your Organization's Promise?

- *Everybody* talks about their **bad experiences**
- *Nobody* talks about the **average service** they received
- Only **exceptional experiences** generate word of mouth advertising

102

102

He or she is the CEO of the branch!

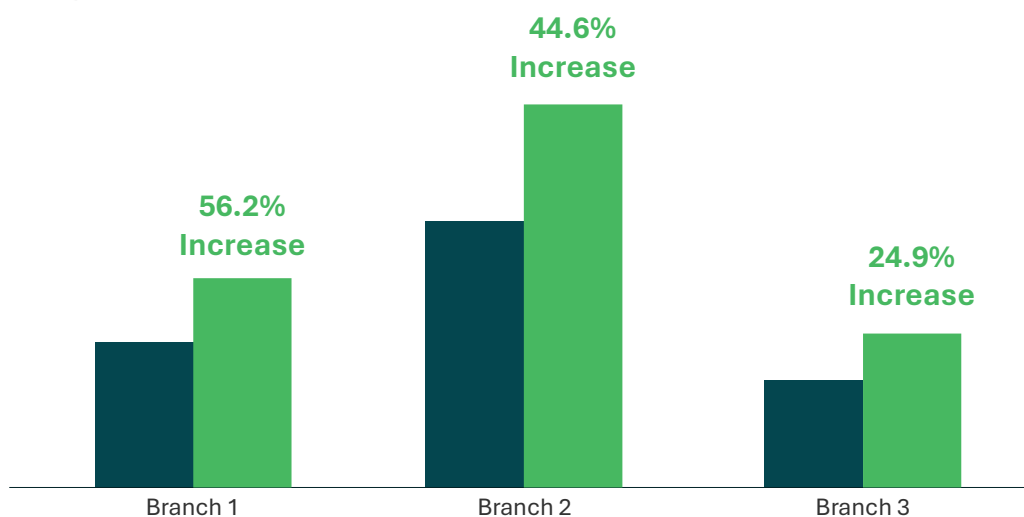
**The branch manager
sets the tone for the
branch.**

103

103

Case Study

Manager Impact on Customer Growth



104

104

“People often tell me that motivation doesn’t last, and I tell them that bathing doesn’t either. That’s why I recommend it daily.”

Zig Ziglar

105

People – Management

Branch managers must:

- Clearly understand the core values and mission
- Be **empowered** to make decisions regarding customer service and employee performance

106

106

People – Frontline

- Inspired to embrace the organization culture and positively contribute to it
- Empowered to provide EXTRAORDINARY service
- Able to clearly articulate your bank's core values and mission
- Understand expectations/held accountable for results

107

107

“Are you happy? 😊
Please notify your face!”

A Client to the Frontline Team Members

108

108

An ordinary response . . .

- “Information? Okay, here is a brochure you can look over.”

An EXTRAORDINARY response . . .

- “Information? Outstanding! You’ve come to the right bank. Let me help you.”

109

109

An ordinary response . . .

- “We **require** that you deposit a **minimum** of \$100 and **always** maintain that balance or we are going to **charge** you \$10 each month you fall below \$100.”

An EXTRAORDINARY response . . .

- “It’s **only** \$50 to open your account today.”

110

110

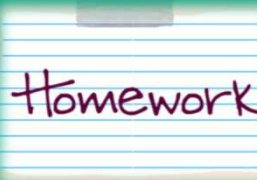
**Small Group
Exercise**

**In your small groups,
please share your
mystery shopping
experiences.**

We will then discuss.

111

111



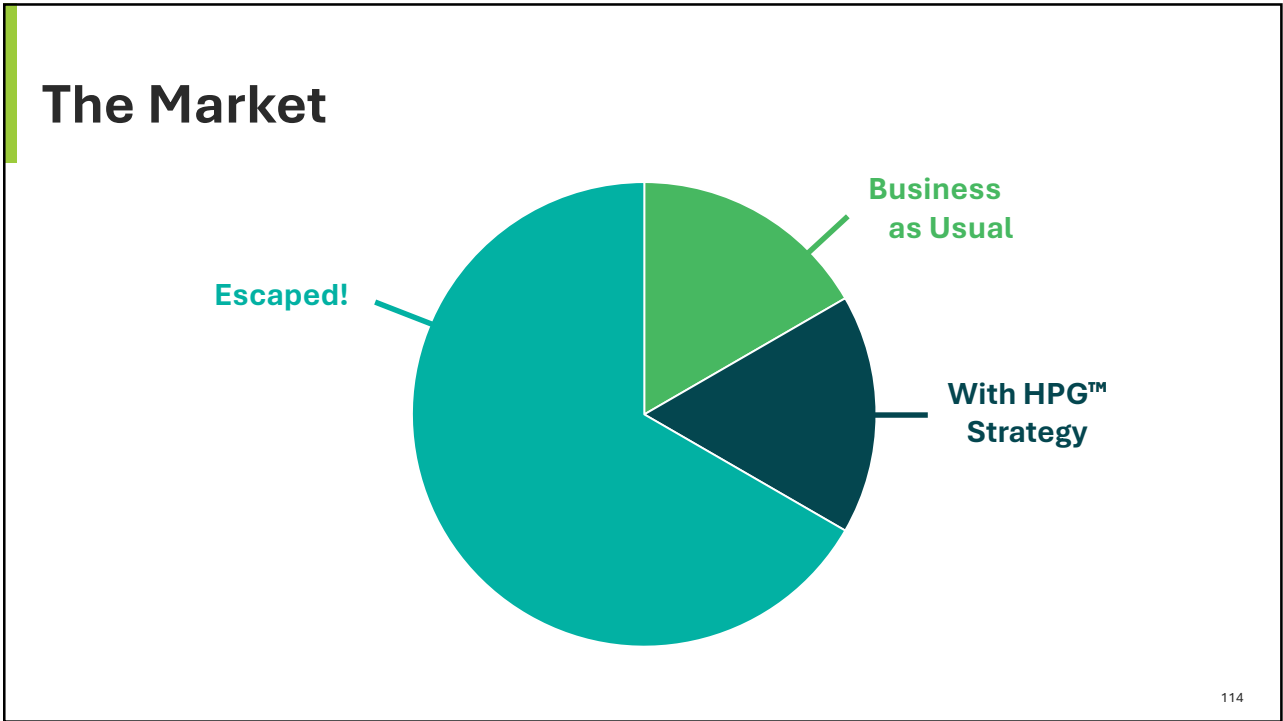
Homework

**Are your customer service
expectations clear?
How do you hold people
accountable?**

112

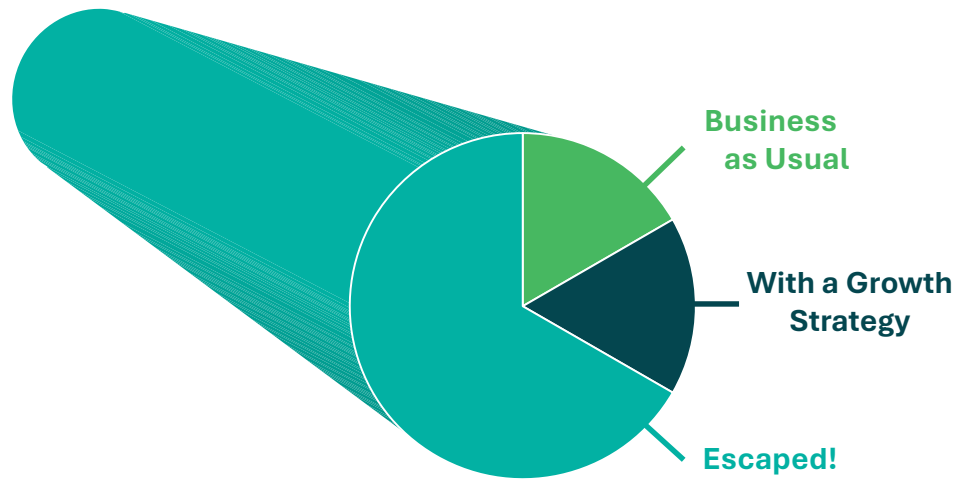


113



114

The Pipeline



115

No One Wants to Switch, BUT...



116

Marketing & Advertising Spend Matrix (2022–2025, \$MM)

Peer Benchmarking

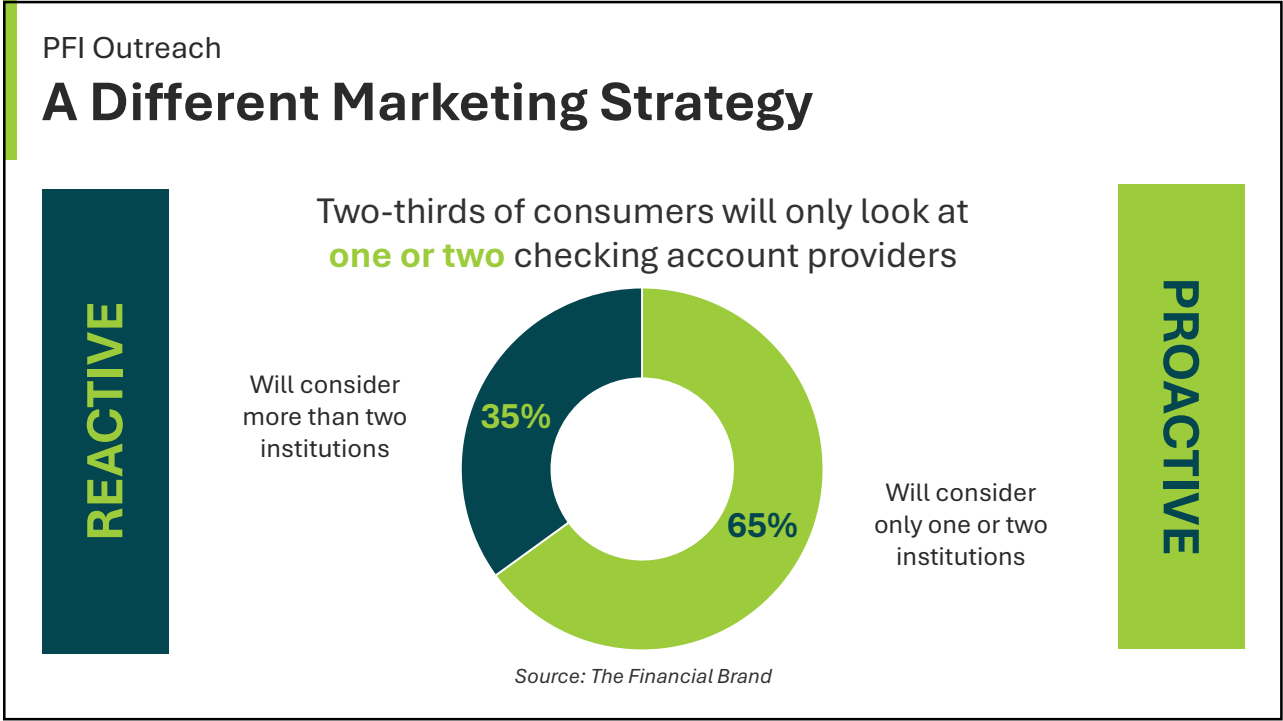
Bank	2022	2023	2024	2025	4-Yr Growth	Trend
JPMorgan Chase	\$4,060	\$4,540	\$4,974	\$5,531	+36%	Steady ↑
Bank of America	\$1,610	\$1,790	\$1,956	\$2,204	+37%	Steady ↑
Wells Fargo	\$505	\$812	\$869	\$1,094	+116%	Steep-change ↑
Citigroup	\$1,556	\$1,393	\$1,113	\$1,097	-29%	Declining ↓
Capital One	—	\$4,000	~\$4,560	~\$5,880	+47%*	Re-accel. ↑
U.S. Bancorp	\$456	\$726	\$619	\$705	+55%	Volatile ↕

* Capital One uses % disclosures; 2023 = \$4.0B base year

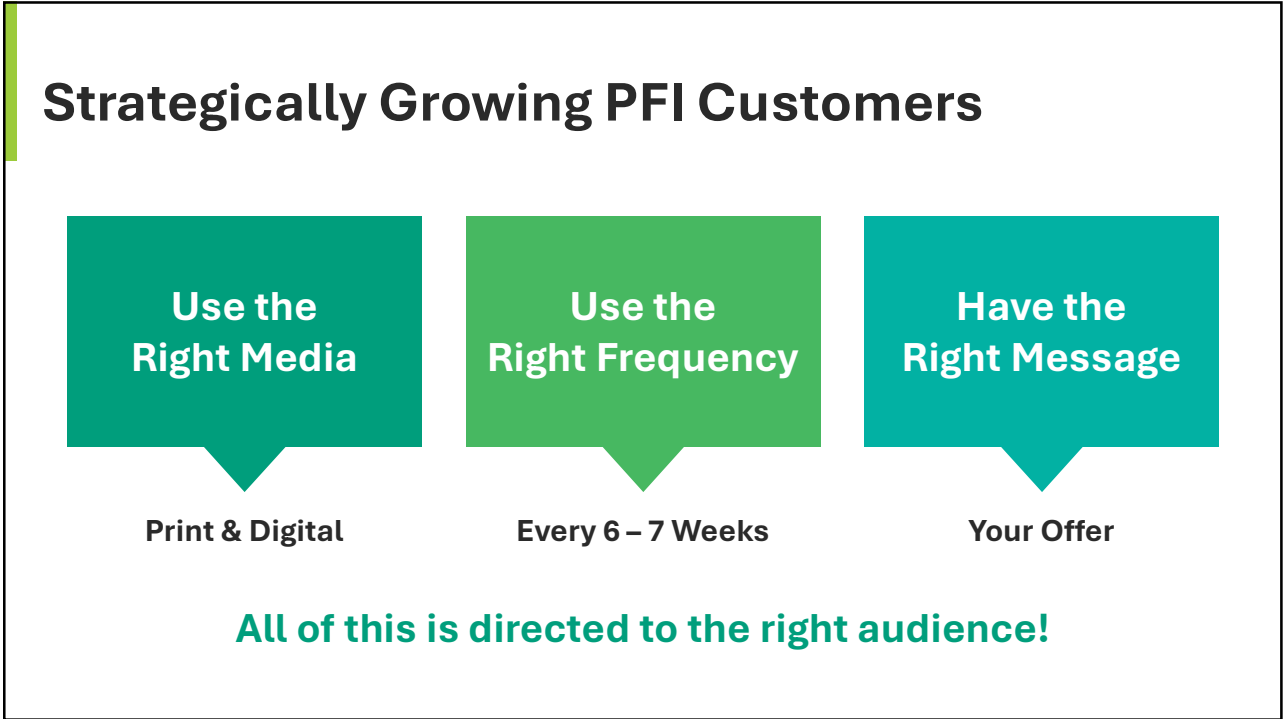
117



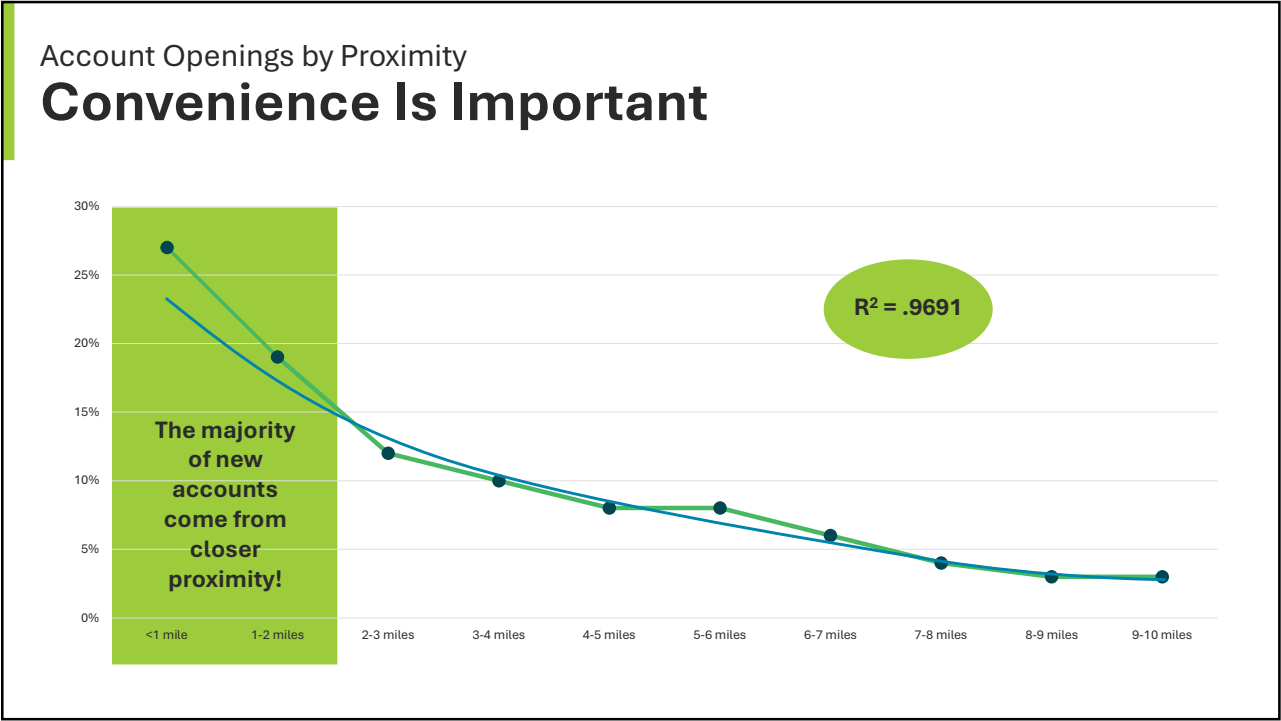
118



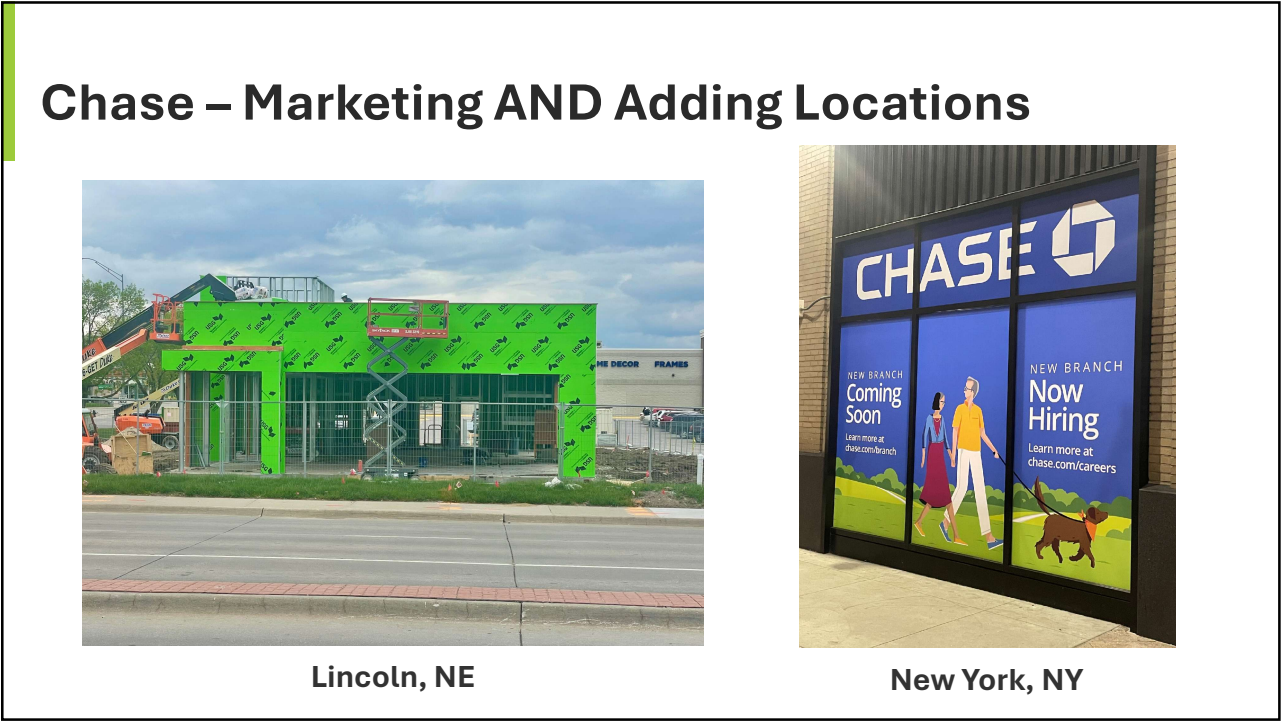
119



120



121



122

Defining Convenience

Demonstrated Convenience

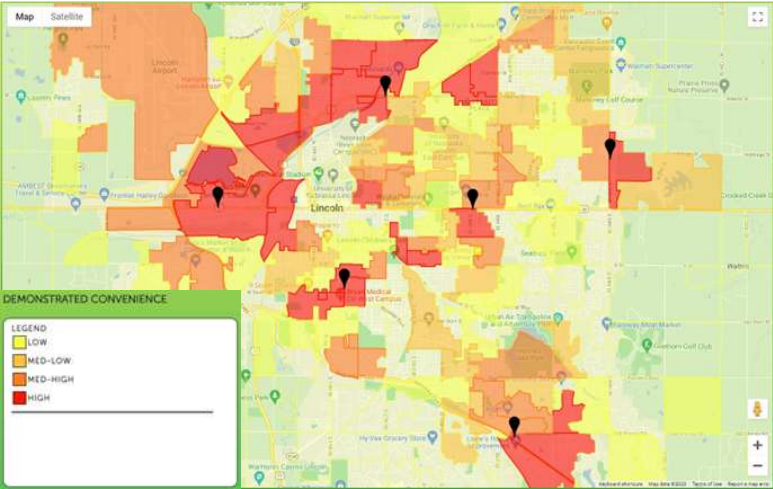
They are the neighbors or businesses next to the customers who already bank with you.
They live around or have businesses near your branches.



123

Driving More Traffic

Demonstrated Convenience



124

Defining Convenience

Predicted Convenience

Includes market penetration and competitor analysis plus GPS data for people who work around, walk, shop, eat or drive by your branches with regularity.

MobilePredict

125

Driving More Traffic

Predicted Convenience

126



Convenient Locations

We're in your neighborhood.

Local banking for where we live, work, and play.

Open your account today!

(800) 971-4671

FirstCommunityBank.com

Stop by your nearest branch today!





Showcase Technology

Convenient and Free at every location

Castleton
6245 Algonquin Road
Indianapolis, IN 46250
ATM: drive-up

Geist
11715 Fox Road, Suite 100
Indianapolis, IN 46236
ATM: drive-up

Greenwood
2011 Emerson Avenue
Greenwood, IN 46043
ATM: drive-up

Lawrence
7101 E. 86th Street
Indianapolis, IN 46226
ATM: walk-up

Lawrence
(located within Major General Emmett J. Bean Building)
Check website for current hours of operation due to COVID-19
ATM: within the building

Kokomo
1928 S. Dixon Road
Kokomo, IN 46902

Stop 11
1301 E. 86th 11 Road
Indianapolis, IN 46227
ATM: drive-up

Park 100
5501 W. 86th Street
Indianapolis, IN 46226
ATM: walk-up

In branch, online or on your device!
800.473.2326
www.fcba.com

App Store | Google Play

The South Shore's Best

Does your bank...

	Coastal Heritage Bank	Your Bank
Offer a FREE checking account with no opening deposit?	YES	?
Offer your FREE gift when you open a new checking account?	YES	?
Buy back your debit card and avoid charges from your old bank?	YES	?
Offer a FREE business checking account for your business or retirement organization?	YES	?

If you answered NO to any of these questions, it's time to switch to Coastal Heritage Bank!



Great Products & Better Pricing

127



Convenient Locations

We're in your neighborhood.

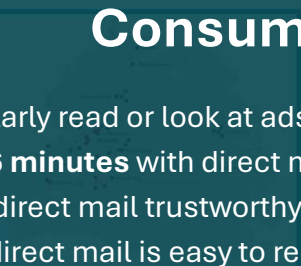
Local banking for where we live, work, and play.

Open your account today!

(800) 971-4671

FirstCommunityBank.com

Stop by your nearest branch today!





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The South Shore's Best

Does your bank...

	Coastal Heritage Bank	Your Bank
Offer a FREE checking account with no opening deposit?	YES	?
Offer your FREE gift when you open a new checking account?	YES	?
Buy back your debit card and avoid charges from your old bank?	YES	?
Offer a FREE business checking account for your business or retirement organization?	YES	?

If you answered NO to any of these questions, it's time to switch to Coastal Heritage Bank!



Great Products & Better Pricing

Consumer Study:

- **72%** regularly read or look at ads in the mail
- Spend **1.6 minutes** with direct mail ad vs 1.1 minutes for digital ad
- **58%** find direct mail trustworthy; **67%** in terms of privacy concerns
- **60%** say direct mail is easy to remember when making a purchase (vs. 44% for digital ads)

"What gives print ads their edge...is they are more effective at leaving a lasting impression."

Dr. Martin Block

Financial Brand, June 2024

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Omnichannel Marketing

Proactively Reaching Prospects

Reactive
35%
will consider
more than two
institutions

Proactive
65%
will consider one or two
institutions

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The Next Step – Persona Messaging

Member FDIC **Equal Housing Lender** NMLS# 416695 **Nº11**

Freedom Checking
An account for customers 13 years and older!
• No minimum balance • No monthly maintenance fee
• FREE eStatements

Business Freedom Checking
Perfect for most businesses!
• 1,000 FREE monthly transaction items
• No minimum balance • No monthly maintenance fee
• Up to \$10,000 in cash & coin services included per month

business freedom checking
Perfect for most businesses!
• 1,000 FREE monthly transaction items
• No minimum balance • No monthly maintenance fee
• Up to \$10,000 in cash & coin services included per month

Enjoy all the benefits of a **Freedom Checking** account!

FREE Online Banking with Bill Pay **FREE** Mobile Banking with Mobile Deposit

FREE Debit Card or Business Debit Card **And More!**

Open Online at **FirstState.Bank** or Visit Your Closest Branch at

FREE Debit Card or Business Debit Card **And More!**

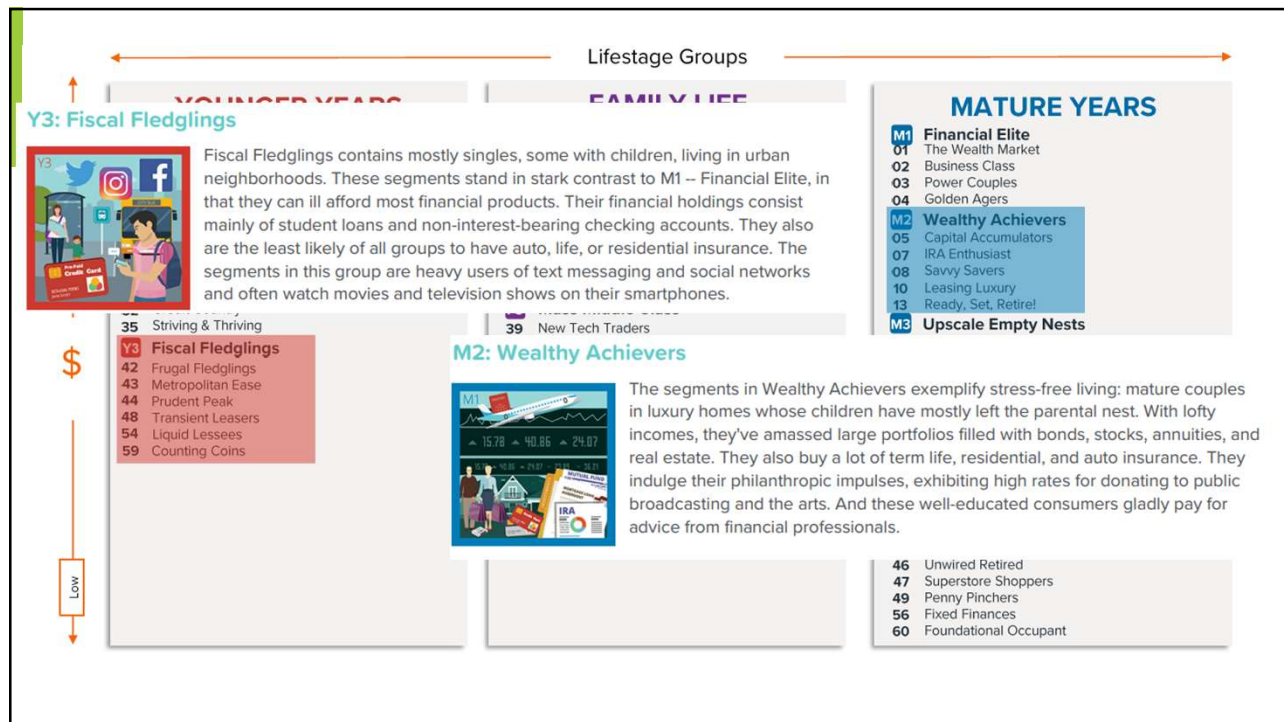
Open Online at **FirstState.Bank** or

Visit Your Closest Branch at
400 W Oak St or 2430 W University Dr - Denton
University Dr Open Saturdays, 9 to 1 p.m.

First State Bank.

Other fees such as non-sufficient funds, overdraft, etc. may apply. See fee schedule for details. Minimum opening deposit is only \$50. Ask us for details. First State Bank rules and regulations apply. Transaction items include all debits and credits. If the Business Freedom or Business Interest account exceeds 1,000 free monthly transactions, a fee of \$3.35 per item over 1,000 may be charged. If the Business Freedom or Business Interest account exceeds \$10,000 in monthly coin and currency services, the account may be converted to a other checking product. Minor 13-17 Joint Ownership of parent or guardian required. Opening online available for personal accounts only.

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Leverage Big Data for Messaging

Persona Precision

Segment existing households to better understand what messaging will resonate with prospects

- High Yield Checking = Wealthy Achiever
- Totally Free Checking = Fiscal Fledglings



CHECKING TO FIT YOUR NEEDS

High Yield Checking
An account for those interested in higher interest

- Unlimited FREE standard checks
- Higher interest rate with a balance of \$1,500 or more
- Competitive interest if balance falls below \$1,500
- Only \$10 monthly charge if minimum balance falls below \$1,500

Open a Checking Account Now

Totally Free Checking
A FREE account for everyone

- No minimum balance
- No monthly service charge

50+ Interest Checking
A perfect account for customers age 50 and better

- FREE standard checks - one box annually
- Competitive interest
- No minimum balance
- No monthly service charge

Direct Interest Checking
An interest-earning account with the convenience of direct deposit or any automatic payment

- Competitive interest
- No minimum balance
- No monthly service charge

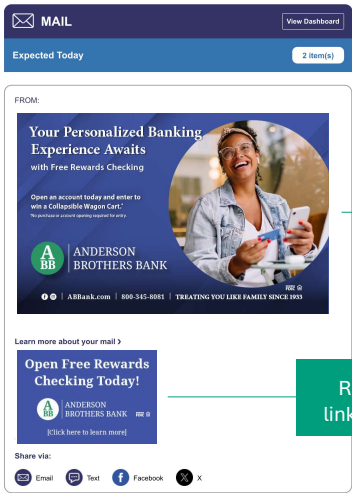
Member FDIC. Minimum opening deposit is \$50. Ask banker for details. Bank rules and regulations apply. Other fees such as non-sufficient funds, overdraft, returned payment fees, etc. may apply. See fee schedule for complete details.

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Informed Delivery

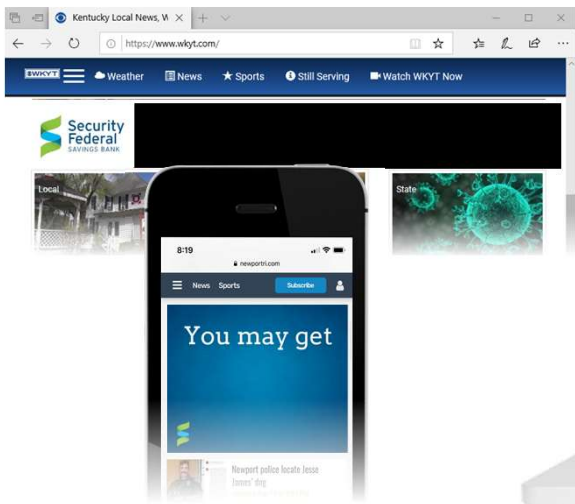
- Basic service provided by USPS with almost 75+ million users
- Residential consumers receive an email preview of incoming mail
- Enhanced through full-color images; achieves priority positioning

Year	Emails Sent	Emails Opened	Email Open Rate
2024	321,798	194,491	60.44%
2025	181,435	109,618	60.42%



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Digital Marketing Animated Display



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Display Ad Types



Product

Promote a specific compelling product
(e.g., Free Checking)

Brand

Build awareness and name recognition
(e.g., Serving your community for 80+ years)

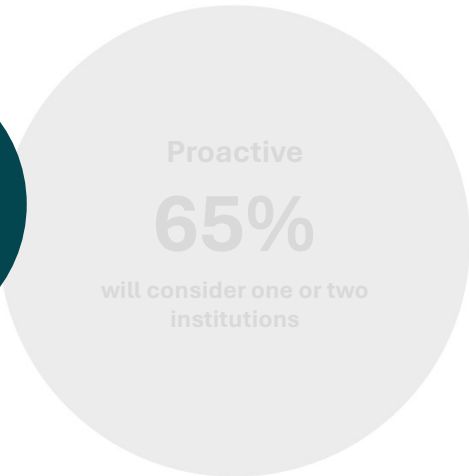
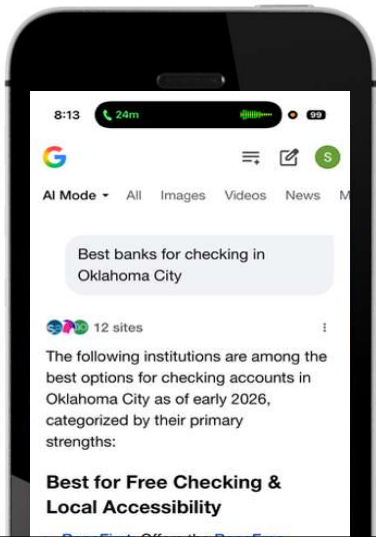
Unique Selling Proposition

Highlight what makes you special
(e.g., Great mobile app)

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Omnichannel Marketing – Generative Engine Optimization (replacing SEO)

Reactively Reaching Prospects



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Stack Rank

Households and Businesses in Your Markets

Predicted Convenience
Mobile Predict™ Score

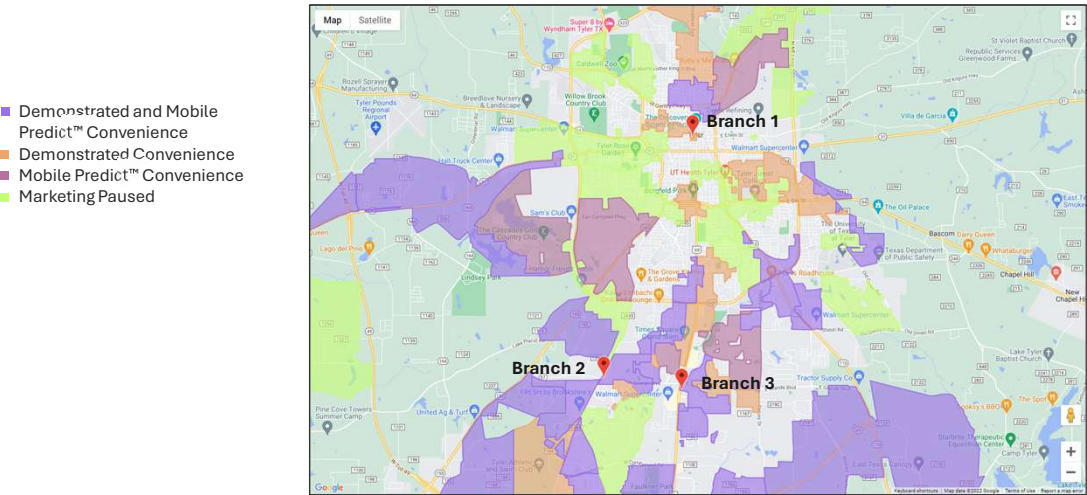
Demonstrated Convenience
Opening Activity Score

	0	1	2	3	4	5	6	7	8	9	10	11	12	Total
0	501	23,042	2,327	7,508	2,100	2,203	1,093	360	848	255	400	365	82	41,084
1		27,162	9,247	961	174									37,544
2		16,262	13,007	5,064	1,541					440				36,314
3	1,525	14,270	10,003	11,412	1,936	578								39,724
4		11,914	12,622	7,712	1,509	713	827							35,297
5		8,283	11,726	10,394	1,925	1,155		345						33,828
6		5,836	10,661	12,556	1,332	1,060		98						31,543
7	648	3,275	14,652	4,597	3,850	979	2,239	568	710	304	484			32,306
8	660	8,138	5,725	5,584	3,837	2,256	2,289	487	490	394	495			30,355
9	711	5,326	7,779	6,633	3,055	1,178	2,577	890	443	591		425		29,608
10		5,970	3,785	7,792	568	1,897	3,936	1,344	1,164	918	419			27,793
11		2,863	5,109	4,122	398	3,258	3,426	1,284	1,968	2,534	202	439		25,603
12		1,958	4,830	1,484	1,890	3,052	3,157	516	1,181	129	623	1,103		19,923
Total	4,045	134,299	111,473	85,819	24,115	18,329	19,544	5,892	6,804	5,565	2,623	2,332	82	420,922

Sample Client: 170,000+ Prospects in High-Performing Neighborhoods

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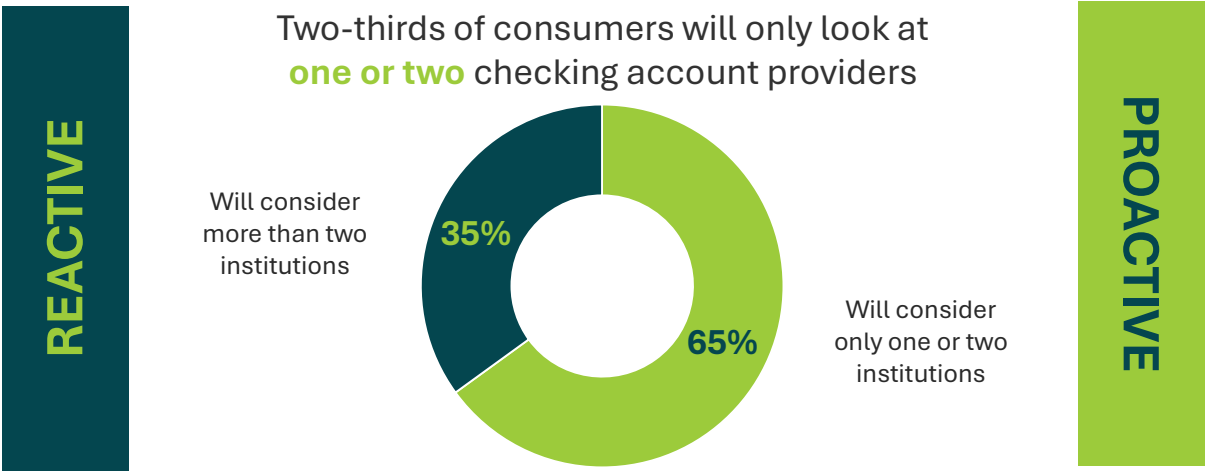
Dynamic Shift of Prospect Targets



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PFI Outreach

A Different Marketing Strategy



Source: The Financial Brand

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“80% of success is showing up.”

Woody Allen

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Homework

**Evaluate your marketing strategy -
Is your bank utilizing its marketing
resources to provide the greatest
return on investment?**

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**“Light travels faster than sound.
That’s why some people appear
bright before you hear them
speak.”**

Larry the Cable Guy

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The Results . . .

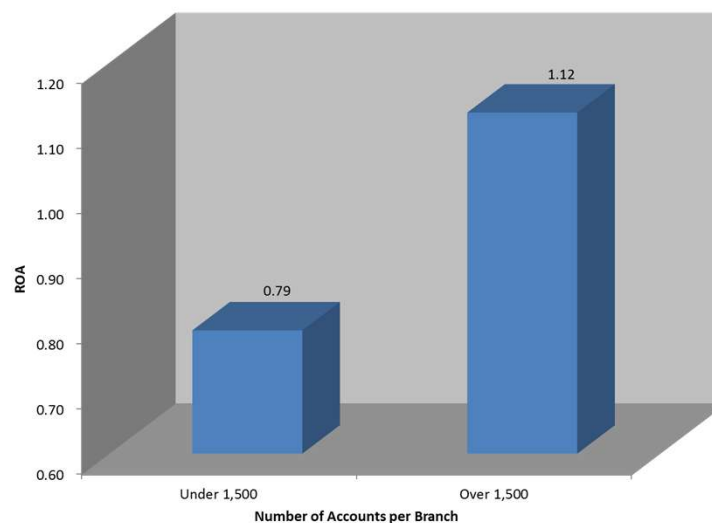
Execution –
Do you want improved profitability?
If yes, you need more customers!

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More Customers = Better ROA

Client ROA by # of Checking Accounts Per Branch

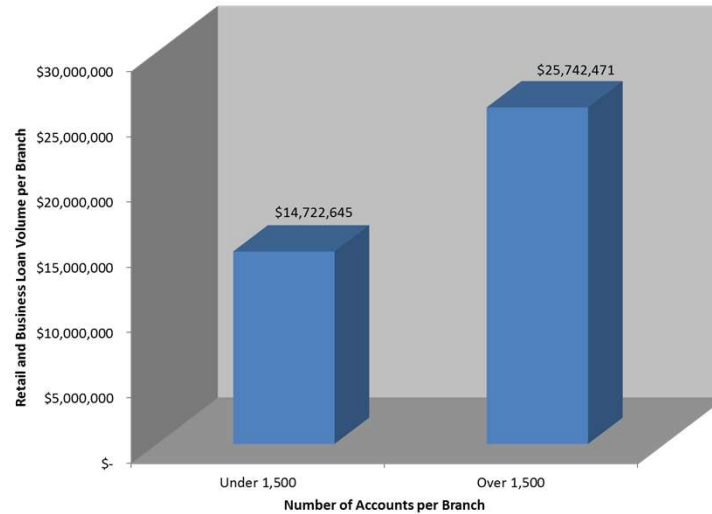


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More Customers = More Loans

Client Loan Volume by # of Checking Accounts Per Branch



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EXTRAORDINARY is . . .

- A way of life
- Linked to on-going execution
- The best path to greater profitability

***“Is your bank on the path to
EXTRAORDINARY?”***

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Homework

Identify two specific items that will enhance your bank's ability to EXECUTE – make them a reality.

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Action Plan

1. Conduct a thorough review of your retail and business products. Are they simple? Do your people understand them? Are your people proud to offer them to customers?
2. Evaluate how easy it is to become a new customer at your bank? Are there barriers that should be removed?

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Action Plan

3. Review your account opening procedures – Do they lead to more business or send profitable customers away?
4. Go back and study your bank's values and/or mission statement – Do they compel?
5. Are your customer service expectations clear? How do you hold people accountable?

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Action Plan

6. Evaluate your marketing strategy – Is your bank utilizing its marketing resources to provide the greatest return on investment?
7. Identify two specific items that will enhance your bank's ability to EXECUTE – make them a reality.

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“Life consists not in holding good cards but in playing those you hold well.”

Josh Billings

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Sean C. Payant, Ph.D.

President
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sean@haberfeld.com



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GLOSSARY

A

ACCOUNT ANALYSIS. An analytical procedure for determining whether a customer's deposit account or entire credit/deposit relationship with a bank is profitable. The process compares revenues from the account with the cost of providing services.

ACCOUNTS PAYABLE TURNOVER. The ratio of the dollar amount in accounts payable times the number of days in the period divided by the total dollar amount of purchases in the period. This ratio tells the lender how long it takes the firm to pay its suppliers.

ACCOUNTS RECEIVABLE TURNOVER. The ratio of the dollar amount in accounts and notes receivable (net) times the number of days in the period divided by the net sales for the period. This ratio tells the lender whether the firm collects money due from customers in a timely basis.

ACCRETION (OF DISCOUNT). The gradual recognition of the discount on a bond as income on the owner's accounting records.

ACCRUE. To recognize income as earned or expense as incurred rather than when cash is received or disbursed. This matches the income and expense to the period in which the benefit or service was provided.

AGENCY SECURITIES. Securities issued by agencies owned or sponsored by the federal government, such as the Federal National Mortgage Association (FNMA), Government National Mortgage Association (GNMA), etc.

ALCO. (Asset/Liability Management Committee) The bank committee charged with developing and implementing the bank's asset/liability policies.

ALLOWANCE FOR LOAN LOSS. A balance sheet valuation account designed to recognize the fact that not all loans will be repaid in full. The allowance is increased periodically by a charge to bad debt expense, so that it totals the aggregate amount of loans estimated to be uncollectible. It is decreased when uncollectible loans are written off and charge-offs actually occur. The allowance is also known as the RESERVE FOR BAD DEBTS.

AMORTIZATION (OF PREMIUM). The charges made against interest received on a bond which is used to offset the premium (amount paid for the bond above its par value) which was paid when the bond was purchased. Premiums generally are amortized over the remaining life of the bond.

ANNUAL PERCENTAGE RATE ("APR"). The cost of credit on a yearly basis, expressed as a percentage. APR considers the amount financed, the finance charge and the term of the loan.

APPRECIATION. Refers to an increase in value. For bonds, the amount by which the market value exceeds the book value or cost.

ASKED (ASK). Price at which a broker is willing to sell the bond to a bank.

ASSET SENSITIVE. When rate sensitive assets exceed rate sensitive liabilities; or when a bank is positioned to profit when rates rise.

ASSETS. Anything of value, real or intangible, owned by the bank or owed to the bank, such as cash, loans, equipment, investments, and receivables.

ATS ACCOUNT. A savings deposit or account that, pursuant to a written agreement between the institution and the depositor, allows automatic transfers to a checking account to cover checks written against the checking account.

AUTOMATED CLEARING HOUSE (ACH). The ACH network is a nationwide electronic funds transfer system for participating depository financial institutions. The American Clearing House Association, Electronic Payments Network, Federal Reserve and Visa act as ACH Operators, central clearing facilities through which financial institutions transmit or receive ACH debits and credits. They electronically process direct deposit of payroll and government benefits such as Social Security, direct payment of consumer bills, business-to-business payments, federal tax payments, and, increasingly, e-commerce payments.

AVAILABLE BALANCE. That portion of a customer's account balance which is available for immediate withdrawal.

B

BALANCE SHEET. A financial statement that indicates the type and amount of assets, liabilities, and owners' equity (net worth) at a given point in time. For banks, it is also called the STATEMENT OF CONDITION.

BANK HOLDING COMPANY ("BHC"). A corporation that owns, controls, or otherwise has the power to vote at least 25% of the voting stock in one or more commercial banks.

BANKERS' ACCEPTANCE. A type of credit instrument similar to a money order in that it is drawn on and accepted by a bank which is used to finance the export, import, shipment or storage of goods. The term "accepted" means that the bank agrees to pay the money order at its maturity on behalf of its customer, who is obligated to pay the bank the amount being financed.

BASE RATE. An interest rate used as an index to price loans, as in, a loan priced at the prime rate plus 1%. The prime rate is the base rate.

BASIS POINT. 1/100th of 1% or .0001. (100 basis points equal 1%.)

BEARER BOND. A security which has no identification as to the owner and is payable to whoever has physical possession of the certificate.

BID. Price that a broker is willing to pay the bank for its bond.

BOND. An interest-bearing debt obligation which promises to pay the principal amount due on a date specified.

BOND RATINGS. The classifications made by rating agencies that represent the relative financial strength of an issuer with respect to the issuer's ability to meet its bond obligations.

BOOK ENTRY. A system in which securities are not represented by physical pieces of paper, but rather as entries on the computer records of the issuer.

BOOK VALUE (OF A BOND). The value at which a bond is carried on the bank's books.

BRANCH BANKING. A bank with more than one location from which it provides all or part of its banking services to the public.

BROKED DEPOSITS. Deposits acquired through a money broker.

BULK FILING. The operations process of filing each day's paid on-us checks according to processing date and statement cycle.

BUSINESS CYCLE. A pattern of fluctuations in economic activity, characterized by expansion and contraction of repeating patterns, but of irregular lengths.

C

CALL REPORT. A statement of a bank's financial condition and income as of a certain date, submitted to a bank's regulatory agency in accordance with regulatory accounting principles established by the Federal Financial Institutions Examination Council. Includes other financial data and responses to questions regarding the bank's activities.

CAMELS. A rating system used by federal and state bank regulators to assess the financial condition and specific risks faced by a bank. Regulators rank performance in six general categories: **Capital adequacy, Asset quality, Management quality, Earnings quality, Liquidity, Sensitivity to market risk.**

CAPITAL. Funds representing ownership in the bank, including funds raised from the issuance of stock and retained earnings.

CAPITAL GAIN. The amount by which the proceeds from the sale of an asset exceed the cost of the asset.

CASH FLOW STATEMENT. A statement which accounts for a company's cash receipts and disbursements during a given period.

CASH ITEM. Any item that the bank is willing to accept for immediate but provisional credit to a customer's account, thus increasing the account's book balance.

CASH LETTER. An interbank transmittal form used to accompany cash items sent from one bank to another. The form contains the date, the banks involved, the total dollar amount of the checks, and the type of credit availability associated with the checks -- immediate, or one-day or two-day deferred.

CERTIFICATE OF DEPOSIT. A large denomination time deposit.

CERTIFIED CHECK. A customer's check that has been presented to a bank for authentication and guarantee. By its certification, the bank guarantees that sufficient funds have been set aside to cover the check when payment is demanded. Generally, payment of a certified check is the bank's responsibility.

CHAIN BANK. An individual or group of individuals with controlling interest in more than one bank without a holding company framework.

CHARGE-OFF. The action whereby a lender reduces the value of an asset (loan) because the asset has declined in value, or as a loan is no longer collectible.

CHECK CLEARING. The process by which banks that receive deposited checks obtain payment from the banks on which the checks are drawn.

CHECK PRESENTMENT. The physical delivery of a check to the bank on which the check is drawn.

CHECK SAFEKEEPING. Retention of the customer's checks by the depository institution rather than returning the checks with the customer's statement. Sometimes called CHECK TRUNCATION where the check is retained at the depository institution.

CLEARING. The interbank presentation of checks, the offsetting of counterclaims, and the settlement of resulting balances. The operation may be local, regional, or national.

CLEARING BALANCE. An account that the depository institution holds at a Federal Reserve bank in lieu of, or in addition to, required reserve balances to facilitate transactions involving Federal Reserve services, and to avoid daylight and overnight overdrafts.

CLEARING HOUSE. A place where representatives of the banks in the same locality meet daily at an agreed-to time to exchange checks, drafts, and similar items drawn on each other and to settle the resulting balances.

COLLATERALIZED DEBT OBLIGATION (“CDO”): A security backed by a pool of loans or bonds which is structured with several classes (called tranches). Payments from the underlying collateral (loans or bonds) are used to make payments to the security holders. If the collateral is bonds, the security is a **CBO** or collateralized bond obligation. If the collateral is loans, the security is a **CLO** or collateralized loan obligation.

COLLATERALIZED MORTGAGE OBLIGATION (“CMO”): A security backed by a pool of mortgages which is structured with several classes (called tranches). Payments from the underlying mortgages are used to make payments to the security holders but with only one class receiving principal repayments at a time (i.e., principal in the first class (tranche) is paid entirely off before principal payments are made to the second class(tranche), etc.).

COLLECTED FUNDS. Cash deposits or checks that have been presented for payment and for which payment has actually been received from the paying bank.

COMPENSATING BALANCE. A deposit balance required as compensation for services provided by a lender or correspondent bank.

COMPOUNDING. Adding interest earned for one period to the principal at the beginning of the next period for purposes of calculating interest for the next period on the total interest plus principal.

CONSUMER PRICE INDEX. An index measuring the cost of a hypothetical “basket of over 300 goods and services” purchased by a typical urban wage-earner family. Since the CPI is an indicator of the general level of prices, it can signal an inflationary environment. Also called **COST OF LIVING INDEX**.

CONTRA ACCOUNT. An account that partially offsets the balances in another account, such as accumulated depreciation accounts and the reserve for bad debts.

CONTRACTIONARY MONETARY POLICY. Policy designed to decrease demand by curbing growth in the money supply. This can be accomplished by increasing reserve requirements, raising the discount rate and open market sales.

CORE CAPITAL. Tier 1 capital consisting primarily of stockholders’ equity.

CORE DEPOSITS. Deposit balances that are relatively stable, are unlikely to be withdrawn even as interest rates rise, and carry predictable costs. Often DDA and savings accounts, or at least a portion thereof, are considered core deposits.

CORRESPONDENT BANK. A bank that provides services, typically check clearing, to other banks.

COST ACCOUNTING. A type of accounting that deals primarily with classifying, allocating and reporting costs and income of producing and distributing a product or rendering a service.

COUPON. The interest rate payable on a bond or debt.

CUMULATIVE GAP. The accumulation of all gap periods up to and including the period under consideration.

CURRENCY TRANSACTION REPORT. A report required by the Bank Secrecy Act for transactions in excess of \$10,000, unless exempted under one of the provisions of the act.

CURRENT RATIO. The ratio of current assets divided by current liabilities. This ratio tells the lender if there are sufficient short-term assets (assets to be converted to cash in less than a year) to repay the current debts (due in less than a year).

CUSIP NUMBER. The nine-digit, alpha-numeric code that uniquely identifies a security issue.

D

DEBIT CARD: Similar to a credit card, a debit card when used immediately debits the account holder's transactions account for the amount of the purchase.

DEBT TO NET WORTH. A ratio of total liabilities divided by net worth. This ratio gives a picture of the burden of debt the company is carrying and tells the lender how much the lenders of the firm have at risk vs. the owners of the firm.

DEED OF TRUST. A legal instrument in which the borrower transfers property to a trustee, for the benefit of the lender, at the time the loan is made. Used in many states instead of a mortgage.

DEMAND DEPOSIT. A transactions account in which the bank pays no interest.

DEPRECIATION. (a) The process of allocating the cost of a fixed asset less its salvage value (if any) over its estimated useful life. (b) For bonds, the amount by which the book value exceeds the market value.

DERIVATIVES. See FINANCIAL DERIVATIVES.

DISCOUNT. The difference between the par value of a bond and its purchase price when a bank pays less than the par value to purchase the bond.

DISCOUNT RATE. Rate of interest charged by the Federal Reserve on short-term loans it makes to banks or other financial institutions through its discount window.

DISCOUNT WINDOW. The lending facility of the regional Federal Reserve bank through which depository institutions may borrow short-term from the Federal Reserve to meet temporary liquidity needs and to cover reserve deficiencies.

DOUBLE ENTRY BOOKKEEPING. An accounting system based upon the premise that for every debit entry there is an equal, corresponding credit entry. Uses the formula that $\text{Assets} = \text{Liabilities} + \text{Owners Equity}$.

DUAL BANKING SYSTEM. The U. S. banking system that permits a bank to obtain a charter either from the state in which it is domiciled or the federal government through the Office of the Comptroller of the Currency.

DURATION. The weighted average of time until cash flows are received or cash payments are made. A measure of the price sensitivity of a security or portfolio of securities.

E

EARNINGS CREDIT. An allowance to a customer, offsetting part or all of the service charges on an account. It is calculated on the basis of the average balance in the account during a period and the earnings credit rate in effect at the time.

ECONOMIC GROWTH. An increase in real Gross Domestic Product (GDP).

EQUITY MULTIPLIER. The ratio of total assets to stockholders' equity.

EXPANSIONARY MONETARY POLICY. Policy designed to increase demand by increasing growth in the money supply. This can be accomplished by decreasing reserve requirements, lowering the discount rate and open market purchases.

EXPENSE. Costs associated with doing business and generating income during the current financial period.

F

FACE VALUE (OF A BOND). See PAR VALUE.

FEDERAL FUNDS ("FED FUNDS"). Short term (usually overnight), secured or unsecured loans made by one bank from its excess reserves (cash and balances on deposit at the Federal Reserve or correspondent bank) to another bank. *Fed funds sold* are loans of excess reserves made by the bank (an asset) and *Fed funds purchased* are borrowings of the bank (a liability).

FEDERAL FUNDS RATE ("FED FUNDS RATE"). The interest rate that banks charge one another for overnight loans of reserve funds. The Fed Funds rate is a key rate in the Federal Reserve's monetary policy, providing an early indication of major changes in the national economy.

FEDERAL NATIONAL MORTGAGE ASSOCIATION (FNMA): A government sponsored enterprise charged with buying mortgages from lenders and selling them to investors. Commonly known as Fannie Mae.

FILTERS. A method of selectively retrieving financial information from a broad database. The purpose is to narrow information to an appropriate field for evaluation.

FINANCE CHARGE. The cost of credit as defined by the Truth in Lending Act, expressed in dollars and cents. One component is the interest charged.

FINANCIAL DERIVATIVES. Financial instruments that derive their value from the performance of the underlying interest rates, foreign exchange rates, equity prices, or commodity prices.

FISCAL POLICY. Actions regarding the level and mix of federal government expenditures, borrowings and taxes.

FHLMC. Federal Home Loan Mortgage Corporation, a quasi-federal agency. Commonly known as Freddie Mac.

FIXED ASSETS. Those items of a long-term nature, such as furniture and buildings, required for the normal conduct of a business that have value and benefit over several financial periods.

FLOAT. The difference between deposits credited to an account and the amount of those deposits that has been collected.

G

GAAP. Generally accepted accounting principles. The rules, conventions, practices and procedures that form the foundation for financial accounting.

GAP. The dollar value of rate sensitive assets minus the dollar value of rate sensitive liabilities.

GAP RATIO. The dollar value of rate sensitive assets divided by the dollar value of rate sensitive liabilities.

GENERAL OBLIGATION BONDS. Municipal bonds secured by the full faith, credit, and taxing power of the issuing state or local government.

GOING OUT ON THE CURVE. Extending the maturities of the bank's investments by buying longer term investments.

GROSS DOMESTIC PRODUCT (“GDP”). The total market value of all final goods and services produced in a country in a given period of time. It is typically expressed in terms of “real dollars,” i.e., the current dollar value of GDP divided by a relevant price index.

H

HEDGE. Take a position to reduce overall risk.

HOT MONEY. Funds that readily leave a bank when interest rates change.

I

ILLIQUID: For investments, the relative inability to sell the instrument in the secondary market. Transactions costs are generally high and it is often difficult to estimate the value that will be realized.

INCOME. Earnings of the bank generated during the current financial period.

INCOME STATEMENT. A financial statement that summarizes the bank’s income and expenses over a given period of time. Also called a PROFIT AND LOSS STATEMENT, OPERATING STATEMENT, EARNINGS STATEMENT, or REPORT OF INCOME.

INDEPENDENT BANK. A bank that is not controlled by a holding company or other outside interest. (Some authors state that an independent bank may be part of a one-bank holding company.)

INDEX OF LEADING ECONOMIC INDICATORS. A group of measures of economic activity that fairly consistently foreshadow future business activity.

INDIVIDUAL RETIREMENT ACCOUNT (IRA). A retirement account available to individuals to defer income taxes.

INFLATION. An increase in the *general* level of prices.

INTEREST BEARING LIABILITIES. Liabilities that cause interest expense.

INTERSTATE BANKING. The establishment of a banking presence in another market across state lines for the purpose of taking deposits. This may be accomplished through owning banks across state lines (interstate holding company) or establishing branches across state lines (interstate branching).

INVENTORY TURNOVER. The ratio of cost of goods sold divided by the average value of the inventory. This ratio tells the lender the number of days a product stays on the shelf.

INVERTED YIELD CURVE. Short-term interest rates are above longer-term interest rates.

K

KITE. Writing checks against uncollected deposits which are in the process of clearing through the banking system.

L

LEDGER BALANCE. The dollar value of a customer's account as it appears on the bank's books and customer's statement. Disregards float and holds.

LEVERAGE: The use of debt to finance a firm's operations. Leverage ratios compare the amount of a firm's debt to its assets or equity and interest payments versus a firm's earnings or cash flow from operations.

LIABILITIES. Obligations the bank owes to others, such as customers' deposits and accrued interest on deposits. A source of funds for the bank.

LIABILITY SENSITIVE. When rate sensitive liabilities exceed rate sensitive assets, or when a bank is positioned to profit when rates fall.

LINE OF CREDIT. A lending agreement between a bank and borrower in which the bank makes a fixed amount of funds available to the borrower for a specified period of time. The customer then determines the timing of actual borrowing.

LIQUIDITY. Ability to raise cash quickly without adversely affecting earnings.

LOAN PARTICIPATION. Credit extended to a borrower in which a group of lenders each provide a fraction of the total financing; typically used because individual banks have legal limits on the amount of credit they can extend to a single customer.

LOAN-TO-DEPOSIT RATIO. A ratio of total loans divided by total deposits. This ratio indicates how the loan portfolio of a bank is financed.

LOCAL ITEMS. A deposited check drawn on another bank within the same city or geographic area.

LOOSENING THE REINS. Efforts by the Federal Reserve when it feels that the economy is growing slower than the desired level. Actions may include: decreasing reserve requirements, lowering the discount rate and open market purchases.

M

MARK-TO-MARKET ACCOUNTING. An accounting rule that forces some securities selected by the bank to be adjusted on the books to market value, thus possibly causing fluctuations in a bank's capital.

MARKET VALUE (OF A BOND). The amount which can be obtained by selling the bond.

MONETARY POLICY. Federal Reserve actions regarding the monetary base (currency in circulation and bank reserves), money stock, and interest rates. These actions are taken to meet the economic objective of a full employment, noninflationary level of total output.

MONEY MARKET DEPOSIT ACCOUNT. A deposit account which is limited to a maximum of six telephone or preauthorized transfers per month, of which no more than three may be drafts.

MONEY MARKET FUNDS. A mutual fund that buys high quality, short-term notes, acceptances, or certificates of deposit (generally short term) of many corporations or governments. The fund sells shares to investors, who receive regular payments of interest.

MONEY SUPPLY. Narrowly defined, M1. More broadly defined, M2 and M3. [M1 = all currency + all checkable deposits not owned by the federal government, Federal Reserve or depository institutions. M2 = M1 + all noncheckable savings deposits + all certificates of deposit less than \$100,000 + money market mutual funds. M3 = M2 + certificates of \$100,000 or more.]

MORTGAGE BACKED SECURITIES ("MBS"). Securities representing an undivided interest in a pool of mortgages or trust deeds with similar characteristics. Payments on the underlying mortgages are used to make payments to the security holders.

MULTIBANK HOLDING COMPANY ("MHC"). A holding company that owns or controls at least two commercial banks. The holding company may or may not engage in other activities or own non-banking corporations.

MUNICIPALS. Securities issued by a state or local government or their political subdivisions.

N

NET INTEREST MARGIN. The difference between interest income, adjusted to a tax-equivalent basis, and interest expense.

NET INTEREST MARGIN (RATIO). Tax-equivalent interest income less interest expense, divided by total assets. (Some sources use total earning assets while some sources call the ratio using earning assets NET INTEREST SPREAD.)

NET OPERATING REVENUE. The sum of net interest income and noninterest income.

NET PROFIT ON TANGIBLE NET WORTH. A ratio of net profit after tax divided by net worth. This ratio tells the lender what the company earns on every dollar invested by the owners.

NOW ACCOUNT. (Negotiable order of withdrawal account) In effect, an interest-bearing checking account.

NSF. Insufficient funds.

O

OFF-BALANCE SHEET ITEMS. Commitments, such as loan guarantees, that do not appear on a bank's balance sheet but represent actual contractual obligations.

ONE-BANK HOLDING COMPANY. See SINGLE BANK HOLDING COMPANY.

ON-US CHECK. A check deposited or negotiated at the bank on which it is drawn.

OPEN MARKET OPERATIONS. The purchase and sale of U.S. obligations by the Federal Reserve. These operations influence the growth of the money supply and are the principal means by which monetary policy is implemented.

P

PAR VALUE (OF A BOND). The face amount stated on the bond. This is the amount payable at maturity.

PASS-THROUGH SECURITY. An instrument secured by mortgages in which actual principal and interest payments on the mortgages are 'passed through' to investors less fees.

PEER GROUP. Groups of banks formed based on asset size and other characteristics and for which statistics are then classified. Each bank is then compared with the other banks in its group on the Uniform Bank Performance Report.

POINT. On a loan, one percent of the loan amount. Points are usually assessed at time of loan origination or closing.

PREFERRED STOCK. Stock which usually has the dividend rate fixed at time of issuance and does not have voting rights. Preferred stock receives dividends before common stock and in the event of liquidation of the company; preferred stockholders are given priority (a preference) ahead of common stockholders to the company assets.

PREMIUM. The amount paid for a bond in excess of its par value.

PREPAID EXPENSE. An expenditure with the benefit yet to come in future time period(s). An asset of the company until it is expensed.

PRIME RATE. A base rate that a bank charges commercial customers. It is often used as an index rate with a premium added for different risks.

PROVISION FOR LOAN LOSSES. A charge (expense) against current earnings to build up a bank's allowance for possible loan losses.

Q

QUICK RATIO. The ratio of cash and equivalents plus net accounts receivables divided by current liabilities. This ratio shows the immediate on-hand cash and equivalents which could immediately be used to cover current liabilities.

R

RATE SENSITIVE ASSETS ("RSAs"). The dollar value of assets that either mature or can be repriced within a specific time interval, such as 90 days.

RATE SENSITIVE LIABILITIES ("RSLs"). The dollar value of liabilities that either mature or can be repriced within a specific time interval, such as 90 days.

RECESSION. A negative percentage change in GDP for at least two consecutive quarters.

REGULATORY ACCOUNTING PRINCIPLES ("RAP"). Accounting rules as prescribed by the bank's regulatory agency.

REPURCHASE AGREEMENT. A sale of securities, usually Treasury bills, with a simultaneous agreement to buy back the same securities at a stated price on a stated date (often overnight). Also called REPO.

RESERVES. Qualifying assets to meet reserve requirements, including vault cash and deposit balances held at Federal Reserve banks.

RESERVE FOR BAD DEBTS. See ALLOWANCE FOR LOAN LOSS.

RESERVE REQUIREMENT RATIOS. Percentages applied to transactions accounts and time deposits to determine the dollar amount of required reserve assets.

RESERVE REQUIREMENTS. Those funds that a financial institution is required by law to set aside, generally in the form of cash or balances at a Federal Reserve Bank.

RETURN ON ASSETS. A ratio of net income divided by average total assets. This ratio indicates what the bank was able to earn for every dollar of assets (how efficiently assets are used). Usually calculated assuming 12 months of income.

RETURN ON EQUITY. A ratio of net income divided by average total capital. This ratio indicates what the bank was able to earn for every dollar the stockholders have invested. Usually calculated assuming 12 months of income.

RISK-BASED CAPITAL. A method of determining a bank's capital adequacy based on the proposition that not all bank assets and off-balance sheet transactions carry the same amount of risk for a bank. For each asset and off-balance sheet transaction, a standard measurement of capital risk has been defined. Rather than using the bank's book value of its assets to calculate capital requirements, each of its assets is adjusted by a percentage to reflect the appropriate level of credit risk for the asset, with the resulting summation determining the appropriate level of capital for the bank.

S

SECONDARY MARKET. A market for the resale of securities, such as the stock exchange, where ownership is transferred from one owner to another. The first sale of any security is in the primary market; all subsequent sales are in the secondary market.

SECURED OVERNIGHT FINANCING RATE (SOFR). Broad, daily measure of the cost to borrow cash overnight, collateralized by U.S. Treasury securities. As a transaction-based, nearly risk-free rate, it replaced LIBOR as the primary USD benchmark in mid-2023.

SECURITIZATION. (a) The practice of packaging a portfolio of specific loans with similar features, such as mortgages, into a single financial instrument and selling the instrument in the secondary market as if it were a security. (b) The aggregation of assets with similar characteristics/features in a standardized format for sale to investors.

SERIAL BONDS. A series of bonds that comprise a single offering by the same issuer where the bonds have different maturity dates.

SETTLEMENT DATE. The date on which delivery of and payment for securities are expected as a result of a securities purchase or sale.

SINGLE BANK HOLDING COMPANY. A holding company that owns or controls only one bank. The holding company may or may not engage in other activities or own non-banking corporations.

SPREAD. The difference between a bank's weighted average interest rate on its assets (loans and investments) and the weighted average interest rate on its interest-bearing liabilities.

SUBPRIME. Higher risk credits, typically associated with low credit scores for individuals.

SUPPLEMENTARY CAPITAL. Same as Tier 2 capital.

SURPLUS CAPITAL. The funds paid for stock in excess of its par value at the time of issuance of the stock.

SWEEP ACCOUNT. A checking account from which an automatic transfer is made to an interest bearing account in order to earn interest whenever a deposit is made to the checking account. When a check is presented on the checking account, funds are then "swept" back to cover the check.

T

TERM LOAN. Loan with a stated maturity beyond one year.

TIER 1 CAPITAL. Primarily stockholders' equity, subtracting goodwill. (See the Accounting module for details.)

TIER 2 CAPITAL. Primarily loan loss reserves and certain types of long-term subordinated debt, preferred stock, and other convertible debt. (See the Accounting module for details.)

TIGHT TO THE CURVE. An investment whose yield is approximately the same as that of a U.S. government security of the same maturity.

TIGHTENING THE REINS. Efforts by the Federal Reserve to curb excessive growth in the money supply or inflation. This can be accomplished by increasing reserve requirements, raising the discount rate and open market sales.

TRANSACTION ACCOUNT. An account that allows for transfer of funds to third parties by check, negotiable order of withdrawal, ATM, phone, etc.

TRANSIT ITEM. Any item that a bank chooses to classify as not payable locally; an out-of-town check.

TREASURY BILLS. A marketable U.S. Treasury security with a life of 4-weeks, 13-weeks or 26-weeks sold to the public at weekly auctions on a discount basis in minimum denominations of \$1,000 and in book-entry form only. Also called T-BILL.

TREASURY BONDS. A debt security of the federal government with a maturity over 10 years.

TREASURY NOTES. An intermediate-term security issued by the Treasury, with an original maturity of 2 to 10 years.

TRUNCATION. See CHECK SAFEKEEPING.

U

UNDIVIDED PROFITS. Retained earnings or cumulative net income since the beginning of the Bank not paid out as dividends or transferred to some other capital category.

UNIFORM BANK PERFORMANCE REPORT (UBPR). A report based on data from call reports that is put together by the Federal Financial Institutions Examination Council. The report allows standard comparisons of banks to their peers.

UNIT BANK. A single-office, independent bank.

UPCHARGE. An amount added for profit to the raw cost of a product to arrive at a selling price. Often used to refer to the mark-up on personal checks sold to bank customers.

UPSTREAM BANK. See CORRESPONDENT BANK.

Y

YIELD CURVE. A graph showing the relationship among interest rates (yield to maturity) on *substantially similar* securities with different maturities.

YIELD TO MATURITY. The total rate of return, including both interest payments and the investor's capital gain or loss, on a bond or debt security held to maturity.

MANAGING LIQUIDITY AND CAPITAL PLANNING

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OVERVIEW

This session discusses the importance of cash assets, available borrowing capacity, and liquidity planning to ensure that a bank can meet unanticipated deposit outflows. It describes different funding alternatives and their respective costs and benefits. It explains the links between liquidity risk, credit risk and interest rate risk and describes the trade-off between reducing liquidity risk and increasing profits. It clarifies the role that bank capital serves and examines the impact of regulatory capital requirements on bank operating policies. It outlines the objectives and basic structure of the risk based capital requirements and discusses how bank managers view capital in their financial decision making.

Liquidity risk was at the top of regulatory concerns given problems faced by many large commercial and investment banks during the financial market disruptions beginning in 2007-2008. Bear Stearns effectively failed early in 2008 largely because counterparties to its transactions would not do business with Bear Stearns because they were not confident the firm would be able to meet its obligations. Without the ability to transact business, Bear Stearns did not have access to sufficient amounts of cash to meet its payment obligations.

Three bank failures in March 2023 brought liquidity issues to light in a completely different way. Social media and digital banking contributed to banking runs that couldn't be overcome. In this session, we examine ways by which a bank can plan and position itself to effectively mitigate liquidity risks.

LEARNING OBJECTIVES

Following the successful completion of this session, you should be able to:

- Recognize the types of transactions or events that contribute to liquidity problems.
- Understand the importance of financial reporting of securities holdings, maturity, marketability, interest rate changes and pledging requirements in determining an asset's liquidity.

- Describe the events leading to problems banks have had meeting liquidity needs in recent history.
- Explain the link between a bank's capital position and its ability to meet liquidity needs.
- Interpret key static liquidity ratios.
- Construct a liquidity planning model that compares potential uses of funds with potential sources of funds.
- Identify the components of regulatory capital at banks.
- Understand the function of bank capital.
- Demonstrate how capital requirements affect management decisions regarding asset growth and asset and liability composition.
- Explain the basic features and objectives of risk based capital standards including capital regulations under Basel III.

SOURCES OF LIQUIDITY NEEDS

Bank liquidity refers to a bank's capacity to obtain cash quickly at a reasonable price. A bank may sell assets, call in loans*, borrow, or even issue new stock to obtain cash. The objective of each transaction is to gain access to deposit balances that help a bank make payments. Banks make payments from deposits held at other financial institutions or Federal Reserve Banks when they buy securities, receive a currency shipment from the Federal Reserve, or make a loan and the customer spends the proceeds. [*Since preservation of customer relationships is paramount, calling in performing loans should be considered a 'last resort' measure.]

Liquidity needs arise from deposit outflows. Most deposit losses are predictable because they follow seasonal patterns, the payment cycles of large customers, or coincide with a maturing time deposit. Transaction accounts, for example, normally exhibit weekly or monthly patterns that follow the payroll and billing activities of the community's largest businesses and the bank's largest commercial customers. Time deposits, in turn, mature at predetermined times so that management can anticipate lost funds if a customer does not reinvest the deposit proceeds. Predictable changes in these bank liabilities produce predictable changes in a bank's cash holdings.

Still, some deposit outflows are unanticipated. Bank managers do not know precisely when customers will write checks, use internet banking or mobile banking to pay bills, get cash from an ATM or whether they will prematurely withdraw funds from time deposits. It is also difficult to predict whether customers will reinvest maturing CDs with the issuing bank. Finally, management may not be able to predict when loan customers will borrow against open credit lines. It is these unpredictable reductions in cash holdings that may present liquidity problems.

Maturing Deposits

Exhibit 1 demonstrates how a bank's deposit balances at a Federal Reserve Bank change when a \$100,000 maturing CD is not rolled over or reinvested by the deposit holder. In this case the CD holder directs the Federal Reserve to transfer the funds by wire to another institution. The outstanding liability to the CD holder falls by \$100,000 while the bank transfers \$100,000 from its deposit account at the Fed to another institution. The net impact is that the bank has less cash. Because these deposits constitute legal reserves, the bank's reserve position worsens. If this deposit outflow was not anticipated, it could create a need for additional liquidity.

New Loan Demand

Exhibit 2 demonstrates that a customer borrowing against a loan produces the same cash outflow. In the top example, an existing loan customer borrows against an open credit line by requesting a wire transfer to cover the purchase of some good or service. The bank authorizes payment for \$250,000, so it decreases its deposits held at the Fed by \$250,000 and adds the same amount to the customer's loan.

In the bottom example, step 1 characterizes a bank that credits \$500,000 to a borrower's demand deposit account, at which time outstanding loans increase. In step 2 the customer writes a check that clears through the Fed, and both the bank's and customer's deposit balances fall. As a result, legal reserves are decreased, and a potential reserve deficiency is created. Eventually the bank must replenish its cash holdings to meet later deposit outflows.

Factors Affecting Liquidity Needs

Below are listed specific features of a bank's deposit and loan customer base that affect liquidity needs. Because banks that find themselves in financial crises typically experience liquidity problems, key factors that indicate a high risk of potential liquidity problems are summarized afterward.

Risk Factors that May Indicate Potential Deposit Losses

- Large balances of uninsured deposits.
- Deposit ownership by type of depositor (in order of less to more vulnerable to sudden withdrawal): individual, non-profit organization, government, business,.
- Payroll transactions by bank business customers (predictable)
- Large deposits held by any single customer; high risk if withdrawn unexpectedly. (unpredictable)
- Seasonal or cyclical patterns in deposit flows (predictable)
- The sensitivity of deposits to interest rate changes. (moderately predictable over time)
- Funding loan commitments and other off-balance sheet commitments. (moderately predictable)
- Loss of reputation with businesses, governments and individuals with which a bank conducts business. (predictable if actively monitored)

Sources of New Loan Demand (measurable and predictable)

- Unused commercial credit lines outstanding.
- Unused consumer credit card lines.
- Business activity and growth within the trade area.
- Aggressiveness of the bank's call program.
- Funding of off-balance sheet commitments.

Warning Signs of a Potential Liquidity Crises

- High levels and rising trends in delinquent (problem) loans.
- High levels and rising trends in loan charge-offs.
- Significant concentrations in loans (to single borrowers or industries).
- High loan growth.
- Difficulties in valuing individual loans and securities and also pools of loans and securities.
- Weak management controls.
- Aggressive accounting practices.

In 2006, bank regulators offered guidance for banks regarding commercial real estate lending due to concern that some institutions had high and increasing concentrations that might make the firms vulnerable to a downturn in real estate markets. In particular, regulators specified thresholds of commercial real estate loans as a fraction of a bank's total capital that would signal potential increased regulatory scrutiny. Banks with high commercial real estate concentrations were expected to have heightened risk management practices. This linkage between loan concentrations to potential asset quality problems and a bank's total capital reinforces key relationships that may signal potential liquidity problems.

Beginning in 2006, sub-prime mortgage lenders in the U.S. experienced substantial borrower delinquencies and defaults. Lenders have long been attracted to sub-prime loans because of their high promised yields. During boom times with rising real estate values, borrowers were often able to sell a property when problems arose with the value sufficient to cover debt service requirements. Lenders helped borrowers get into homes by offering non-traditional mortgage financing products such as option ARMs enabling less qualified borrowers to purchase houses they could not otherwise afford and pay a small fraction of the amount necessary to cover interest and the mandatory principal reduction.

When real estate values fell and/or leveled off and regulators increased loan underwriting requirements for sub-prime borrowers, many borrowers discovered that they couldn't service their outstanding debt. In many instances, the root cause was aggressive underwriting (or no underwriting) where lenders would not require documentation of a borrower's income or other evidence of ability to pay as well as offer mortgage products with attractive front-end terms, such as the interest only (IO) and option-ARM products. Rising rates revealed the weaknesses of mortgage products with

attractive front-end terms, such as the interest only (IO) and option-ARM products. Rising rates revealed the weaknesses of these practices as debt service requirements increased well beyond what many borrowers could pay. Not surprisingly, defaults and foreclosures increased. Numerous lenders saw their profits fall and many mortgage lenders eventually failed.

In 2009 and 2010, this trend of real estate losses appeared in commercial real estate portfolios and finally began to slowly reverse starting in 2012. However, in 2020-2021, the COVID-19 pandemic and the resulting closure and/or reduction of income in the business sector was deeply concerning. According to the FDIC, in the second quarter of 2020, banks reported the largest percentage increase in charge-offs for bad loans since early 2010 and also quadrupled the reserves they set aside to absorb loan losses. However, when the Federal Government created the \$813.5 billion Paycheck Protection Program (PPP) as part of the \$2 trillion CARES Act of 2020, many businesses who received (mostly forgivable) funds were stabilized. Many businesses stockpiled these funds, which combined with other forms of stimulus in the CARES Act resulted in many commercial banks having higher deposit levels than anticipated through 2021 and into 2022.

SOURCES AND USES OF BANK FUNDS

In order to understand how banks meet liquidity needs, it is necessary to distinguish between sources and uses of bank funds. Sources of funds represent an inflow of cash, while uses of funds represent cash outflows.

Sources and uses can be conveniently viewed in terms of changes in a bank's balance sheet over time. Suppose, for example, that you are comparing your bank's balance sheet on June 30, 2025, with figures for year-end 2024. An increase in any liability, such as CDs, represents a source of funds because additional net financing has been obtained. Similarly, an increase in equity, which typically arises from issuing new bank stock or adding to retained earnings by reducing or eliminating dividends paid, is a source of funds. On the asset side, a decrease in assets represents a source of funds. This occurs if a bank sells securities from its portfolio, outstanding loan principal balances are repaid, or depreciation reduces net fixed assets.

Uses of funds are balance sheet changes in the opposite direction of that described above. Thus, any decrease in a liability or equity, or increase in assets represents a net cash outflow. Examples include: a maturing deposit where the proceeds leave the bank; reporting a net loss; or making new commercial loans.

General sources and uses of funds include:

Sources of Funds

Decrease in an asset

Increase in a liability

Increase in stockholders' equity

Depreciation and amortization

Uses of Funds

Increase in an asset

Decrease in a liability

Decrease in stockholders' equity

Cash dividends/Stock buybacks

SOURCES OF LIQUIDITY

Arguably the most attractive source of liquidity is core deposits, which are relatively stable, low cost and not very rate sensitive. If banks can grow core deposits, they increase their franchise value and core funding base. Small banks generally have limited access to large denomination purchased liabilities such as jumbo CDs and Euros. Many join the Federal Home Loan Bank in order to have access to its favorable financing alternatives via advances from the FHLB. Others rely more heavily on short-term assets to meet liquidity needs. Large banks have the additional option of purchasing funds in the form of large denomination liabilities issued via national money markets.

Liquid Assets

The most liquid assets are highly marketable securities because they possess features that are attractive to investors. Securities are more liquid than loans because they have standardized features, consistent payment streams and are typically traded in well-established secondary markets. Treasury securities are, in turn, the most liquid securities because there is no default risk, and dealers stand ready to buy and sell them at known, predictable prices. Short-term securities are less volatile in price than long term securities and thus provide a more reliable source of liquidity.

Of course, a bank must be able to sell the securities for them to be liquid in practice. This means that it must account for these securities as **available-for-sale** for reporting purposes. This classification requires that the securities be reported at market value on the balance sheet and thus subject to a change in value when interest rates change.

Securities classified as **held-to-maturity** are not liquid, regardless of their features, because management has indicated the intent to hold them to final maturity and not liquidate them earlier.

Highly liquid assets include:

- Cash and due from banks balances in excess of required holdings,
- Federal funds sold and repurchase agreements (securities purchased under agreement to resell),
- Short term, interest bearing deposits in denominations of \$100,000 or more held at other institutions,
- Treasury securities maturing within one year,
- Federal agency securities maturing within one year,
- Commercial paper or other high quality short term corporate securities, and
- Government guaranteed portion of loans.

Long term securities may also be liquid if they trade at prices above the value recorded on a bank's books; that is, if their market value exceeds book value. Banks are typically more willing to sell any security if they can record a gain rather than a loss from the sale. Securities sold above book value provide a gain on sale that is reported as non-interest income and are generally excluded from profitability analyses since securities gains and losses are taken at the discretion of management and cannot be forecasted.

Not all of a bank's security holdings can be readily sold, even if they have short maturities, because banks are required to pledge securities as collateral against some of their liabilities. Collateral is specifically required against borrowings from the Federal Reserve at the discount window, public deposits such as those held by states and local governments, securities sold under agreement to repurchase, and advances from Federal Home Loan Banks. With **pledging requirements**, the depositor or creditor stipulates the types of securities that can be

pledged as collateral and how much collateral is necessary. Pledged collateral is usually held by a third party trustee ensuring the bank cannot sell the pledged asset. Thus, only unpledged securities are truly liquid.

Liquidity from Borrowing

It is difficult to measure a bank's borrowing capacity.* It depends on the quality of bank assets, the capital base supporting operations, and the bank's overall reputation among creditors. Banks with stable core deposits, high quality assets, and a large equity capital base can issue more debt at relatively low rates. Banks that regularly rely heavily on purchased liabilities, such as federal funds and Repos, jumbo CDs, internet CDs, Eurodollar liabilities, and commercial paper, can expect to pay higher rates and may find that the sources of funds dry up when problems arise. [*While estimating borrowing capacity is not an exact science, prudent money managers periodically test various sources of purchased funds by initiating short-term transactions when the bank is not in a liquidity crunch.]

Analysts typically examine the following performance ratios for evidence of borrowing capacity: [Relative value of ratio indicating more borrowing capacity.]

- Stockholders' equity to total assets, [higher]
- Core deposits to total liabilities (or total assets), [higher]
- Fed funds purchased plus Repos and CDs to total liabilities, [lower]
- Loan losses to net loans, [lower]
- Risk assets (loans) to total assets, [lower]
- Noncurrent loans to total loans, [lower]
- Loan loss reserves to noncurrent loans, [higher]
- Level 3 assets (those marked to market without a strong basis in knowing true value), [lower]
- Significant loan concentrations, and [lower]
- Volatile (or non-core) liability dependence (a comparison of short term investments with non-core liabilities). [lower]

They also monitor the interest rates that banks pay on outstanding liabilities as an indicator of the market's assessment of bank risk. In the case of large banks, debt ratings (Moody's, S&P) are used as indicators for the bank's cost of purchased funds.

Joint Liquidity and Dependency Ratios

Many banks set liquidity policy guidelines regarding liquid assets and non-core liabilities obtained from balance sheet data. Typically, management attempts to measure the amount of liquid assets that are not pledged and the amount of volatile liabilities. Often they calculate a dependency ratio, which compares the two.

For example, a bank's liquid assets might consist of the following:

Short term unpledged government + agency securities	\$1.71 million
Short term unpledged municipal + corporate securities	\$0.66 million
Federal funds sold	\$3.00 million
Unrealized securities gains	<u>\$0.20 million</u>
Liquid Assets	\$5.57 million

The same bank's volatile (non-core) liabilities might consist of:

Jumbo CDs	\$3.25 million
Portion of time deposits + MMDAs	<u>\$0.75 million</u>
Volatile Liabilities	\$4.00 million

The bank might then set policy limits for a short term liquid asset ratio as:

$$\frac{\text{Liquid Assets}}{\text{Total Assets}} > + 5.0\%$$

And for a dependency ratio as:

$$\frac{\text{Liquid Assets} - \text{Volatile Liabilities}}{\text{Total Assets}} > -5.0\%$$

The implication is that management targets a minimum amount of liquid assets in general and relative to volatile, non-core liabilities.

Federal Home Loan Bank Borrowing

Many community banks have joined the Federal Home Loan Bank (FHLB) system because of the services offered. One of the most popular services is advances, or loans, that the FHLB makes available up to pre-determined amounts. Such loans may be short term or long term with maturities as long as 15 years. Some advances are like jumbo CDs in that they pay fixed rates that vary with maturity, while others carry floating rates.

Some advances also amortize at approximately the same rate as a bank's mortgage assets. Finally, some advances carry options where either the FHLB or the borrowing bank has the right to terminate the advance prior to final maturity. A bank would normally terminate the advance if interest rates fell while the FHLB would do this if interest rates rose after original issue. The variety of advances allows banks greater flexibility in meeting liquidity needs or as discussed later, in managing their overall interest rate risk.

It is important to recognize that any advance containing an option is difficult to value. Before borrowing in this form, management should carefully review the potential outcomes were rates to either rise or fall. During the early 2000's, for example, many banks borrowed via advances with ten year maturities at fixed rates. Some were induced to do so by low initial rates reflecting options that allowed the FHLB to exit the contract after some deferment period. When rates fell, loans funded by the advances were refinanced by borrowers but the banks were left with long term liabilities at rates now well above current market conditions.

FHLB advances may be a relatively low cost and potentially longer term source of funds for small banks compared with other money market instruments. Banks that borrow from FHLB must pledge real estate related collateral or related collateral provided under the Financial

Modernization Act of 1999 against the borrowings. As long as banks have qualifying collateral, the FHLB will provide financing.

Exhibit 3 shows FHLB advances outstanding at year-end from 2021-2025. To some extent, banks have traditionally used FHLB advances as substitutes for CDs. The critical issue is whether or not banks are using advances to place interest rate ‘bets’ in terms of trying to lock-in low borrowing rates given expected interest rate moves.

The importance of FHLB funding can be demonstrated by the heavy usage by large institutions, particularly those facing liquidity problems. In late 2007 when Citigroup, Countrywide, Wachovia and Washington Mutual were experiencing significant deposit losses and were forced to pay high rates on jumbo CDs to attract funds, they used their banking affiliates to borrow heavily from the FHLB of Atlanta. In 2007, FHLB of Atlanta extended \$43 billion of advance credit to Wachovia, \$51 billion to Countrywide, \$52.5 billion to Washington Mutual, and \$104.5 billion to Citigroup. This funding represented a high concentration of loans from the FHLBs’ perspective. Unfortunately, as events unfolded in 2008, even this level of borrowing could not sustain these organizations.

Liquidity vs. Profitability

There is a short-run tradeoff between bank liquidity and profitability in that increased liquidity comes at the expense of profitability. A bank with a higher percentage of liquid assets relative to total assets sacrifices income because short-term, highly marketable securities with low default risk typically pay lower yields than other assets. The same is true of loans. Loans that offer the highest pre-tax yields are often the least liquid because they have the greatest default risk or longest term to maturity. Loans that can be easily sold at reasonable prices are government guaranteed or represent high quality borrowers and carry lower yields.

Banks with substantial core deposits and few purchased liabilities pay lower rates, on average, which improves earnings. The same is true for banks with large amounts of equity capital. The improved earnings from more equity contribute to higher net income and ROA. The tradeoff is that financial leverage (equity multiplier or EM) is less. Therefore, another bank with the same ROA but proportionately less equity financing will report a higher ROE than the bank with a larger relative equity base

From a long-term perspective, maintaining adequate liquidity is critical to successful operation. Depositors and high quality loan customers assess overall asset and management quality to determine who gets their business. A highly liquid bank has the flexibility to make strategic changes that enhance long-run profitability despite short-term costs.

RELATIONSHIP BETWEEN LIQUIDITY RISK, CREDIT RISK, AND INTEREST RATE RISK

Well managed banks monitor their cash position and borrowing capacity carefully and operate with little liquidity risk. Cash deficiencies can normally be met by maintaining high quality assets that can be readily valued and sold in secondary markets, and by accelerating borrowing efforts or slowing asset generation. Liquidity risk actually rises or flows from credit and interest rate risks assumed elsewhere. Large and unexpected deposit outflows resulting from bad loans or losses on ill-advised interest rate gambles should be a signal to management that credit and interest rate risk policies, processes and controls are inadequate to ensure the bank's safety and soundness

A predictable sequence of events often precedes the most serious liquidity problems at banks:

1. Management assumes excessive risk in the loan portfolio, by mismatching asset and liability maturities or by misreading or failing to recognize market signals that point to a potential economic downturn that may negatively affect otherwise strong borrowers' ability to repay their loans;
2. The bank reports a decline in earnings;
3. The media publicizes the bank's problems;

4. Depositors get nervous and the bank must pay higher rates to keep customers from moving or to attract new deposits;
5. The bank cannot sell sufficient assets to reduce its capital requirements and/or fund its cash flow needs;
6. Earnings decline further with non-accruing loans and a reduced net interest margin;
7. Uninsured depositors move their funds;
8. Other creditors withdraw their funds.

This last step forces management to shrink the bank and rely on the Federal Reserve for financing until a merger or sale can be arranged. The point is that liquidity risk is closely linked to credit risk and interest rate risk.

LIQUIDITY PLANNING

In today's environment, banks use both assets and liabilities to meet liquidity needs. A bank's asset and liability management committee (ALCO) compares available sources of funds with projected needs. Liquidity planning focuses on ensuring that a bank has sufficient cash balances on hand to meet both expected and unexpected deposit outflows. The planning occurs at two levels. The first involves managing the bank's required reserve position over a two-week maintenance period. The second involves forecasting net funds needs obtained by comparing expected deposit outflows with known inflows and adding potential unanticipated deposit losses. The planning horizon at this stage encompasses monthly intervals at least through the upcoming year.

Planning Over the Reserve Maintenance Period

The basic objective of managing bank reserves is to meet the regulatory minimum at the lowest possible cost. Under current reserve requirements, banks must hold a minimum amount of deposits at the Fed determined as a fraction of the bank's liabilities outstanding after subtracting vault cash held. A bank does not have to hold any minimum amount on a single day but must meet some average minimum over a two-week maintenance period. Liquidity planning involves forecasting

available reserves over the two weeks and either investing any excess balances at available yields or borrowing additional reserves in the overnight federal funds or Repo market to cover deficiencies.

Exhibit 4 lists factors that increase and decrease actual reserves. Management has at least partial control over the discretionary factors but virtually no control over nondiscretionary factors. The most important nondiscretionary items are those associated with check clearing and maturing deposits. In most cases, a bank receives information on clearing surpluses or deficiencies once or twice daily. A bank that does not anticipate a large withdrawal may have to scramble to make up the deficiency by borrowing at high rates.

Managers use the discretionary items to adjust reserve assets when necessary. To obtain reserves a bank can borrow in the federal funds market or from the Federal Reserve. Alternatively, it can sell securities. Excess reserves are normally invested short term in Repos or the federal funds market at prevailing rates.

Planning Over Monthly Intervals

Liquidity planning over longer periods involves forecasting loans and deposits net of required reserves. The sum of maturing time deposits and new loans, less the change in transaction accounts net of required reserves, equals a bank's potential uses of funds. Maturing investment securities and principal payments on loans equals potential sources of funds. A bank's **liquidity gap** equals potential uses of funds minus potential sources of funds over specific time intervals. If the liquidity gap is positive, the bank projects a funding deficiency. A negative liquidity gap suggests an excess of investable funds.

The liquidity gap calculation is demonstrated in *Exhibit 5* over three successive time intervals through the upcoming year. The data for the next 30 days suggest that the sample bank has \$55.5 million in maturing deposits and forecasts \$113 million in new loan demand. Transaction accounts are projected to decline by \$4.5 million over the same period, so that net uses of funds total \$173 million. These uses represent expected cash outflows over the next 30 days. Expected sources of funds include \$18 million in maturing securities and \$80 million in principal repayments, for \$98 million in total new funds. The 30-day liquidity gap thus equals \$75 million. The bank needs to replace the maturing CDs

and Eurodollars and find at least \$25 million in new funds. This funding need appears largely because the bank makes \$113 million in new loans.

Comparable figures for 31 to 90 days and 91 days through one year also appear in the exhibit. According to these figures, management expects a surplus of \$135 million one to three months out and a large deficiency from three months through one year. The cumulative gap figure simply sums the previous periodic gaps and measures the total requirement from the present through the farthest day within each time interval. The sample bank has a net liquidity deficiency through one year of \$208 million, which represents a net need for liquid funds.

Liquidity gap information is useful when determining the desirable cash flow characteristics of investments and loans and arranging for contingency funding. If management anticipated a net outflow of funds 91 days to one year out, it may arrange for securities to mature within that interval to reduce risk. It may similarly implement marketing strategies to attract additional deposit funding over the interval. At a minimum, management should arrange for contingency funding of net outflows (a positive liquidity gap) by establishing a borrowing line with its correspondent and identifying securities or loans that could be sold.

Recent Deposit Trends

Some analysts routinely criticize community banks because of their lack of size and limited delivery systems. They argue that small banks won't invest in the technology or branch systems required to compete for deposits. With individuals fleeing the stock market from 2001 through early 2003, as well as in 2007-2008, most banks grew their core deposits with smaller institutions capturing a substantial portion of the growth.

Community banks have an opportunity to compete effectively when they invest in the technology demanded by consumers today. Branch delivery systems are very expensive, so community banks need to make careful decisions about how much to invest in brick and mortar, supplemented with the online and mobile banking capabilities that consumers expect. Those capabilities combined with highly personalized service and high-level execution create a competitive advantage that is difficult for very large banks to replicate.

COMPONENTS OF BANK CAPITAL

The primary objective of bank regulators is to ensure the safety and soundness of the U.S. financial system. Consumers and businesses want some guarantee that the funds they keep on deposit will be available when needed. The failure of individual banks, particularly large institutions, erodes public confidence in financial institutions and markets. Bank regulators thus attempt to limit the magnitude and scope of failures by requiring banks to operate with a minimum amount of equity and certain types of long term debt. This minimum is stated as some fraction of each bank's risk-weighted assets.

Prior to the 1980s, regulators emphasized the judgment of examiners and their supervisors in determining capital adequacy. With the subsequent banking crises, legislation forced regulators to impose specific numerical minimum capital requirements based on general estimates of aggregate credit risk assumed by a bank. Such capital adequacy standards are a means of controlling bank risk taking. The more capital that banks are required to have, the less the risk of failure and the more secure is the FDIC insurance fund.

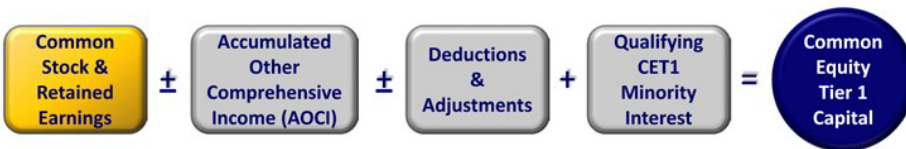
What Constitutes Bank Capital?

Capital is a balance sheet figure. In accounting terms, it is the same as net worth and equals the value of total assets minus the value of liabilities. It is normally measured on a book value basis in which assets and liability values are stated at historical cost. It represents ownership in the firm. Bank regulatory capital, however, differs from accounting capital because regulators include certain types of bank debt and loan loss reserves when measuring capital adequacy. Accounting capital includes the book value of common equity and preferred stock outstanding. Bank regulatory capital is much broader as described below.

Bank regulators currently divide capital into Common Equity Tier 1 Capital (CET 1), Additional Tier 1 Capital, and supplementary (Tier 2) capital. The following charts from the FDIC define these types of capital:

Definition of Common Equity Tier 1 Capital ⁷

Banks that Do Not Elect AOCI Opt-out and Advanced Approaches Banks*



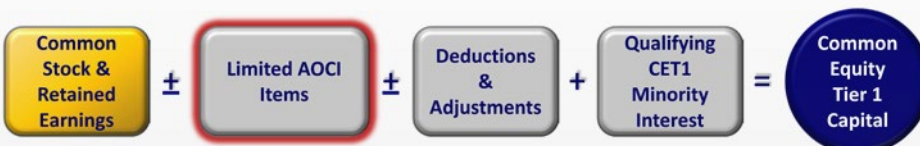
* Institutions with \$250B or more in assets or \$10B or more in foreign exposures

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Definition of Common Equity Tier 1 Capital

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Banks with AOCI Permanent Opt-out Election

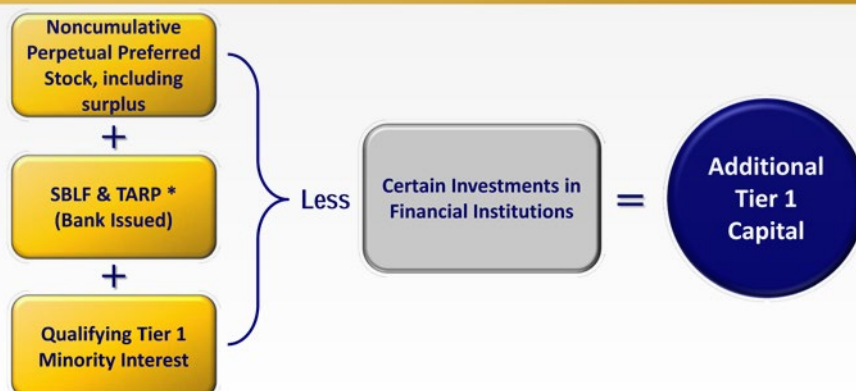


- Opt-out: same AOCI treatment as today
- Election: the March 31, 2015 Call Report and FR Y-9C (if applicable)

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Definition of Additional Tier 1 Capital

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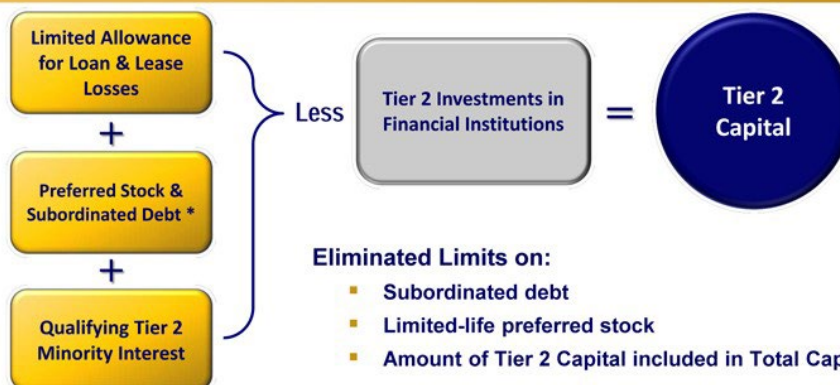


* Only if original bank issuance qualified as Tier 1 Capital

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Definition of Tier 2 Capital

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* Includes bank-issued SBLF and TARP instruments that currently qualify as Tier 2 Capital.

FEDERAL DEPOSIT INSURANCE CORPORATION

The obvious question is, "Why do regulators include as regulatory capital balance sheet accounts that are not stockholders equity?" The answer relates to the purpose of capital regulation in providing a safe banking system. When a bank fails, insured depositors are paid first. The claims of other noninsured creditors and stockholders are subordinate to insured depositors and are not paid from the insurance fund. Both long term debt and equity provide protection for uninsured depositors, creditors, and stockholders.

CET1 capital is deemed to be more attractive to regulators because it represents stockholders' interests, whose claims on a bank are subordinated to creditors in the case of failure. In addition, banks do not have to pay dividends when problems appear which potentially helps their cash flow. Tier 2 capital is also valuable because the claims of long term debt holders and preferred stockholders are similarly subordinated to the FDIC in the event of failure.

What is the Function of Equity Capital?

The function of bank equity capital is to reduce risk. It does so in three fundamental ways:

1. It provides protection against operating and extraordinary losses. Furthermore, more equity capital results in lower mandatory interest payments. Dividend payments on stock are discretionary because they can be omitted without producing default. When a bank reports a loss, it charges the loss against its capital. It must have some capital remaining after deducting losses to be solvent according to accounting principles.
2. Equity capital allows a bank access to new borrowings and/or the ability to issue new stock, providing liquidity in the event of deposit losses. Without a strong base of equity capital, investors demand higher interest payments on new bank borrowings, if the bank is able to issue debt at all. On the other hand, banks with substantial amounts of capital can generally borrow at lower rates.

3. Capital restrains growth and thus limits risk taking. Because capital must equal a minimal fraction of assets, the potential growth rate in bank assets is tied to the growth rate in capital. Banks are also required to hold capital in support of certain off-balance sheet activities, so these revenue-generating efforts are also constrained.

Buffer Against Loan Losses

Consider the impact of capital on a bank's cash flows. A bank is operationally solvent as long as cash inflows at least equal cash outflows. If a loan customer defaults on a loan, the bank no longer receives interest and principal payments as expected. Cash inflows drop. Cash outflows, however, are not affected except that collection costs may rise. Capital serves as a buffer because it reduces contractual interest payments on bank debt, thereby limiting cash outflows. As a result, more of a bank's assets can default before equity is depleted and the bank is insolvent.

Access to Financial Markets

Large amounts of equity capital inspire confidence in a bank's overall financial condition and ability to cover losses. It enables a bank to borrow from normal sources, such as jumbo CDs and federal funds purchased, at reasonable interest rates. Banks with less equity capital and the same asset quality pay higher rates on borrowed funds. Stockholders similarly discount expected dividend payments at a lower rate (lower risk premium) so that the stock price is normally higher. This provides better access to new common stock and preferred stock issues. Simply put, a bank's capital position is closely tied to its liquidity position.

For evidence, consider the pattern of efforts to resolve the funding crisis in 2007-2008 at large commercial and investment banks. For example, Citigroup, Wachovia, and Washington Mutual each reported large losses from asset write-downs and increased provisions for loan losses, creating a need for additional capital. By cutting their dividends and issuing preferred and convertible stock they were able to remain solvent for a period of time. However, the magnitude of losses was so large that, by the end of 2008, all three institutions had been 'bailed out' or forced by the FDIC to merge with another performing entity.

Limit Growth and Risk Taking

Regulatory capital requirements limit growth and risk taking by restricting the amount of new assets that a bank can acquire through debt financing (increased financial leverage). When a bank adds assets, it must support the growth at least in part by equity financing (Tier 1 Capital). Because new equity is expensive, asset returns must be high enough to cover the cost of debt and cost of equity.

Consider a bank with \$100 million in assets, \$94 million in liabilities, and \$6 million in equity capital. Its current Tier 1 capital to total assets ratio is 6%. Assume that this is the minimum targeted by management because it has limited sources of additional capital. Suppose the bank earns \$1 million in net income, pays \$400,000 in dividends, and adds \$600,000 to retained earnings.

How large could the bank grow and still meet the 6% target ratio? With the \$600,000 in new equity, total equity would equal \$6.6 million. This capital would support total assets of \$110 million ($\$6.6 / .06$). The bank could thus grow by \$10 million in assets. When adequately capitalized, a bank's risk asset (both on- and off-balance sheet) growth rate can equal the rate of growth in equity capital.

RISK BASED CAPITAL STANDARDS

Historically, banks were required to operate with a minimum amount of equity and debt capital set as a percentage of total assets. Such regulation unintentionally made it possible for banks to grow without restraint and, in some cases, encouraged outsized risk taking in lending. Of course, prudent bank management teams, then and now, do not necessarily take undue advantage of regulatory guidance that may result in compromising liquidity and safety and soundness. Here are the reasons a simple percentage of total assets can increase risk:

- Banks with risky assets were treated the same as banks with less risky assets. Thus, banks had a regulatory disincentive to hold low default risk, highly liquid securities that deliver lower yields in favor of high risk, high return assets.
- Banks could meet capital requirements with loss reserves and by issuing debt instead of raising additional equity.

- Off-balance sheet activity was not subject to capital requirements.
- Banks were allowed to engage in new activities such as securities underwriting and certain real estate activities. These were at least as risky as traditional banking.

To remedy the situation, banking regulators from the United States and 12 other industrialized countries in mid-1988 approved guidelines for international risk based capital standards. The guidelines were phased-in so that all institutions were subject to comparable requirements by the end of 1992. Each country's bank regulators were given some flexibility in applying the standards so the types of qualifying capital varied across countries. As structured in 1992, the standards focused on default risk. These guidelines were updated in 2004, (Basel II) and again in 2010 (Basel III).

The housing and mortgage problems in 2007-2009, however, revealed the inadequacy of large bank risk models. In short, models have not been developed that enable large commercial and investment banks to accurately measure enterprise risk. Since it is problematic to base capital requirements on faulty risk models, the solution devised is to require these institutions to operate with more capital than they have in prior years.

Risk Based Framework

In applying regulatory risk based standards, a bank's assets are categorized into risk classes. Each category is assigned a risk weight as noted. Risk-weighted assets then equal the dollar amount of bank assets in each category times the associated risk weight, summed across categories. Off-balance sheet items are converted to a credit equivalent amount and multiplied by the appropriate risk weight.

The various weights increase with the perceived riskiness of the underlying assets. Cash and 90-day Treasury bills, for example, are in category 1 and essentially require no capital. A bank that held only cash and these short term T-bills would not have to have any qualifying capital under the risk based standard.

Most loans fall in category 4 and require 100% (dollar for dollar) capital backing. The primary impact is that a bank with riskier assets will have to have greater capital. In addition, in order to identify excessive interest

rate risk, banks will calculate the weighted average duration difference between assets and liabilities. If it is too large, the bank may be required to operate with additional capital.

An Example

Consider the data in *Exhibit 6* for Prosperity National Bank at the end of 2025. The first column indicates the balance sheet account or off- balance sheet account classified according to the appropriate risk category. Note that liquidity risk, interest rate risk, and all risks other than credit risk are ignored. The risk weight appears beside each category with off- balance sheet items summarized at the bottom. The first column of data indicates balances outstanding. The last two columns of data indicate the risk weight and amount of risk-weighted assets by item.

The FDIC Improvement Act (FDICIA)

Under FDICIA, regulators are required to respond quickly and predictably when banks fail to meet minimum capital standards. There are mandatory provisions or actions that regulators must take when banks reach each capital category listed below. Note that these provisions are increasingly restrictive and thus mandate that banks quickly improve their capital position or they will eventually be closed.

Objectives of the Regulatory Capital Standards

These capital requirements achieve three regulatory objectives:

- **Competitive Balance.** Banks in all nations that are part of the agreement are subject to similar requirements and thus will operate with approximately the same percentage of capital requirements. This improves the competitive balance among international competitors.
- **Match Capital Requirements to Risk Profiles** The amount of required capital at each bank is specified as a percentage of risk assets. Banks that hold riskier assets will be forced to have more capital than similar-sized banks with less risky assets. Off-balance sheet commitments are also subject to capital requirements.

- **Prompt Corrective Action.** Banks that fail to meet the standards are subject to mandatory sanctions. This last item follows from FDICIA, which mandates specific regulatory responses when a bank's capital ratios fall below regulatory minimums.

Prompt Corrective Action (PCA)

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PCA Categories	Tier 1 Leverage (%)	Common Equity Tier 1 RBC (%)	Tier 1 RBC		Total RBC (%)
			Current (%)	Interim Final Rule (%)	
Well Capitalized	≥ 5.0	≥ 6.5	≥ 6.0	≥ 8.0	≥ 10.0
Adequately Capitalized	≥ 4.0	≥ 4.5	≥ 4.0	≥ 6.0	≥ 8.0
Undercapitalized	< 4.0	< 4.5	< 4.0	< 6.0	< 8.0
Significantly Undercapitalized	< 3.0	< 3.0	< 3.0	< 4.0	< 6.0
Critically Undercapitalized	Tangible Equity / Total Assets ≤ 2%				

- Revised PCA ratios are effective on January 1, 2015, for all banks
- Tangible Equity equals the revised Tier 1 Capital plus outstanding non-Tier 1 perpetual preferred stock

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Community Bank Leverage Ratio

In September 2019 (took effect for the March 31, 2020 call report), the FDIC introduced an optional simplified measure of capital adequacy for qualified community banking organizations known as the community bank leverage ratio (CBLR) framework. CBLR was designed to reduce burden by removing the requirements for calculating and reporting risk-based capital ratios for organizations that opted into the framework.

In order to qualify for the CBLR framework, a community banking organization must have less than \$10 billion in total consolidated assets, a tier 1 leverage ratio of greater than 9 percent, and limited amounts of off-balance-sheet exposures and trading assets and liabilities. An organization that opts into CBLR and meets all requirements is considered to have met the well-capitalized ratio requirements under the Prompt Corrective Action regulations and is not required to report or calculate risk-based capital.

BASEL III CAPITAL ACCORDS

The Basel III Capital Accord represents an approach to capital regulation developed by the Basel Committee on Banking Supervision, the same international group that set the 1992 risk based capital standards.

In December 2010, the Basel Committee on Banking Supervision published proposals (Basel III) for implementation of new capital standards. U.S. regulatory agencies proposed their Basel III risk-based capital rule in June 2012. After a commentary period, the final rule was issued in July 2013.

The following section is provided by the Central Banker, Federal Reserve Bank of St. Louis, Summer 2013 Edition:

In early July 2013 the Federal Reserve Board of Governors, the Office of the Comptroller of the Currency and the Federal Deposit Insurance Corp. approved the final Basel III risk-based capital rule. The rule aimed to improve the quality and quantity of capital for all banking organizations. The agencies, in response to comments on their June 2012 proposed capital rule, sought to minimize the potential burden on community banks. For community banking organizations, the rule in final form provided some relief from the initial proposal in three important areas: residential mortgage exposure, accumulated other comprehensive income (AOCI) and grandfathered capital instruments. Community banking organizations first become subject to the final Basel III rule on Jan. 1, 2015. Thereafter began a phase-in period through Jan. 1, 2019.

The new rule implemented higher minimum capital requirements and emphasized the use of common equity through the introduction of a new capital ratio: common equity tier 1 (CET1). In addition, the new rule established stricter eligibility for capital instruments included in CET1, additional tier 1 capital or tier 2 capital. In addition, the rule introduced the requirement of a capital conservation buffer, beginning on Jan. 1, 2016, and ending on Jan. 1, 2019. Banking organizations without other supervisory issues that wish to distribute capital freely must maintain the buffer. Tables 1 and 2 compare current treatments versus final capital rule treatments.

TABLE 1

MINIMUM CAPITAL STANDARDS

	Current Minimums	Final Rule		
		Minimum	Buffer	Total
Common equity tier 1 capital (CET1) ratio	N/A	4.5%*	2.5%	7.0%
Tier 1 capital ratio	4%	6.0%*	2.5%	8.5%
Total capital ratio	8%	8.0%*	2.5%	10.5%
Leverage ratio	4%	4.0%*	N/A	N/A

* Please note when the new capital rule is fully phased in, the minimum capital requirements plus the conservation buffer will exceed the prompt corrective action well-capitalized thresholds below. This 0.5-percentage-point cushion allows institutions to dip into a portion of their capital conservation buffer before reaching a status that is considered less than well capitalized for prompt corrective action purposes.

TABLE 2

PROMPT CORRECTIVE ACTION WELL-CAPITALIZED THRESHOLDS

	Current Treatment	Treatment in Final Rule*
Common equity tier 1 capital (CET1) ratio	N/A	≥6.5%
Tier 1 capital ratio	≥6.0%	≥8.0%
Total capital ratio	≥10.0%	≥10.0%
Leverage ratio	≥5.0%	≥5.0%

* Conservation buffer is included in the above standards reflective of the final transition date of Jan. 1, 2019.

The new rule emphasizes common equity as the preferred capital instrument. It also limits the inclusion of intangible assets, including mortgage servicing assets, deferred tax assets and significant investments in unconsolidated capital of financial institutions. Each will be subject to a 10 percent individual limit and 15 percent aggregate limit of CET1.

The new capital rule addresses the Dodd-Frank Act prohibition on reliance on external credit ratings specified in the regulations of the federal banking agencies. Consequently, the new capital rule replaces the previous credit-rating-based risk-weighting approach of certain assets with the simplified supervisory formula approach. As an alternative, banking organizations may use a gross-up approach or otherwise default to the seemingly prohibitive 1,250 percent asset risk weight.

The new Basel III capital rule introduces a comprehensive new regulatory framework for U.S. banking organizations which is consistent with international standards. For the most part, community banking organizations have been insulated from a capital rule that results from a severe knee-jerk reaction to the financial crisis.

Based on our estimates, for the majority of community banking organizations, the final rule will have little impact on their capital level and structure. However, for a minority, some capital will need to accrue prior to final phase-in of the new rule.**

**Excerpt ends from *Central Banker*, Federal Reserve Bank of St. Louis, Summer 2013 Edition

The following chart, provided by the OCC's *Expanded Community Bank Guide to the New Capital Rule for FDIC-Supervised Banks*, outlines the transition period for the new standards:

Table 4 – Transition Schedule for New Ratios and Capital Definitions

Year (as of Jan. 1)	2015	2016	2017	2018	2019
Minimum common equity tier 1 capital ratio	4.5%	4.5%	4.5%	4.5%	4.5%
Common equity tier 1 capital conservation buffer		0.625%	1.25%	1.875%	2.50%
Minimum common equity tier 1 capital ratio plus capital conservation buffer	4.5%	5.125%	5.75%	6.375%	7.0%
Phase-in of most deductions from common equity tier 1 (including 10% & 15% common equity tier 1 threshold deduction items ⁹ that are over stated limits)	40%	60%	80%	100%	100%
Minimum tier 1 capital ratio	6.0%	6.0%	6.0%	6.0%	6.0%
Minimum tier 1 capital ratio plus capital conservation buffer		6.625%	7.25%	7.875%	8.5%
Minimum total capital ratio	8.0%	8.0%	8.0%	8.0%	8.0%
Minimum total capital ratio plus conservation buffer	8.0%	8.625%	9.25%	9.875%	10.5%

Several factors, including the worldwide COVID-19 pandemic, delayed the full implementation of BASEL III. In July 2023, the Federal Reserve, FDIC, and OCC published for comment proposed changes to U.S. bank capital rules that were aligned with BASEL III standards. The comment period was extended from November 2023 to January 2024 due to concerns across the U.S. banking industry.

On March 19, 2026, the Federal Reserve/FDIC/OCC announced three 're-proposals', intended to implement the 2017 BASEL III capital framework, often referred to as the BASEL III 'endgame'. The joint press release noted these proposals were intended to "streamline capital requirements and better align regulatory capital with risk while maintaining the safety and soundness of the banking system." The agencies also confirmed that they were formally rescinding the 2023 proposals. Comments are due in June, 2026. The financial world will be watching with interest, particularly in the EU and UK, who have also delayed full implementation of BASEL III.

IMPACT OF CAPITAL REQUIREMENTS ON OPERATING POLICIES

When they were originally imposed, many U.S. banks had Tier 1 and total capital ratios that were close to the minimums for the adequately capitalized category. In order to reduce regulatory scrutiny, many banks employed the following strategies to increase capital ratios:

Change Asset Composition

One method of improving a bank's capital position is to shift assets from high risk categories to lower risk categories under the risk based standards. For most banks this means substituting securities, especially those in the 20% risk class for securities in the 50% risk class and loans. Explicit risk based standards also encourage banks to increase overall capital ratios. Today, virtually all U.S. banks report capital ratios that place them in the well-capitalized category. They are subsequently able to grow loans as much as is reasonably possible and avoid substantive regulatory pressure based on capital.

Increase Capital to Support Growth

A bank that relies on internally generated capital (from retaining earnings) can obtain additional capital either by generating higher returns or paying less in dividends. Competition limits banks' ability to simply raise loan rates or lower deposit rates to increase their net interest margin. They can achieve higher returns by acquiring riskier assets and pricing them accordingly or by generating additional non-interest income from services. The disadvantage of reducing dividends is that it may encourage stockholders to sell stock, which lowers a bank's stock price. With a lower stock price and prospects for lower dividends, it becomes more difficult to issue new stock. Managers have generally kept bank dividends and/or dividend payout rates (cash dividend payments as a fraction of net income) low to keep shareholders satisfied yet increase retained earnings as net income grows.

Alternatively, a bank can obtain new capital externally, with common and preferred stock issues. While attractive from a regulatory perspective, new stock is expensive. It potentially dilutes the ownership interest of existing stockholders, who also lose some control over decisions.

Slow Asset Growth

Another option for a bank that needs capital is to slow growth or even shrink the size of the bank. A smaller balance sheet requires less capital. This can only be a short-term solution since it is extremely difficult to increase net interest income and deliver stockholders high returns when a bank is shrinking or shows no growth.

Move Assets off the Balance Sheet

A similar response to cutting growth is to move assets off the balance sheet. Because the assets do not appear on the bank's books, capital requirements are not affected. Regulators do examine off-balance sheet activities, however, and may selectively request additional capital. Banks that move assets off the books create contingent liabilities that have some risk but produce fee income. Examples include securitizing assets, such as mortgages, car loans, and credit card loans, or providing letters of credit.

In the wake of the housing bubble bust, many mortgage lenders, particularly those dealing in sub-prime loans, experienced problems with securitization efforts. Rising real estate prices had previously masked serious problems in the quality of the assets resulting from securitization. Specifically, under certain conditions, such as an early default by a borrower, the originator of a loan may have to take the loan back, negatively affecting the originator's earnings and reducing the ability to securitize additional loans. In 2007-2009 numerous mortgage lenders declared bankruptcy associated with defaults and delinquencies.

From 2000 – 2005, several large banks were forced to effectively move assets back onto their balance sheets. For example, PNC created a special purpose entity to which the bank sold problem assets to move the assets off balance sheet. This allowed PNC to operate with less capital and not reflect the adverse earnings impact of these assets after the transaction. Regulators eventually forced PNC to reverse the transaction and the bank took a substantial charge to earnings. These problems continued through 2012 across the banking industry. Another specific type of transaction demanding capital involved loans that were packaged in

securitization pools and sold to investors. As the underlying loans deteriorated in quality, the originating bank was obligated to repurchase a portion of the pool, requiring additional capital.

Capital ratios have always differed across banks. Generally, small banks have operated with higher ratios because they are less diversified and do not have the "too big to fail" umbrella to cover problems. Not surprisingly, the largest banks with the greatest access to external capital have increased their capital ratios by a greater amount in recent years.

Raise New Capital

Bank managers essentially have three vehicles to obtain new capital that meets regulatory requirements: issue new common or preferred stock, issue new long term subordinated debt, and/or increase earnings and retain a greater portion. Each has costs and benefits. In today's environment it is extremely difficult and/or costly to obtain capital in any form unless the bank's financial condition is very strong.

Issue Stock

Both common stock and perpetual preferred stock count as capital. Ideally, banks will anticipate future needs and issue stock when profits are high, asset quality is high, capital exceeds regulatory and industry norms, and economic conditions are robust. In such an environment, stock prices will be relatively high and new stock issues are relatively inexpensive because they do not dilute the ownership interests of existing stockholders. These conditions do not always prevail at the same time management perceives that a bank needs additional capital, making new stock issues more expensive.

Of course, not all banks have ready access to the stock market. Community banks generally rely on existing stockholders or interested investors within the region, limiting the availability of new capital. To supplement capital on a regular basis,, many banks have formed employee stock ownership programs (ESOPs) where employees effectively own bank stock via a trust and can add to their holdings over time. ESOPs have the added benefit of providing a retirement benefit to employees as well as a personal incentive to work to make the bank as profitable as possible.

Preferred stock convertible into common stock is another option for most banks. This is, however, very expensive capital.

Issue Long term Subordinated Debt

Subordinated debt that qualifies as bank capital is attractive in that it does not dilute the ownership of existing stockholders and interest payments are tax deductible. This market is generally unavailable except to the strongest large banks throughout the country.

Increase Retained Earnings

The most attractive source of capital is adding to retained earnings. This requires that the bank either increase profitability if it chooses to pay the same dividends, or cut its dividends if profits are stable or declining. Strategies to increase profits are generally preferred, but tactics to do so must carefully balance risk and return. Long term profit increases are aided by improved operating efficiencies, increased employee productivity, better pricing, and added volume by cross-selling products and services to existing customers. Increasing long term profits by making more loans can be a successful tactic as long as growth is managed with rigorous credit policies and highly trained relationship managers who provide comprehensive financial solutions for their customers instead of merely trying to lend money.

CAPITAL MANAGEMENT ISSUES

The advent of even higher risk based capital standards has generated a renewed appreciation of capital's importance and a renewed interest in best using this precious, limited resource. Management's initial response was to increase capital ratios to ensure that the bank was financially strong and could be independent of regulatory sanctions. It also forced managers to establish longer term strategies for survival. If a bank is to remain independent, it has to grow – perhaps by expanding into new product or geographic markets and perhaps by acquiring other banks (or non-banks) or being acquired.

Bank managers have always looked at capital regulation as a necessary component of federal deposit insurance. Today, capital management is of critical importance to banks. Capital is expensive compared to debt financing because dividend payments are not tax deductible while interest on debt is, yet a bank must pay shareholders a reasonable return. Bank managers are thus trying to allocate capital to its best purpose. This requires that they understand the true riskiness of different investments and/or business activities and develop a method of determining how much profit the bank can earn from each. Thus, the current focus of capital management is on measuring risk adjusted returns on allocated capital within the bank.

Deposit Insurance Premiums

According to regulation, the insurance fund must maintain a minimum reserve to insured deposits. In 2008, numerous bank analysts and some bank regulators expressed concern that the deposit insurance fund would be under-funded. There were six bank failures in 2000, four in 2001, and 11 in 2002. As mentioned previously, the pace of failures picked up rapidly in 2007 and has subsided as evidenced by the turnaround in 2011 - 2020. Importantly, larger banks that fail result in a greater liquidation cost especially in terms of the dollars spent to pay-off insured depositors.

Due to the magnitude of large and small bank failures, the fund fell slightly below the previous 1.25% level in 2006-2007, then plummeted to .36% in 2008 and -.39% in 2009. In response, the FDIC was forced to take historic action. On 5/22/09, they announced a 5 basis point special assessment for all banks. As it became apparent that this assessment would be inadequate (even combined with higher regular assessments), on 9/29/09 the FDIC announced a requirement that all banks prepay their expected assessment for the next three years on 12/30/09. The banks were forced to write a check for the full amount, then gradually expense the amount over the three year period. This strategy, along with higher, risk-based assessment rates were expected to replenish the fund over a period of five to seven years. The new assessment rates were based on a bank's capital ratios and CAMELS ratings, with a range of 7 basis points for the strongest banks to 77.5 basis points for the weakest banks. This is a huge change from paying no premiums just a few years ago.

On March 15, 2016, the FDIC Board of Directors approved a final rule to increase the Deposit Insurance Fund (DIF) to the statutorily required minimum level of 1.35 percent before September 30, 2020. The reserve ratio reached 1.36% in September 2018, ahead of the statutory deadline. The reserve ratio then sank to 1.3% in mid-2020 due in large part to enormous deposit growth related to the federal COVID-19 pandemic response. In late 2020, the FDIC announced their plan to increase the reserve back up to 1.35% over an eight-year period, with no expected increase in assessments.

The failure of three banks in early 2023, two of them being the second and third largest bank failures in U.S. history, raised concerns that there might be possible adjustments to upcoming assessments. A final rule regarding a special assessment to recover the losses from those failures was issued in November 2023, to take effect starting with the first quarterly assessment period of 2024. No banking organizations with total assets under \$5 billion will pay the special assessment. As of December 31, 2024, the fund had a balance of \$137.1 billion.

Identifying Returns on Risk-Adjusted Capital (RORAC)

Bank managers have recently spent considerable effort trying to allocate capital internally to different products, services, or lines of business to better enable them to assess profitability. The risk based capital standards forced managers to reassess the pricing of specific assets and activities. This has led to efforts and formal systems to allocate capital toward specific products/services and lines of business in terms of their presumed riskiness.

While this is not a perfect science, it allows managers to compare the associated revenues and expenses to estimate returns on allocated risk-adjusted capital, labeled RORAC. Such analysis provides better information concerning what products or lines of business are profitable and whether the bank should aggressively compete for that business.

SUMMARY

1. Liquidity problems arise at banks due to unanticipated deposit outflows and unanticipated loan demand.
2. Banks can meet liquidity needs either by selling assets, purchasing funds or issuing new debt.
3. The most liquid assets include cash and equivalents above reserve requirements, time deposits held at other institutions, federal funds sold and repurchase agreements, and short term securities that are not pledged as collateral against bank liabilities.
4. Core deposits improve a bank's liquidity because they provide a stable funding base. Banks with substantial amounts of capital can borrow more readily compared to banks with limited capital if their asset quality is the same.
5. A higher capital ratio relative to risky assets provides a bank the ability to borrow and thus lower its liquidity risk.
6. A bank's liquidity gap compares the dollar amount of potential uses of funds during a set time interval with the dollar amount of potential sources of funds. If uses exceed sources, the bank has a net liquidity need. If sources exceed uses, the bank has excess funds to invest.
7. Banks are currently subject to risk based capital standards that require a minimum amount of capital based on the risk profile of a bank's assets. More risk requires more capital. Banks are further required to hold capital in support of off-balance sheet commitments, such as letters of credit and long term loan commitments.
8. The function of bank capital is to reduce the risk that can lead to failure in the most extreme cases. Capital acts as a buffer against loan losses, provides access to financial markets and limits growth.
9. Banks obtain capital by issuing new stock or long term subordinated debt and by retaining more earnings. The availability of each type of capital depends on the financial strength of the bank, access to capital markets and economic conditions.

10. In the wake of financial market disruptions in 2007-08, many banks reported significant asset quality problems and experienced significant declines in their capital ratios from asset write-downs and increased provisions for loan losses. Large bank risk models have been revised to more accurately measure enterprise risk and the components of capital inadequacy and liquidity risk.
11. Insurance reserves must be maintained at a minimum 1.35% of insured deposits. Due to bank failures, the fund plunged to a negative level during 2009. In order to address the issue, the FDIC implemented a one-time special assessment, instituted a new risk-based pricing grid with higher assessments for all banks, and required all banks to prepay three years of premiums on 12/30/09. On March 15, 2016, the FDIC Board of Directors approved a final rule to increase the Deposit Insurance Fund (DIF) to the statutorily required minimum level of 1.35 percent before 2020. This minimum was achieved in 2018 but then sank to 1.3% in mid-2020 due in large part to enormous deposit growth related to the federal COVID-19 pandemic response. In late 2020, the FDIC announced their plan to increase the reserve back up to 1.35% over an eight-year period, with no expected increase in assessments. In 2022, the FDIC announced their amended restoration plan, which has incremental assessment increases in order to reach the 1.35% by 2028. The FDIC reviews this plan at least semi-annually. A special assessment (banking organizations under \$5B in total assets are exempt) to help recover losses due to protection of uninsured depositors was announced in November 2023, and implemented in the first quarter of 2024.
12. Today it is increasingly common for bank managers to allocate capital internally to specific products and lines of business in order to assess the true profitability of each.

SUGGESTED READINGS

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Exhibit 1
THE EFFECT OF MATURING CERTIFICATES OF DEPOSIT ON A BANK’S DEPOSIT
BALANCES HELD AT THE FEDERAL RESERVE

Maturing CD that is not rolled over.

Commercial Bank

Δ Assets	Δ Liabilities
Demand deposits held at the Federal Reserve	Certificates of deposit
-\$100,000	-\$100,000

Exhibit 2
THE EFFECT OF LOAN USAGE ON A BANK’S DEPOSIT BALANCES AT THE FEDERAL RESERVE

- a. Loan customer borrows against a credit line and spends the proceeds.

Commercial Bank

△ Assets	△ Liabilities
Demand deposits held at the Federal Reserve	
-\$250,000	
Commercial Loans	
+\$250,000	

- b. Loan customer borrows against a new term loan and spends the proceeds.

Commercial Bank

△ Assets	△ Liabilities
<i>(step 1)</i>	
Commercial loan	Demand deposit - loan customer
+\$500,000	+\$500,000
<i>(step 2)</i>	
Demand deposits held at the Federal Reserve	Demand deposit - loan customer
-\$500,000	-\$500,000

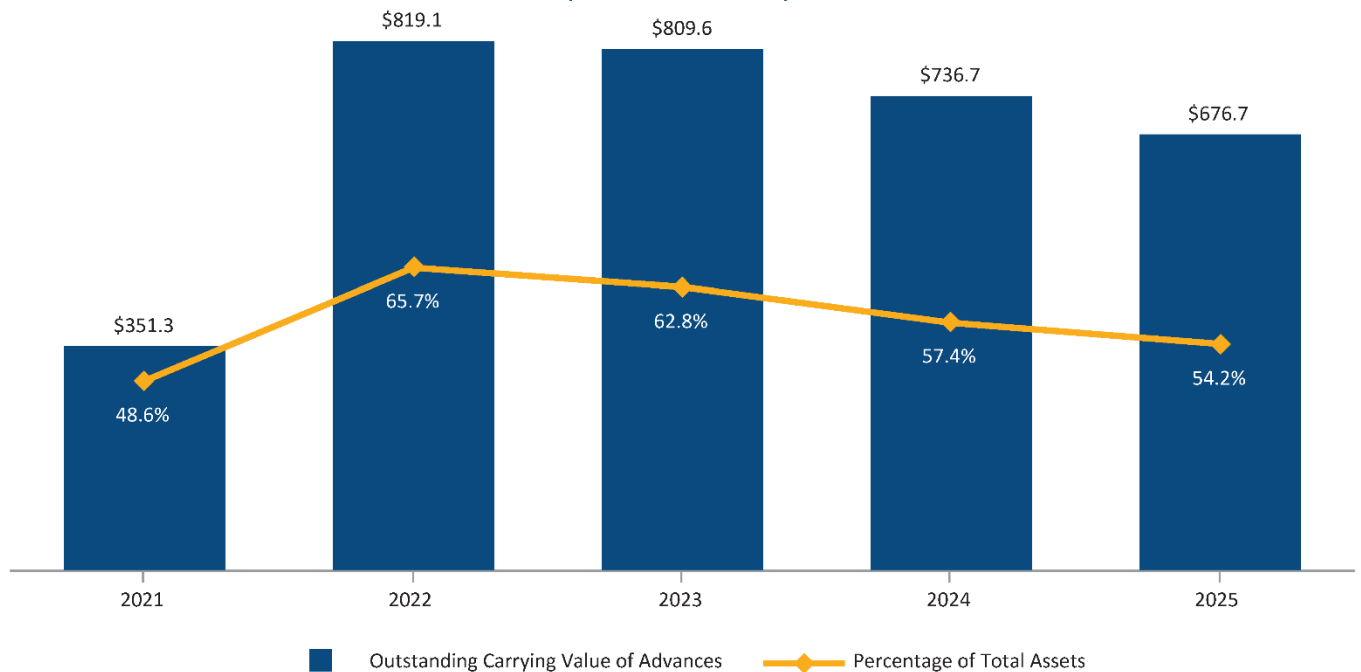
Exhibit 3

FEDERAL HOME LOAN BANK ADVANCES

Advances

The FHLBanks provide funding to members and housing associates through secured loans (advances), which may be used for, among other things, residential mortgages, community investments, and other services for housing and community development. Each FHLBank makes advances based on the security of mortgage loans and other types of eligible collateral pledged by, and the creditworthiness and financial condition of, the borrowing institutions. Figure 3 presents advances for the most recent five years.

Figure 3 - Advances Outstanding at Year-end (Carrying Value)
(dollars in billions)



FHLBANKS COMBINED FINANCIAL REPORT | 2025 YEAR-END

Exhibit 4
FACTORS AFFECTING DAILY RESERVES HELD AT
THE FEDERAL RESERVE

Factors Increasing Reserves	Factors Decreasing Reserves
<u>Nondiscretionary</u>	<u>Nondiscretionary</u>
Yesterday's immediate cash letter	Remittance charged
Deferred availability items	Deficit in local clearinghouse
Excess from local clearinghouse	Treasury tax and loan account calls
Deposits from U.S. Treasury	Maturing certificates of deposit, Eurodollars not rolled over
<u>Discretionary</u>	<u>Discretionary</u>
Currency/coin shipped to Federal Reserve	Currency/coin received from Federal Reserve
Security sales	Security purchases
Borrowing from Federal Reserve	Payment on loans from Federal Reserve
Federal funds purchased	Federal funds sold
Securities sold under agreement to repurchase	Securities purchased under agreement to resell
Interest payments on securities	
New certificates of deposit, Eurodollar issue	

Source: *Bank Management* by Timothy W. Koch and Scott MacDonald

Exhibit 5
LIQUIDITY GAP ESTIMATES
(MILLIONS OF DOLLARS)

	0-30 Days	31-90 Days	91-365 Days
Potential Uses of Funds			
<i>Add: Maturing time deposits</i>			
Small time deposits	\$ 5.5	\$ 8.0	\$ 34.0
Certificates of deposit over \$100,000	40.0	70.0	100.0
Eurodollar deposits	10.0	10.0	30.0
<i>Plus: Forecast new loans</i>			
Commercial loans	60.0	112.0	686.0
Consumer loans	22.0	46.0	210.0
Real estate and other loans	31.0	23.0	223.0
<i>Minus: Forecast net change in transactional accounts^a</i>			
Demand deposits	-6.5	105.5	10.0
NOW accounts	.3	4.5	5.0
SuperNOW accounts	.1	1.0	2.0
Money market deposit accounts	<u>1.6</u>	<u>3.0</u>	<u>6.0</u>
Total uses	\$173.0	\$155.0	\$1,260.0
Potential Sources of Funds			
<i>Add: Maturing investments</i>			
Money market instruments	\$ 8.0	\$ 16.5	\$ 36.5
U.S. Treasury and agency securities	7.5	10.5	40.0
Municipal securities	2.5	1.0	12.5
<i>Plus: Principal payments on loans</i>	<u>80.0</u>	<u>262.0</u>	<u>903.0</u>
Total sources	\$ 98.0	\$290.0	\$992.0
Periodic Liquidity Gap^b	\$ 75.0	-\$135.0	\$268.0
Cumulative Liquidity Gap	75.0	-60.0	208.0

^aNet of required reserves.

^bPotential uses of funds minus potential sources of funds.

Source: *Bank Management* by Timothy W. Koch and Scott MacDonald

Exhibit 6
PROSPERITY NATIONAL BANK:
RISK BASED CAPITAL (DOLLARS IN THOUSANDS)

	Assets <u>12/31/25</u>	Risk <u>Weight</u>	Risk Weighted <u>Assets</u>
Category 1: Zero Percent			
Cash and reserve	\$104,525	0%	\$0
Trading account	830	0	0
U.S. Treasury & agencies (GNMA)	45,882	0	0
Federal Reserve stock	5,916	0	0
Category 2: 20 Percent			
Due from/in process	303,610	20	60,722
Interest-bearing deposits/federal funds sold	497,623	20	99,525
U.S. Treasury & agencies (collateralized Repos)	329,309	20	65,862
U.S. agencies (govt.-sponsored)	412,100	20	82,420
State & munis secured tax authority	87,515	20	17,503
C.M.O. backed by agency sec.	90,020	20	18,004
Domestic depository institution	38,171	20	7,634
SBA's (govt. guaranteed position)	29,266	20	5,853
Category 3: 50 Percent			
C.M.O. backed by mortgage loans	10,000	50	5,000
State & munis/all other	68,514	50	34,257
Real estate: 1 - 4 family	324,422	50	162,211
Category 4: 100 Percent			
Loans: comm/agency/institutional/leases	1,966,276	100	1,966,276
Real estate, all other	388,456	100	388,456
Allowance for credit loss	(70,505)	0	0
Other investments	168,519	100	168,519
Premises, equity, other assets	<u>194,400</u>	100	<u>194,400</u>
Total Assets	\$4,994,849		\$3,276,642
Off-Balance-Sheet Items			
Loan commitments > 1 year	\$ 364,920	50	\$182,460
Standby letters of credit	165,905	100	165,905
Futures & forwards	50,000	100	50,000
Interest rate swaps	<u>75,000</u>	50	<u>37,500</u>
Contingencies	\$ 655,825		\$ 435,865
Assets & contingencies	\$5,650,674		\$3,712,507

Requirement for Adequately Capitalized

Tier 1 Leverage: .04(\$4,994,849) = \$199,793	4% of Total on Balance Sheet Assets
CET1: .045(\$3,712,507) = \$167,063	4.5% of RWA
Tier 1 capital: .06(\$3,712,507) = \$222,750	6% of RWA
Total RBC: .08(\$3,712,507) = \$297,000	8% of RWA

These formulas do not take into account the conservation buffers. Those began in 2016 and are an additional requirement to each level: 2016 – 0.625 2017 – 1.25 2018 – 1.875 2019 – 2.50 2020 – 2.50

Source: *Bank Management*, seventh edition, by Timothy W. Koch and Scott MacDonald (modified)

Exhibit 7
PROSPERITY NATIONAL BANK: RISK BASED
CAPITAL (DOLLARS IN THOUSANDS)

	Assets <u>12/31/25</u>	Risk <u>Weight</u>	Risk Weighted <u>Assets</u>
Category 1: Zero Percent			
Cash and reserve	\$104,525	0%	\$0
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Real estate, all other	388,456	100	388,456
Allowance for credit loss	(70,505)	0	0
Other investments	168,519	100	168,519
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Total Assets	\$4,994,849		\$3,276,642
Off-Balance-Sheet Items			
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Source: *Bank Management*, seventh edition, by Timothy W. Koch and Scott MacDonald (modified)

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BUSINESS PLANNING

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LEARNING OBJECTIVES

Following the successful completion of this session, you should be able to:

- Cite the importance of a vision and mission statement, financial goals and objectives, situation analysis, strengths and weaknesses analysis, and action plans in the planning process.
- Understand the difference between business planning (aka strategic planning), profit planning and budgeting.
- Draft specific and measurable goals for your financial institution.
- Recognize how an organization's budget is used as a management control device.
- Describe the features of budgets and profit plans.
- Understand the importance of including all employees in the foundation of business planning.
- Recognize the importance of management involvement and support.

OVERVIEW

One of the primary functions of leadership in any organization is to set the direction of that organization for the future. The method for setting this direction is business planning, which includes strategic or long-term planning as well as intermediate- and short-term planning or budgeting. In the financial services industry, business planning involves addressing six fundamental issues:

1. Evaluating the financial institution's current situation: What is our recent history and current position? What are our strengths and weaknesses?
2. Creating a shared vision for the future: What is the idealized picture of our organization in the future?
3. Understanding the mission: Who are we? What is our reason for being? How do we utilize the mission to reach the vision?

4. Setting strategic and operational goals and strategies: What are our strategic areas of priority (i.e., markets, customers, products, etc.)? What are the financial goals we need to achieve?
5. Developing specific action plans with measurable and achievable goals: What are our specific measurable and achievable goals, and how do they support our vision and mission? What are the specific steps we need to take to ensure we achieve our goals?
6. Review the process and repeat steps 1-5: Does the actual compare to the plans? If not, why not? What adjustments do we need to adjust and/or change to reach our goals and objectives?

This session introduces the business planning process and focuses on the steps involved in developing an ongoing plan for the organization.

For business planning to succeed, everyone must have a voice in the process. From the front line to the boardroom, all employees need to believe that they have had a role in setting the direction for the organization. In working with employees to create a shared vision, an organization also creates employee ownership. Once the vision is developed and communicated, all the following steps in the planning process become much easier because the entire organization knows where it is going.

The business plan is commonly referred to as the “road map” for the organization; this road map enables the entire organization to see where they are, where they want to be and how to get there. Also, effective leaders recognize that business planning must, by definition, be forward thinking.

Although it is important to understand past performance as well as the current situation of the organization, the business plan should not be just an extension of the past. The plan must consider what is on the horizon. It is critical for survival and growth to recognize when an adjustment to the current plan is needed or when a different path should be followed. In other words, business planning is essential for the long-term survival and prosperity of the organization.

In crafting the final product, the organization’s leadership must pay close attention to the vision for the future, and they must incorporate insights, ideas, concerns, and issues gleaned from employees in preplanning meetings. Top management’s intimate involvement in crafting and approving the final product is essential, as support and enthusiasm for the business plan must be shared throughout the organization so each

employee understands the importance of his/her part in execution. Finally, a successful business plan must be in writing, have defined objectives, timelines accountabilities and be broadly and regularly communicated to everyone in the organization. A plan sitting on the shelf or communicated to a select few is destined to fail.

Relationship to Organizational Profitability

In financial services, business planning and the asset/liability management function are closely linked. Analyzing the present situation and recent history keeps management aware of the organization's profitability and risk profile. This information, in conjunction with an analysis of the organization's strengths and weaknesses, provides critical information needed to set goals, develop strategies and tactics to achieve the goals and execute. Because a bank's financial strength is driven by its balance sheet,, the asset/liability function is one of the primary methods for developing and monitoring the implementation of action plans. The same individuals should, therefore, be involved in both business planning and asset/liability management.

To understand the planning function more fully, it will be helpful to apply the framework of analysis to your organization by developing a brief situation analysis, establishing goals and defining strategies to attain the goals. This, of course, requires some familiarity with the organization's performance history, which is available by reviewing recent performance ratios and risk characteristics, the organization's Uniform Bank Performance Report (UBPR), and the products/services offered with the associated market shares.

THE NEED FOR PLANNING

Why plan? The answer is simple...."Those who fail to plan, plan to fail." Leaders who plan improve the odds that their organizations will be a winner in the increasingly competitive financial services industry. When interest rates were controlled by regulation, asset choices were limited, and financial institutions competed in limited geographic markets, planning beyond developing annual budgets was less critical. In today's competitive world where financial institutions pay market-determined interest rates on virtually all liabilities, where nontraditional competitors offer highly competitive financial service products to customers, and where technological change is rapidly altering how financial services can be delivered, planning is essential for an organization to perform well and ultimately survive.

Examine the six issues introduced in the overview. Doesn't it seem reasonable that financial institution managers and employees should understand the organization's current financial and operating condition? To know what decisions are appropriate, shouldn't management and employees have that road map clearly in mind?

Only if organizational leaders adequately examine these issues can they establish strategies to ensure profitable service to their customers and guarantee survival.

Business Planning vs. Long Term Budgeting

A financial institution's business (strategic) plan should not just be a multi-year budget but instead act as a tool to guide management's decision making. A business plan provides a framework for leaders to make decisions that allow the organization to take advantage of opportunities when they arise and avoid problems. The purpose of a budget, on the other hand, is to allocate the organization's resources effectively, while providing for effective monitoring. Business planning is forward looking and flexible, and it serves as a guide for future decisions in anticipation of a changing financial services environment.

THE PLANNING PROCESS

In many organizations, planning consists merely of forecasting the financial institution's position over the next several years and preparing annual budgets. For planning to be effective, it must be treated as a process through which leaders of an organization assess the strengths and weaknesses of the financial institution's current operating and financial situation, identify opportunities and threats, formulate the organization's vision, create a viable mission statement, establish goals and objectives, and, only then,, design and implement strategies to achieve desired goals and objectives.

An important consideration in the planning process is recognizing and planning for risks facing the organization. In this regard, planners must also be risk managers. In banking, there are five basic risks: credit risk, liquidity risk, capital risk, interest rate risk and operational risk. Additionally, most organizations must also manage reputation risk, and larger banks may need to manage currency exchange rate risk. The five basic risks are discussed in detail in the session on bank financial analysis. The planning process requires that leaders manage these risks by

recognizing the particular risks to the organization and by developing and implementing a business plan that addresses these risks and charts the future course of the institution. Accordingly, the appropriate time frame for the business planning process is multi-year with regularly scheduled evaluation and reassessment.

The planning process used commonly differs in terms of each institution's organizational structure and size. One common element for any size organization, however, is to seek early input and feedback from employees at all levels.

Even though the final plan may be the product of a smaller group, the concepts and direction should be reflective of the organization as a whole, thereby increasing each individual's sense of ownership in the final product. Regardless of the time frame or the number of people, the outline as seen in *Exhibit 1* is primarily the same for all organizations. There are six essential parts:

1. Current conditions
2. Internal factors
3. External factors
4. Vision, mission and goals
5. Strategies to achieve goals
6. Implementation and control

The first three parts address the organization's current position. During this analysis, the planners agree on what the organization currently looks like, which is comparable to taking a picture of the current financial institution. The analysis of strengths, weaknesses, opportunities and threats (SWOT) indicates what the financial institution *can* be like in the future.

The last three parts require that leaders determine what the financial institution *wants* to be like in the future and how and when to accomplish it. After a plan is in place, organizational leaders need to continuously monitor the implementation and performance.

Current Conditions

The business planning process begins when employees evaluate current conditions with respect to the organization's vision, mission, goals and objectives. A financial institution's situation analysis should be conducted along the dimensions indicated below. In order to conduct the analysis, the planning group must develop an information base in each area. The major areas to be considered include:

Internal factors:

1. Financial condition of the organization
2. Products and services offered
3. Human resources
4. Non-staff resources

External factors:

1. Changing customer base
2. Trade area
3. Economic conditions
4. Competition
5. Regulatory environment
6. Advances in technology

Financial Condition

The most important element is the evaluation of financial condition. The procedure follows the format introduced during the session on bank financial analysis. The analysis essentially consists of evaluating the organization's profitability profile, then assessing the organization's risk profile along the dimensions introduced earlier.

Key performance ratios in each category should be calculated over time so that management can identify important trends and compare performance with peer organizations. A peer comparison assists in identifying key differences in performance – either sources of superior performance or sub-par performance.

Products and Services Offered

Each financial institution should develop a list or inventory of all products and services offered. The list should indicate the specific product name, which department is responsible for the product, the target market, the current pricing policy and the associated market share. This, then, can be used to compare your organization's products and services with competitors'.

Human Resources

Each organization should develop a human resource/talent inventory, including management and staff personnel within each department as well as members of the organization's board of directors. It will reveal the range and depth of talent available in marketing, lending, operations, clerical and administrative skills. Because financial institutions offer undifferentiated products and services (e.g., essentially no product or service is proprietary), employees and the organization's culture are its only strategic differentiators compared to the competition. Having a talent inventory as a resource is the first step in ensuring you have the best person available assigned to every position.

Customer Base

Data on the financial institution's customer base indicates what demographics the organization actually serves. By looking at the characteristics of existing customers in terms of age, education, income or wealth, and geographic location, planners can identify profitable and potentially profitable segments in order to develop new products or services to broaden the relationships or attract new customers. *Exhibit 2* indicates some of the important information that should be obtained.

Economic, Trade Area, Industry and Regulatory Considerations

Economic and regulatory factors clearly influence the environment in which financial institutions compete. Economic factors determine growth opportunities and areas with significant risks. Trade area factors include the predominant businesses or industries with operations in the trade area, expected investment in or closure of significant operations, current and expected levels of unemployment etc. Industry factors include all information concerning the organization's direct competitors in its existing trade area and information on regional and national trends. Basic data needs consist of deposit growth, loan growth, profitability, capitalization, market penetration and number of employees. The

organization must also operate within guidelines imposed by bank regulators. Recent areas of regulatory interest and anticipated regulatory trends should be identified to provide guidance regarding policy or strategy constraints/opportunities.

ANALYSIS OF STRENGTHS, WEAKNESSES, OPPORTUNITIES AND THREATS (SWOT)

Once an information base is generated, the planners should analyze the financial institution's strengths, weaknesses, opportunities and threats. It is typically best to initially examine broad based industry and regulatory trends, then assess competitive trends in specific markets, and finally, identify the organization's areas of expertise and weakness within this framework or situation analysis.

Strengths: This is a prioritized list of areas internal to the financial institution that provide an inherent advantage over competitors. The strengths may be in image, personnel, financial stability, facilities, product line or operational. The situation analysis described above should identify these internal strengths.

Weaknesses: This is a prioritized list of areas internal to the financial institution that need improvement or restructuring. These weaknesses may be in the same areas listed under strengths and can be readily discerned from the situation analysis or customer surveys.

Opportunities: This is a prioritized list of external opportunities that potentially will provide a competitive advantage to the organization. They may be market or product specific, related to location, regulatory, competitive or technological in nature. One example is growth and market penetration available from acquired banks and nonbank subsidiaries.

Threats: This is a prioritized list of external threats confronting the financial institution. These are obtained from the same areas as opportunities. Today, many threats come in the form of regulatory restrictions and competitive products available from non-bank financial service providers.

VISION, MISSION AND GOALS

In practice, an organization's vision, mission, goals and objectives are established and/or redefined only after the leaders understand the environment and the strengths, weaknesses, opportunities and threats the financial institution faces.

A financial institution's **shared vision statement** creates a picture of the idealized organization. It answers the 'What' question, "What is the idealized picture of ourselves and our organization in the future?" The shared vision statement should be motivating, inspiring and memorable. Effective vision statements are also easily understood by everyone.

The organization's **mission statement** answers the 'Who' and 'How' questions and concisely and specifically communicates methods for achieving the shared vision. It is commonly less than a paragraph. Specifically, the mission statement answers the questions, "Who are we? What is our reason for being? How do we utilize the mission to reach the vision?" Notice that we have chosen to define shared vision statement and mission statement separately. Some organizations do not differentiate between a shared vision statement and a mission statement, choosing instead to combine these items into a single vision/mission statement for the organization.

Regardless of the terminology used, the end product for an organization's vision/mission should answer these four questions (as outlined in *Applied Strategic Planning*):

1. What function does the organization perform?
2. For whom does the organization perform these functions?
3. How does the organization go about performing these functions?
4. Why does the organization exist?

In addition to the four items above, several other aspects are critical. The vision/mission statement should:

1. Be clear and understandable to all people.
2. Be brief enough for people to remember it.

3. Clearly specify what business the organization is in.
4. Serve as a template to all employees to make decisions.
5. Reflect the values of the organization.
6. Be realistic and actionable enough for the employees and stakeholders to personally own it.
7. Serve as a rallying point.

The challenge then becomes converting shared vision and mission statements into goals and then into actions. Many financial institutions formalize a targeted future position with a document that signifies specific intent and serves as the basis for establishing strategies. The following is a list of broad goal categories based on the shared vision and mission statements.

Targeted Future Position

<u>Category</u>	<u>Goal/Objective Sample</u>
Market Profile	To become the dominant supplier of trust services to professionals by 20XX.
Product/Service Mix	To generate an additional 15 percent in annual revenue by developing trust services available to the Emerging Affluent segment.
Image	To be ranked as the top financial institution in the state in terms of consistent, quality customer service.
Growth	To add 30 percent to the deposit base from new small businesses, and 30 percent to the C&I loan portfolio.
Profitability	To have all mature products and services provide a minimum 15 percent net return on allocated equity annually.
Technology	To outsource data processing to a private vendor by 20XX.
Human Resources	To put an effective hiring and training program in place by 20XX that will recruit and place up to 20 employees annually.

Goals and **objectives** serve two purposes: 1) they allow a financial institution to allocate its funds, labor, technology and other resources in an objective and concentrated manner, and 2) they allow for the communication of organizational intent to the whole organization by relating an employee's job to the financial institution's overall goals and objectives. Sound business planning recognizes both the priorities of goals and the likely time required to attain each goal.

Setting goals and objectives involves a two-step process. The first step entails defining broad goals in line with the financial institution's shared vision statement and mission statement. Once a situation analysis is completed, organizational leaders must refine the broad based goals and supplement them with specific numerical goals and objectives and action plans to achieve these goals.

Goals can be short term, intermediate term or long term. Some examples are cited below. Note that though it is admirable to have long term goals, with the rapidity of change in the financial services industry, the number of long term goals should be few, and they should be tied directly to the shared vision of the company.

A financial institution's goals and objectives must:

- Be prioritized.
- Specify the time frame during which they will be operative.
- Specify the responsible people and areas.
- Be specific and measurable.

Short term goals are those that can normally be attained within one year. An organization's goal to bring in 200 new IRAs during a spring advertising campaign is such a goal.

Intermediate term goals are those which require one to three years to achieve. A financial institution's goal to increase its average loan yield by two percent by shifting the composition toward middle market commercial credits would be such a goal.

Long term goals extend beyond three years. An organization's goal to increase its return on equity or minimum capital ratio is typically such a goal. Budgeting and profit planning normally relate to short term and intermediate term goals and objectives. As mentioned above, long term goals, though specifically stated, are more strategic in nature and should be tied to the long range vision of the company. Business planning assists in ensuring the link and compatibility between goals, no matter the time frame.

Specific long-term goals are generally grouped in the following categories:

- ✎ **Earnings:** Measured by return on equity, return on assets and net interest margin.
- ✎ **Growth:** Measured by percentage increase in deposits, loans and total assets as well as segmented by market share in target product markets.
- ✎ **Capital:** Measured by the financial institution's primary capital and secondary capital as a fraction of total assets with risk based capital requirements, measured as core (Tier 1) capital as a fraction of risk assets, and total capital as a fraction of risk assets. As a whole, the focus is on stockholders' equity.
- ✎ **Dividends:** Measured in absolute dollars and as a percentage of net income.
- ✎ **Risk Management:** Controllable versus noncontrollable risks are identified in the areas of credit risk, liquidity risk, capital risk, interest rate risk, operational risk, exchange rate risk and reputation risk.
- ✎ **Regulatory Compliance:** Indicated by compliance examinations.
- ✎ **Community Service:** Identified by portfolio activities and employee involvement in the community.
- ✎ **HR/Culture:** Identified by being considered a 'great place to work' or an 'employer-of-choice', able to attract the best available talent at competitive (e.g., approximately market average) compensation.

There is an obvious trade off with these goals. To maintain capital adequacy, growth must be constrained. High dividend payouts similarly lower capital accumulation. The greater an organization's capital, the more difficult it is to meet return on equity targets.

Suboptimization occurs when one department in a financial institution pursues its own short term goals at the expense of the goals of other departments or at the expense of the organization's long term goals.

- Can you identify your financial institution's short term, intermediate term and long term goals?
- Are you aware of suboptimization within your organization?
- What can be done to improve your financial institution's goal setting and implementation?

Elements for Structuring Goals

When establishing objectives, they should be ranked according to relative importance to the organization, and they should be specific and measurable. In areas that are more difficult to quantify, such as research, auditing and public relations, the focus should be on efforts to be initiated and results that are anticipated from the efforts. Formal guidelines should indicate the time period during which they will be operative and the responsibilities of each department for achieving the goals.

A financial institution's goals should be written clearly and worded unambiguously. Goals should be communicated to all employees with the fanfare that signifies their importance. A process should be implemented to monitor the goals to determine if changes or adjustments are needed.

STRATEGIES AND ACTION PLANS

The previously discussed parts of a business plan focus on developing an overall direction for the organization and a master plan. During the strategy phase, the planners identify specific strategies, tactics and action plans to achieve the desired goals and objectives. They should indicate what specific actions will be taken, who is responsible for the action, the expected result of that action, the activities that will be used to generate the result and the criteria that results will be evaluated against. The process emphasizes the financial institution's strengths and either minimizes or corrects the organization's weaknesses. Plans should be consistent with the financial institution's overall shared vision, mission statement, goals and objectives.

Action plans are initially broad and general in nature and can be stated in one or two sentences. More precise steps are then identified to implement these broad based plans. *Exhibit 3* lists several broad strategies associated with selected goals and objectives. Implementation requires more direct actions. Specific individuals, often referred to as 'champions' should be assigned to implement the strategies and to monitor performance. Regardless of the type of actions taken, the strategies should reflect the following:

- They should specifically address ways to capture share of sought after customer and market segments.

- They should add to the long run profitability of the organization.
- They should maintain or improve the financial institution's capital position and ensure related risks are held to acceptable levels.

In many (generally larger) financial institutions, senior management organizes the company into "strategic business units" with responsibility for developing a business action plan. Such a plan must conform to the shared vision of the organization, its mission, subsequent goals and objectives. It should include specific short term and long term goals and objectives, strategies and action plans for implementation and control.

Results Timetable

Leaders must establish a realistic timetable for each goal and strategy; this assists in maintaining momentum and measuring results. In many cases, actions piggyback on previous actions, and a timetable determines the sequence and schedule of tactics. Examples include specific advertising and promotion efforts to enhance image then improve market share.

Once a plan is under way, the business plan champions or responsible parties must constantly monitor performance to ensure the organization is progressing toward its objectives. This management and control function provides for early identification of tactics that are not successful, timetables that are not met, or leaders have information that requires a change in direction for the financial institution. This early identification allows for a more rapid change in plans to meet the challenges.

IMPLEMENTATION AND CONTROL

Budgeting is both a planning technique and a control technique. In most financial institutions, the overall performance of the organization and the performance of different departments are compared to budgeted (planned) as well as prior period results. These comparisons may lead to modifications in performance or operations, demonstrating how budgets control activities.

The Annual Budget

A financial institution's operating budget generally reflects senior management's expectations of the organization's revenues and operating expenses over the next year. In most financial institutions, the

controller's department is responsible for coordinating the formulation of the annual operating budget; however, the actual preparation of the component parts is the responsibility of each department.

Some organizations use an incremental approach to budgeting. The prior year's budget or actual is used as a starting point, with increases in key expenses or activities factored into the new budget based on the prior year's increases. Some financial institutions revise last year's budget by applying an across the board increase to all expenses pegged to a projected inflation rate or to a predetermined rate of increase set by management. These top-down approaches, however, generally do not produce a sound budget. Most successful organizations review each major expense category separately and try to evaluate whether budgeted expenses will help the financial institution achieve its long term goals.

In this context, business planning has a substantial impact on an organization's operating budget. A financial institution that targets a new loan market, for example, must allocate the staff and supporting resources to generate new business. The anticipated expenses must be added to the previous budget or resources will have to be taken from existing departments or categories. Branch closings or sales similarly require a reallocation of personnel and supporting outlays to new areas.

Some organizations have adopted a zero-based budgeting approach in which all expenses and activities must be justified in their totality each year. Zero-based budgeting does not focus on incremental change, or even on trends, but on the precise level of labor, capital and other resources needed to accomplish goals.

In most financial institutions, the controller's department summarizes budgetary data and actual operating results, usually monthly, for use by departmental and senior management. The object of these reports is to alert management to deviations from budgeted performance that may require corrective actions and to provide management with an ongoing monitor of the organization's overall budget performance. It is recommended that all employees understand financial goals and receive regular updates on the organization's performance. Depending upon the size of your organization, this could be the entire financial institution or by department. By sharing information, team members at every level can be helped to understand the importance of their jobs in contributing to the organization's performance

Profit, or Balance Sheet & Fee Income Planning

Budgeting is part of a financial institution's overall profit planning process, as indicated in *Exhibit 4*. In the first stage of the process, each department prepares detailed reports of its actual costs and labor resources. It then uses this information, along with data on the anticipated budget and pricing policy, to forecast the growth in each asset and liability item under its control. The focus is on the upcoming year.

Economic forecasts serve as the common base for departmental projections. Many financial institutions use the 3-month Certificate of Deposit (CD) rate as the internal cost of funds rate to be charged to the organization's lending and investment areas in transfer pricing. The same CD rate serves as the internal rate credited to fundraising areas of the organization to determine revenues. Alternative rates may be the Federal Funds rate or Secured Overnight Financing Rate (SOFR). Organizations with more resources and sophisticated modeling systems may assign the COF by maturity; e.g., different rates for loans with fixed vs. floating rates.

Various forecasting approaches include:

Management Insight into the Market: Many small financial institutions base their projections on the consensus comments of depositors and borrowers and a general sense of what is happening to the organization's market. This visceral approach to forecasting is relatively inexpensive and is usually effective in markets that are stable.

Market Surveys: Some financial institutions rely on market surveys, often conducted by consultants, to establish a base on which to make projections of deposit growth and loan demand.

Statistical Analysis: Many organizations rely on careful statistical analysis of trends in their loan and deposit activity over time, factoring seasonal and cyclical adjustments into their data. With the advent of computers and the development of econometric models, many of the largest financial institutions apply statistical techniques to forecast a broad range of variables that affect interest rates, loan demand, inflation rates and aggregate spending.

Putting It All Together

The next stage in profit planning is the consolidation of the separately developed departmental plans. Consolidation provides the organization's leaders with the first look at how departmental managers see their own groups performing over the next year. Consolidation also helps identify possible inconsistencies. After reviewing the plans, management may adjust expense, pricing or balance sheet growth guidelines to address inconsistencies and/or find ways to meet bank-wide goals.

This consolidation and adjustment process may take several iterations to achieve desired results and resolve inconsistencies. This process may include a meeting or series of meetings with senior management, of the financial institution to review each group's proposed plan for the year with the appropriate department personnel and approve or negotiate additional changes. Issues that may require follow up study are also raised. For example, the financial institution may have insufficient capital to support its planned growth in assets. An issue may be whether a possible sale of organization stock should be contemplated and the most appropriate timing for such a move. After the reviews are completed, with refinements, the financial institution adopts a formal profit plan.

The final stage of the annual budget process is to present it for approval and sign-off to the board of directors, who also would have reviewed and approved the business (strategic) plan.

Control

Control consists of comparing standards versus actual achievement and plans/budgets versus actual performance and communicating these variations/deviations to management. Although control systems may differ in complexity according to the nature of a financial institution's operations and the size of the organization, good control programs share common features:

- Standards are established to represent desired performance. Examples include minimum acceptable market shares, targeted employee turnover rates and targeted costs for making different types of loans.

- The financial institution's actual achievement is compared with the standard. If a monthly error rate standard for account postings has been determined, for example, then actual monthly errors must be compared against it.
- Standards are examined periodically for possible revision, and new standards for previously unmeasured activities are continually being developed.
- In addition to standards versus actual achievement comparisons as described above, control systems also compare plans/budgets to actual performance and prior year results on a periodic basis, usually monthly or quarterly and year to date.
- Variance reports are regularly prepared and provided to management including department heads responsible for their results so reasons for the variances can be determined and any necessary corrective action be taken. Some organizations schedule monthly or quarterly financial reviews with department heads to ensure variances are being addressed and inconsistencies or sub-optimization do not become an issue.

Business Planning Preparedness

The following questions can be used to assess whether a financial institution has a plan and is prepared for the future. Determine how you would answer each question as it pertains to your organization. If any of the questions below have not been adequately addressed, care should be taken to determine if more work is required to understand these important issues.

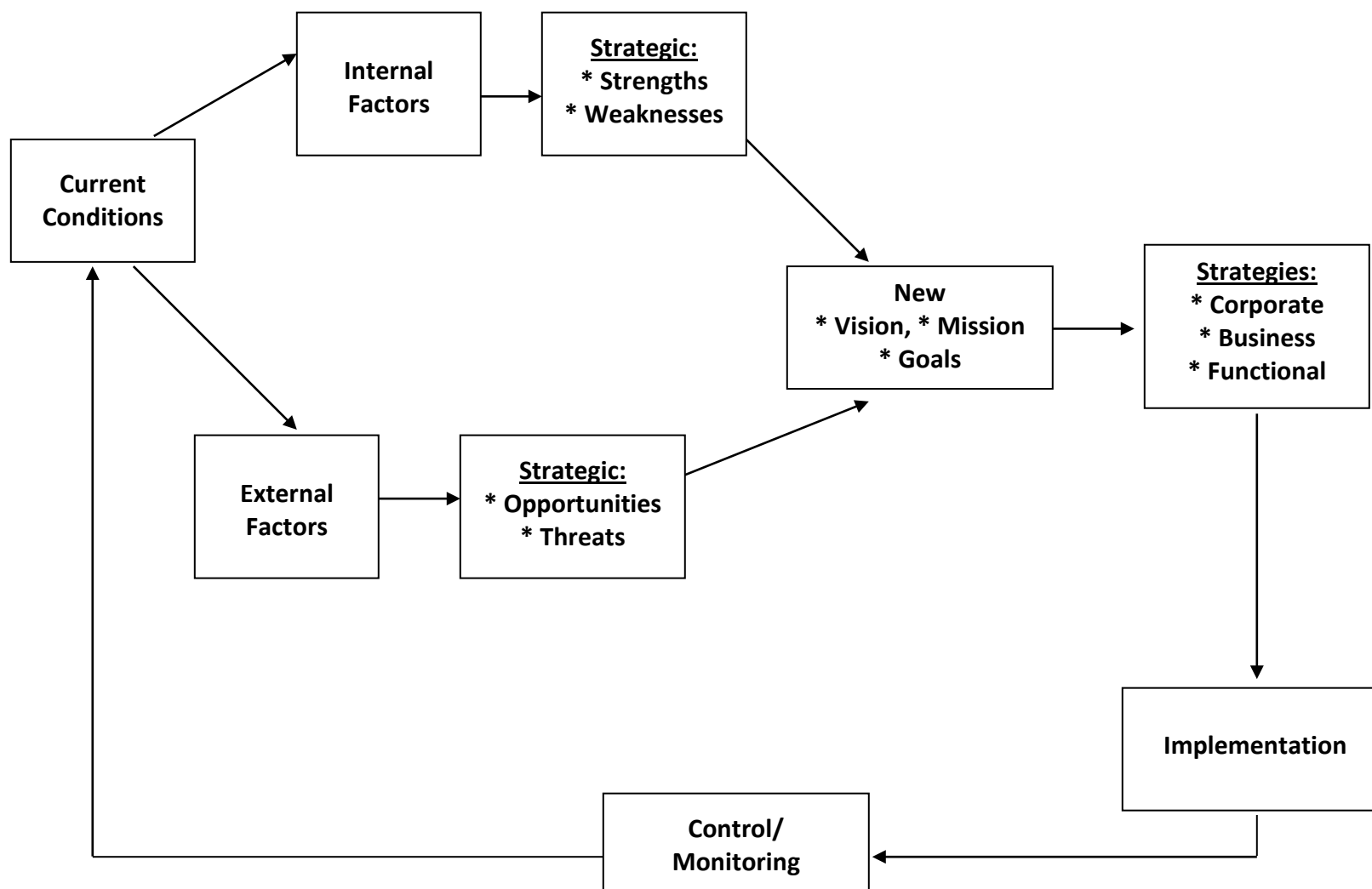
1. How is your organization different from the competition?
2. Who are your financial institution's customers? What products and services do they want?
3. Has your organization developed the technology to measure customer profitability and product profitability? Can it track which customers buy each product?
4. How can the financial institution access additional capital externally and maintain its independence? What firms might be potential merger partners or acquisition targets?

5. Are the organization's pricing strategies market driven? Are they cost driven? Do they segment retail customers?
6. What image does the financial institution present in the marketplace? How does it differ from the images of competitors?
7. What is the long range strategy for improving profitability and increasing the organization's stock price?

SUMMARY

1. Business planning involves six fundamental issues: evaluating the current situation, creating a shared vision, creating a mission statement, setting goals and objectives, developing specific action plans, and implementing and controlling the process.
2. Risk management is an integral part of the planning process.
3. A vision creates a picture of the organization's ideal future characteristics and answers 'What will we look like?'.
4. A mission statement describes the organization's primary business objectives, addressing the 'How?' question.
5. Goal setting includes, short term, intermediate term and long term goals, which are all inter-related but distinct.
6. The situation analysis examines the financial institution's financial condition, products and services offered the customer base and trade area, human resources, the economic industry, and regulatory environment.
7. The analysis of strengths and weaknesses follows the situation analysis and focuses on internal factors. The analysis of opportunities and threats focuses on external factors.
8. Action plans must be customer driven, focus on long run profitability and maintain the organization's risk profile within targeted objectives.
9. The operating budget reflects management's expectations regarding next year's revenues and operating expenses.
10. Control consists of identifying deviations in performance from plan and identifying/implementing changes.

Exhibit 1
BUSINESS PLANNING PROCESS



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Exhibit 2 DEMOGRAPHICS

I. Customer Base and Trade Area

A. Profile of the Financial Institution's Customers

Income: Estimated household income

Education: Highest degree obtained; number of years of high school, college, etc.

Employment: Type of employers

Demographic: Age distribution

Location: Residence of customers by zip code

B. Key Economic and Demographic Measures in Market

Demographic: Age distribution
Average age
Population growth: recent and projected

Households: Average age of household head
Household growth: recent and projected

Housing Activity: Housing unit growth, Single Family and Multi Family
Building permits, Single Family and Multi Family

Income: Total personal income; recent growth
Per capita income; level and recent growth
Effective buying income by household and per capita; levels and projections

Employment: Composition, by industry
Growth
Unemployment
Key sectors and employers

Other: Commercial development

II. Sources of External Information

Government Documents

Government documents (national, state, local) are an excellent source of information on industries, products and demographics.

Federal Agencies

The Federal Reserve Bank System, for example, provides a wealth of economic and banking data.

Pro-Quest Data Base

Statistical Reference Index (SRI)

Indexes statistical and marketing reports published by local, state and regional governmental sources, corporations, trade associations, special interest groups, etc.

American Statistics Index

Indexes statistical summaries and tables in Federal Government Documents.

Business Periodicals Index (BPI)

Indexes articles in business journals.

Predicasts F & S Index – United States

Indexes articles in trade journals and newspapers.

Social Science Index

Indexes articles about consumer/managerial behavior.

PsychINFO Index

Indexes articles about consumer/managerial decisions, attitudes and perceptions.

Trade Associations

If you would like to contact a trade association or research center, do so early during the project. It may take several weeks to receive the information you request. Do some research first so that you can request specific information.

III. National Sources of Demographic Information by Type of Information Provided**A. Situation & Industry Factors****General Economic Conditions:**

The Federal Reserve System (numerous publications)
FDIC
S&P Global Ratings
U.S. Bureau of Economic Analysis (BEA)
U.S. Census Bureau Economic Indicators
U.S. Data and Statistics
Barchart Yearbook
U.S. Bureau of Labor Statistics

Financial Information for Industries:

RMA Annual Statement Studies
Almanac of Business & Industrial Financial Ratios
Dun & Bradstreet Key Business Ratios
Dun & Bradstreet Industry Reports
Manufacturing USA

B. Competitors/Products

Uniform Bank Performance Reports
Sheshunoff
10-K Reports
Annual Reports
Business Rankings Annual
S&P Global Ratings

C. Target Market

Sourcebook of County Demographics
Sourcebook of Zip Code Demographics
Consumer Buying Power by Environics Analytics
County & City Data Book
Lifestyles Market Research Reports & Industry Analysis
U.S. Data and Statistics

Exhibit 3

GOALS/OBJECTIVES AND SOME ASSOCIATED STRATEGIES

Selected Goals/Objectives

Some Possible Strategies

PROFITABILITY

Increase return on assets to our size by 20XX.

1. Examine investment portfolio for possible improvement in rate and/or maturity mix.
2. Perform comprehensive review of loan industry average for banks of portfolio-quality mix, and so on.
3. Investigate feasibility of restructuring the organization to combine existing loan and investment functions into asset management groups.

COMPETITIVENESS

Growth

Become the leading financial institution in the state in total deposits by 20XX.

1. Become more aggressive in the retail market.
2. Remodel existing obsolete facilities.
3. Investigate feasibility of training all customer personnel.
4. Seek total bank affiliations in the retail market.

Stability

Secure a share of newcomers in the community commensurate with the market share of total deposits at the end of the preceding year.

1. Investigate feasibility of establishing formal newcomer program.

EFFICIENCY

Identify critical areas in management depth and succession.

1. Investigate outside consulting firm to review and managerial personnel, depth, strengths, weaknesses and plan for succession.
2. Institute ongoing program of personnel attending banking schools.

FLEXIBILITY

External

Restructure loan portfolio, with increases in commercial loans and real estate loans to ____%, commercial and ____%, real estate by 20XX.

1. Develop programs for more aggressive marketing of commercial and real estate loans - perhaps examining competitiveness of rates, training calling officers, developing an officer call program, developing various promotional programs (e.g., advertising, home-buying seminars).

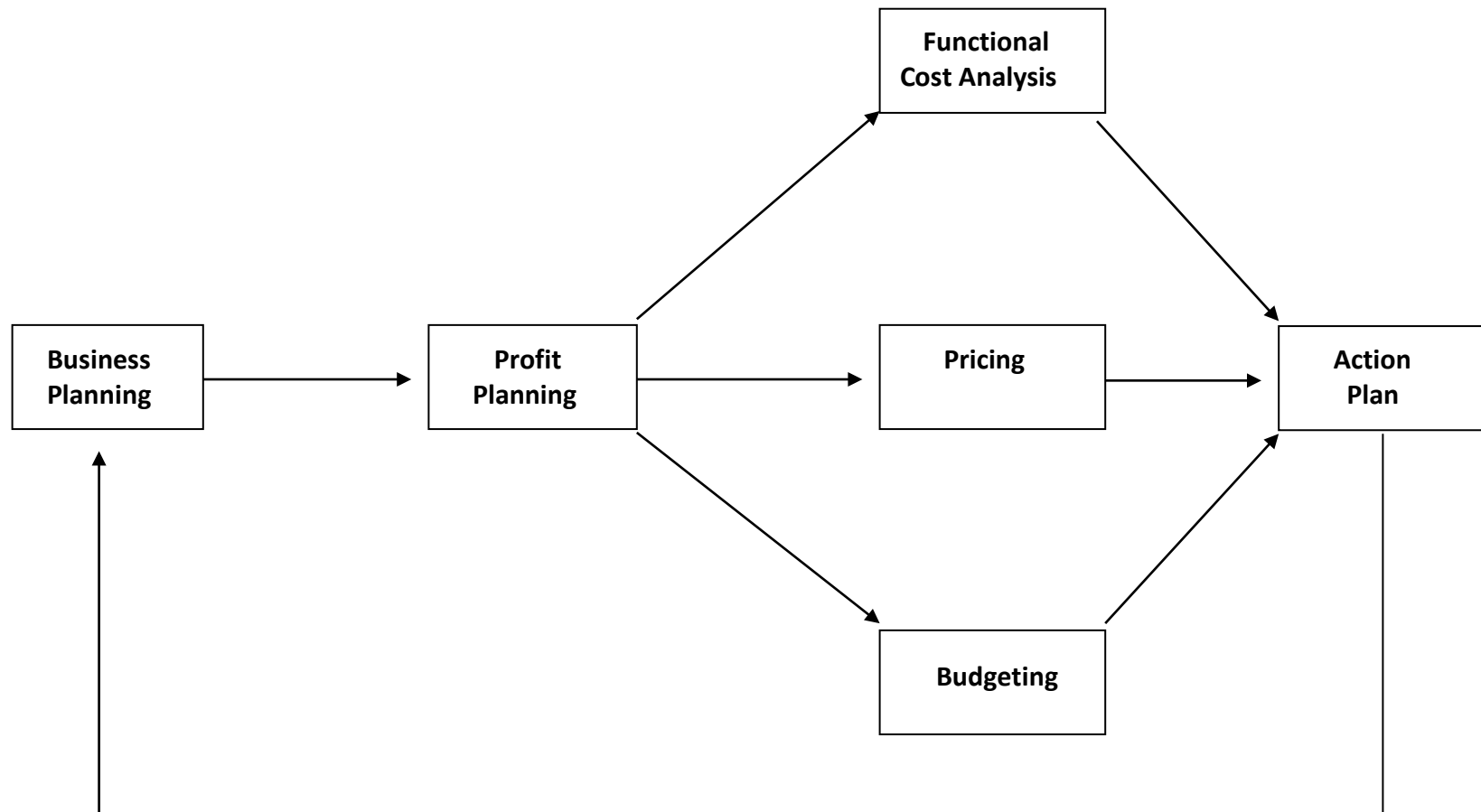
Internal

Achieve a loan-to- deposit ratio of ____% by 20XX.

1. Assign responsibility to senior officer for continuous evaluation of the bank's balance sheet. This "balance sheet management" function will be an addition to existing asset management and liability management activities.

Source: Donnelly. *A Preface to Banking*, American Bankers Association.

Exhibit 4
THE PROFIT PLANNING PROCESS



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HUMAN RESOURCE MANAGEMENT

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HUMAN RESOURCE MANAGEMENT

Notes

OVERVIEW

During the past six decades, the area of human resource management has taken on a whole new meaning, focus and importance. Businesses have become increasingly more aware of the fact that their success is directly related to the management of their human assets—the employees.

The role of the Human Resource function has changed from being the record keeper, party and picnic planner, and bowling league coordinator to that of being a key strategic function in the organization. This change is a result of the legislation that has been passed, the economy and labor market trends in the country, and the need for companies to maximize productivity, and maintain or reduce costs.

To achieve this level of productivity while offering excellent customer service, employees at all levels must be able to work efficiently, be motivated, well trained, and ready and willing to make the changes necessary to compete in the new global market.

The banking industry is no different. As the competition from related industries increases, the pace of mergers and acquisitions accelerate and new community banks are chartered, the role Human Resources plays in the success of the banking industry increases. Employees are the primary competitive advantage (or disadvantage) for any bank in selling the bank's products and servicing its customers. Human resource planning, therefore, becomes a key strategic objective that must address hiring, training, compensation and benefit design, compliance with employment laws, discipline, performance reviews and cultural development. Without specific attention to employees, banks risk losing market share and customers to the competition.

Larger organizations may have very structured Human Resource Departments managing the human resource function for the entire organization. These departments may coordinate benefit programs, payroll, employee relations, compliance, and the interviewing and employment process. In very small organizations, one or two people may have responsibilities for various aspects of the human resource function and to ensure compliance with necessary laws and regulations. Many smaller organizations choose to supplement their capabilities by partnering with professional firms that provide payroll, benefits, legal and regulatory updates and often, full service back office HR support.

LEARNING OBJECTIVES

Following the successful completion of this session, you should be able to:

- Identify various management styles and philosophies, organizational structures, and market trends.
- Understand the basic laws and regulations affecting the employment process and management's responsibilities within these laws.
- Understand the importance of the role of the manager in the employment process.
- Identify various factors affecting retention and development of employees throughout the employment process.

ORGANIZATIONAL STRUCTURE AND MANAGEMENT STYLES

Organizations go through life cycles just as humans do. At different stages of this life cycle, different types of management may be more effective than others.

Strategies of Management

Centralization, decentralization and a blended model are three management strategies that can affect an organization's structure.

Characteristics of Centralization

- Authority is concentrated at the top levels of management.
- Economies of scale and uniform policies exist.
- Strategies and goals in separate units that once conflicted are unified.
- Work is performed centrally.
- The management style is typically authoritative.

Characteristics of Decentralization

- Authority is placed at different levels throughout the organization.
- Management is confident of the staff's competency in performing various tasks.
- Tasks performed are unique to different departments
- The management style is typically participative.

Characteristics of a Blended Model

- Authority and decision making is carefully placed at the most efficient level of the organization.
- Management is confident of the staff's competence in performing tasks efficiently but develops policies and procedures to ensure consistency of results and consistent customer experiences.
- Tasks may be performed differently in different areas, but the desired outcomes (sales goals, customer service) are clearly defined and followed.
- Managers and supervisors are trained to engage their teams to deliver the desired results while leveraging their unique talents and capabilities.

Consider the following scenario:

The loan department of the bank in a decentralized environment provides the lending officers with the authority to make loans without prior approval from the loan committee up to their legal lending limit. Loan officers may perform their own credit analysis or independently review the credit analysis completed by the credit analyst.

The loan committee may review loans but the commitment has already been made. In this situation loan officers may take more ownership in maintaining the quality of their individual portfolio and be more motivated to work with borrowers to put the deals together.

In this same lending department in a highly centralized environment, the loan officer takes the application and the file is sent to a central location for credit scoring and approval or denial. The loan officer becomes the messenger for the decision that has already been made. Even though the loan officer may have the ability to "argue the decision", they typically are

not given the ability to change the decision without prior approval. In this environment, the decision-making authority is centralized with a few individuals in certain areas. Several bank offices are able to operate out of one centralized credit scoring area.

In a blended model, the loan officer is highly trained regarding the bank's desired credit quality and lending terms and has access to centralized statement spreading and analysis. S/he also has a very clear understanding regarding acceptable flexibility and trade-offs, his or her own signing authority and access to more senior lenders to collaborate on larger or more complex deals. Because all standards and procedures are transparent to all personnel involved, including the loan committee, reversals of commitments are rare, if not non-existent. This model benefits the bank by increasing safety and soundness and increasing efficiency while ensuring loan officers are motivated to find ways to satisfy the needs of their customers.

LEGAL ISSUES

Federal regulation during the past six decades has continually worked to ensure employment opportunities to groups that have traditionally been underrepresented in hiring while more clearly defining employees' rights. In developing employment policies, employers must carefully develop policies and procedures to ensure they operate within legal and regulatory guidelines.. The following is a very brief summary of Common Law tort theories and federal laws and regulations that could affect the employment process.

Employers must also be aware of state laws, regulations and enforcement agencies. In many cases, state laws may differ or be more stringent than federal laws. This material does not contain all information necessary to understand the particular regulation or evaluate specific cases and is not a substitute for legal advice.

Common Law Tort Theories

The United States inherited the concept of common law from its British roots. On the federal level, common law dictates that custom and usage have the force of law (generally laws developed by court decisions), even if not specifically found in codified written laws. In terms of employment policy there are five key Common Law concepts:

- **Employment-at-will** is the concept that an employer may terminate an employee at any time for any reason—with or without cause—unless prohibited by law or an employment contract. There are three major exceptions to the employment at will doctrine: 1. public policy exceptional (43 states), 2. Implied-contract exception (38 states), 3. Covenant-of-good faith exception (11 states). Alaska, California, Idaho, Nevada, Utah and Wyoming recognize all three exceptions. Florida, Georgia, Louisiana and Rhode Island recognize none of the exceptions.
- **Negligent hiring** and retention of employees who engage in misconduct (wrongful acts) both during and after working hours is cause for employers to face an employment lawsuit. The theory is that employers have a duty to protect workers, customers, and visitors from injury caused by employees who the employers know (or should have known) pose a risk. This obligation exists even if the injury occurs miles away from the work site.
- **Defamation** is injuring someone's reputation in the community. It may be verbal (slander) or written (libel). In general, to prove defamation, an employee must show not only that the false report of fact caused harm but that the employer made the statement with malice. In the legal sense, malice refers to making a statement known to be false and acting in reckless disregard as to the statement's truth or falsity.
- **Invasion of privacy** or any unnecessary intrusion into an employee's personal life that has no legitimate business purpose may be considered an invasion of privacy. References or questions about off-the-job conduct frequently fall into this category.
- **Constructive discharge** occurs when an employer makes conditions so intolerable for an employee that the employee must resign. Legally, this is considered an involuntary termination.

Federal Laws and Regulations

In addition to common law, many federal laws and regulations designed to end discrimination have been enacted during the past six decades. Following are some of the laws which apply to employers:

- **Title VII of the Civil Rights Act of 1964** is the cornerstone of federal antidiscrimination legislation and covers employers with 15 or more employees. It prohibits discrimination in all conditions of employment with regard to the following protected classes: race, creed, color, national origin, religion and sex. Sexual harassment is a form of discrimination and therefore prohibited. [Some states add sexual orientation to the list of protected classes.]
- **Executive Order 11246** requires federal contractors and subcontractors with contracts in excess of \$10,000 to comply with Title VII. Contractors with contracts over \$50,000 and 50 or more full-time employees must develop a written affirmative action plan to increase the participation of members of protected classes.
- **Age Discrimination in Employment Act of 1967** prohibits discrimination in employment for persons age 40 and over. The amendments of 1978 and 1986 first raised and then eliminated altogether the age at which employees could be forced to retire, except in certain executive level positions. The act covers employers with 20 or more employees and does not apply if age is a job related occupational qualification.
- **Fair Credit Reporting Act of 1970 and Consumer Credit Reporting Reform Act of 1996 (CCRRA)** requires employers to make a clear disclosure in writing that a report may be obtained and to obtain written authorization from employees and/or candidates for employment before obtaining a consumer report and/or an investigative consumer report. Before taking any adverse action based on the information, employers must provide notice of the adverse action and a copy of the report to the applicant along with a summary of the consumer's rights under the Fair Credit Reporting Act (FCRA).

- **Vietnam-Era Veterans Readjustment Act of 1974** prohibits discrimination against disabled veterans who served in the armed forces on active duty for a period of more than 180 days, any part of which occurred between August 5, 1964 and May 7, 1975 and requires contractors and sub-contractors having federal contracts of \$10,000 or more to have written affirmative action plans. Open positions, except executive and top management, those positions that will be filled from within, and positions lasting three days or less, must be listed with the appropriate local state employment service office nearest the facility where the opening occurs. In 2013, the Labor Department established a benchmark for veterans of 8 percent of an employer's work force or the percentage of former military members in the local workforce.
- **Pregnancy Discrimination Act of 1978** amended Title VII to include pregnancy, childbirth, or related medical conditions and requires employers to treat pregnancy the same as any other temporary disability. Employers must provide access to medical benefits and sick leave. Employees returning to the job after any type of disability leave have a right to be reinstated to the same or similar position without loss of seniority or benefits.
- **Immigration Reform and Control Act of 1986**, as amended in 1990, attempts to deal with problems arising from the flow of immigrants into the U.S., prohibits discrimination against foreign looking job applicants and establishes penalties for hiring illegal aliens. Within three days of hiring, both the new hire and the employer must fill out Form I-9, which verifies the employee's identity and their right to work in the U.S.
- **Drug-Free Workplace Act of 1988** requires Federal contractors with contracts of \$25,000 or more to certify that they maintain a drug-free workplace by following certain policies or procedures, such as: 1) developing a policy prohibiting the unlawful manufacture, distribution, possession, or use of controlled substances; 2) specifying the actions to be taken against those who violate the policy; and 3) providing a copy to all employees.
- **Americans with Disabilities Act (ADA) of 1990** covers employers with 15 or more employees and generally provides that employers cannot discriminate against "qualified disabled persons" because of the disability in any aspect of the employment relationship. Employers are required to make reasonable accommodations for a qualified individual with a disability as long as the "reasonable accommodations" do not create an "undue hardship" on the employer. An individual is considered disabled if he or she:

- Has a physical or mental impairment which substantially limits a major life activity;
- Has a record of an impairment.
- Is regarded as having such impairment.

It is also unlawful to discriminate against a qualified individual because of their association with a person with a known disability.

A “substantial limitation” of a “major life activity” means that an individual’s activities, such as caring for oneself, performing manual tasks, walking, seeing, hearing, speaking, breathing, learning, and working, are restricted as to the conditions, manner or duration which they can be performed as compared to the average person in the general population.

In 2013, the Office of Federal Contract Compliance established a “utilization goal” for people with disabilities at 7 percent of employees in each job category or 7 percent of total workforce. This applies to Federal Contractors or subcontractors with \$10,000 or more annually in government contracts.

- **The Civil Rights Act of 1991** shifts the burden of proof to the employer. Once the employee shows an employment practice has a disparate impact, the employer will have to justify the challenged practice by showing that the practice was required by business necessity. It also added the ability to collect **compensatory damages** (e.g., emotional pain, suffering, inconvenience, mental anguish, loss of enjoyment of life, etc.) to the already established ability to collect **punitive damages** (violations with “malice” or “reckless indifference” for federally protected rights, unless committed by governmental body). The Act also allows the plaintiff to demand a jury trial.

Enforcement Agencies

The **Equal Employment Opportunity Commission (EEOC)** was established by the Civil Rights Act of 1964. It has primary authority to enforce antidiscrimination legislation. The EEOC investigates charges of discrimination and makes a determination as to whether there is “reasonable cause” to believe that discrimination has occurred.

The **Office of Federal Contract Compliance Programs (OFCCP)** enforces Executive Orders and laws dealing with federal contractors and subcontractors. The OFCCP is an agency of the U.S. Department of Labor (DOL).

Compensation and Benefits

- **1931 Davis-Bacon Act** established the prevailing wage requirement for contractors paid \$2,000 or more for the construction, alteration, or repair of federal public buildings or public works projects.
- **1934 Copeland Act** prevents employers from receiving kickbacks from employees for wages earned.
- **1936 Walsh-Healy Act** extended the concept of prevailing wage to manufacturers or suppliers of goods for government contracts in excess of \$10,000.
- **1938 Fair Labor Standards Act (FLSA)** is the broadest piece of labor legislation regulating: employee status, child labor, minimum wage, overtime pay, recordkeeping and other administrative concerns. Independent contractors and employees in positions which are legally “exempt” from coverage are not covered by FLSA (***Exhibit 1 – Summary of Exempt/Non-exempt***). Generally, an employer with at least \$500,000 of business or gross sales in a year is covered by the FLSA.

Nondiscrimination Issues

- **1963 Equal Pay Act** amends the FLSA by requiring equal pay for equal work (not to be confused with comparable worth). Equal work is defined by four factors: 1) equal skills, 2) equal effort, 3) equal responsibility and 4) equal working conditions. Exceptions allow the establishment of different wage rates based on such things as seniority, merit, and basically any factor other than sex.

- **1964 Civil Rights Act** defines two types of discrimination in pay—disparate treatment and disparate impact. Disparate treatment occurs when an employee who is a member of a protected class is intentionally paid less. Disparate impact occurs when an apparently neutral compensation practice results in unintentional wage discrimination for a protected group.
- **1968 Wage Garnishment Act** prohibits employers from terminating an employee for one single indebtedness, even if the debt results in garnishments. The **Consumer Credit Protection Act** limits the amount of wages that can be garnished (generally limited to 25% of disposable pay).

Employee Benefits

- **1934 Securities and Exchange Act** created the Securities and Exchange Commission (SEC) to curb malpractice on the stock exchange. This act has an effect on company stock options and employee stock purchase plans, requiring registration of all securities sold on the exchanges and disclosure and trading restrictions whenever “insiders” exercise their stock options.
- **1935 Social Security Act** provides three types of benefits to workers: retirement income, disability, and survivor’s benefits. In the 1960s the Social Security program was amended to provide hospital insurance and medical insurance through Medicare.
- **1973 Health Maintenance Organization Act** or the “dual choice provision” requires that employers of more than 25 employees provide workers with the option of joining a federally qualified health maintenance organization (HMO).
- **1974 Employee Retirement Income Security Act (ERISA)** established basic standards which must be met for benefit programs to maintain their tax-favored status. It covers such areas as eligibility, vesting, years of service, fiduciary responsibilities, funding, plan documentation, and reporting. This act established the Pension Benefit Guaranty Corporation (PBGC).

- **1985 Consolidated Omnibus Budget Reconciliation Act (COBRA)** requires employers with 20 or more employees who provide health care benefits to provide the opportunity for employees to continue group coverage for 18-36 months when employees or family members have a “qualifying event.” A “qualifying event” includes termination of employment, death of a spouse or parent, divorce, eligibility for Medicare, college graduation or the covered dependent ceases to become a qualified participant in the plan.
- **Family and Medical Leave Act (FMLA) of 1993** allows employees of employers with 50 or more employees within a 75 mile radius to take up to 12 weeks unpaid leave during any 12-month period to care for family members or because of a serious health condition. This includes: 1) the birth of a son or daughter; 2) placement of a child with the employee for adoption or foster care; 3) care for the employee’s spouse, child or parent (not a parent-in-law) with a serious health condition; and 4) a serious health condition that makes the employee unable to perform the functions of the position.

PERSONNEL FILES

Records to Be Kept in Employee’s Personnel File

This file may be viewed by the employee or the supervisor with reason to know.

-  Application for employment
-  Resume
-  Offer letter
-  New hire checklist
-  Supervisor’s new hire checklist
-  Acknowledgement of receipt of Employee Handbook
-  Work permit
-  Confidentiality agreement
-  Conflict of Interest Statement

-  Correspondence granting exceptions to policy or outlining negotiated items
-  Notification of appointment/election to officer level
-  Job posting requisitions filed by employee
-  Written notice of resignation
-  Exit interview form
-  Termination of salary form completed by supervisor
-  Relocation checklist (if applicable)
-  Progressive counseling/warning documentation
-  Request to Review File form
-  Performance reviews
-  Forms explaining any transfer, promotion, salary change or other change of status
-  Copies of training/educational records (college transcripts)
-  Information submitted by employee disputing records or some part of file
-  Emergency Evacuation Procedures agreement
-  Preauthorization of medical benefits procedures acknowledgement
-  HRIS data collection form

Benefit/Health Information File

This file may be viewed by the employee only. Supervisors and other personnel do not have access.

-  Proof of age (retirement purposes)
-  W-4
-  Leave of absence paperwork, including FMLA documentation
-  Doctor release forms
-  Workers' Comp Employer's Report
-  Benefit enrollment and change forms
-  Change of beneficiary
-  401(k) forms, hardship withdrawals, loan paperwork, etc.

Employee Data File

This file may be viewed by Human Resources only. Supervisors and the employee do not have access to this file.

-  Credit Bureau reports or correspondence required by Fair Credit Reporting Act
-  Records of Convictions
-  Garnishments or attachments of wages
-  Reference checks, character and credit reports
-  Authorization forms to release information to external parties, i.e., employee consent, information released and receiving parties

Documents to be Removed/Excluded from Employee Files

-  Test scores or evaluations resulting from aptitude, achievement, psychological or other testing process during pre-employment period or employment period.
DO: store in functional file, i.e. keyboarding test file, sales test file, psychological evaluations file, etc.
-  Future job assignments (potential or succession plan documentation)
DO: maintain in departmental files
-  Letters of commendation from customers, co-workers, etc.
DO: return them to the employee
-  Records of arrest
DO: destroy them
-  Photographs of employee
DO: return them to employee
-  United Way/Community Campaign Contribution Cards
DO: maintain a separate United Way Contribution file
-  Insurance and claim form information
DO: return to employee
-  I-9 Forms (Verification of eligibility for employment)
DO: maintain in a separate I-9 file
-  Safety Training Records
DO: maintain in a separate safety training file
-  Invitation to Self-Identify/Applicant Tracking
DO: maintain in a separate affirmative action tracking file

DISCARD all miscellaneous memos, documentation and records not relevant to employment, performance or salary.

Disputes, law suits, EEOC records and any other related legal matters should be retained separately under the control of the HR Manager.

EMPLOYEE HANDBOOKS

Not all banks have employee handbooks. There are advantages and disadvantages to putting policies in writing in a handbook.

Advantages:

-  Employees have more confidence in the integrity and fairness of the employer's policies and that everyone is being treated equally, which can lead to higher morale and productivity levels.
-  Provides guidelines to managers and supervisors helping them to make more informed and consistent decisions when situations occur.
-  Employees have guidelines and know the expectations, rules, and policies.
-  Helps ensure that benefits, both offered and expected, are consistent.
-  Shows the organization's good faith effort to comply with the various regulations regarding equal employment opportunities.
-  Can assist in training supervisors and orienting new employees to the bank.
-  May help employers avoid or defend charges of discrimination.

Disadvantages:

-  Could possibly create an implied contract of employment, which negates the common law theory of employment-at-will. Mitigate this risk by making it clear in the manual that it is not an implied contract.
-  Can result in charges of discrimination because of inconsistent application of policies. It is vitally important regular training and communication occurs to reduce the risk of inconsistent application. Managers and supervisors should be encouraged to check with HR for proper application if a question exists. Also, an open environment where employees' can question a decision and ask for review without fear of retribution is critical.



Not enforcing or randomly enforcing policies can be worse than having no policies. On the other hand, having no policies virtually ensures that inconsistency of treatment occurs, resulting in potentially larger problems.

Basic Principle...Applicable to all employment law:

If a bank adopts guidelines, policies, rules or standards of conduct, they must be followed consistently. If not followed, or followed in a random manner, it will likely result in potential liability.

Policies to Consider Including in the Handbook

At-Will Employment. A formal policy stating that the employee and/or the bank have the right to terminate the employment relationship at any point in time with or without cause.

Equal Employment Opportunity (EEO) Policy. A formal statement that the bank has adopted an EEO policy and the employer and its employees will not discriminate against any person on the basis of race, creed, color, sex, religion, national origin, age, disability or Vietnam era or disabled vet status.

Employee Performance Reviews. Include information on the frequency and purpose of reviews. It is important for both the employee and the employer that a consistent policy be followed regarding reviews. Employees who receive timely and accurate reviews have a better idea of whether they are meeting expectations in their job performance. If the employee is not meeting the expectations, the reviews provide notice and an opportunity to correct existing deficiencies. Employee reviews can serve as a vital tool in determining promotions, raises and other benefits, as well as providing substantial protection in the event termination of an employee is necessary. Formal reviews should be supplemented with frequent informal feedback, e.g., praise for above-expected performance and/or counseling for improvement in the event of underperformance or unacceptable behavior.

Disciplinary Policy. Keep the policy general enough to allow the employer some room in responding to special situations where it would not be appropriate to proceed under a progressive disciplinary policy. Certain situations may occur in which the nature of the employee's conduct, its severity, and duration may be better handled by immediate termination instead of following progressive discipline policies. Include language that reserves the right of the employer to use discretion in certain circumstances. It is very important that the employer makes it clear that while progressive discipline policies are generally followed by the employer,

the policy itself is discretionary and may be changed with or without notice to the employee.

Harassment. It should be clear that harassment of any kind will not be tolerated, and the policy should specifically address sexual harassment. The complaint procedure should be outlined including at least two persons (position titles) to whom an employee may report any incidents of harassment. The policy should specify that the employer will promptly investigate all complaints, and that no employee will be subject to any form of retaliation or discipline based upon making a complaint or assisting in an investigation.

Alcohol, Substance Abuse. The policy and the consequences of coming to work under the influence, drinking on lunch hours, etc., should be outlined so employees understand and have notice that testing is possible as well as termination.

Disability/Serious Diseases. Provide a guideline that addresses disabilities and serious diseases and the employee's responsibility in making their disability known in order to obtain reasonable accommodation.

Disability Leave. It is important that employers consistently apply a disability leave policy. Pregnancy and related conditions should be included in a disability policy and treated as other disabilities. If parental leave is offered, it must be offered to both male and female employees.

Family and Medical Leave. Under the Family and Medical Leave Act of 1993 (FMLA) an employer with 50 or more employees within a 75-mile radius is covered by the Act and must provide notice to employees of their rights, including providing information in a written handbook. The policy should explain how to request FMLA leave and whether paid leave is required to be used during the leave. There is no requirement that an employer provide paid family or health leave. Leave may consist of paid leave, but whether leave is paid or not is at the employer's discretion. The employer may require the employee to use accrued paid vacation leave, personal leave, sick leave or family leave for any of the 12 weeks used because of birth, adoption, foster care or health care of a spouse, child or parent.

Vacation Pay. The policy should include the amount of vacation accrued, when it accrues, and if it must be used within a certain period of time or whether it can be carried over from year to year. Including the manner in which vacations are scheduled (e.g. seniority) can mitigate understaffing issues during popular vacation windows.

Attendance Policy. An attendance policy, or absence occurrence policy, provides clear expectations of approved absence occurrences and disciplinary actions to be expected in the event of unacceptable absences. The policy should also address tardiness and failure to remain at work. Clearly defining approved and unapproved absences demonstrates that abled and disabled employees are being treated equally.

Disclaimer Language. The handbook should include language indicating there are no promises in the handbook and reserving the right to unilaterally change, delete, alter, or modify any of the terms of the handbook, not subject to notification of or consultation with the employee, and the employer has the right to terminate an employee with or without cause.

Choose Your Words Wisely

Including words such as the following could possibly create an implied contract, thereby negating the employment-at-will status:

-  Permanent
-  Job security
-  Reference to partnership/management track
-  Long term growth or relationship
-  “Just cause” when talking about termination
-  Continued employment for specified period of time
-  Statements such as “employee privacy will always be respected”
-  Probationary periods

JOB DESCRIPTIONS

Job Descriptions serve a variety of functions including job evaluation, selection, recruitment, HR planning, training, safety and performance appraisal.

The format of the job description varies; however, the following sections will typically be included: (***See Exhibit 2 – Sample Job Description***)

-  **Summary** – a brief description, summarizing the overall purpose and objective of the position. This section may also cover the primary responsibility of the job, the results the employee is expected to accomplish and the degree of freedom to act (for example, “independently” or “under direct supervision”).
-  **Essential Job Functions** – the fundamental tasks, duties and responsibilities of the position.
-  **Nonessential Functions** – desirable, but not necessary, functions of the job.
-  **Knowledge, Skills and Abilities Required** – the specific competencies required for job performance. For example, the description might specify “how to use Excel” rather than “computer spreadsheet knowledge.” For compliance purposes, it is important to focus on minimum requirements so as not to discriminate against protected groups.
-  **Supervisory Responsibility** – the scope of the person’s authority, including the number of direct and indirect reporting relationships and a list of jobs that report to the incumbent.
-  **Working Conditions** – the environment in which the job is performed, especially any unique conditions outside a normal office environment.
-  **Minimum Qualifications** – minimum education and experience required to obtain the job. Again, it is important to focus on minimum requirements to avoid claims of discrimination.
-  **Physical Demands** – physical requirements in the position, including sitting, standing, walking, hearing, talking, reaching, lifting (up to X pounds), etc.
-  **Other Areas** – other areas which may be included: language skills, math skills, reasoning ability, certificates or licenses required, exempt/nonexempt status, salary level (grade) and range.

Guidelines for Writing Job Descriptions

Job descriptions must be based on real-life positions. Consider the following when developing job descriptions:

-  Give jobs realistic, descriptive titles.
-  Identify the Fair Labor Standards Act (FLSA) exempt or nonexempt status.
-  Keep the summary brief.
-  List only the principal fundamental duties, tasks or responsibilities, identifying the essential job functions for ADA purposes.
-  Validate the knowledge, skills and abilities to ensure they are job related.
-  Secure approvals and dates.
-  Include any disclaimers.

Essential Job Functions and the ADA

Defined by the Equal Employment Opportunity Commission (EEOC) as the fundamental job duties of the position, a function is essential if an employer actually requires employees in the position to perform the functions that the employer asserts are essential.

The following factors will be considered by the courts and the EEOC in determining whether a function is essential:

-  Whether an employee in a specific position is actually required to perform the function.
-  If an employee actually performs the function, the analysis shifts to whether removing the function will fundamentally alter the job.

The EEOC and courts will look at:

- ◆ Whether position exists to perform a particular job;
- ◆ Number of other employees who can perform the job or among whom the job function can be distributed;
- ◆ Degree of expertise or skill required to perform the function;
- ◆ Time spent performing the function; and
- ◆ Consequences of failing to require the employee to perform a certain function.

Actual determination is made on a case-by-case basis. Evidence that will be considered includes:

- ◆ Job descriptions;
- ◆ Terms of a collective bargaining agreement; and
- ◆ Work experience of past employees in the job or of current employees in a similar job.

The EEOC regulations indicate that the “essential function” inquiry is not to second guess employer’s business judgment with respect to production standards or require an employer to lower such standards.

CAREER PATHS

- ☑ **Career Paths** demonstrate to employees the opportunities they have for advancement as they improve their skills. An example would be as follows:

Position

Teller Supervisor

Lead Teller

Senior Teller

Teller

Teller Trainee

INTERVIEWING

Types of Interviews

- ☑ **Prescreening Interviews** are helpful when there are a large number of applicants for a position and telephone or face-to-face interviews are necessary to determine prequalification factors.
- ☑ **In-depth Interviews** vary in style and are usually conducted by line management.
 - ✓ **Structured interview** or repetitive interview asks every applicant the same questions.
 - ✓ **Patterned interview** or targeted interview asks each applicant questions from the same knowledge, skill or ability area but not necessarily the same questions.
 - ✓ **Stress interview** is very aggressive to determine how the candidate responds and reacts to stressful situations.
 - ✓ **Directive interview** is highly structured, asks direct questions.
 - ✓ **Nondirective interview** asks open questions and provides general guidance but allows the candidate to guide the process, e.g., a response to one question indicates the next question.
 - ✓ **Behavioral interview** is based on the premise that past performance is the best predictor of future performance. It focuses on how the candidate actually handled past situations.

Interviewing for Behavior

While there are several types of interviews, as outlined above, behavioral style interviewing is widely used and the most common approach to basic interviewing situations. The past behavior of a candidate in certain situations may be the best predictor of future performance. Develop questions to get specific examples of how the candidate responded in situations or under conditions which will be experienced on this job. Use the job description to prepare the questions.

- ☑ Tell me about a time you had to deal with a difficult, demanding person or customer. What was the situation? How did you respond? Were you able to resolve the situation?

The ideal response from an applicant for a teller position would be to explain a situation with an angry customer, why the customer was angry, what was said, and how the customer's problem was resolved.

Interviewing Skills and Techniques

- ☑ **Put the candidate at ease.** Establish a pleasant, courteous and professional rapport with the candidate by greeting the person with a firm handshake and making eye contact, displaying a sincere interest in them, and listening carefully to what is being said.
- ☑ **Pay attention and listen.** Through the use of body language and reflective listening techniques which include restating the feeling and/or content of what the speaker has communicated, the candidate will believe that you are paying attention and interested in what they have to say. An example of reflective listening is:

Speaker: "When my supervisor said that to me, it made me feel like she didn't have much confidence in my ability to get the job done."

Listener: "I can understand that. I would feel the same way."
- ☑ **Watch for contradictions in their actions.** By observing their eye contact, voice tone or inflection, facial expressions, gestures, body position, or movement of hands, feet, and head, you may find inconsistencies between what the candidate says verbally and non-verbally. Many applicants are skilled at telling you what you want to hear but they are unable to hide some of these non-verbal cues.
- ☑ **Ask questions.** First ask probing, open ended questions that generally begin with what, where, why, when, or how. You may also include phrases like "Tell me about..." or "Describe for me a time when..." Let the candidate do most of the talking before you begin providing information (or the answers) on what you want in the job.
- ☑ **Provide information and sell the bank.** After finding out about the candidate's background experiences and qualifications, explain the job duties, the organization's philosophies and practices and be prepared to answer questions regarding the organization, the job and working conditions. This is the time to sell the candidate on the bank just as the candidate is trying to sell the bank on his or her value as an employee.

- ☑ **Take notes.** Write only job related information on the qualifications of the candidate; do not make notes on personal characteristics or comments. Notes provide documentation to compare qualifications between the candidates and helps prevent confusion between the candidates.
- ☑ **The next step.** Explain to the candidate the next step in the selection process and the expected timeline.

Don't put the applicant in a box...

The way the question is stated is important. Some behavioral questioning borders on psychological testing or entrapment instead of interviewing.

For example:

- ◆ Everyone has made a big mistake somewhere along the way. Tell me about a time you made one.

OR

- ◆ Everyone takes minor items from their employer occasionally. Tell me about a time you took something.

These examples are stated in such a way as to lead the applicant to think that the belief is everyone steals or everyone makes big mistakes. While it may be legitimate to have an interest in an applicant's honesty, asking the applicant to admit they've made a monumental error or taken something in this manner may not get an honest answer.

The applicant is thinking, "If I admit I took home those yellow bar pads for the kids, they're going to think I'm a thief. But, if I don't admit to taking something, they're going to think I'm a liar. A thief or a liar—what's the choice?"

Putting the applicant into a box is playing a game and puts the applicant at a disadvantage. The applicant starts trying to figure out what answer the interviewer is trying to get and may give the "guessed" answer rather than an honest answer.

Instead of saying: Everyone has to bend or break the rules some time. Describe an incident where you found it necessary.

Try saying: Have you ever been put in a position where you found it necessary to make an exception to the rules in order to get your job done? Please describe the circumstances and how you resolved the issue.

OR

Instead of saying: We've all had occasions when we omitted taking care of some important detail. Describe an experience in which that happened to you.

Try saying: Have you ever had an experience in which you were glad you had paid attention to a particular detail? Please describe it.

Legality of Questions

If the question is job related, it is probably legal. If it is **not** job related, be careful! Questions that involve race, creed, sex, national origin, marital status, number of children, disabilities, etc., are illegal. Consider the following chart:

MAY ASK	MAY DISCRIMINATE BY ASKING
SEX & FAMILY ARRANGEMENTS: - Does applicant have relatives already employed by the organization? - Any responsibilities that conflict with job attendance or travel requirements	- Sex of applicant - Have children or # of children - Marital status or maiden/previous name - Spouse's occupation or name - Child care arrangements - If covered by spouse's health plan
RACE	- Applicant's race or color of skin - Photos to be attached to resume or application form
NATIONAL ORIGIN OR ANCESTRY - If applicant has legal right to be employed in the U.S. - Ability to speak/write English fluently (if job related) - Ability to speak/write other language (if job related)	- Whether applicant is citizen of another country - Birthplace of applicant or applicant's parents - Nationality, national origin - Ethnic association of surname - Applicant's native language - Maiden/previous name (when married)
RELIGION - Availability for weekend work - Availability to consistently work shift for which being hired	- Religious affiliation - Religious holidays observed
AGE If applicant is over age 18 (if job related) - If applicant is over age 21 (if job related)	Date of birth - Date of high school or college graduation - Age
OTHER Convictions if performance related Academic, vocational or professional training - Training received in the military - Membership in any union, trade or professional association - Job references	Number and kinds of arrests Convictions, unless job related - Height or weight except if a bona fide occupational qualification - Veteran status, discharge status, branch of service - Contact in case of an emergency

How to Ask Disability Related Questions

Under the ADA, prior to making an offer, employers cannot inquire as to whether an individual has a disability or ask about their workers' compensation history. Employers may ask questions that relate to the applicant's ability to perform job related functions, but these questions should not be phrased in terms of a disability. For example, an employer may ask whether the applicant has a driver's license, if driving is a job function, but may not ask whether the applicant has a visual disability.

Employers may describe or demonstrate the job function and inquire whether or not the applicant can perform that function with or without reasonable accommodation. For example, an employer may explain that the job requires assembling small parts and ask if the individual will be able to perform that function, with or without reasonable accommodation.

Employers may also ask an applicant to describe or demonstrate how, with or without reasonable accommodation; the applicant will be able to perform job related functions. This type of request may be made of all applicants in the same job category regardless of disability. This request may also be made of an applicant whose known disability may interfere with or prevent the performance of a job related function, even if the request is not made of all applicants in the job category.

For example, an employer may ask an individual with one leg who applies for a position as a home washing machine repairman to demonstrate or explain how, with or without reasonable accommodation, he or she would be able to transport themselves and their tools down basement stairs. However, the employer may not inquire as to the nature or severity of the disability or ask how the individual lost the leg or whether the loss of the leg is indicative of an underlying impairment.

On the other hand, if the known disability of an applicant will not interfere with or prevent the performance of a job related function, the employer may only request a description or demonstration by the applicant if the request is routinely made of all applicants in the same job category.

For example, it would not be permitted for an employer to request that an applicant with one leg demonstrate their ability to assemble small parts while seated at a table, if the employer does not routinely request that all applicants provide such a demonstration.

After an applicant has inquired about obtaining a reasonable accommodation, it is permissible to ask the applicant what he or she will require to perform the position.

An interviewer **must not ask** about the nature or extent of an applicant's disability during the pre-employment interview.

Sample Interview Questions

Use the following as guidelines and make them fit your particular situation.

About the Job

- Why did you apply for this position?
- This position requires you work some evenings and some weekends. Are you able to work those hours?
- Tell me about your attendance record at your last job.

Applicant's work experience

- Tell me about your current job. What are you responsible for? What's a typical day like?
- What did you enjoy most/least about your last (or current) job?
- What were the biggest pressures on your last job?
- Why did you leave your last job? **or** Why do you want to leave your current job?
- If I asked your boss to evaluate your performance, what would he/she say—strengths & weaknesses?
- Describe the best/worst manager you ever had.

Communication skills

- What type of person is the hardest for you to get along with?
- Tell me about your experience in working on teams.
- What did you contribute to the team?
- How important was communication and interaction with others on the job?

Conflict/Persuasion skills

- Have you ever been in a dispute with a supervisor/co-worker? What was it about and how was it resolved?
- Tell me about a time you came up with a new method or idea, how did it get approved and implemented?
- I would be interested to hear about an occasion when your work or an idea was criticized.

Education and Training

- What subject did you do best in? Why?
- What subject did you have the most trouble with? Why?

- What subject did you like/dislike the most? Why?
- What skills did you learn in school that will help you on this job?
- What kinds of skills were acquired as a result of your training?

Personal Traits

- What makes a job enjoyable for you?
- What qualities would you bring to this job that others would not?
- How do you define doing a good job?
- Tell me about a time when you conformed to a policy with which you disagreed.
- For what have you been most frequently criticized?

Personal Motivation

- What has been your greatest accomplishment in a work environment and why?
- Give me an example of a time when you went above and beyond the call of duty to get something done.
- What motivates you to put forth your greatest effort?
- What have you learned from your mistakes?
- What did you find most frustrating on your last (or current) job?
- Why have you changed jobs so frequently?

ORIENTATION PROGRAMS

Many good employees are lost during the first few weeks or months on the job because of poor orientation techniques. It is important from the beginning to make the new employee feel a part of the organization. Starting off on the right foot with an employee may help reduce turnover, increase efficiency and lower production costs.

There can be several phases to the orientation process:

- ✎ The first day when all the initial paperwork is completed for payroll, benefits, bank policies, personnel records and other necessary data collection, which is usually conducted by Human Resources. If this paperwork is not completed within the first day, it should be done within the first three days.
- ✎ The briefing by the immediate supervisor on the basics of where everything is daily work schedule and work routines. In most cases, this should be done on the first day.
- ✎ The more thorough orientation program to the entire bank or division, including organizational structure, bank history, products and services, goals and self-image. Usually conducted by HR with the assistance of various division managers of the bank. This type of program may take place two weeks after hire or six months, depending on the number of new hires in the company and the logistics of getting all new hires together.
- ✎ On-going training and briefings by the immediate supervisor on the daily expectations and routines of the job. This should happen regularly. Implementing a 30-60-90 day review process for new employees is a good tool for ensuring this communication takes place.
- ✎ Pairing a new employee with a tenured employee in the same or similar job function and organizational level provides a peer resource for simple questions that the new employee may not wish to ask their new supervisor.

Items to Consider for Orientation:

- ✎ A personal welcome from HR representative, CEO, and/or Department Manager, etc. and introduction to peer 'buddy'—see above.

- ✎ Completion of necessary forms for payroll, personnel records, insurance coverage, data collection, etc.
- ✎ Basic information on the performance evaluation system, training programs and advancement opportunities.
- ✎ Review of employee insurance, retirement and leave benefits.
- ✎ Review the content of employee handbook and emphasize the importance of knowing and observing its provisions.
- ✎ Discuss subjects like parking, lunchroom, breaks, etc.
- ✎ Discuss pay policies, including when, how much, and in what form (check, cash, or direct deposit), incentive compensation or bonus plans.
- ✎ Discuss pay for holidays, overtime, shift differentials, etc.
- ✎ Explanation of the bank's:
 - History
 - Growth
 - Trends
 - Goals
 - Priorities
 - Products and services
 - Image
- ✎ How each part of the organization contributes to the overall goals – organizational charts.
- ✎ Describe the performance review system, with an emphasis on what is expected during the initial work period.
- ✎ Review of critical policies in handbook.
- ✎ Review of all insurance benefit programs, claim processes and where to get forms.
- ✎ Names and duties of co-workers.
- ✎ The department's major responsibilities and how they relate to the overall operation.
- ✎ Working hours, shift assignments, breaks, holidays and overtime policies.
- ✎ Where to find lockers, lunchroom, restrooms, elevators and stairs and a tour of the whole facility.
- ✎ What to do in case of illness or lateness.

- ✎ Details of job duties.
- ✎ Whom to see for information or help with problems.
- ✎ General policies such as dress code, safety requirements and responsibility for tools and supplies.
- ✎ Performance expectations during the initial work period.
- ✎ Facts on key managerial staff.
- ✎ Community relations, expectations and activities.

Use of Checklists

With the number of details and critical information that needs to be included in the orientation program, the use of a checklist by HR and/or the immediate supervisor ensures that each topic is covered. Checklists will:

- ✎ Reduce the possibility of a misunderstanding on information.
- ✎ Eliminate the guesswork that a manager may be tempted to substitute for fact.
- ✎ Provide a standard system of induction for newcomers.
- ✎ Ensure that all new employees receive complete and standard information.

Follow Up Regularly

The supervisor needs to follow up on a regular basis after the initial meetings to make sure all questions the employee might have about previous orientation information are answered and to discuss and review expectations.

30-60-90 Day Review

The supervisor should conduct appraisal interviews with each new employee on a regular basis, comparing the performance to date with the goals established earlier. The purpose of the 30-day and 60-day reviews is to give both parties a chance to make necessary changes in time for the 90-day review.

The 90-day review comes at the end of the *traditional probation period*, although it should not be described as a probation period to the employee. Some employees believe that they become “permanent” if they pass the probation period and then can no longer be considered an “at-will” employee.

Remember, a slow start may not necessarily indicate a performance problem. Some employees take longer to adjust than others. Goals should be set during the 30-day appraisal and given careful evaluation at the 90-day session. If performance remains inconsistent and unacceptable, you may have to consider termination or another 30-day training period.

INTERNAL TRAINING PROGRAMS

In addition to employee orientation programs, it is essential that organizations work to provide on-going training opportunities for their employees. Training should include information on specific products and services as well as an overview of their various features and benefits (sales training). Training should also include instruction on how to effectively utilize the data processing system. In addition, it is strongly recommended that supervisors receive training on managing and leading people on a regular basis. Certain training is required by law or regulation to be conducted on a regular schedule. An example is sexual harassment training.

COACHING, COUNSELING AND PERFORMANCE EVALUATIONS

Performance evaluation is a powerful tool for management control. Managers and supervisors need a systematic way of communicating work expectations to employees and to provide follow up. The foundation of effective performance evaluation is the relationship between supervisor and employee, and the performance evaluation process is virtually indistinguishable from the process of management. The evaluation process is a fundamental component of effective management..

Coaching and counseling is the ongoing process through the year that leads up to and provides the foundation for the performance evaluation process. Instead of avoiding difficult situations with employees and hoping they will go away, managers should address the issues in a timely manner. The underlying theme to all coaching, counseling and performance evaluations is to be honest, consistent and accurate in your discussions. Furthermore, the manager/supervisor should create an atmosphere where the employee feels they can ask for clarification or help in solving an issue—the essence of effective two-way communication.

The Five R's of Counseling

The Right Purpose:

- ☒ To strengthen, maintain or restore a working relationship.
- ☒ To motivate employees to achieve greater productivity.
- ☒ To resolve personality conflicts.
- ☒ To discipline an employee.
- ☒ To provide orientation counseling.

The Right Time:

- ☒ Don't intervene with counseling until it is necessary.
- ☒ Don't initiate a counseling session in an upset, frustrated or angry mood.
- ☒ Don't schedule a counseling session during peak workloads; just before lunch, the end of the day or a deadline.
- ☒ Don't set up a counseling session too far in advance.

The Right Place:

- ☒ Behind closed doors in a private office or conference room.

The Right Approach:

- ☒ Invite the person into the office or conference room without a lot of advance notice.
- ☒ Start the conversation quickly and don't beat around bush.
- ☒ State facts only; do not make accusations.
- ☒ Keep a calm, pleasant, subdued voice.
- ☒ Encourage the employee to talk.
- ☒ Don't rush.

The Right Techniques:

- ☑ **Directive** – The supervisor does most of the talking and draws a firm line on the direction the conversation will take. Advice or direction is being given. This technique is used:
- ✓ When there is a violation of bank policies or rules.
 - ✓ When mistakes need to be corrected.
 - ✓ When employee hostility can no longer be tolerated.

An example of directive counseling would be: “You have been keeping your bait money in the top drawer and gave it out by mistake this morning. It is the bank’s policy for tellers to keep their bait money in the bottom drawer and we expect you to comply with this policy starting today and going forward.”

- ☑ **Nondirective counseling**. The employee is encouraged to talk. This is a soft approach designed to bring out hidden problems and set a climate for free and constructive discussion. This technique is used:
- ✓ When an employee appears to have lost his/her touch or positive attitude over a sustained period of time.
 - ✓ To strengthen or restore a relationship.
 - ✓ To motivate an employee to greater productivity.

See the next page for an example of non-directive counseling.

Outline for Non-Directive Counseling Discussions (Work Improvement)

Describe current performance and desired performance. This step establishes the subject of the meeting. The employee should come away from this step having recognized that there's a performance problem. If necessary, you may tell the employee the consequences of continuing the current performance; that is, why improvement is necessary. Sometimes, the employee will recognize the problem immediately. Other times, when the employee doesn't understand the need for improvement, some discussion or elaboration may be needed.

Example: "Matt, I want to talk to you about your billing problem. Your error rate for billing is too high. It must come down to our standard rate. When clients get incorrect bills, they get annoyed and may take their business elsewhere."

Help employee decide on action plan. This step gets a firm commitment for improvement from the employee by asking for actions he or she can take to improve. You also may need to encourage the employee as he or she analyzes the problem and develops an action plan.

Example: "What do you think you can do to bring down your error rate?"

Examples: "Well, when do you think you tend to make errors?" "Can you think of anyone you could get help from?"

Set up progress-review checkpoints. This step lets the employee know how and when you'll track performance, and how he or she will know if improvement is taking place. These checkpoints may be decided upon by both the employee and the supervisor, or by just the supervisor.

Example: "I'll check on your progress by spot-checking your bills, say, twice a week. Then, I'll let you know how I think it's going. If the level of errors is down by the next monthly report, we'll know the plan is working."

Discuss possible obstacles and how to overcome them. This step prevents the employee from becoming discouraged and abandoning the plan at the first obstacle.

Example: "What possible problems do you see in trying to check unusual bills with the other clerks?"

Summarize action plan. This step ensures that both parties understand the decisions made in Steps 2, 3, and 4. It may be done by either the supervisor or the employee. If the plan of action is complex, it may be in written form.

Example: "To make sure we're both clear about what's going to happen, I'd like you to summarize how you're going to decrease your billing error rate."

Tips for Conducting Effective Performance Evaluations

1. **Be Prepared** – Collect the work samples and review the data necessary to complete the performance review form. Complete all parts of the form and include written comments to support or clarify a rating. Written comments provide much better feedback than just a circled or checked rating. Thorough preparation will help in conducting a more meaningful performance discussion.
2. **Consider the Full Rating Period** – Don't let recent performance incidents influence the entire review. Remember the full rating period is 12 months. Performance should be rated for 12 months.
3. **Objective Work Data vs. Subjective Criteria** – Give the employee examples using objective work criteria whenever possible. Objective criteria include quantity of work, quality of work, and completion of specific job related goals. Subjective criteria include adaptability, bearing, demeanor, manner, attitude and opinions and should be discussed only if these issues appear to be affecting the objective work criteria.
4. **Plan the Discussion** – Think through the discussion with the employee using the review form to guide the discussion. Think about how the employee might react to the performance ratings and be prepared to respond. If feedback is provided to the employee on a regular basis during the review period through coaching and counseling, there should be no surprises. The performance discussion will be a review of issues already discussed with the employee.
5. **Follow Bank Procedures and Get Approvals** – Follow bank guidelines and definitions for performance ratings. Get required approval from upper management or the human resources department. Many banks require that performance reviews and pay adjustments be approved by upper management prior to a discussion with the employee.
6. **Distinguish Between Levels of Performance** – Mark the ratings accurately on the different performance issues: poor, average or excellent. Everyone has strengths and weaknesses in different areas, so it is unlikely that all duties will be performed at the same level.
7. **Notify Employee** – Notify the employee in advance to schedule the performance review discussion. This will promote more open and positive communications and lets the employee know that the performance discussion and pay issues will be reviewed on a timely basis. It also gives the employee time to prepare their self-evaluation.

8. **Use Work Samples** – Work samples help illustrate the employee's performance, promote more objective evaluations and help justify performance ratings. Work samples focus the discussion on specific job output issues. Constructive suggestions on how to perform tasks more efficiently helps to minimize emotional confrontations.
9. **Allow for Adequate Time** – To have a meaningful discussion, allow adequate time to discuss job expectations and the employee's performance. As a general guide, performance discussions with employees should take approximately one hour. The key factor is to allot sufficient time to discuss job requirements, rate the employee's performance, and suggest ways to improve and to elicit employee response.
10. **Avoid Interruptions** – Pick a time and place where interruptions will be avoided. A private office or conference room, not in a cubicle where others can overhear is ideal. It is distracting to have other employees walking by or coming in to an office during a performance discussion. Telephone calls also disrupt the performance discussion. This is not the time to take the employee to lunch.
11. **Describe the Process** – Explain to the employee what will happen during the performance review discussion. This will help put the employee at ease and reduce some of his or her questions. It also helps the supervisor direct the discussion by defining what issues will be discussed. Advise the employee that salary will not be discussed during the performance evaluation.
12. **Be Friendly, Yet Businesslike** – The tone of the performance review discussion should be friendly, positive and businesslike. Avoid joking or nervous laughter during the discussion. Encourage the employee to relax. If the employee has serious or continuing performance problems, the supervisor's manner should be firmer to convey the seriousness of the employee's poor performance.
13. **Stay On Track** – Keep to the subject at hand. Do not let the discussion wander into unrelated areas. Thorough preparation will help the supervisor discuss specific performance issues and minimize unrelated discussions.
14. **Follow the Appraisal Form** – First, identify the performance factor, then the desired performance norm, and then the rating of the employee's performance. When results of the employee's work are compared to the expected norm, issues can be discussed on a more objective basis. Consider utilizing "Below Expectations, Meets

Expectations and Consistently Exceeds Expectations.” Avoid personal criticisms or insulting remarks.

15. **Praise Achievements** – Recognition and praise for achievements is an important part of the performance review process. Giving credit, when due, helps the employee know his or her efforts are recognized. Recognition is an effective motivator.
16. **Identify Deficiencies** – Poor performance must be clearly marked on the performance review form and discussed with the employee. Do not “beat around the bush” with vague generalities. Give specific examples of performance problems and then identify the desired level of performance. The employee will assume that performance is satisfactory unless the problems are specifically identified. However, avoid unreasonably harsh treatment of the employee to cause resignation. Deal with deficiencies in a timely, accurate and honest manner.
17. **Sandwich Technique** – A technique called the sandwich technique can be helpful when discussing performance problems. With this technique, the supervisor first compliments the employee on an aspect of good performance, then identifies a performance deficiency, and then follows up with another comment about good performance. This technique softens the effect of discussing poor performance. Avoid overusing the technique. In cases of serious or repeated poor performance, be sure to describe the problem specifically and specify the desired performance.
18. **Maintain Professionalism** – The performance review discussion should be constructive and non-confrontational; pleasant and professional; not a contest of personalities; with an element of empathy rather than emotion. Focus on job tasks, results and accomplishments. Personal attacks on the individual are likely to arouse an argumentative response or result in barriers to communication.
19. **Offer Improvement Suggestions** – Offer specific suggestions on how to improve performance, particularly when identifying performance problems. Performance improvement is not likely to occur merely by identifying the employee’s mistakes. It will more likely occur when the employee understands proper work techniques and expected performance goals.
20. **Set Performance Standards and Objectives** – Defining measurable performance criteria is key to getting improved performance. By defining performance criteria, the employee has a target to work

toward. Employees should have input in this process. These targets should be achievable with some extra effort and also provide the basis to evaluate performance during the next rating period.

21. **Discuss Performance** – The performance review process should be a discussion between the supervisor and employee. It is not effective when the appraisal form is handed to the employee to be read or when the supervisor just reads it to the employee. Talk through the responses and ask the employee for their input.
22. **Don't Discredit the Bank** – Sometimes a supervisor may make a commitment or promise a pay raise or tell the employee that a recommended pay raise was cut by management. When a supervisor discredits the bank or management in this way, it reflects poorly on the supervisor and reduces his/her credibility in the view of the employee. Avoid this by making sure the pay raise or promotion has the necessary approval before communicating it to the employee.
23. **Encourage Employee Comments** – A primary objective of the performance review is communication between employees and supervisors. Encourage employees to react to the performance ratings. The employee may agree, disagree, or offer reasons (sometimes excuses) for performance problems. Listen to and consider the employee's comments.

Setting Goals

Part of the ongoing process of performance evaluation is establishing performance expectations or measurements – goals for employees to attain.

Performance planning or the establishment of standards and objectives takes place at the beginning of the performance period. The employee and the supervisor discuss and agree on the work to be accomplished. Throughout the performance period, the employee performs the tasks and the manager monitors the performance. Follow up and coaching meetings should take place between the employee and the supervisor, and as a result, the employee should continue to grow and improve in the position. At the end of the evaluation period, the supervisor will complete the performance evaluation form and then conduct the evaluation meeting with the employee.

Standards and objectives are established at the beginning of the performance evaluation period to measure employee performance against.

Standards are used in situations in which the same measurement criteria can be applied to all employees holding the same job. They don't change from one employee to another or from one performance period to another.

Standards are typically established for non-exempt positions. Examples of standards are:

- Balances cash drawer in five minutes or less.
- Thanks each customer for his/her business at the end of a transaction.

Objectives refer to individual goals that are set separately for each employee in a job category and usually describe results or outcomes the employee is expected to accomplish. For example: two employees with the title of Management Information Supervisor may have slightly different jobs. Individual objectives may take into account the difference in employees' jobs, abilities, work situations and past performance. Therefore, they are usually established through a discussion between the employee and the supervisor and may change from one performance period to another.

Whether you are setting job standards or establishing individual objectives with an employee, there are four steps to establishing a well thought out standard or objective with a high likelihood of being achieved. They are:

1. Determine the job tasks and/or responsibility.
2. Decide what to measure in terms of quantity, quality and timeliness.
3. Establish the level to be attained for each area to be measured.
4. Test the standard and/or objective for MARC—whether it is:

M = Measurable

A = Achievable

R = Relevant

C = Controllable

A standard/objective should be expressed in the following terms:

- ☞ End Result Oriented – what will the observable differences be if the standard is accomplished?
- ☞ Specific – quantity, quality and cost (budget limitations).

- ☞ Time frame – specify when or how long.
- ☞ A standard that is fair is one which describes the satisfactory level of performing a work requirement.
- ☞ Standards set for each job position should be realistic, not ideal.

SALARY ADMINISTRATION AND INCENTIVE COMPENSATION

Types of Compensation

Flat rate – a single rate of pay is established for each job. Performance and seniority do not influence or affect the rate of pay.

Time-based – length of time on the job determines the salary. The more seniority, the higher the salary. Generally, there will be an upper limit for any given position. Once the employee reaches that upper limit, s/he could earn a higher salary by obtaining training or credentials needed to move into a higher pay grade.

Performance based – or merit pay. Individual performance is the basis for the amount of pay increases.

Productivity based – or piece rate systems. Production by the employee determines the level of pay.

Competency- or skill based – the worker with the higher level of skills or knowledge receives a higher level of pay. Job attributes are not a factor.

Salary administration programs and incentive compensation plans take on many different forms and can be developed in many different ways. Typically, a pay structure is developed to bring internal equity to the salary administration program, as well as external equity to ensure competitive wages with the market. One of the more common methods for developing a salary administration program is as follows.

Job descriptions are used for all positions to point factor the positions. Point factoring involves reviewing each position description and determining how it would be valued in each compensable factor.

Compensable factors may include such things as: education level, years of experience, supervisory/management responsibilities, independence of action or judgment, equipment used, internal vs. external contacts, decision making responsibilities, etc.

An example of the point factoring under education would be:

Education Level Required for the Position	Number of Points Assigned
Less than GED	0
GED/High School	1
HS/some College	3
Assoc. Degree	5
Assoc. Degree +	6
BA/BS	8
BA/BS +	9
MS	11
MS +	12
Ph.D.	15

Once each position (not person) is awarded points in each compensable factor, the points are totaled for each position and positions are put into a pay grade.

Position	Pay Grade
Teller Supervisor	10
Lead Teller	8
Senior Teller	6
Teller	5
Teller Trainee	3

When job openings are posted, the pay grade should be included. This will give employees the opportunity to determine whether the open position would be a promotion, demotion or lateral move in relation to their current position and pay grade.

A pay grade has a spread of points and may include several different types of jobs. Each pay grade is assigned a salary range based on current market data for similar positions. Employees are then paid within the minimum and maximum of each salary range for the position they hold. Position within the pay grade is determined by individual performance and knowledge, skills and abilities above the minimum required. Salary ranges should be reviewed every one to two years to ensure they stay competitive with the market.

Effective Salary Administration

Effective salary administration means evaluating an employee's skill level and performance to determine where the employee should be paid within the salary range for a specific pay grade. An example would be:

Salary Ranges			
Pay Grade	Minimum	Mid-Point	Maximum
5	\$20,000	\$22,500	\$25,000

Employees evaluated overall as “meeting” the expectations for their Grade 5 position should be in the \$21,000 to \$23,999 range. Only employees evaluated a “consistently exceeding the expectations” for their Grade 5 position, should be in the \$24,000 to \$25,000 range.

Incentive Compensation

The term “incentive compensation” is sometimes used to mean commissions, bonus programs, piece-rate systems, profit sharing and Employee Stock Ownership Plans (ESOP). However, they can be very different.

Commissions are typically paid to an individual as a percentage of the amount of goods sold or the dollar volume sold.

Bonuses are typically given to a group of individuals to reward overall their extra efforts, higher productivity, or departmental or bank goals.

Piece-rate plans pay wages to individuals based on the number of units produced or processed. Because a bank's products are financial, care must be given to create commission-based sales plans that avoid ‘gaming’ the system. For example, paying a commission on ‘new accounts opened’ could incent an ambitious sales person to churn accounts by closing active accounts and opening new ones. A better metric might be ‘net new accounts’ opened.

Profit sharing programs distribute a portion of the bank's profits to all eligible employees.

Incentive compensation is typically tied to goals established over and above normal duties and the standard level of performance expectations. Incentive compensation plans generally are based on annual or multi-year goals, but may be divided into performance time periods that are no less than a quarterly basis.

Designing Incentive Plans

- Employees should see a direct connection between their level of performance and the reward. Avoid 'Santa Claus' bonuses that are surprises and awarded at the whim of management. Since the employee cannot do anything to affect the bonus amount, there is no incentive present. In fact, when the bonus is lower than prior year's or non-existent in a bad earnings year, it may have the effect of creating a culture of mediocrity.
- Whether the incentive is bank wide, within a department, or set for an individual, reward what is important to the bank, not just what is easy to measure, although measurement and the ability to incent specific performance behavior is very important.
- Pay incentives separate from base salaries. If salary and incentive are paid together, the incentive is lost and becomes part of the base and expected rather than earned.
- "Golden Handcuffs" are created when long and short term incentives are paid in an overlapping fashion. Because of this overlapping method of payment, it is difficult for high performers to leave and miss an incentive payment.
- Tailor the incentive to fit the individual bank's culture, strategies, performance expectations, etc.

Other Types of Compensation

- Perks – Typically for executive level employees, includes such things as: car, country club membership, reserved parking places, dry cleaning, dining club membership, tickets for civic or sporting events.
- Golden parachutes – provides continued salary and benefits or lump sum payout in the case of a merger or acquisition by another company.
- Equity Compensation – provides an executive with the opportunity to acquire company stock at a favorable price. Two common types of equity compensation are Stock Options, which allow the recipient to purchase shares at a certain price within a certain period of time, and Restricted Stock, which awards equity shares where full ownership generally is based on the achievement of certain financial goals.

SUMMARY

1. **The organizational structure, management styles and corporate work environments are changing almost daily. Centralized and decentralized styles both serve a role in today's workplace. However, with virtual offices, work teams,** and the demands of the new work force, companies are being forced to look at innovative ways of structuring reporting relationships structures in order to attract and retain the quality of employee they desire, including a version of the blended model discussed above which combines the benefits of centralized and decentralized styles.
2. The legal liability for companies related to the human resource asset is constantly changing and increasing, forcing more and more organizations to look at the way it manages its most important asset. It is important to have ongoing internal or external employment law expertise available to keep current with constantly changing laws and regulations.
3. Employee handbooks, job descriptions and performance evaluations are tools to be provided to employees giving them guidance on what the expectations are and the measurement that will be used by management in determining whether expectations are being met. The more comfortable employees are with their role in the organization, the more comfortable they will be in providing customers with the level of service they deserve. These documents should be reviewed regularly and updated on an as-needed basis to ensure they are current with all applicable laws and regulations. As a practical matter, a loose leaf and/or electronic employee handbook facilitates the need for currency.
4. Effective recruiting requires that the supervisors and managers get the best information possible when interviewing candidates to determine whether their skills and abilities match those needed. It also helps determine whether the candidate will be a good match for the corporate environment. Turnover is expensive and making the right choice the first time benefits everyone. These principles hold true in periods of both low and high unemployment.
5. Providing employees with a reward system that encourages top level performance and going above and beyond creates the environment for motivating employees to do their best and continue to reach new heights. High performing employees who feel valued for the job they do result in higher levels of productivity, better quality production and service, better customer service and

higher profitability. Note that a reward system goes well beyond compensation and benefits. Tending to the work atmosphere, training, open communication and teamwork, to name a few 'intangibles', are all critically important to create a high performance culture. If employees (at all levels) don't feel valued or appreciated, no amount of money will motivate them.

Appendix

- **Exhibit 1 – Summary of Exempt vs. Non-Exempt Employees**
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- **Glossary of Terms**

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EXHIBIT 1

Summary of Exempt vs. Non-Exempt Employees

The terms “exempt” and “non-exempt” refer to the overtime and minimum wage provisions of the Fair Labor Standards Act of 1938, as amended and applicable state regulations (most states, if they have provisions, follow the federal rules, but employers need to verify their individual state laws). Paying a white collar employee a “salary” or by the hour is irrelevant. What exempts an employee from the overtime provisions is the nature of the job – his/her duties and responsibilities – not how the worker is paid or what their title may be.

There are five main categories of employees that are considered exempt: executive, administrative, professional, outside sales and computer professionals.

Executive Employees

Under the regulations that became effective January 1, 2020, workers are employed in an executive capacity if they are compensated on a salary basis at a rate of at least \$684 per week. In addition, the workers’ job duties must meet all three of the following criteria:

1. **Their primary duty consists of the management of the enterprise in which they are employed, or of a customarily recognized department or subdivision of it.** Examples of the “management of the enterprise” include interviewing, selecting, and training employees; directing the work of employees; handling employee complaints; determining the type of materials, supplies, machinery, equipment, or tools to be used or merchandise to be bought; planning and controlling the budget; and monitoring or implementing legal compliance measures.

A “customarily recognized department or subdivision” must have a permanent status and continuing function, as distinguished from a “mere collection of employees” assigned sporadically to a specific job.

2. **They customarily and regularly direct the work of two or more full-time employees or their equivalent.** For example, one full-time employee plus two half-time employees equal two full-time employees.
3. **They have the authority to hire or fire other employees, or their suggestions and recommendations are given particular weight concerning the hiring, firing, advancement, promotion, or any other change of status of other employees.** Factors to consider in determining if suggestions and recommendations are given “particular weight” include whether it is part of the employee’s job duties to make the suggestions and recommendations, the frequency with which they are made or requested, and the frequency with which they are relied on.

All executive employees either have the authority to hire and fire or be regularly involved in these types of decisions.

Administrative Employees

Under the regulations implemented in 2020, workers are employed in an administrative capacity if they are compensated on a salary or fee basis at a rate of at least \$684 per week, and their work meets both of the following requirements:

1. **Their primary duty consists of the performance of office or non-manual work directly related to the management or general business operations of their employers or of their employers' customers.** To meet the “work directly related to the management or general business operations” standard, an employee must perform work directly related to assisting with the running or servicing of the business. Examples include work in functional areas such as human resources, tax, finance, accounting, budgeting, auditing, insurance, computer network and database administration, and legal compliance.
2. **Their primary duty includes the exercise of discretion and independent judgment with respect to matters of significance.** This standard requires the comparison and evaluation of possible courses of conduct and acting or making a decision after the various possibilities have been considered. “Matters of significance” refer to the level of importance or consequence of the work performed. Factors to consider include whether the employee has authority to formulate, affect, interpret, or implement management policies or operating practices; has authority to commit the employer in matters that have significant financial impact; and has authority to waive or deviate from established policies and procedures without prior approval.

These regulations contain several examples of jobs that may meet this exemption, depending on their specific job duties, including human resources managers, executive or administrative assistants to business owners or senior executives, and purchasing agents with authority to bind the employer on significant purchases. These regulations also contain an exemption for employees who perform administrative functions directly related to academic instruction or training in an educational establishment.

Professional Exemption

Workers are employed in a professional capacity if they are compensated on a salary or fee basis at a rate of at least \$684 per week and their primary duty meets either the “learned professional” or the “creative professional” criteria.

1. **Learned professional.** The work requires knowledge of an advanced type in a field of science or learning customarily acquired by a prolonged course of specialized intellectual instruction. The work must be predominantly intellectual in character and includes work requiring the consistent exercise of discretion and judgment.

A “Field of science or learning” includes law, medicine, theology, accounting, engineering, teaching, various sciences, pharmacy, and other similar occupations. “A prolonged course of intellectual instruction” requires specialized academic training that is a standard prerequisite for entrance into a profession, such as an “appropriate” academic degree. Examples of exempt professionals include registered or certified medical technologists, registered nurses (not licensed practical nurses), dental hygienists, physician assistants, accountants, chefs, and funeral directors.

Any employee actively employed by an educational establishment and who is engaged in teaching, tutoring, instructing, or lecturing in the activity of imparting knowledge also is an exempt professional.

Doctors and lawyers do not have to be paid on a salary or fee basis in order to meet this exemption if they hold a valid license or certificate and they are actually engaged in professional practice. This exemption includes medical interns and residents who have the appropriate academic degrees for the general practice of medicine. In addition, teachers also are exempted from the salary or fee basis requirement if they are actively employed in an educational establishment, regardless of whether they have a certificate.

2. **Creative professional.** The work requires invention, imagination, originality, or talent in a recognized field of artistic or creative endeavor. For example, actors, musicians, composers, conductors, painters, cartoonists, essayists, novelists, screenplay writers, and certain journalists generally meet this requirement.

Primary Duty

The executive, administrative, and professional exemptions all specify that the employee’s “primary duty” meet the exemptions’ requirements. Primary duty is defined to mean the principal, main, major, or most important duty the employee performs. Factors to consider include the relative importance of the exempt duties as compared with other types of duties, the amount of time spent performing exempt work, and the employee’s relative freedom from direct supervision.

Computer-Related Employees

To be eligible for the computer-related exemption, workers must be employed in computer systems analysis, programming, software engineering, or other related jobs requiring similarly skilled workers in the computer field. In addition, they must be compensated either on an hourly basis at a rate of at least \$27.63 an hour or on a salary or fee basis of at least \$684 per week. Further, their primary duties must consist of one or more of the following:

1. The application of systems analysis techniques and procedures (including consulting with users) to determine hardware, software, or system functional specifications;
2. The design, development, documentation, analysis, creation, testing, or modification of computer systems or programs (including prototypes) based on and related to user or system design specifications;
3. The design, documentation, testing, creation or modification of computer programs related to machine operating systems; or
4. A combination of the duties listed above, the performance of which requires the same level of skills.

Outside Sales

Workers are considered employed in an exempt outside sales capacity if they meet both of the following criteria set out in the regulations:

1. Their primary duty is either (a) “making sales” as defined by the FLSA or (b) obtaining orders or contracts for services, or for the use of facilities, for which a consideration will be paid by the client or customer.
2. They are customarily and regularly engaged away from the employer’s place or places of business in performing their duties.

Highly Compensated Employees

There is a special exemption for “highly compensated” employees. Workers are considered exempt if they meet all of the following three criteria:

1. **They earn total annual compensation of \$107,432 or more, which must include at least \$684 paid per week on a salary or fee basis.** Total annual compensation may include commissions, non-discretionary bonuses, and other non-discretionary compensation earned during a 52-week period.
2. **They customarily and regularly perform at least one of the exempt duties or responsibilities of an executive, administrative, or professional employee.**
3. **Their primary duty includes performing office or non-manual work.** Highly compensated production workers, carpenters, plumbers, construction workers, ironworkers, etc., will not qualify simply because they earn more than \$107,432 a year.

Salary Basis Test

An exempt employee is considered to be paid on a salary basis if he regularly receives a predetermined amount of compensation each pay period on a weekly, or less frequent, basis. This amount cannot be subject to reduction because of variations in the quality or quantity of work performed. In addition, an exempt employee must receive the full salary for any week he performs any work without regard to the number of days or hours worked, although a few exceptions apply (discussed below). Deductions may not be made for absences caused by the employer or by the operational requirements of the business.

Deductions may be made in the following, limited situations:

1. If the employee is absent from work for one or more full days for personal reasons (other than sickness or disability, discussed below);
2. For absences of one or more full days due to sickness or disability if the deduction is made in accordance with a bona fide plan, policy, or practice of providing compensation for salary lost due to illness;
3. To offset amounts employees receive as jury or witness fees, or for military pay;
4. For penalties imposed in good faith for infractions of safety rules of major significance; or
5. For unpaid disciplinary suspensions of one or more full days imposed in good faith for workplace conduct rule infractions. This disciplinary deduction provision was added in the new regulations.

In addition, you are not required to pay the full salary in the initial or terminal week of employment, or for weeks in which an exempt employee takes unpaid leave under the Family and Medical Leave Act.

The regulations also include a section addressing improper deductions. If you are considered to have an “actual practice” of making improper deductions from exempt employee pay, you may lose the exemption for all employees who work in the same job classification and are under the manager responsible for the deductions.

However, the regulations also create a “safe harbor” that allows you to preserve your exemptions if you inadvertently make improper deductions or if the deductions are isolated. This safe harbor applies only if you (1) have a “clearly communicated” policy that prohibits improper deductions and includes a compliant mechanism, (2) reimburse affected employees, and (3) make a good faith effort to comply in the future.

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EXHIBIT 2
Community Bank
Sample Job Description

Job Title:	Loan Review and Compliance Officer
Employee Name:	Pat Smith
Location:	Main Office
Shift:	8:00 a.m. – 5:00 p.m.
Division:	Lending
Salary Level:	09
Department:	Lending
Reports to:	Karen Johnson, CEO
FLSA Status:	Exempt
Prepared By:	Pat Smith
Prepared Date:	03/01/2026
Approved By:	Karen Johnson
Approved Date:	03/01/2026

SUMMARY

Under the administrative direction of the Bank's CEO and the functional direction of the Board of Directors responsible for the internal, independent review of the bank's loan portfolio on a continuing basis in order to prevent or reduce loan losses; assures documentation is in compliance with loan policy and state and federal regulations; assists in the detection of deterioration in loan quality; assists in recommendations of collection activity; assists in evaluation of loan proposals; reviews and ensures compliance policy objectives are met.

ESSENTIAL DUTIES AND RESPONSIBILITIES:

- Performs the full range of supervisory/managerial duties of the Loan Review and Compliance function including complete adherence to all policies and practices of the Bank and its applicable regulatory and governmental agencies.
- Responsible for implementing a system of credit analysis and control of quality for all loans made; ratings assigned quarterly in conjunction with the loan loss reserve review.
- Examines files systematically for adequacy of credit and collateral documentation, regulatory compliance, and loan policy conformance; reviews technical exceptions and deficiencies; reports continued outstanding exceptions to the Board of Directors.
- Prepares written analyses on all large loans, large aggregate lending to one borrower, complex loans, and weak loans for the benefit of the officer servicing the loans; assists in evaluating merits of new loan proposals.

- Identifies problem loans, develops and maintains a “watch loan list” that is reviewed quarterly with the Board of Directors; discusses the status of problem loans with the Senior Commercial Officer and may make recommendations regarding the handling of those loans; identifies loans meeting non-accrual or charge-off criteria.
- Analyzes the adequacy of the allowance for loan and lease losses for discussion with the Board of Directors.
- Prepares appropriate monthly/quarterly/annual Board of Directors reports.
- Prepares periodic studies of various portions of the loan portfolio including past due reports, concentrations of credit, etc., for the benefit of supervisory and executive officers.
- Provides overall direction to the Bank’s compliance activities. Chairs the Compliance Committee meetings. Assists Compliance Committee members in their effort to initiate and maintain compliance in their assigned areas. Coordinates regulatory compliance examinations.
- Based on compliance or loan reviews and the dissemination of other pertinent materials, evaluates and recommends policy or procedure changes.
- Serves on Asset/Liability Committee.
- Provides assistance to co-workers with difficult internal problems or customer inquiries or problems.
- Assists in the development of manuals and supporting documentation to accomplish tasks/duties inherent in this position.
- Maintains education and professional expertise through attendance at job related seminars, conferences and workshops and involvement in professional civic and community groups in leadership positions.

NON-ESSENTIAL DUTIES AND RESPONSIBILITIES:

- Performs inventory of safe deposit boxes when required.

SUPERVISORY RESPONSIBILITIES:

- Directly supervises one non-supervisory employee serving as administrative assistant to the department.
- Carries out supervisory responsibilities in accordance with the organization’s policies and applicable laws.

- Responsibilities include interviewing, hiring, and training employees; planning, assigning and directing work; appraising performance; rewarding and disciplining employees; addressing complaints and resolving problems.

KEY CONTACTS:

- Reporting Relationships: Reports to CEO and Board of Directors
- Internal: Has frequent contact with the Senior Credit Officer, Senior Commercial Officer, Senior Retail Officer and other loan officers.
- External: Has periodic contact with external auditors and examiners. Has occasional contact with regulators and legal counsel to determine interpretations of requirements.

QUALIFICATIONS

- To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. The requirements listed below are representative of the knowledge, skill, and/or ability required. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

EDUCATION and/or EXPERIENCE

- Bachelor's degree (B.A.) in business from four-year college or university; or three to four years' bank loan review and/or compliance experience and/or training; or equivalent combination of education and experience.

LANGUAGE SKILLS

- Ability to read, analyze, and interpret general business periodicals, professional journals, technical procedures, or governmental regulations.
- Ability to write reports, business correspondence, and procedure manuals.
- Ability to effectively present information and respond to questions from groups of managers, clients, customers, and the general public.

MATHEMATICAL SKILLS

- Ability to calculate figures and amounts such as discounts, interest, commissions, proportions, percentages, area, circumference, and volume.

REASONING ABILITY

- Ability to solve practical problems and deal with a variety of concrete variables in situations where only limited standardization exists.
- Ability to interpret a variety of instructions furnished in written, oral, diagram or schedule form.

OTHER SKILLS AND ABILITIES

- Must be able to operate PC, payment calculator, copy machines and telephone switchboard.
- Uses Jack Henry & Associates, Bankers Systems Loan Processing and Microsoft Office software.

Position requires the ability to attend meetings before or after normal business hours and may require occasional overnight travel.

CERTIFICATES, LICENSES, REGISTRATIONS

- Must have valid driver's license, credit life and A&H insurance licenses.

PHYSICAL DEMANDS

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee is regularly required to sit and talk or hear. The employee frequently is required to stand and walk. The employee is occasionally required to use hands to finger, handle, or feel and reach with hands and arms. The employee must occasionally lift and/or move up to 25 pounds. Specific vision abilities required by this job include close vision, distance vision, peripheral vision, depth perception, and ability to adjust focus.

WORK ENVIRONMENT

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee is occasionally exposed to outside weather conditions. The noise level in the work environment is usually moderate.

COMMENTS

This position may require work before or after normal business hours to meet with clients or attend bank meetings. The position may require some overnight travel to attend conferences or education programs.

GLOSSARY OF HUMAN RESOURCES TERMS

AFFIRMATIVE ACTION PLAN (AAP). A detailed document outlining a company's employment plans in order to remedy results of past discrimination and/or to ensure equal opportunity in the future. Employers with 50 or more full-time employees are required to have one plan for minorities and females, one plan for veterans and one plan for disabled employees.

AGE DISCRIMINATION IN EMPLOYMENT ACT (ADEA). Prohibits discrimination in employment of persons age 40 and over and eliminates the age at which employees can be forced to retire, except in executive level positions.

AMERICANS WITH DISABILITIES ACT (ADA). Provides that employers cannot discriminate against "qualified disabled persons" because of the disability in any aspect of the employment relationship and requires employers to make reasonable accommodations for a qualified individual with a disability as long as the "reasonable accommodations" do not create an "undue hardship" on the employer.

BEHAVIORAL INTERVIEW. Based on the premise that past performance is the best predictor of future performance; focuses on how the candidate actually handled situations in the past.

BONA FIDE OCCUPATIONAL QUALIFICATION (BFOQ). A legitimate reason or actual qualification of performing the job that allows an employer to discriminate against persons who are in a protected class. For example, it may be legal to require an employee to be a member of a particular religion to work in a religious order.

BONUS. Compensation given to a group of individuals for the overall efforts, higher productivity, or attainment of department or bank wide goals. Individual efforts towards attainment of the bank wide goals may or may not play a role in determining the amount of bonus given to each individual. An individual's performance plan ideally contains goals for which s/he is individually responsible and team, department or bank wide goals, providing incentive for individual excellence while contributing to goals and objectives of the larger group.

BUSINESS NECESSITY. A term used by the courts to describe a possible justification for unintentional discrimination. The adverse impact of an otherwise neutral personnel practice may be justified by an essential business need.

CAREER PATH. A normal progression from a trainee position, to a trained position, to a senior position within a specific work area. An example would be Teller Trainee, Teller, and Senior Teller.

CENTRALIZED MANAGEMENT. Most of the authority is concentrated with top management.

CIVIL RIGHTS ACT OF 1964. Title VII came out of this making various forms of discrimination illegal. Established the Equal Employment Opportunity Commission.

CIVIL RIGHTS ACT OF 1991 (CRA). Shifts the burden of proof to the employer to justify a practice claimed to have a disparate impact, by showing that the practice was required by business necessity. Enables the plaintiff to collect compensatory damages in addition to punitive damages, as well as the ability to demand a jury.

COLLECTIVE BARGAINING AGREEMENT. An agreement resulting from the process by which wages, working conditions, etc., are negotiated and agreed upon by the union and employer for all employees under the union's jurisdiction.

COMMISSIONS. A percentage of the amount of goods sold or the dollar volume sold.

COMMON LAW THEORIES. Inherited from our British roots, says that custom and usage can be enforced just as if they were laws, even if not specifically found in codified written laws.

COMPARABLE WORTH. The theory that jobs requiring comparable knowledge, skills, and abilities should be paid similarly.

COMPENSATORY DAMAGES. Payment awarded for emotional pain, suffering, inconvenience, mental anguish, loss of enjoyment of life, etc.

CONSOLIDATED OMNIBUS BUDGET RECONCILIATION ACT (COBRA). Requires employers who provide health care benefits to offer continued group coverage to employees or family members when a "qualifying event" occurs, such as termination of employment, death of a spouse or parent, eligibility for Medicare, divorce, college graduation, or marriage of a dependent.

CONSTRUCTIVE DISCHARGE. Is a termination of employment that is the result of making the employee's working conditions so intolerable that the employee feels compelled to leave. This is an exception to the "Employment-at-Will Doctrine".

CONSUMER CREDIT PROTECTION ACT. Limits the amount of wages that can be garnished (generally limited to 25% of disposable pay).

CONSUMER CREDIT REPORTING REFORM ACT (CCRRA). Requires employers to obtain written authorization from employees and/or candidates for employment before obtaining a consumer report and/or an investigative consumer report. Before taking any adverse employment action based on the information, employers must provide notice of the adverse action and a copy of the report to the applicant along with a summary of the consumer's rights under the Fair Credit Reporting Act of 1970 (FCRA).

CONSUMER REPORT. Written, oral, or other communication of information by a consumer reporting agency bearing on a consumer's credit worthiness, credit standing, credit capacity, character, general reputation, personal characteristics, or mode of living that is used or expected to be used in establishing the individual's eligibility for employment purposes.

COPELAND ACT. Prevents employers from receiving kickbacks from employees for wages earned.

CREED. An accepted system of religious or other belief.

CULTURAL NOISE. A response that is given to be socially acceptable but may not necessarily be an accurate reflection or belief of the person speaking. {I don't think this adds any value to this document. It seems to be just another way to say PC or politically correct speech. Recommend deleting.}

DAVIS-BACON ACT. Established the prevailing wage requirement for contractors paid \$2,000 or more for the construction, alteration, or repair of federal public buildings or public works projects.

DECENTRALIZED MANAGEMENT. Authority is spread throughout the organization, not just with top management.

DEFAMATION. Injuring someone's reputation in the community through reporting false facts in either written or verbal form and making the statement with malice.

DIRECTIVE INTERVIEW. Highly structured interview with questions designed to elicit specific information..

DISABILITY. As defined by the Americans with Disabilities Act, a physical or mental impairment that substantially limits one or more of the major life activities of the individual; a record of such an impairment; or being regarded as having such an impairment.

DISCRIMINATION. The use of any test or criteria that adversely affects hiring, promotion, transfer or any other employment or membership opportunity of protected classes unless the test has been validated and is job related, and/or an employer can demonstrate that alternative hiring, transfer, or promotion procedures are unavailable.

DISPARATE IMPACT. Unintentional discrimination against a protected group resulting from an apparently neutral employment practice.

DISPARATE TREATMENT. An employee who is a member of a protected class is treated differently or discriminated against because of a particular employment practice.

DRUG FREE WORKPLACE ACT. Requires Federal contractors of \$25,000 or more to certify that they will maintain a drug free workplace and that they will take specific steps to meet that goal.

EEO-1 REPORT. An annual report filed with the Joint Reporting Committee (EEOC and OFCCP) detailing the race, ethnic, and sex composition of an employer's work force by job category.

EMPLOYMENT-AT-WILL. The employer and the employee have the right to terminate employment at any time for any reason—with or without cause—unless prohibited by law or an employment contract.

EQUAL EMPLOYMENT OPPORTUNITY COMMISSION (EEOC). Established by the Civil Rights Act of 1964, it has primary authority to enforce anti-discrimination legislation, investigates charges of discrimination, and makes a determination as to whether there is “reasonable cause” to believe that discrimination has occurred.

EQUAL PAY ACT. Requires equal pay for equal work with exceptions based on such things as seniority, merit, and basically any factor other than sex.

EQUAL WORK. Defined by the Equal Pay Act as equal skills, equal effort, equal responsibility, and equal working conditions.

EMPLOYEE RETIREMENT INCOME SECURITY ACT (ERISA). Established standards which must be met for benefit programs to maintain their tax-favored status and established the PBGC (Pension Benefit Guaranty Corporation).

ESSENTIAL JOB FUNCTIONS. The fundamental job duties of the employment position; does not include marginal functions of the position.

ETHNIC. Pertaining to or characteristic of a group of people sharing a common and distinctive culture, religion, language, etc.

EXECUTIVE ORDER 11246. A Presidential Order that requires written affirmative action plans by maintained by government contractors and subcontractors with 50 or more employees and \$50,000 or more in contracts or purchase orders.

EXEMPT EMPLOYEES. Employees working in jobs that are not subject to the overtime pay provisions of the Fair Labor Standards Act. Most professional, executive, administrator, and outside sales positions are classified as exempt.

FAIR CREDIT REPORTING ACT (FCRA). Summarizes the consumer’s right to obtain information in the credit report and outlines the information which must be provided.

FAIR LABOR STANDARDS ACT (FLSA). Regulates employee exempt/non-exempt status, child labor, minimum wage, overtime pay, record keeping, and other administrative concerns.

FAMILY AND MEDICAL LEAVE ACT (FMLA). Allows qualified employees of qualified employers to take up to 12 weeks unpaid leave during any 12 month period to care for family members or because of a serious health condition.

FLAT RATE PAY. Regardless of performance and/or seniority, a single rate of pay is established for each job.

FORM I-9. All new employees must complete within 3 days of hiring to verify the employee’s identity and their right to work in the U.S.

GARNISHMENT. A portion of an employee's wages withheld as a result of a court action to pay a debt owed a creditor.

HARASSMENT. To disturb persistently, torment, pester or persecute; to trouble by repeated attacks resulting in a hostile work environment or fear of retribution on the part of the target of the harassment. See also SEXUAL HARASSMENT.

HEALTH MAINTENANCE ORGANIZATION ACT. Sometimes referred to as the "dual choice provision," requires employers provide workers with the option of joining a federally qualified health maintenance organization (HMO). DOES THIS NEED TO BE REPLACED OR SUPPLEMENTED WITH THE RULES FROM THE ACA?

HRIS – HUMAN RESOURCE INFORMATION SYSTEM. A computerized employee data base management system that allows for the tracking of employee data and generation of reports.

IMMIGRATION REFORM AND CONTROL ACT (IRCA). Prohibits discrimination against foreign looking job applicants and establishes penalties for hiring illegal aliens. Within three days of hiring, both the new hire and the employer must complete Form I-9 which verifies the employee's identity and their right to work in the U.S.

IMPLIED CONTRACT. To indicate or suggest without explicitly stating that a contract or length of term of employment exists.

INCENTIVE. Compensation or reward that is "earned" by an employee as a result of their extra efforts over and above the basic level of job performance.

INVASION OF PRIVACY. An unnecessary intrusion into an employee's personal life that has no legitimate business purpose.

INVESTIGATIVE CONSUMER REPORT. Contains information on a consumer's character, general reputation, personal characteristics, or mode of living as obtained through personal interviews with neighbors, friends, associates, or others with whom the individual is acquainted.

JOB CATEGORIES. Nine designated categories of the EEO-1 report: officials and managers, professional, technicians, sales workers, office and clerical workers, craft workers (skilled), operatives (semi-skilled), laborers (unskilled), and service workers.

JOB DESCRIPTION. A document outlining the essential and non-essential duties of a position and the skills and abilities necessary to perform those duties.

LIBEL. Defaming someone's reputation in the community through written communication.

MAJOR LIFE ACTIVITY. Defined under the Americans with Disabilities Act as an individual's activities, such as caring for oneself, performing manual tasks, walking, seeing, hearing, speaking, breathing, learning, and working.

MALICE. Making a statement known to be false and acting in reckless disregard to the statement's truth or falsity.

NEGLIGENT HIRING. Employers have a duty to protect workers, customers, and visitors from injury caused by employees who the employers know (or should have known) pose a risk. This obligation exists even if the injury occurs miles away from the work site.

NON-DIRECTIVE INTERVIEW. Questions are very open and provide general guidance to the interview conversation but allows the candidate to guide the process; a response to one question leads to the next question.

NON-ESSENTIAL JOB FUNCTIONS. Tasks or duties that are desirable, but not necessary, aspects of the job and could be performed by someone else.

NON-EXEMPT EMPLOYEE. Employees working in positions that are subject to the minimum wage and overtime pay provisions of the Fair Labor Standards Act. Office and clerical workers, skilled craft workers, semi-skilled operatives, unskilled laborers, and service workers are examples of non-exempt employees.

OBJECTIVE. Individual goals that are set separately for each employee in a job category and usually describes results the employee is expected to accomplish.

OBJECTIVE CRITERIA. Things such as quantity of work, quality of work, and completion of specific job related goals used in evaluating employees' job performance.

OFFICE OF FEDERAL CONTRACT COMPLIANCE PROGRAMS (OFCCP). An agency of the U.S. Department of Labor, enforces executive orders and laws dealing with federal contractors and subcontractors and audits Affirmative Action Plans.

OPEN ENDED QUESTION. A question that requires a response other than a "yes" or "no" or some other single word response.

OVERTIME. Pay received at the rate of time and one-half for hours worked over 40.

PATTERNED INTERVIEW. (Also Targeted Interview) Questions are asked from the same knowledge, skill, or ability area but the questions are different.

PAY GRADE. The level of a position in an organization relative to all other positions in the organization. An example would be Teller Trainee – Grade 3, Teller – Grade 5, Senior Teller – Grade 6 and Chief Executive Officer – Grade 21.

PERFORMANCE-BASED PAY. (Also Merit Pay) Individual employee performance is the basis for the amount of pay increases.

PIECE RATE PAY. Pay based on the number of units produced or processed.

POINT FACTORING. A method used to assign points to a job description based on the education, experience, human relations, equipment, decision making, accountability and authority involved with the position.

PREGNANCY DISCRIMINATION ACT. Amended Title VII and makes it unlawful to discriminate on the basis of pregnancy, childbirth, or related medical conditions and requires employers to treat pregnancy the same as any other temporary disability, to provide access to medical benefits and sick leave, and to reinstate returning employees to the same or similar position without loss of seniority or benefits.

PRODUCTIVITY-BASED PAY. (Same as Piece Rate Pay). The number of units produced or processed determines pay.

PROFIT SHARING PROGRAM. A portion of the bank's profits are distributed to all eligible employees.

PROTECTED CLASS. (Also Protected Group). Any of the protected groups covered by Title VII or other regulations, including race, sex, age, national origin, creed, color, disability, Vietnam Vet status, religion, pregnancy, etc.

PUNITIVE DAMAGES. Payment awarded for violations with "malice" or "reckless indifference" for federally protected rights, unless committed by governmental body.

QUALIFYING EVENT. Under COBRA includes such things as loss of employment, divorce, birth, marriage, etc., which allows a person to continue their insurance coverage.

REAL DISCRETION AND JUDGMENT. Defined by the Fair Labor Standards Act, as the comparison and evaluation of possible courses of action without the benefit of structured operating procedures, and a decision regarding the appropriate course of action free from direction or supervision.

REASONABLE ACCOMMODATION. As defined by the Americans with Disabilities Act: modifications or adjustments to a job application process that enable a qualified applicant with a disability to be considered for the position such qualified applicant desires; or modifications or adjustments to the work environment, or to the manner or circumstances under which the position held or desired is customarily performed, that enable a qualified individual with a disability to perform the essential functions of that position; or modifications or adjustments that enable a covered entity's employee with a disability to enjoy equal benefits and privileges of employment as are enjoyed by its other similarly situated employees without disabilities. Includes such things as making existing facilities used by employees readily accessible to and usable by individuals with disabilities, and such things as job restructuring, part-time or modified work schedules, reassignment to a vacant position, acquisition or modification of equipment or devices, appropriate adjustment of examinations, training materials or policies, or the provision of qualified readers or interpreters.

REFLECTIVE LISTENING TECHNIQUES. Restating the feeling and/or content of what the speaker has communicated.

SALARY. Payment to an employee that is the same set amount from pay period to pay period.

SALARY RANGE. The minimum and maximum salary for a specific job description or responsibility grade.

SANDWICH TECHNIQUE. Putting a corrective comment between two positive comments to make the corrective comment more acceptable.

SECURITIES AND EXCHANGE ACT. Created the Securities and Exchange Commission (SEC) and effects company stock options and employee stock purchase plans, requiring registration of all securities sold on the exchanges and disclosure and trading restrictions whenever “insiders” exercise their stock options.

SEXUAL HARASSMENT. Conduct on the part of any employee that is of a sexually harassing nature, which is unwelcome, and which creates an offensive and hostile work environment for the victim. Unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature constitute sexual harassment when: 1) submission to such conduct is made either explicitly or implicitly a term or condition of an individual’s employment; or 2) submission to or rejection of such conduct by an individual is used as the basis for an adverse employment decision(s) affecting the individual; or 3) such conduct has the purpose or effect of substantially interfering with an individual’s work performance or creating an intimidating, hostile, or offensive work environment.

SKILL. The application of knowledge, techniques, procedures or specified standards.

SKILL-BASED PAY. The higher the level of job related skills or knowledge, the higher the level of pay.

SOCIAL SECURITY ACT. Provides retirement income, disability, survivor’s benefits to employees, and hospital insurance and medical insurance through Medicare.

SLANDER. Verbally defaming someone’s reputation in the community.

STANDARD. A measurement metric, usually for all employees holding the same job, used to measure an employee’s performance against. Typically established for non-exempt positions.

STRESS INTERVIEW. Very aggressive, putting pressure on the candidate to determine how the candidate responds and reacts to stressful situations. Several people at the same time may be interviewing one candidate.

STRUCTURED INTERVIEW. Every applicant is asked the same set of questions.

SUBJECTIVE CRITERIA. Things such as adaptability, bearing, demeanor, manner, social behavior, and subjective opinion of supervisors used in evaluating employees' job performance.

SUBSTANTIAL DISCRETION. As defined by the Fair Labor Standards Act, work directly related to the employer's management policies or general business operations.

SUBSTANTIAL LIMITATION. Unable to perform a major life activity that the average person in the general population can perform or significantly restricted as to the conditions, manner or duration which an individual can perform a major life activity as compared to the condition, manner, or duration under which the average person in the general population can perform that same major life activity as defined by the Americans with Disabilities Act.

SURNAME. Family name, typically the last name of a person in the United States.

TIME-BASED PAY. Length of time on the job determines the level of salary.

TITLE VII. A part of the Civil Rights Act of 1964 which when enacted prohibited discrimination in all conditions of employment based on race, creed, color, national origin, religion and sex. (Other protected groups have been added through amendments.) It also established EEOC and made that agency responsible for enforcement of the statute.

UNDUE HARDSHIP. As defined by the Americans with Disabilities Act, significant difficulty or expense incurred, considering such things as: the nature and cost of the accommodation, the availability of tax credits, deductions, or outside funding, the overall financial resources of the facility, the overall size of the business, the effect on expenses and resources, or the impact of the accommodation on the operation of the facility.

VIETNAM-ERA VETERANS READJUSTMENT ACT. Prohibits discrimination against disabled veterans who served in the armed forces on active duty for a period of more than 180 days, any part of which occurred between 8/5/64 and 5/7/75, and requires open positions be listed with the appropriate local state employment service office nearest the facility where the opening occurs. Also requires contractors and sub-contractors having federal contracts of \$10,000 or more to have written affirmative action plans.

WAGES. Payment to an employee calculated based on the amount of time worked.

WAGE GARNISHMENT ACT. Prohibits employers from terminating an employee for one single indebtedness, even if the debt results in garnishments to the employee's wages.

WALSH-HEALY ACT. Extended the concept of prevailing wage from just contractors to manufacturers or suppliers of goods for government contracts in excess of \$10,000.

WORKERS' COMPENSATION. Benefits provided to an employee injured on the job.

SALES IN FINANCIAL SERVICES

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SALES IN FINANCIAL SERVICES

Notes

LEARNING OBJECTIVES

Following the successful completion of this session, you should be able to:

Introduction to Sales Management

- Describe how bank sales and marketing have shifted over the past twenty years.
- Describe the role of selling and sales management as transactions and interactions continue to become technology based.
- Describe the role of selling and sales management as non-bank competitors enter the market and target bank customers.
- Recognize two common errors in managing a sales program.
- List the components of a sales culture.
- Describe what is required of other bank departments to support a sales culture.

Selling Systems and Processes

- Create a job description, determine criteria and interview to select people who want to sell.
- Describe what training is needed to be effective at selling in a branch environment.
- Explain the five necessary components of an effective goal.
- Describe how to set sales goals for various target markets and skill levels.
- Explain factors to be considered in making annual sales goal adjustments

- Create a branch sales plan.
- Create a personal sales plan.
- Describe the elements of an effective sales tracking program.
- List two types of tracking programs, and the pros and cons of each.
- Describe three types of sales incentive programs, and the pros and cons of each program.
- Describe two types of reward programs.
- Describe how to structure an incentive program to reward the behavior you desire.

Implementing Sales Routines

- List three methods by which the corporate vision can be communicated, initially and on an ongoing basis.
- List four types of information that should be regularly communicated to performers in a healthy selling environment.
- Recognize the critical role behavior modeling plays in developing and sustaining sales habits.
- Identify and use four basic sales coaching techniques.
- Describe how to recognize and manage fear of selling.

Explain how to reward high performance and encourage improved performance.

- List three topics to include in every sales meeting.
- List five topics to consider for adding diversity to your sales meetings.
- Explain how to arrange sales meetings with full-time and part-time employees, or when your staff works at various times during the day and night.

- Practice skills through exercises and/or role plays.
- Optional skill practice through case study.

INTRODUCTION TO SALES MANAGEMENT

Overview

For over fifty years, banks have been talking about the importance of implementing and sustaining a sales culture; still many banks have yet to put forth the whole bank concentrated effort that, once achieved, will have a profound impact on profits. Part of the problem may lie in the fact that many may not realize how to go about structuring and managing a sales culture. To understand this issue, it is helpful to consider major movements that occurred within banking in the past and present, and to also consider the future of sales and marketing efforts in the financial services industry.

Past

Before the 1970's few sales efforts were established in banking. After that point, many early adopter banks plunged into teaching their bankers selling skills and began to focus on sales activities. Consider the following:

- Prior to the 1970's, banking was highly regulated with little product differentiation.
- Selling was not considered to be a job responsibility until the late 1970's and early 1980's, when the laws changed and non-bank competitors began to emerge.
- Since the 1980's, distribution systems have become more diverse, including ATMs, supermarket banking, internet banking, and mobile banking.
- Mergers, acquisitions and bank holding companies were rapidly forming as a way to increase capital and quickly grow market share and asset size.
- The Glass-Steagall Act, repealed in 1999, allowed for the creation of financial supermarkets, including banking, insurance and investment products and services.

Present

Right now, selling is a firmly established and integral job function within banking. Technology and customer expectation changes continue to challenge and define the role of bankers and banking in America.

- New distribution systems continue to emerge, both internet and mobile banking are considered viable and necessary delivery channels for even the smallest companies, including start-ups.
- Better and improved technology options prevail, both for management and customers.

Future or Now?

- The role of selling continues to evolve and will differ from what we have come to expect and manage.
- Continued migration of customers away from the branch and toward online/mobile options is fast becoming the preferred delivery choice for routine (and even moderately complex) transactions.
- High use of artificial intelligence and predictive modeling to identify and serve the customer's need for financial products. All customer contact personnel will need to be trained to recognize and act on sales opportunities.
- Offering competitive and profitable products will continue to be a critical factor in determining the long-term success and viability of the bank. However, because financial services products and services are by definition undifferentiated (e.g., easily duplicated from one institution to another), competitive advantage will go to the banks that have the highest trained and motivated people in all functions, especially sales.

As we proceed, please remember that this material is designed to introduce banks to the most common sales management systems, processes and routines. The module is not meant to be a complete resource for implementation.

Structuring the Sales Management Process

Two of the most common errors that banks make in managing the sales process are not gaining full support of the organization, especially management, when implementing the new concepts and systems and not structuring the bank to support the sales function.

An important way to avoid these errors is to begin the process by conducting an annual strategic planning conference that includes representation from all areas of the bank to determine performance goals over the planning horizon (3-5 years) and then identifying what those goals need to be during the upcoming year (budgeting). Past performance, market data, market planning, overall bank goals and internal resources, including personnel are considered in this plan. Corporate goals are set, and communicated to each functional area. ***These become the performance metrics from which the sales planning systems, processes and routines are developed.***

It is critical that the sales management process is supported by several key functions in the bank. Some of these systems are already in place and only require minor adjustments, while others may be new to the bank. All are important and need to be effective.

Current Systems and Processes

The current systems or functions which are important to sales management include: human resources, training, marketing and back office operations. Listed below is a summary of their respective roles:

- ✦ *Human Resources* – Job descriptions are written with clear sales expectations and updated at least annually. Hiring practices are criteria based. Performance appraisal systems include annual reviews, quarterly updates, and managers who are trained to provide consistent feedback, coaching and effective sales force management techniques.
- ✦ *Training* – Training programs are skill based and designed to produce employees equipped with all the capabilities needed for effective selling to include operations, product knowledge, customer service, sales, and, for managers and supervisors, sales management, problem solving, and performance management.

- ✦ *Marketing* – Marketing campaigns are established annually to support the sales efforts. Sales tools, such as brochures, handouts, mailings, campaigns, etc. support and motivate the sales staff. The marketing department is typically responsible for sales database management.
- ✦ *Back Office Support* – This includes operations, item processing, data processing, loan processing, online and mobile banking site management and customer service support such as call centers and online 'help desks'. All transactions and interactions with customers, internal and external must be flawless 99.9% of the time or the credibility of the sales force will be compromised.

New Systems and Processes

The following new systems, or processes, are typically handled by the branch manager or department manager, and include:

- ✦ *Goal Setting* – Setting performance goals for all employees. Example: Each customer service representative will open five new accounts each week.
- ✦ *Sales Planning* – Writing sales plans for both branch/department and individuals. Each sales plan includes stating specific goals, identifying activities to achieve the goals, assigning who is responsible for completing each activity and establishing a due date for completion. Some banks create a new position to monitor, measure and report sales results. Because the duties of this important job are often operational in nature it is best titled "Sales Database (or Program) Manager. This ensures that the person hired to serve in this capacity understands that s/he *does not manage the sales people* and signals to managers that they are accountable to meet their goals and manage their sales force.
- ✦ *Tracking and Monitoring* – The use of a tracking system to monitor progress and report results. A tracking system can be as simple as making tick marks on a log sheet each time a sale is made, then tallying these results at the end of each day. Most banks today, however, are using technology-based tracking systems, thereby reducing errors and ensuring consistent reporting of sales results

- ✦ *Incentives and Rewards* – Implementing an incentive and reward programs. A simple example of an incentive and reward program is paying \$5.00 for each new checking account opened during the month of August.
- ✦ *Communicating* – Establishing and using ongoing, bank-wide communications. This can be as simple as writing a newsletter each month that announces top performance results, but often includes more frequent short messages to provide information, motivation or encouragement to the organization

Sales Routines

In addition to the new systems and procedures, the following routines support and ensure that the sales personnel stay motivated and have a better chance of being successful.

- ✦ *Coaching* – Daily coaching shapes and reinforces desired behavior. An example of a manager coaching can be as simple as complimenting an employee when he or she cross-sells multiple products or providing corrective feedback when an employee makes an error in their paperwork.
- ✦ *Meetings* – Meetings can be conducted daily, weekly, quarterly, and annually and typically provide feedback on performance and motivation to performers.
- ✦ *Appraising* – Performance appraisals, conducted annually and updated quarterly, serve as a development tool and ensure accountability. Performance development plans are written annually as part of this process. An example is provided in the appendix.
- ✦ *Celebrating* – Periodic celebrations reward performers and high achievers, and support teamwork and bonding. Example: Some banks have sales rallies before or after work, and some banks have a party to celebrate a good month or year.

As you can see, effective sales management is the result of various systems and processes, coupled with a routine that collectively produces the desired results.

SELLING SYSTEMS AND PROCESSES

Selecting and Training Salespeople

One of the most critical pieces of sales management is hiring and training people who want to sell. All of the systems, processes and procedures amount to very little if people with the wrong skill set have been hired for this job function or if they do not do what they are supposed to do. This process begins with writing a thorough job description.

Writing Job Descriptions

Understanding what the job of selling actually requires and hiring people who want to do that job with energy and enthusiasm is the first step to establishing a solid sales management program. Start by writing a job description for each sales position. A job description should describe the knowledge, skills and abilities required to be successful in that position. These are commonly referred to as “KSAs”, which are described below:

- **Knowledge** is information that you must *know* in order to be able to do the job correctly. (Example: knowledge of United States currency)
- **Skills** are behaviors that you learn in order to perform the job correctly. (Example: count a tray of \$25,000 in 10 minutes or less)
- **Abilities** are qualities you must be able to do in order to perform the job correctly. (Example: see money, pick up money and perform rapid movements with hands)

If you do not have job descriptions, or if they have not been updated in a long time, there is an easy way to start the process. Find a person who is doing the job correctly and ask her to keep a journal of everything that she is doing daily for at least two weeks (and preferably for one month). When reviewing the individual’s list, determine if the items would be classified as knowledge, skills or abilities. [This is an example of where the support of other departments, e.g., HR, in the bank is needed.]

Exercise: Identify KSAs for a Customer Service Representative

Listed below are qualities of effective salespeople. Determine if these represent knowledge (K), skills (S) or abilities (A) by writing the appropriate classification next to the word.

- _____ Knows bank regulations as they pertain to the job of a teller.
- _____ Uses open probing skills when determining a product or service for customers.
- _____ Hears, understands, and reacts appropriately to comments made by customers and co-workers.
- _____ Manages multiple projects and meets deadlines as needed to be effective on the job.
- _____ Understands and competently uses spoken language when interacting with customers.
- _____ Delegates work and completes projects on time.

Training Your Sales Staff

There are literally thousands of options available for training your sales personnel including books, audio tapes/podcasts, videos, DVDs, internet-based training and computer-based training. Decide which method you want to use based on the time and budget available. If you are unsure of how to configure a training program, you may want to talk to fellow bankers that you have met through professional organizations about their training methods and whether or not they are pleased with the results. [Again, call on internal resources where available...HR/Training, Technology (for computer-based instruction).

The following illustrates necessary training to be effective at selling in a branch environment.

New Branch Employee (Complete within 90 days)

- Systems Training (computer and telephone)
- Operations
- Product Knowledge
- Customer Service/Active Listening
- Needs Based Selling
- Individual Goal Setting

Advanced Training (Complete within 6-9 months)

- Talking to customers about loan needs
- Effective referrals to consumer or commercial lenders
- Analyzing Financial Statements
- Sales Review

Group Discussion: Determining the Best Training Methods

Working in groups of three to five people, discuss the best methods of training the skills listed above. Be prepared to share your answers with the class.

Setting Sales Goals

One of the most critical elements of a successful sales management program is effective goal setting. Goal setting is determining in advance what sales results you are trying to achieve during a specific time period. This process provides everyone in the company with a clear understanding of what needs to be accomplished and by when, and who has been assigned each activity.

How Do You Determine What Goals to Set?

At the bank-wide level, senior management determines what the bank needs to accomplish in order to meet financial objectives during the next fiscal year. Bank-wide goals are then developed to reach those objectives.

For example, if the bank wants to achieve a certain net profit, set that profit figure as a goal, and then determine everything else that needs to be done to meet that goal. If you need a certain amount of fee income in order to increase profits as desired, establish a goal for fee income.

If you need more deposits or loans outstanding on the books, establish deposit and loan growth goals. Continue this process until goals are established for every objective that needs to be met. At each level of the goal setting process, goals are determined according to the ability of the division, branch or individual to contribute to the overall plan for the bank. Each division, branch and individual establishes goals for the objectives they are capable of affecting.

Several types of commonly used goals are:

- Net growth of deposit balances
- Net growth of loans outstanding
- Fee income generated
- Profit (the product of multiple other goals)
- Number of products sold
- Amount of risk (bad debts, losses, etc.)
- Retention percentage (accounts, staff, etc.)
- Cross-sell ratios
- Number of activities completed (sales calls, phone calls, etc.)

Other goals that may be set at the branch and individual levels may include customer service goals, or even operations goals that, if not performed correctly, impact sales goals.

What Makes A Goal Effective?

The most important concept to remember is that you want your goals to be SMART:

Specific – What exactly do I want to sell/grow/do?

Measurable – By whom, how much or how many?

Attainable – How will I do this?

Realistic – Is my goal too high or too low?

Timely – By when will I accomplish this?

Goals should be specific, so employees know exactly what to focus on, whether it is a growth measurement to reach, product to sell or activity to do. Measurement, or the ability to track progress toward a goal, is another key element in goal setting. Any goal you set needs to be measured to see whether or not it is accomplished.

Goals should also be attainable and realistic. If you are not sure, ask the employees to explain how they would reach the goal. If they cannot conceive how a goal would be obtained, it won't be. Setting goals too high, especially early in the process, will sour employees to the sales program, negatively impact morale and may lead to mediocre effort since they perceive the goal won't be reached no matter how hard they work. The converse is also true – goals that are too easy to attain and require no "stretch" effort falsely communicate that your program requires no special effort, and the goals are therefore less important.

Exercise in goal setting:

Write a bank goal making sure that all SMART principles are being followed.

How Do You Determine Numbers and Time Frames?

If your bank has never established goals in the past, the best way to start the process is to take the sales results achieved during the previous year and add 10 to 15%. If the employees easily reach a goal set this way, you can safely move the bar a little higher. Goals should be high enough to motivate people but not so high as to overwhelm them. A good guideline is that performers should be able to see the goal and realistically think that they can at least make 60% of it.

Establishing Time Frames

Once annual goals are established by senior management, the division and branch managers take the process one step further to establish quarterly, monthly, weekly and daily goals for their areas and each of their employees. For example:

<i>Goal to be determined:</i>	<i>Divide annual goals by:</i>
Quarterly	4
Monthly	12
Weekly	52
Daily*	240

[*Assumes 20 working days/month]

To determine daily goals by employee, divide the daily goal for the department or branch by the number of employees in it. Full time and part-time staff should be included in goal setting, with part-timers receiving proportionately smaller goals. This supports the concept of a “team” and allows everyone to be included in the sales management process. Typically, part-time worker goals are adjusted to reflect the number of hours actually worked.

Adjusting Goals for Different Markets and Skill Levels

It is appropriate to adjust goals to reflect the market or an individual’s level of expertise. For example, say you have four branches – two are in areas of the city where young families live and significant growth and construction is taking place, and two are in older, established neighborhoods with many elderly customers. It makes sense to adjust your goals to reflect the needs of each market – higher loan goals for the younger area, and higher deposit goals for the older and more established area.

Likewise, when dealing with goals for individuals, give your seasoned and more experienced bankers more challenging goals. Provide newer employees with goals that are more likely to be achievable for someone at their skill level.

When to Set, Adjust and Review Goals

Goals are usually set annually by senior management during the fall for the upcoming year, and then distributed to each division to create quarterly, monthly and daily plans. Each quarter, managers may want to revisit quarterly, monthly and daily goals and adjust them to make sure they are realistic, as well as account for campaigns or promotional activities that could skew results. Many branch managers compare goals to actual production daily, never allowing themselves to “get behind” in attaining them. Daily review is recommended. At the very least, branch managers should review goals versus actual production weekly.

Senior management should review goals versus actual weekly, but no less than monthly; this allows them to notice very quickly if any area or objective is behind plan, so action can be taken immediately to get back on track and reach the goals. It also gives them information on individuals so they can congratulate high performers, and provide encouragement to those who are struggling.

Exercise: Setting Sales Goals

Break down an overall annual loan outstanding growth goal of \$10,000,000 into quarterly, monthly, weekly and daily goals for two branches. One branch is in a new neighborhood with many young families, and the other branch is in a neighborhood with many retirees. Next, break one of the branch's goals down into monthly, weekly and daily individual goals for a branch manager, an assistant manager and three customer service representatives; one of the customer service representatives has only been with the bank two weeks.

Use the Goal Minimizer worksheet in your appendix for this exercise.

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Developing Personal and Branch Sales Plans

Once goals are established, the next critical step in the sales management process is developing sales plans for the branches and for each individual responsible for selling. While goals tell you where you need to go and by when, a sales plan provides the road map for how you plan to get there.

What Does A Sales Plan Include?

Sales plans should be written for the branch as a team and for each individual in the branch with sales goals. Examples of both types of sales plans are included in the appendix. Both branch and individual sales plans should include the following:

Goals

The first step in writing a sales plan is to restate or include the goals you have already determined to accomplish. Make sure that you write the goals in terms that are specific, measurable, attainable, realistic and timely.

Activities

The next step is to identify and include all the activities you and your staff can do to make sure you accomplish each goal. Some examples of activities are: 1) Make ten phone calls or e-mails to targeted home equity prospects per week, or 2) Open two new interest checking accounts per day. Each goal in your plan may have several activities associated with it to make sure it is accomplished. Try to think of every possible activity you or your branch could do to help reach the goal and write them in the plans. Just like goals, activities need to be SMART: specific, measurable, attainable, realistic and timely.

Responsibility

One of the keys to writing a good sales plan is to make sure it identifies who is responsible for making sure each activity is done. For the branch plan, make sure each activity has a champion to see that it occurs. For example, if one of the activities you include is a promotion for car loans, assign tasks and goals for the promotion to everyone at the branch to make sure they know what they are responsible for doing and achieving. Write those responsibilities in the branch sales plan; this ensures that the promotion is done as planned, that it occurs when planned and that it is

successful. For individual plans, the person for whom the plan is written is responsible for each goal and activity listed. Managers and supervisors are advised to work collaboratively with each individual to ensure s/he understands and fully embraces accountability for the plan .

Deadlines

All activities need deadlines, just like goals need time frames in order to be meaningful. Each activity in the sales plan needs to have a stated time by which the activity should be done. Saying that you will contact ten customers about opening a new money market account without stating a deadline for that activity to occur is too vague to be truly motivational. Saying you will contact ten customers each week this month about opening a new money market account is much more specific and provides more accountability.

How Often Do You Write A Sales Plan?

Branch sales plans are usually written on a quarterly basis, although they can be adjusted monthly or as needed to account for new opportunities or obstacles that could affect the branch's ability to meet its goals. Examples of things that merit an adjustment to the plan include a newly announced advertising and direct mail campaign that could bolster sales beyond expectations or the realization that a planned activity did not achieve the results needed to reach your goals.

Individual sales plans should be written monthly, to coordinate with the quarterly branch sales plan. An individual sales plan helps employees determine what activities they spend their time doing each day, so the individual sales plan needs to be updated and adjusted for any opportunities or obstacles as they occur.

Exercise: Developing Personal and Branch Sales Plans

Write a portion of a branch sales plan, using the Sales Plan worksheet provided in the Appendix. Use the quarterly loan growth goals determined in the goal setting exercise. Include at least three planned activity goals for the plans. Be prepared to share your plan with the group.

Using Tracking and Reporting Systems

The main idea behind a tracking system is record keeping – being able to quickly determine whether or not you are reaching your sales goals or performing your planned activities. A tracking system also allows you to determine which sales employees are high achievers, which are moderate achievers, and which require additional support.

What to Measure and Why

Basically, you should track anything that is important to your bank. Any goal you have set or activity you have planned must be tracked in order to know if you are successful.

This means that you may need the ability to track many things. The most common statistics tracked and reported are listed below, as well as how often the reports should be available:

Per Individual (on a daily, weekly, monthly, quarterly and annual basis)

- Name
- Branch
- Products sold by type
- Activities stated in plans (calls, prospects, applications, etc.)
- Cross-sell ratios
- Balances/Outstandings
- Risk measurements (over/short, charge-offs, bad debt, etc.)

Per Branch or Division (on a weekly, monthly, quarterly and annual basis)

- Branch/Division Products sold by type
- Activities stated in plans (calls, meetings, promotions, etc.)
- Cross-sell ratios
- Balances/Outstandings
- Risk measurements
- Profitability
- Fee Income

Bank-wide (on a weekly, monthly, quarterly and annual basis)

- Branch
- Division
- Products sold by type
- Cross-sell ratios
- Balances/Outstandings
- Risk measurements
- Profitability
- Fee Income

WHAT ARE THE ELEMENTS OF A TRACKING SYSTEM?

The main requirement of a tracking system is that it is capable of measuring and reporting results for the activities and outcomes you need to understand to effectively manage the sales effort. There are several ways banks do this, and in some cases, it may be necessary to use a combination of tracking methods.

The two broad categories of tracking systems are manual and automated. Typically, bank size and complexity will determine the number of different statistics you need to track. It is critical to understand what information is important and how it will be used in order to make an informed decision about the type of tracking system, or combination of systems, required. That information also helps avoid expensive and time-consuming errors when purchasing a more sophisticated software system.

Manual Tracking Systems

Manual tracking can be as basic as a tick sheet, with totals tallied and reported weekly. The tick sheet can be as simple as a pad of legal paper or as complicated as a web-based tracking system. A sample of a manual tick sheet is in the Appendix.

The reporting capabilities of a manual tracking program are limited to specific needs or requests of management and the creativity and talent of the person responsible for maintaining and compiling the data. In some cases, reporting may only be as sophisticated as a tallied tick sheet for the week, faxed or e-mailed to whoever needs the information. In other cases, tracking and reporting may be the responsibility of one person, or a team, who gathers the information from the tick sheets, creates and generates the reports, and distributes them on a regular basis.

The important aspect of a good manual system is that it is capable of recording the needed information and reporting it to the people responsible for managing the sales process. The downside of a manual system is that it is by nature self-reporting and therefore subject to human error or even (unfortunately) exaggeration of reported results.

Automated Tracking Systems

There are many types of automated tracking systems available. Some are more truly automated than others are. Some banks use spreadsheet programs where results are compiled in worksheets on an individual and branch basis, then rolled up into preprogrammed division or bank-wide reports. Once the worksheets and reports are set up, the program actually does the computations and generates them automatically, although the data *must still be entered manually* as sales or activities occur.

There are also many types of software available, designed specifically for tracking sales production. Sales tracking software typically includes the capability to produce standard and custom reports. Some of these programs require data input from a central location, where others allow data input at the branch level with weekly or even daily download capability.

Programs are also available with immediate or real-time feedback with sales data captured online as the sales occur. With these programs, information can be compiled, arranged by division, branch, or individual, and posted online for review at any time.

WHAT TYPE OF TRACKING SYSTEMS WORK BEST?

The best tracking system for your bank depends on several factors because each system has its pros and cons. The main things you need to keep in mind when selecting which tracking system is right for you are:

- ✦ The complexity of your information and reporting needs. Is the information you need to report complex or voluminous to gather and report or fairly simple and easy to capture and distribute?
- ✦ The size of your bank and branch network. Are you gathering sales data from a relatively small number of branches, such as 5 or 10, or do you need to compile data from a large number of branches, such as 50 or 100?

- ✦ The resources you have available (budget, staff, existing computer systems, etc.). Do you currently have a platform system that could be interfaced with an online tracking system, or do you operate on a paper based system that is fairly manual?

The following chart shows how your needs can determine the best type of tracking system to use:

Manual Tracking:	Automated Tracking:
Straightforward, simple reports	Complex reports and projections
Limited number and type of reports	Larger number and variety of reports
Weekly reporting is as frequent as needed	Reports are more frequently needed or needed on an ad hoc basis
Small number of branches to track	Large number of branches and sales people to track
Limited budget to spend on tracking	Budget available to buy software and/or hardware
Existing staff able to absorb responsibility or small additional staff can be justified due to cost	More staff would likely be required to manage a manual system than to manage an automated system
Paper based, manual loading of sales	Centralized loading of sales or platform system whether online or not

Who Should Receive Reports?

Everyone involved in selling or in managing the sales process should receive progress reports of actual sales versus goals. Senior management needs to review reports for the bank as a whole and for the divisions or branches they are responsible for managing. Weekly, monthly, quarterly and annual reports should be distributed so it is easy to see at all times where the bank stands to meet its goals. Frequent reporting allows you to see any problems quickly so you can make adjustments to get back on track.

Branches and individuals also benefit from reports showing where they are compared to goal on an annual, quarterly, monthly, weekly and even daily basis. If automated daily reports are not available, the branches should create their own manual tracking system to monitor their sales plans and see how results for the branch, and for each individual, compared to their daily goals. It is also recommended that branch managers be provided with weekly reports to show how their branches compare to goal, along with the same data on other branches for easy comparison.

Effective Reporting Methods

Managing the distribution of the tracking reports may seem like a daunting task. To make it simpler, banks establish systems, or methods, to organize the reports for easy access. A few of these methods are described below:

Sales Management Notebooks

Create a notebook with tabs for goals, sales plans and each type of report needed to manage the sales process, such as net growth, product reports, P & Ls, etc. Everyone involved in selling or managing sales should have a notebook, or they should have access to one that includes the information they need. As an example, a branch sales management notebook needs tabs for branch goals, sales plans and tracking reports, plus tabs for individual goals and sales plans. Each individual may also want to keep a personal notebook with his or her individual goals, sales plans and daily/weekly/monthly sales results.

Online Reporting

Banks with automated tracking systems often produce reports that are accessible online. Standard reports are created and posted on a computer network. Different levels of authority or security are established for access to the reports, such as individual sales reports, branch sales reports, division sales reports and senior management reports. Anyone with the proper level of authority can pull reports off the network at any time, eliminating the need to distribute substantial amounts of paper, and thereby saving time and money.

Leader Boards/Newsletters

Many banks also find it helpful to distribute sales results in leader boards and newsletters. Leader boards are one page summaries of sales results by category, which include all branches or divisions for easy comparison.

They are especially helpful for reporting results during promotions or campaigns where all the branches are competing.

Newsletters contain sales results similar to leader boards as well as sales tips, sales success stories and other valuable sales related information. They are typically published on a regular basis, such as monthly, weekly or even daily.

Developing Incentive and Reward Programs

Goal setting, sales plans, tracking and reporting are essential elements of a sales culture. Incentives and rewards are also powerful motivational tools that quickly and directly impact the sales results you desire. An incentive is a reward providing motivation to accomplish a sales or activity goal. It can take the form of money, prizes, trips, time off, plaques, awards, recognition or anything that would motivate a particular individual or group of individuals to succeed.

Incentives are most powerful when they are packaged as an effective incentive plan. An incentive plan is a carefully thought out program where sales and desired sales activities are monitored and reported, and the sales people are paid or rewarded for achieving their goals. The most effective incentive plans are open to all sales people, are communicated clearly and are easily understood by all the participants. Most importantly, there must be a clear line of sight between reaching a sales goal and the actual incentive to help ensure employees clearly understand which are the most desired activities and outcomes.

The most effective incentive programs currently used by banks include a combination of monetary awards/prizes and public recognition

- *Points acquired for each sale*, leading to purchase of merchandise or a trip.
- *Money paid per product sold* or per activity completed.
- *Money paid as a percentage of the goal achieved*, such as net growth in deposit balances or loans outstanding, a fee income target accomplished, profitability threshold met, etc.
- *Membership and recognition* in an exclusive club for achieving or exceeding goals (President's club, Chairman's club, etc.).
- *Special privileges*, such as days off or a weekend at the President's beach house.

Why Select One Type of Incentive Program Over Another?

The most important aspects of an incentive program are that it provides true motivation for the participants, and it rewards participants for the behavior and results you want. Make sure that the incentive plan you put in place accomplishes both these things, and it will benefit the bank and the employees.

In order to be truly motivational, the incentive program mirrors the goals established for your sales people. It should be attainable and include incentives or rewards that your sales people desire. Because of varying corporate cultures, meaningful rewards or incentives may differ by bank. Unique incentives may even need to be established for different groups of employees within a bank. For some employees, money provides the most meaningful incentive. For others, profit sharing and stock options are more effective. In other cases, prizes, trips, time off or public recognition may be more highly valued. Find out what rewards are most meaningful to your sales force then structure your program with those in mind.

How Do You Set Up an Incentive Program to Reward Desired Behavior?

Create a program that pays for results you want to accomplish. You will find your sales people adapt very quickly to focus on the activities they need to do to make the most incentive. For instance, if you want to sell more home equity lines, pay a higher per product incentive for each home equity line sold. You will be amazed by the results you get when you pay \$50 for each home equity line closed, and only pay \$15 for an auto loan or \$5 for a credit card.

If you don't really care to focus on particular products but want to make sure that net deposit and loan growth are at top of your staff's mind, pay a percentage of the goal, such as .5% of \$1,000,000 in net loan growth. This type of program can provide a very meaningful incentive. Some banks have found that structuring incentives this way eliminates "product pushing", and it focuses sales people on developing deeper customer relationships with a broader mix of products. This has the added benefit of increasing customer retention, which is an early indicator of improved profitability.

If you want to improve branch profitability, establish an incentive plan that pays for reaching profit goals—but set guidelines for how those goals may be achieved. Failing to replace a customer service representative will save

salary and incentive dollars in the short-term but may negatively impact customer service/satisfaction. The same holds true with any goal that merits a salesperson's focus. In fact, you can design a program to reward nearly any behavior you want! Just make sure that the goal is attainable, otherwise people will be discouraged.

How Do You Know What to Pay?

Deciding what you want to pay for any incentive boils down to one principle – profit. Incentives and rewards should be large enough to motivate your sales force. Make sure they are worth the effort. At the same time, it is important not to overpay. When structuring a successful incentive program, understand how your incentives will impact profitability. After all, your program is supposed to help the bank meet its goals, not eat up the bottom line.

If you structure a program that pays per product incentives, first determine the amount of profit you can make, on average, for each product sold by product type, being sure to take into account estimates for direct (e.g., customer facing personnel) and indirect (e.g., back office processing) costs. Then determine the amount of incentive you can pay for each one while still making money for the bank. For a program that pays a percentage of net growth, it is essential to understand the spread or the yield the bank makes on those balances. Then determine the percentage you can pay as incentive for reaching the goals without reducing the net spread by too much.

After you have designed your plan, it is a good idea to figure a total amount that you would pay if 50% of the goals were met and make sure that amount is in your budget. If the number is outrageous, rethink the plan and only publish one that you are able to honor regardless of how positive the outcome.

Disincentives

Purposeful disincentives

Sometimes you may want to use your incentive program to discourage undesired behavior. Disincentives are powerful tools you can use to turn that behavior around. One example of this is not paying incentives on the products you do not want to sell or for products that are unprofitable. Another is withholding sales incentives that are earned because other aspects of an employee's behavior are unacceptable – such as too many charge-offs, a large number of loan exceptions, etc. Whether the signal is subtle as in the first example, or more obvious as in the last, your sales people will take notice.

Fatal errors

The power to withhold sales incentives after they have been earned is a formidable one. As long as the rules are understood, employees can accept the outcome. Make sure you explain any reasons that incentives could be withheld on the front end when you first communicate the plan. Most importantly, set the expectation at the outset of any program rollout that 'gaming' the system is unacceptable and will result in withheld incentives and potentially serious disciplinary consequences. An example of this is closing a current account to add a new one or splitting a \$50K CD into two \$25K CDs to inflate the 'new accounts sold' goal (yes, these are real life examples).

From time to time, a company may make the fatal error of withholding incentives that are earned according to the rules or altering an incentive program midstream without paying what was promised. This usually occurs when sales are better than expected and the incentives turn out to be much greater than the amount budgeted to pay them. This is a mistake that can dishearten even the best and most consistent performers.

Once an incentive program is communicated, the best thing to do is honor it to the letter - regardless of how amazing the results are – even if it causes you to pay more than you budgeted. Reneging or changing the rules midstream causes mistrust, making your incentive program meaningless to your sales people. They won't trust the bank to honor it, so they won't put their whole efforts into the sales process. If you must make changes to the plan that could negatively impact the amount of money employees will earn, honor the incentives that have been earned so far and then change the plan going forward.

Exercise: Incentives and Rewards.

Can you answer the following questions? Work with a partner with one person answering questions one through three, and the other person answering questions two through six.

1. Name three of the five most popular incentive programs banks currently use.
2. What makes an incentive program truly motivational?
3. How do you set up an incentive program?
4. How do you know what to pay?
5. What is a disincentive?
6. What is a fatal error, and how would you recover?

IMPLEMENTING SALES ROUTINES**Communicating the Vision**

Establishing solid and effective communication is another key component to sales management. Listed below are some of the methods that, when used as a regular and ongoing part of management, ensure that all performers are up to date on all matters important to their performance.

What Should be Communicated and to Whom?

In the past, knowledge was considered to be a form of reward for managers, and the higher your position, the more information you received that was not shared with subordinates. This **outdated** mindset can cause employees to become distrustful. The list below provides ideas of what type of information should be regularly communicated to participants in a selling environment.

Communicate to All Participants

- ★ Corporate vision
- ★ Sales campaigns
- ★ Sales expectations
- ★ Detailed information about the current product line
- ★ Daily, monthly, quarterly, and annual performance goals
- ★ Budgets
- ★ Recent successes and stories of best practices
- ★ Changes in the competition
- ★ Changes in market conditions, pro and con
- ★ Other concerns of a general nature,

Communicate to Managers Only

- ★ Pending managerial changes
- ★ Pending strategic changes
- ★ Upcoming product changes

Communicate to Individuals Only

- ★ Individual performance concerns

Communication Methods

Although it may seem obvious, many bankers forget that they have many methods by which communication can take place. Use all of the methods available for variety.

- ★ Annual bank-wide meetings or sales rallies
- ★ Quarterly bank-wide meetings or sales rallies
- ★ Monthly or quarterly newsletter
- ★ Weekly newsletter during campaigns
- ★ E-mail or Video (YouTube)
- ★ Letter from the President

- ★ Weekly or daily branch meeting
- ★ Personal notes from manager thanking employee for extra effort
- ★ Bank-wide e-mail/video
- ★ Readings from various bank magazines/websites on pertinent articles
- ★ Reading file for the local daily newspaper

Coaching High Performance

Did you know that one of the best ways to motivate your employees to sell is to provide regular coaching? Most sales employees, when asked, feel that they do not receive enough coaching, and therefore, they welcome the opportunity to receive more feedback. Coaching is not a performance appraisal. It usually takes place instantaneously, and it shows the performer what he or she is doing correctly or incorrectly so that adjustments can be made.

Statistics show that without coaching most behavior adjustments made after attending a training program are lost. Based on this statement, it is obvious that coaching is one of the most important and critical things that you can do as a sales manager.

There is also a significant amount of evidence that proves that if the manager's skills are significantly different from what is being trained, measured and given incentives, then behavior change will not take place. The converse is also true – if a branch manager has mastered selling skills and performs effectively according to the sales process, so that employees are able to view these attitudes, behaviors and skills being used on a daily basis, they tend to model and adopt them as their own.

There are five basic coaching techniques that can be used to help improve employee's performance. The techniques are listed below:

One-on-one spontaneous coaching

The manager provides instant feedback on a skill the employee has done well or on areas needing work; this takes place throughout the day and is not planned.

Coaching following a planned observation

The manager and employee determine a time when the manager will observe the employee performing, and they meet afterwards to discuss what was done correctly and where additional growth is needed. This can

be accomplished during a sales call, by conducting a role play, observing from a nearby location or through telephone monitoring. Typically, the manager will encourage the employee to work on just one or two things per coaching session.

New Employee Mentoring and/or Observing a High Performer

When using mentoring, a new employee is coupled with a seasoned employee who is a high performer, who provides personal coaching and regular feedback over a period of one to two months. Typically mentors are provided with a list of the skills they are to train and coach so that as the employees work together, the new employees' progress is being noted. A second method is to ask the new employee to observe a high performer working and create a list of all of the things he or she is doing correctly that allows him or her to be successful. Sometimes the new employee is named "sales assistant" so that he or she is able to learn all of the details involved in selling and servicing an account.

Skill Drills

During sales meetings, the manager returns to the content studied from a given training program and conduct drills to renew and refresh skills.

Role Plays

During sales meetings and using actual selling situations, role plays are conducted to practice the skills studied in a training program and receive constructive feedback from the manager. When role playing, one person plays the role of the banker, one person plays the role of the customer, and one person is an observer. Critique is provided by the observer following the role play, and then roles are rotated so that eventually, everyone plays the role of the banker once. Ideally, role-plays should not be interrupted while they are taking place, and feedback is provided at the end of the role play. A feedback sheet can be prepared to assist the observer while they are listening. (A sample of an observer's feedback sheet is provided in the Appendix).

How Do You Give Feedback?

Some managers make the mistake of never providing feedback when things are going well and only providing negative feedback when correction is required. Studies show that behavior decreases when it is either ignored or punished and increases when it is praised or rewarded.

Therefore, try to use praise often when attempting to change habits or the behavior patterns in employees. Say something positive when performance is as it should be or when it is improving and be specific.

To praise an employee, you should:

- ★ Specifically state the BEHAVIOR that you are praising.
- ★ Tell the employee WHY it was good/important to the company.

For example, if you hear an employee selling and they are doing a good job using open questions, you might say “You asked really good open questions during that sale, which resulted in two additional cross-sells. Keep up the good work.”

Correcting an employee

When giving corrective feedback, make sure you:

- ★ Tell the employee what they are doing well as it relates to the behavior being corrected.
- ★ If there is nothing genuine that you can think of, skip this step.
- ★ State the BEHAVIOR to be adjusted. Avoid the use of the word “you.” Say “Open probes were not used”, not “You did not use open probes.”
- ★ Get the employee’s input on how this can be improved or changed.

For example, you may say, “I know that we need to protect the bank by asking for proper identification, which I appreciate, however, the tone of voice that was used really seemed to upset the customer. Did you notice that?”

When providing corrective feedback, be careful with your voice tone and body language. Try using a neutral voice tone; with the same intonation that may be used to say, “I’m going downstairs to get a drink of water.” Do not close your body language by crossing your arms or frowning – both of

these tend to cause the people to whom you are speaking to become defensive.

Focus only on one or two items when correcting. Don't compare employees, as this makes people defensive and will ruin the relationship between the two being compared. Most importantly, do not give corrective feedback in public, when the employee is tired, or when they are too busy or distracted.

Try to praise three times for every time you correct, and keep a record, if possible, of your coaching so that you will have this to refer to for performance appraisals and to help you stay on track.

Conducting Sales Meetings

Sales meetings are important because they provide an opportunity to refocus your group on the goals and action plans most likely to produce an increase in sales. They also produce a sense of belonging and common purpose, and to this extent, they are highly motivational. When meetings occur at the same time each week, they provide a built-in "deadline" for achieving sales results that can help keep your group focused and on track. Sales meetings do not have to be a big production, but rather, they should be a genuine show of your emotional support to the group and their goals.

Don't schedule a sales meeting at the same time as you schedule other meetings, as you will find that the sales material will tend to get crowded in the agenda with other non-sales items. Hold one weekly meeting that will last anywhere from 15 to 20 minutes and then daily 5 minute "rallies" to keep people focused and enthusiastic about their work.

Every meeting should have a clear purpose, and an agenda should be prepared. Of course, you will want to review goals and the sales action plan. Your commitment to your sales meetings is a commitment to the growth of your staff and the meetings should not be cancelled unless it is completely unavoidable. Most importantly, have fun in every meeting so they become anticipated events and not dreaded reviews of numbers.

What Should Be Included on the Agenda of Every Sales Meeting?

- ◆ Stress the importance of the week ahead, such as, three weeks left in the campaign, one more month in the quarter, etc.
- ◆ Review sales statistics: How much have we produced? How does this compare to monthly, quarterly and annual goals?
- ◆ Review the branch sales plan. Are we on track?
- ◆ Review individual production reports and celebrate successes.
- ◆ Establish a focus or objective for the week.
- ◆ End the meeting on a positive note by providing one productivity tip or motivational theme for the week.

To Add Diversity to Your Sales Meetings, Consider Adding One or Several of the Following:

- ◆ Guest speaker
- ◆ Product training
- ◆ Skills review
- ◆ Tips on how to be more productive
- ◆ Role plays
- ◆ Book or article reviews, which focus on “How can we use this idea in our bank?”
- ◆ A “good things” report

Encourage Group Participation

If you worry about having time to plan sales meetings, delegate this responsibility to someone else in your area. For example, one bank has a rotating “Sales Leader” who is responsible for organizing and conducting sales meetings each month for one quarter.

You can also encourage people to participate by using one of the following ideas:

- ◆ Give participants a pre-meeting assignment.
- ◆ Organize small group discussions to solve a common problem.
- ◆ Brainstorm ideas on a white board/flipchart.
- ◆ Stand during the meeting.
- ◆ Follow your agenda closely.
- ◆ Ask open questions that encourage people to talk.
- ◆ Make eye contact with participants.
- ◆ Establish a rule that each idea presented requires one good thing mentioned before any criticism will be heard.
- ◆ Circulate agenda early and encourage people to add to the agenda.

How Should You Arrange Meetings with Full- and Part-Time Employees?

- ◆ Assign a “scribe” whose job is to take notes and share the results of the meeting with those coming in at different times.
- ◆ Conduct shorter meetings when all staff is present.
- ◆ Video or tape record the meetings and make them required viewing/listening.
- ◆ Occasionally have meetings after hours.
- ◆ List key points in a “Meeting” folder – pass around and have all sign after viewing.

Exercise: Small Group Discussion

Working in groups of three to five, write an agenda for a sales meeting that will take three to five minutes. Select a team leader and be prepared to role play the meeting if asked.

SUMMARY

For more than forty years, banks have been talking about the importance of implementing and sustaining a sales culture, yet many banks have yet to put forth the whole bank concentrated effort that, once achieved, will have a profound impact on profits. If the problem lies in not realizing how to go about structuring and managing a sales management program, use the components listed in this program as an outline for putting all of the pieces in place. There are also many excellent resources available online or in your local library. Your state banking association also provides information and seminars that can help support this process.

A Glossary found in the Appendix provides a list of terms unique to the sales management process. Full implementation can take as long as three to five years; therefore, managers should be aware of this and ready to make changes as needed. A well-managed sales program will dramatically increase the profits for the bank and produce a company for which all employees can be immensely proud. It is well worth the time and effort required.

APPENDIX

Sales Management Worksheets

- **The Goal Minimizer Worksheet**
- **Sales Plan Worksheet**
- **Tracking and Monitoring Worksheets (Monthly Sales Logs)**

Optional Sales Management Case Study

Glossary of Terms

Goal Minimizer Worksheet

What annual sales goals have been set for your branch?

List these below:

Deposit: \$3,000,000 increase

Credit: \$750,000 increase

Now, break this goal down into a quarterly, monthly, daily and individual sales goal:

To Find Your:	Take Your Annual Goals	Divide By:	Minimized Goals
Quarterly Goals	D \$3,000,000	4	\$750,000
	C \$750,000		\$187,500
Monthly Goals	D \$3,000,000	12	\$250,000
	C \$750,000		\$62,500
Daily Goals	D \$3,000,000	240	\$12,500
	C \$750,000		\$3,125
Individual Goals	D \$12,500	# of FT Employees	\$2,500
	C \$3,125		\$625

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Monthly Sales Plan

Branch: Main Bank

Month/Year: July – 20XX

Goal	Activities to Reach Goal	Who Will Do This?	Due Date
#1 \$250,000 in New Deposits.	Ask each new account customer about at least one additional deposit product.	All	End of Month
	Call Certificate Customers for additional deposits.	Managers/CSR	15 th
	Ask CD customers for referral business.	All	End of Month
#2 \$62,500 in New Loans.	Ask customers with children in private school or college about an equity line for tuition payments.	All	All month
	Call customers with three years plus old car/loans. RE: new car promotion.	Managers/CSR	20 th
#3 Answer the telephone by third ring and apply proper phone skills.	Have refresher review of skills and prepare job aid to remind all of requirements.	All	All Month
	Daily reward for individual who does the best job.	Manager	Daily
	If month goes well, hold a pizza party for the branch if goal is met.	Manager	End of Month
#4 Cross-sell one product to 20 new or existing customers.	Tellers ask every customer about one new product each day.	Tellers	All Month
	CSR's use open ended questions to identify one additional need per conversation.	CSR	All month
	Develop one new prospect per week from an outside source.	Managers	Weekly, by Thursday

Goal	Activities to Reach Goal	Who Will Do This?	Due Date
#5 Use promotion to sell car loans to new and existing customers	Give promo flyer to each person visiting bank in the lobby or drive-through.	All employees	All Month
	Call loan customers for promo - have a call party.	All employees	19 th
	Ask each new account customer if they are in the market for a new car.	Managers	All Month
#6 Develop and implement ideas for cross training so that all employees are able to take lunch	Create training program and job aids as needed.	Managers/CSR	19 th
	Each employee will submit one type of cross training they need at each sales meeting.	All	1 st two weeks of month
	Try best ideas for one week and implement or adjust as necessary.	Managers	24 th

[illegible]

Sales in Financial Services

Monthly Sales Log

Month: _____

Employee	Goal		Actual		Goal		Actual		Goal		Actual		TOTAL		TOTAL	
Deposit	Goal	Actual	Goal	Actual	Goal	Actual	Goal	Actual	Goal	Actual	Goal	Actual	Goal	Actual	Goal	Actual
TOTAL																
Loans	Goal	Actual	Goal	Actual	Goal	Actual	Goal	Actual	Goal	Actual	Goal	Actual	Goal	Actual	Goal	Actual
TOTAL																

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Sales in Financial Services

Monthly Sales Log

Month: _____

Employee													TOTAL		TOTAL	TOTAL
Deposit	Goal	Actual	Goal	Actual	Goal	Actual	Goal	Actual	Goal	Actual	Goal	Actual	Goal	Actual	Goal	Actual
TOTAL																
Loans	Goal	Actual	Goal	Actual	Goal	Actual	Goal	Actual	Goal	Actual	Goal	Actual	Goal	Actual	Goal	Actual
TOTAL																

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Monthly Sales Log (Completed)

Month: July - 20XX

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Sales Management Case Study

You have been the manager of Baywood Heights, a \$15 million branch of Winstar Bank for three years. Several months ago the bank decided to close another branch that is within two miles of your facility and combine operations. Because of this, you are beginning to experience customer service problems within your branch that are affecting sales. You have four tellers and four customer service representatives that work at your branch.

Two of the Customer Service Representatives from the closed branch were moved to your facility. They were unhappy about the move and have been somewhat hostile toward the customers and coworkers of your branch. The other two CSR's have excellent service skills, but they have been with the bank less than three months and are still learning operations and frequently make mistakes. Three of the tellers are new and have been with the bank less than six months. Your head teller is the only person in the branch who has been there since the branch opened five years ago, and she is very talented and provides stability.

Since the consolidation, teller transactions have increased from 9,456 transactions per month to 35,124 transactions per month, and the three new tellers are experiencing balancing problems. Many of the customers from the old branch complain frequently about having to drive farther now, and both sets of customers are unhappy about the longer lines. Your tellers have all been very successful in selling direct deposit and debit cards to customers who are complaining.

Branch loan sales are 50% ahead of budget, but you need to get the service and balancing problems under control. In fact, Audit called yesterday and you were informed that three of your tellers need to be placed on marginal status immediately due to their records.

Analyze the Problem

1. Describe the problem: What is occurring now? Who is involved?
2. What are the possible causes? What are the most probable causes? How can the problems be corrected?
3. Develop an action plan that will address these issues and correct the situation that includes all of the elements studied in this module.

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Glossary of Terms

ACTIVITY. Actions the employee takes to develop qualified prospects, follow up with prospects, or close sales. Effective activities are proactively identified in a sales plan and tracked so they can be coached and included in performance appraisals on a regular basis.

BRANCH GOALS. Specific sales and activity objectives that management establishes for each branch or division to meet as a team during a specified time frame.

CLOSING. Putting business on the books; such as opening a new account.

COACHING. One-on-one feedback, either positive or negative, provided in a timely manner, and on a regular basis in order to enhance an employee's sales performance.

CRITERIA BASED INTERVIEW. Determining what knowledge, skills and abilities are needed to be effective in a job, and conducting an interview in such a way to make sure they are present.

CROSS-SELL RATIO. Average number of sales per total sales completed.

GOAL. Specific and measurable outcome or objective to meet during a determined time frame as a result of focused effort.

GOAL SETTING GUIDELINES (SMART). All goals should meet the following criteria:

Specific –	Broken down into clearly defined objectives, which are easily communicated and understood. They should not be vague in any way that could allow misunderstanding or ambiguity.
Measurable –	Written with a measurable outcome, such as quantity or quality, so progress or shortfalls in results or activities can be tracked, measured and reported on a regular basis. A desired outcome that is not measurable may result in not meeting a sales goal.
Attainable –	Able to be accomplished through activities under the control of the individuals or the group of individuals responsible for reaching the goal and that the salespeople are able to achieve through their own effort.
Realistic –	Able for employees to accomplish during the specified timeframe as long as the correct activities are identified and carried out as planned through hard work and conscious effort. The goals should not be too easy or too difficult to accomplish.
Timely –	Assigned a specific deadline to accomplish the goal.

INCENTIVE. Award motivating an employee to accomplish a sales or activity goal. Incentives can take the form of money, prizes, trips, time off, plaques, awards, recognition, or anything that motivates a particular individual or group of individuals to succeed.

INCENTIVE PLAN. A planned program of payment or reward for achieving desired sales and/or activity results, which is communicated clearly and easily understood by all participants. Sales/activities are monitored and reported, and incentives are paid on a timely basis for achieving goals as determined in the plan.

INDIVIDUAL GOALS. Specific sales and activity objectives established for an individual to meet during a specified time frame.

MODELING. A desired behavior done correctly so that other employees can observe it and pattern their behavior after it.

NET GROWTH REPORT. A report showing the actual increase or decrease of key measures, such as loan or deposit growth over a determined period of time. If using growth goals, produce this report at least as often as the goals are measured or incentives are paid. With more frequent growth reporting, employees or branches may evaluate and adjust their activities to meet or exceed expectations. Yeiser recommends at least monthly reporting of any net growth results-to-goal.

PERFORMANCE APPRAISALS. Regularly scheduled meetings with employees to provide specific, detailed feedback on their performance and identify strengths and areas for improvement. In a true sales culture, sales skills, sales and prospecting activities and sales results-to-goal are standard areas to review and rate as job performance requirements.

PROACTIVE. Creative problem solving, where an employee ascertains a customer's problem and offers a solution without procrastinating. Also an employee's ability to anticipate customers' needs and offer appropriate solutions without being asked (the opposite of order taking).

PRODUCTION REPORT. A report showing actual numbers of products sold or activities accomplished compared to goal over a determined period of time. If using production goals, produce this report at least as often as the goals are measured or incentives are paid. With more frequent production reporting, employees or branches may evaluate and adjust their activities to meet or exceed expectations. Yeiser recommends at least weekly reporting of any production results-to-goal. Employees should have the capability – either manually or systematically – to track production daily.

PRODUCT PROFITABILITY. The actual profit or loss of an individual product type, considering all possible income sources, and all fixed, variable and overhead costs attributed to selling and managing that product. Profitability is often figured on a one, two and three-year basis. Use this information to determine marketing budgets and the per product incentive to pay to motivate employees to sell that product. More profitable products support more marketing efforts and higher per product incentives. Evaluate non-profitable products for customer need, competitive advantage, and ways to improve profitability (or to discontinue offering).

REACTIVE. A lack of creative problem solving ability. Also order-taking, or using minimal skill to handle customer requests as they are presented without anticipating other needs or trying to offer creative solutions

SALES CULTURE. A work environment that identifies, trains, motivates, tracks, coaches and rewards desired sales skills and activity among all employees in order to reach well-communicated production, growth and profitability goals. In a true sales culture, sales skills, sales and prospecting activities and sales results-to-goal are reviewed and rated as job performance requirements for all front line personnel.

SALES GOAL. Any specific sales objective that an individual or group determines they will accomplish during a defined time frame through proactive, productive and planned sales activities

SALES MANAGEMENT. The systems and processes required to: establish and communicate effective goals for all sales personnel; create sales plans to identify desired sales activities; motivate employees to accomplish goals; track and report performance-to-goal; support coaching to enhance employee performance; require a minimum standard of sales skills and results to review as required job performance; and reward desired performance.

SALES PLAN. A written description of goals and the blueprint of activities required to meet those goals during a determined time frame

STRETCH GOAL. A goal determined by reviewing past performance, establishing a reasonable performance expectation for a determined time frame going forward and increasing that expectation to create a goal requiring concentrated effort to achieve. Yeiser recommends that a stretch goal not exceed 110 – 115% of reasonable performance expectations (a 10 – 15% improvement over past performance).

TRACKING. The ability, through manual or automated systems, to measure actual progress or shortfalls in production or performance, compared to sales and activity goals. Any objective used as a goal or performance requirement should be measured, or tracked, in relation to expectations. These measurements are reported to all individuals who are held accountable for goals, or are responsible for the sales management process, to use for goal setting, monitoring production- or activities-to-goal, coaching, performance reviews and incentives.

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Appendix

Cases and Problems

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CASES/PROBLEMS: MACROECONOMICS

A. Analysis of Economic Conditions

Consider the following data which can be used to identify the state of the U.S. macroeconomy. Assume that various federal government agencies have just released reports that provide this information. **Remember, this is a hypothetical case, and not all data is reflective of current economic conditions.** The Roman numerals refer to respective 3-month intervals (quarters) of the current year: I = first quarter, II = second quarter, etc.

1. Aggregate Output

- a. Gross domestic product in the recent quarter: 1.05%
- b. Gross domestic product for 2 previous quarters: -1.41%(I), 0.36%(II)
- c. The growth in consumer spending is negligible; consumer confidence is low and declining; consumer debt recently peaked but is now declining as a fraction of consumer income.

2. Employment

- a. Civilian unemployment rate for most recent quarter: 7.1%
- b. Civilian unemployment rate for previous 2 quarters: 7.0%(I), 7.1%(II)
- c. Growth in employment for most recent quarter: 338,000 people

3. Inflation

- a. Producer price index for 3 recent quarters: 3.1%(IV-prior year), 2.8%(I), 1.1%(II)
- b. Consumer price index for 3 recent quarters: 4.1%(IV-prior year), 2.4%(I), 2.2%(II)

4. Interest Rates

- a. Money market and capital market rates are at historical lows.
- b. Interest rates in the U.S. are below rates on comparable maturity securities in Great Britain, Germany, and Japan.
- c. The yield curve as measured by the difference between the 30-year, 10-year, and 1-year Treasury bond rates exhibits its steepest slope since the early 1970s.
- d. Short-term and long-term rates have been generally falling for the past 5 years.

5. U.S. Monetary Environment

- a. Money supply growth however measured (by M1, M2 or M3) is at the upper end of the Federal Reserve's target range.
- b. The Federal Reserve recently lowered the discount rate to its lowest level in 25 years.
- c. The Federal Reserve recently lowered reserve requirements against checkable deposits at all financial institutions.

6. Federal Budget Deficit

- a. The federal budget deficit is estimated to exceed \$250 billion in the upcoming fiscal year, but appears to have stabilized.
- b. Federal government borrowing as a fraction of gross domestic product has increased slightly in recent years.
- c. Interest payments on the federal debt are a constant fraction of total government expenditures because the level of interest rates has recently fallen.

7. Global Environment

- a. Germany and Japan are using monetary policy to keep rates high.
- b. Gross domestic product in most industrialized nations is slowing, yet growth is still positive and there is no worldwide recession.
- c. The value of the U.S. dollar is generally declining relative to the currencies of other industrialized nations.
- d. U.S. exports are slowing relative to U.S. imports.

Questions

According to the above information:

- 1. Where is the U.S. economy in terms of the business cycle? Identify which figures you used to determine this.
- 2. What role has the Federal Reserve played in influencing where the economy is in the business cycle?

3. What impact does the federal budget deficit have on economic growth? Does it hinder government policy initiatives? If so, how? If not, why not?
4. Can the U.S. look to foreign investment and economic growth to help improve domestic economic conditions? What is your forecast regarding the value of the dollar versus other currencies over the next year?
5. What is the significance of the U.S. Treasury yield curve exhibiting such a steep slope? Would it be wise government policy to borrow more via short-term Treasury securities, such as T-bills, and less via long-term Treasury bonds?
6. Suppose that you are a member of the President's Council of Economic Advisors. What policy targets would you emphasize and what policy actions would you recommend, if any? Assume that it is not an election year.
7. Suppose that you are a member of the Federal Reserve Board of Governors. What policy targets would you emphasize and what policy actions would you recommend? Again, it is not an election year.

B. Impact of Policy Directives on Bank Customers and Bank Performance

1. Assume that U.S. economic activity is slowing down. The growth in gross domestic product is declining as is employment, inflationary pressures are easing, retail sales and consumer spending are generally slowing, and interest rates are falling. At this point in time, the Federal Reserve decides to accelerate money growth through purchases of securities in the open market. It also announces a policy of monetary ease by cutting the discount rate.
 - a. How do prevailing economic conditions affect bank retail customers? What likely occurs with deposit growth? What happens to individuals' demand for installment loans? What responses will the bank get to declining interest rates?
 - b. How do prevailing economic conditions affect bank commercial customers? What likely occurs with commercial deposits and commercial loan demand? Does a business normally see its financial condition improve or deteriorate? Why? What will the likely trend be for loan losses?
 - c. Explain how the Federal Reserve policy will likely affect:
 - i) consumer confidence and sentiment
 - ii) business spending and loan demand
 - iii) the availability of bank credit; will banks be more willing to lend?
 - iv) the level of short-term and long-term interest rates.

Now assume that the U.S. economy is in a high growth period. Consumer and business spending is high and growing. Inflationary pressures are growing. National output is strong and employment gains are impressive. U.S. interest rates are rising because the availability of credit cannot keep up with loan demand and investors fear that inflation will worsen. To reduce inflation fears, the Federal Reserve decides to slow money growth by taking reserves out of the banking system via open market sales of government securities.

- a. How do prevailing economic conditions affect bank retail customers?
 - b. How do prevailing economic conditions affect bank commercial customers?
 - c. Explain how the Federal Reserve policy will affect:
 - i) consumer confidence and sentiment
 - ii) business and consumer spending and loan demand
 - iii) the availability and price of bank credit
 - iv) the level of short-term and long-term interest rates
2. Both of the above situations ignored the role of global economic conditions. Explain how the impacts of Federal Reserve policy might differ depending on:
- a. whether global economic conditions are robust with all countries experiencing strong growth
 - b. whether large industrialized nations are in recession.

CASES/PROBLEMS: MANAGING LIQUIDITY AND CAPITAL PLANNING

A. Liquidity Analysis

1. Liquidity planning requires constant monitoring of deposit outflows. Below are listed activities that may cause deposit outflows. Indicate which ones are predictable from a banker's perspective. Indicate how a banker might position the bank in anticipation of both the predictable and unpredictable activities.
 - a. In April a farmer draws down his line of credit in order to purchase seed.
 - b. Students borrow to pay fall tuition at local universities.
 - c. Bank makes a monthly lease payment for bank buildings.
 - d. Bank buys newly issued municipal securities.
 - e. Bank makes a dividend payment to holders of common stock.
 - f. The Friday before a city-wide festival, customers drain all cash from ATMs.
 - g. The U.S. Treasury transfers funds from its tax and loan account to the Federal Reserve.
 - h. Wealthy individual withdraws a \$5 million CD.
2. What do the terms *core deposits* and *volatile liabilities* mean? Explain how a bank might estimate the magnitude of each.
3. *Exhibit 3-4* presents a format for calculating a bank's liquidity gap. Assume that you are in charge of liquidity planning for this bank and are confronted with the liquidity gap estimate provided in this exhibit. Discuss the specific risks faced by the bank. Indicate how you would position the bank, both in terms of asset holdings and borrowing capacity, to respond to these risks.

B. Managing Liquidity and Capital Planning

Exhibit 10 in the text provides the risk-based capital requirement for Prosperity National Bank. Asset data from the balance sheet are separated into categories according to risk classes as determined by regulation. The zero percent or lowest risk assets are listed first followed by assets in successively higher risk classes. Off-balance sheet activity is listed at the bottom of the list. The columns of data indicate the associated balance sheet value or off-balance sheet exposure,

the associated risk weight specified by regulation, and the contribution to the bank's risk-weighted assets. The exhibit demonstrates that Prosperity National Bank reported almost \$5 billion in assets at the end of 2023. Of this total, \$3.28 billion represented risk assets which combined with risk assets associated with off-balance sheet activity (\$435.9 million) produced \$3.7 billion in regulatory risk-weighted assets.

The calculation at the bottom of the exhibit indicates that Prosperity National Bank was required to have no less than \$148.5 million in Tier 1 capital and \$297 million in total capital at the end of 2023, assuming it was an average risk bank. This calculation also assumes that the bank does not need additional capital in support of excessive interest-rate risk.

Problem Analysis:

Assume that Prosperity National Bank was capital deficient at the end of 2023 because it had only \$120 million in Tier 1 capital. This resulted from a series of asset write-downs and loan loss provisions over the years 2009-2023 that reduced stockholders' equity. The bank was still experiencing asset quality problems and was in serious need of additional capital.

Questions

Consider each of the following as a potential source of new capital or means of meeting the regulatory capital standards at Prosperity National Bank. Evaluate the advantages and disadvantages of obtaining capital in that form. Which is the best alternative in your view?

1. Shrink the bank by reducing loans and securities. Alternatively, stay the same size but shrink the loan portfolio and substitute lower risk class securities.
2. Issue new common stock or new preferred stock.
3. Retain more of the bank's earnings, either by eliminating dividend payments or trying to earn more by accepting higher risk assets.
4. Find a merger partner or acquirer.

C. Analyzing Capital and Solvency Risk

The following ratios are taken from a sample bank's Uniform Bank Performance Report (UBPR) for December, 2025. Analyze the bank's capital risk position. In particular, how does the bank compare to peer banks in terms of its capital adequacy?

Appendix Cases/Problems

<u>Ratios</u>	<u>Sample Bank</u>	<u>Peers</u>
Net income/Average assets	1.43%	1.21%
Noncurrent loans & leases/Average assets	2.46	2.04
Total capital/Risk-weighted assets	8.13	10.19
Cash dividends/Net income	18.60	29.54
Tier 1 Capital/Risk-weighted assets	4.41	8.09
<u>Ratios</u>	<u>Sample Bank</u>	<u>Peers</u>
<i>Growth rates</i>		
Assets	8.63	5.19
Net loans & leases	7.36	6.04
Total capital	6.28	6.82
Temporary investments	1.75	7.04
Volatile (non-core) liabilities	11.47	12.19
<i>% of Total Assets</i>		
Loan & lease commitments	2.99	
Gross standby letters of credit	0.92	
Principal balance of mortgage pools	4.61	
Net loans & leases	67.27	57.08
Securities over 1 year	14.92	17.36
Temporary investments	11.50	18.36
Earning assets	93.69	92.80
Core deposits	80.57	78.55
Volatile (non-core) liabilities	7.68	10.30
Common & Preferred capital	6.23	9.36
Loss provision/Average assets	0.16	0.33
Net loss/Average total loans	0.34	0.49
Loan & lease allowance/Non-accrual loans	3.16	2.83
Non-accrual loans & leases/Total assets	1.44	1.02
(Interest-bearing Assets – Interest-bearing Liabilities)/Assets	16.33	14.52
<i>Capital Ratios</i>		
Total Capital/Average assets	8.13	10.69
Total capital/Non-liquid assets	13.49	18.90
Net loans & leases/Equity	7.8X	5.6X
Net income/Average equity	17.31	14.72
<i>Growth rates</i>		
Tier 1 capital	10.91	8.10
Total capital	8.44	6.72
Total capital growth less asset growth	4.28	2.41

CASE/PROBLEMS: LENDING

A. Commercial Lending – Cash Flow Analysis

The following exhibit presents balance sheet and income state data for Growth Resources, Inc., a manufacturer of herbal dietary supplements that recently bought out an existing chain of health stores. During 2025 the firm instituted a national marketing campaign to enroll individuals to sell the firm's products from their homes. Senior officers of the firm were pleased with sales in 2025, noting the 20% increase over 2024 sales. Individuals enroll in the new program for one year and Growth Resources recognizes the entire membership fee immediately, even though the new sales representatives have the right to cancel without obligation during the first 3 months. The policy has clearly helped the firm's marketing efforts and sales.

Balance Sheet and Income Statement Data for Growth Resources, Inc. ((\$mm in dollars))

<u>Balance Sheet</u>	<u>2024</u>	<u>2025</u>	<u>Income Statement</u>	<u>2024</u>
Assets				
Cash And Marketable Securities	\$ 27	\$ 6	Net Sales	\$ 784
Accounts Receivable	118	203	Cost Of Goods Sold	<u>604</u>
Merchandise Inventory	97	99	Gross Margin	180
Prepaid Expenses	8	5	Selling Expenses	47
Gross Fixed Assets	130	139	General & Adm. Expenses	59
Less Accumulated Depreciation	<u>-42</u>	<u>-57</u>	Depreciation	<u>23</u>
Net Fixed Assets	88	82	Operating Profit	51
Intangible Assets	<u>4</u>	<u>3</u>	Interest Income	3
Total	\$ 342	\$ 398	Interest Expense	<u>21</u>
			Profit Before Taxes	33
Liabilities And Net Worth			Income Taxes	<u>8</u>
Notes Payable - Bank	121	154	Net Profit ^a	\$ 25
Current Matur. - Long-Term Debt	9	11		
Accounts Payable	42	48		
Accruals	2	8		
Federal Income Tax Payable	3	6		
Long-Term Mortgage	19	17		
Long-Term Debt	<u>48</u>	<u>39</u>		
Liabilities	\$ 244	\$ 283		
Common Stock	50	50		
Retained Earnings	<u>48</u>	<u>65</u>		
Net Earnings	<u>98</u>	<u>115</u>		
Total	\$ 342	\$ 398		
^a Net Worth Reconciliation:				
Beginning Net Worth	48			
+ Net Profit	25			
- Dividends Paid (Cash)	<u>8</u>			
Ending Net Worth	65			

Questions

1. Using the data in the preceding exhibit, generate a cash-based income statement for Growth Resources in 2025.
2. Interpret the figures by evaluating the firm's cash flow from operations. What is the impact of changes in current assets and liabilities? Is the cash flow from operations large enough to cover mandatory expenditures?
3. Make a list that summarizes potential problems that Growth Resources Inc. faces in terms of the cash flow statement and otherwise.

B. Consumer Lending – Credit Scoring

Assume that you have a 52-year old male approach your bank with a request to finance a \$35,000 boat. The following information is drawn from his credit application.

Annual Gross Income	\$52,500
Monthly Net Income	3,400
Monthly Debt Payments	1,275
Bank Relationship	checking only
# Of Credit Cards	6
Residence	own with mortgage
Residence Stability	20 months
Job Stability	22 months
Marital Status	recently divorced
Credit History	2 derogatories in last 3 years

1. Use the data in *Exhibit 11* for University National Bank and the following ranges for credit scores to determine whether this borrower qualifies for credit on a strict numerical basis from the credit scoring model introduced:

Minimum score for automatic credit approval = 200

Maximum score for automatic credit denial = 150

Range for judgmental evaluation = 150-200

2. What information would you assign the greatest weight in evaluating whether to approve this loan request or not? Assume that the basic issues of character have been resolved in the prospective borrower's favor. Would you make this loan with other information known to be of minimal impact?

CASES/PROBLEMS: INVESTMENTS

A. The Price Sensitivity of Fixed Income Securities

1. Suppose that your bank is considering buying a 6-month T-bill that pays \$100,000 at maturity in 182 days. The current T-bill (discount) rate is 4.5%. Calculate the current price of the T-bill. How much interest will you earn if you hold the T-bill to final maturity?
2. Suppose that you want to sell the T-bill after two months when it has 150 days remaining to maturity. If the current market rate on this T-bill is 4.3%, calculate the price at which you could sell the security.
3. Your bank owns a 3-year Treasury bond that pays \$35,000 in coupon interest every 6 months and will return \$1 million at maturity. The current market interest rate on this bond is 6.80%.
 - a. Will the price of this bond be above, below, or equal to \$1,000,000?
 - b. Assume that the market interest rate on this bond rises to 7.15% in 6 months. Explain how the price of the bond will change.
 - c. Suppose that your bank also owns a 7-year Treasury bond that pays \$35,000 in coupon interest every 6 months and has a \$1 million maturity value. If the market interest rate on this bond is 7.15%, will this be a discount or premium bond? Will its price be greater or less than the price of the 3-year bond when both are priced to yield 7.15%? Explain.

B. Yield Curve Analysis

You have funds to invest for 2 years and want to maximize total return but minimize default risk. Suppose that the following market rates on Treasury securities are currently available:

1-year = 5.68%

2-year = 6.10%

1. Why is the 2-year rate above the 1-year rate according to the expectations theory?
2. Assume that you will either buy the 2-year security or two consecutive 1-year securities. In the first case you can "lock in" a yield of 6.10% for each of the two years. In the second case, you can "lock in" a yield of 5.68% in the first year, but do not know the yield that you will get in the second year. Ignoring interest compounding, determine what yield you would have to reinvest at for the 1-year security in the second year to earn the same interest as you would get simply by buying the 2-year security. This break-even yield is labeled a forward rate.
3. How does the forward rate that you calculated in question #2 differ from the current 1-year rate of 5.68%? Why?

4. Suppose that you expect a 1-year Treasury security to yield 6.75% 1 year from today. Would you buy the 1-year Treasury and reinvest in another 1-year Treasury at maturity, or would you buy the 2-year Treasury? Explain your reasoning.

C. Qualified versus Nonqualified Municipals vs. Taxable Securities

Assume that you manage your bank's investment portfolio. At the end of the month, \$1 million in municipals purchased in 2019 will mature. The issue is how to invest the proceeds. You have identified two alternative securities with comparable default risk and maturity.

	<u>Federal Land Bank Bond</u>	<u>ISD Municipal</u>
Maturity	5-year	5-year
Annual coupon	8.45%	7.05%
Tax status	taxable	bank qualified
Applicable tax rate*	34%	?

*no state/local taxes apply to either bond

1. Calculate the effective tax rate on the ISD municipal. Use this to calculate the after-tax yields on each bond. Which offers the highest after-tax return? Assume that your bank's pooled cost of funds equals 6%.
2. What would the after-tax yield on the ISD municipal equal if the bond did not qualify for any bank interest deductibility on the associated carrying costs (if the bond was non-qualified)?
3. What impact does the alternative minimum tax have on the after-tax yield comparison?

D. Mortgage-backed Securities

1. Suppose that your bank purchased a FNMA 7.5% coupon security at par 4 years ago. The estimated prepayment rate at that time was 6% such that the estimated life of the bond was approximately 7 years.
 - a. Today interest rates on comparable FNMA securities have fallen to 5.5%. Determine whether the prepayment rate will increase or decrease and explain why. In this environment, what will happen to the security's estimated life? What problem(s) does owning this security possibly present?
 - b. Would the impact on prepayments and the estimated life have been greater or less if your bank had owned a 9.5% FNMA security in the same interest rate environment? Provide your reasoning.

CASES/PROBLEMS: ASSET AND LIABILITY MANAGEMENT

A. Variations in Net Interest Income

The County Bank has classified the following balance sheet items as rate-sensitive within one year. Average expected interest yields and interest costs during the year are listed beside each account category. Use this information to answer questions 1 through 5.

<u>Rate-sensitive assets</u>	<u>\$ in millions</u>	<u>Average Interest Rate (%)</u>
U.S. Treasury securities	5.6	4.66
U.S. Agency securities	11.9	7.85
Federal funds sold	2.2	3.83
Commercial loans	30.8	10.47
Consumer loans	38.6	13.60
Mortgages	9.1	10.04
Municipal securities	5.8	8.31 (te)
Total	\$104.0	
Fixed-rate earning assets	\$146.0	9.25
<u>Rate-sensitive liabilities</u>		
NOW accounts	32.3	3.16
MMDAs	18.7	4.55
Small time deposits	40.9	5.48
CDs over \$100,000	17.8	7.12
Repurchase agreements	3.0	4.06
Total	\$112.7	
Fixed-rate interest bearing liabilities	\$122.3	6.24

1. Calculate the bank's GAP, expected net interest income, and expected net interest margin assuming that interest rates remain at the levels listed. Evaluate the GAP by explaining the bank's risk exposure to changes in interest rates.
2. Assume that the yield curve at all maturities shifts upward by 1.5% during the year and that all rate sensitive assets and liabilities are repriced at the higher rates. Recalculate the bank's net interest income and net interest margin.
3. Suppose instead of a uniform shift in rates, asset yields rise by 1% while liability rates rise by 1.5%. Calculate the bank's net interest income and net interest margin. Why might rates change unevenly?
4. Assume that the bank's ALCO shifts \$8 million in maturing commercial loans to U.S. agency securities during the year. What impact will this have on net interest income?

5. When reviewing interest rate risk, the bank's ALCO also evaluates potential outcomes when interest rates decline. If all interest rates fall by 2% during the year, determine the change in net interest income from that originally expected.

B. Concept Questions

1. Indicate whether the following statements are true or false. Provide your reasoning.
 - a. A zero GAP indicates that net interest income will not change from year to year.
 - b. The best strategy is for a bank to maintain a zero GAP.
 - c. GAP measures beyond one year are not useful in understanding a bank's interest rate risk.
 - d. A bank that hedges its interest rate risk entirely eliminates the potential for extraordinary returns from favorable interest rate movements.
 - e. A bank that adjusts the size and sign of its GAP in line with management's interest rate forecast must be able to forecast interest rates better than the market (the current yield curve) to systematically profit from interest rate changes.

C. Asset and Liability Management and the Business Cycle

See *Exhibit 8* from the module on Investments. It characterizes how interest rates and the yield curve change over time as economic conditions change. Use this information to answer all parts of the questions below. In each case provide your reasoning.

1. At the peak of the business cycle, what is the shape of the yield curve? Why does it typically take this shape?

Assume that you are the bank's portfolio manager at the time that business activity is at its peak. In order to position the bank to reduce risk and enhance portfolio returns, which of the following would you attempt from each pair of alternatives?

- | | |
|--|---|
| a) market fixed rate loans | b) market floating rate loans |
| c) lengthen the average maturity of government securities holdings | d) shorten the average maturity of government securities holdings |
| e) lengthen the average maturity of outstanding CD liabilities | f) shorten the average maturity of outstanding CD liabilities |
| g) market fixed rate savings | h) market floating rate savings |

2. At the trough of business cycle activity, what is the shape of the yield curve? Why does it typically take this shape?

Assume that you are the bank's portfolio manager at the time that business activity is at the trough. In order to position the bank to reduce risk and enhance portfolio returns, which of the following would you attempt from each pair of alternatives?

- | | |
|--|---|
| a) market fixed rate loans | b) market floating rate loans |
| c) lengthen the average maturity of government securities holdings | d) shorten the average maturity of government securities holdings |
| e) lengthen the average maturity of outstanding CD liabilities | f) shorten the average maturity of outstanding CD liabilities |
| g) market fixed rate savings | h) market floating rate savings |