

VBA SCHOOL OF BANK MANAGEMENT 2020

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Please read the attached financial management primer before you enter bank school. We will be reviewing this material in more detail and the background will add real value to this course. Complete the matching exercise below:

Suggested Response

Asset (A), Liability (L), Owner's Equity (also known as shareholder equity) (O), Income (I), or Expense (E).

- ___ Interest and fees on loans
- ___ Salaries
- ___ Undivided profits
- ___ Other assets
- ___ Cash and due from banks
- ___ Pension, profit-sharing, and other employees benefits
- ___ U.S. Treasury securities
- ___ Other real estate
- ___ Interest on savings and time deposits.
- ___ Income on federal funds sold
- ___ Interest on other borrowed funds
- ___ Bank premises and equipment
- ___ Demand deposits
- ___ Interest and dividends on U.S. Treasury securities
- ___ Trust department income
- ___ Net occupancy expense of bank premises
- ___ Long-term debt
- ___ Savings deposits
- ___ Time Deposits
- ___ Capital stock
- ___ Equipment expense
- ___ Interest and dividends on securities of other U.S. agencies and corporations
- ___ Securities of U.S. government agencies
- ___ Loans (net of reserve for loan losses)

BANK ASSETS AND LIABILITIES

Just as the Federal Reserve manages the nation's funds to achieve its monetary policy objectives (and, in so doing, affects banks and their business objectives), banks manage their funds to achieve their business objectives. Bank funds are their assets and liabilities. The most important and largest bank assets are loans and investments; its most important liabilities are its customers' deposits. Banks have other assets and liabilities as well, all of which are reported on a bank's statement of condition.

STATEMENT OF CONDITION

The statement of condition, more commonly called the balance sheet, is prepared as of a specific date; for example, December 31 of a given year (see exhibit 2.4, next page). It is a snapshot of total bank assets, liabilities, and bank capital (**equity** or net worth) on a given day. An asset is anything of value the bank owns or is owed; a liability is anything a bank owes. For example, loans owed to the bank by borrowers are assets. Deposits owed by the bank to depositors are liabilities.

Major categories of assets listed on the statement of condition are:

- **Cash on hand and due from other banks**—coin and currency held in the vault, checks in process of collection, and balances with other banks and the Federal Reserve
- **Investments**—includes obligations of the federal government and its agencies, obligations of state and local units of government, and stock in the Federal Reserve if the bank is a member
- **Loans and lease financing**—all indebtedness to the bank, usually subdivided by category
- **Fixed assets**—real estate owned by the bank, as well as furniture, fixtures, and equipment
- **Other short-term assets**—for example, fed funds sold and securities purchased under an agreement to later resell them

Major types of liabilities that appear on the statement of condition include:

- **Deposits**—customer deposits subdivided into demand, savings, time, domestic, and global deposit accounts
- **Taxes payable**—all federal, state, and local taxes due
- **Dividends payable**—dividends to shareholders that have been approved by directors but not yet disbursed
- **Other short-term liabilities**—for example, fed funds purchased and securities sold under an agreement to be repurchased later

Depending on the size and scope of bank operations, other assets and liabilities may be listed in order of **liquidity**. Being the most liquid, “cash and due from banks” is the first asset shown and “deposits” is the first liability listed.

equity—The investment interest of all shareholders in a corporation, equaling the excess of assets over liabilities and including common and preferred stock, retained earnings, surplus, and reserves.

lease financing—A specialized area of finance dealing with renting property owned by a lender, financing the leases of a company engaged in rentals, or financing the purchase of an item to be leased out by the borrower.

liquidity—(1) The ability of a business to meet its current obligations or to take advantage of new investment opportunities, such as a bank's ability to cover withdrawals, pay for operating expenses, or make loans; (2) the quality of an asset that makes it readily convertible to cash without significant loss.

Balance Sheet Versus Income Statement

Statement of condition (balance sheet)

A detailed list of a company's assets, liabilities, and capital (equity) on a specific date

Profit and loss statement (income statement)

Summary of revenue, expenses, and net income earned by a company during a stated period, such as a quarter or a year

Exhibit 2.4: Consolidated Statement of Condition

Assets (In thousands of dollars)	December 31		
	20XY	20XX	Change
Cash and due from banks	\$ 1,649,334	\$ 1,332,586	\$ 316,748
Overseas deposits	<u>458,313</u>	<u>460,396</u>	<u>(2,083)</u>
Investment securities:			
U.S. Treasury securities	881,081	982,654	(101,573)
Securities of other U.S. government agencies and corporations	199,318	243,420	(44,102)
Obligations of states and political subdivisions	738,813	396,948	341,865
Other securities	<u>88,278</u>	<u>92,032</u>	<u>(3,754)</u>
Total investment securities	1,907,490	1,715,054	192,436
Trading account securities	14,846	66,140	(51,294)
Fed funds sold	168,600	108,450	60,150
Loans (net of reserve for loan losses and unearned discount)	9,715,728	8,074,132	1,641,596
Direct lease financing	147,860	134,472	13,388
Premises and equipment, net	133,506	132,320	1,186
Customers' acceptance liability	372,835	248,271	124,564
Accrued interest receivable	133,840	123,719	10,121
Other real estate owned	34,332	13,668	20,664
Other assets	<u>103,939</u>	<u>131,711</u>	<u>(27,772)</u>
Total assets	<u>\$ 14,840,623</u>	<u>\$ 12,540,919</u>	<u>\$ 2,299,704</u>
Liabilities and Stockholders' Equity			
(In thousands of dollars)	20XY	20XX	Change
Demand deposits	\$ 3,543,141	\$ 2,937,065	\$ 606,076
Savings deposits	3,585,808	3,485,886	99,922
Savings certificates	1,635,215	1,391,107	244,108
Certificates of deposit	1,827,420	1,601,707	225,713
Other time deposits	424,592	313,811	110,781
Deposits in overseas offices	<u>1,468,003</u>	<u>722,950</u>	<u>745,053</u>
Total deposits	12,484,179	10,452,526	2,031,653
Fed funds borrowed	897,189	924,501	(27,312)
Long-term debt	44,556	43,766	790
Acceptances outstanding	373,022	249,088	123,934
Accrued taxes and other expenses	142,756	122,064	20,692
Other liabilities	<u>171,904</u>	<u>122,890</u>	<u>49,014</u>
Total liabilities (excluding subordinated notes)	<u>14,113,606</u>	<u>11,914,835</u>	<u>2,198,771</u>
Subordinated notes:			
8.25% capital note to Wells Fargo & Company, due 20XZ	25,000	25,000	—
4.5% capital notes due 20XZ	<u>50,000</u>	<u>50,000</u>	—
Total subordinated notes	<u>75,000</u>	<u>75,000</u>	—
Stockholders' equity:			
Capital stock	94,461	94,461	—
Surplus	300,036	251,512	48,524
Surplus representing convertible capital note obligation assumed by parent corporation	10,065	14,589	(4,524)
Undivided profits	<u>247,455</u>	<u>190,522</u>	<u>56,933</u>
Total stockholders' equity	<u>652,017</u>	<u>551,084</u>	<u>100,933</u>
Total liabilities and stockholders' equity	<u>\$ 14,840,623</u>	<u>\$ 12,540,919</u>	<u>\$ 2,299,704</u>

insolvent—A position where liabilities exceed assets, resulting in the party being unable to meet its debt obligations.

Unless a bank is **insolvent**, its total assets are greater than its total liabilities. The excess of assets over liabilities show in the capital accounts, also called shareholder equity or net worth. A fundamental equation in accounting states that total assets must equal total liabilities plus net worth. In other words, if all of a bank's liabilities were paid by using assets, what is left would be its net worth. The standard equation is:

$$\text{Assets} = \text{Liabilities} + \text{Net Worth (Shareholders' Equity)}$$

MANAGING ASSETS AND LIABILITIES

Managing bank funds is far more complex than just making sure the rates charged for loans are higher than the rates paid for deposits. When crafting a strategy to manage its funds, every bank takes many variables into account. Most banks use a funds management strategy that is applied simultaneously to assets and liabilities. Because this is so important, banks usually have an Asset and Liability Management Committee (ALCO) that is responsible for this function.

The ALCO monitors the cost of deposits and the income from loans. Its goal is to manage bank assets and liabilities so that shareholders achieve the maximum possible long-term gain while allowing the bank to meet the needs of its customers. Accomplishing this feat requires balancing three objectives: liquidity, safety, and income.

Liquidity

Liquidity is important because a bank must have enough money available when depositors want to make withdrawals. When it is suspected that a bank is **illiquid**, depositors will rush to withdraw funds. This has triggered bank panics and failures in the past.

The need for liquidity is tied to both the deposit and the lending functions. Liquidity enables a bank to meet customer loan demand and respond to the credit needs of its community.

Every bank operates with the expectation that, over time, fund inflows will approximate outflows. Normally, new deposits arrive at a bank each day as checks and orders for withdrawals are being honored.

However, over time, if fund inflows and outflows do not match often enough, liquidity problems can build up. High loan demand (because of low interest rates or other market factors) and low deposits (because funds are being diverted to stock or other investments, or people stop saving) can cause a “credit crunch.” In a credit crunch, banks find it difficult to meet the legitimate borrowing needs of their customers.

Reserves, classified usually as primary and secondary, help prevent liquidity problems. Primary reserves include cash on hand, demand deposit balances at **correspondent banks**, and reserves kept at the Federal Reserve. Because the funds support daily operations, they are available immediately and thus highly liquid.

Secondary reserves are the highest-quality investments permitted by law, such as Treasury bills. They earn interest but can be converted to cash quickly. They are a back-up source of liquidity because they must be sold to be converted to cash.

Although a bank must stay liquid, it cannot afford to overemphasize liquidity by keeping large amounts of currency in its vaults. Because excess reserves reduce the percentage of deposits available for lending, they lower income from loans. Therefore, while recognizing the primary importance of liquidity, a bank also recognizes two other obligations in its program of funds management: safety and income.



Did You Know ...

Although there are now more credit unions in the U.S. than commercial banks, banks play a much larger role in the nation's economy, holding more than \$13 trillion in assets at the end of 2012. Credit unions and saving institutions reported combined assets of a little over \$1 trillion.

Source: Federal Financial Institutions Examination Council

illiquid—Deficient in assets that can be quickly used to meet current obligations.

correspondent bank—A bank, often a larger bank, that maintains an account relationship or engages in an exchange of services with another, usually smaller, bank. Sometimes called upstream correspondent bank. The bank that uses the services is the respondent bank.

Situation

Joan has a \$5,000 certificate of deposit that will mature soon. She has decided to reinvest the money in another certificate of deposit and wants the highest rate of return possible. She is not certain if her bank's rates are competitive with the current market. Joan plans to shop around for the best rate and, if necessary, will move her money to another bank.

Safety

Depositors must be confident that their money is safe. Although deposits are insured by the Federal Deposit Insurance Corporation (FDIC) up to \$250,000 (per depositor, per insured bank, for each account ownership category), banks must protect the deposits entrusted to them by avoiding unnecessary risk. Prudent lending practices, appropriate loan loss reserves, and strong corporate governance minimize fraud and mismanagement and help protect depositors.

Banks must strike a balance, however, and not be overcautious. A bank that aimed at maximum safety by avoiding all risk would make few loans and invest only in instruments that yield little income. This results in neglecting the legitimate credit needs of its customers and community and losing interest and fee income, thus minimizing the return to shareholders.

Income

The third objective of funds management is income. If liquidity and safety were the only factors a bank had to consider, it could keep most of its assets in cash held in its vault and make only those loans that carry an absolute minimum of risk. However, if a bank did this, it would fall far short of its income needs.

U.S. banks are not owned or directly subsidized by the federal government. Banks are owned by their shareholders, and thus earning a profit for those shareholders is of primary importance. A bank that repeatedly operates at a loss soon loses the confidence of its depositors, its shareholders, and the public.

Throughout U.S. financial history, banks that chose to maximize short-term income at the expense of liquidity and safety were forced out of business because their practices were unsafe. Although there may be a short-term gain in profits, unduly lowering credit standards will, in the long run, be fatal to a bank when weak loans cannot be collected and must be charged off for a loss. Income, like liquidity and safety, can never be considered alone.

Matched Funding

For years, bank management concentrated primarily on traditional assets such as loans. Managers were not as concerned about the source of the funds—primarily customers' deposits—that were used to purchase assets. Today, however, because customers have a wide variety of options for depositing their money, managing the liability side of banking has become equally important.

Banks work hard to attract new depositors and keep them. Periodically, every bank must decide how much it needs in funds, where to acquire additional funds, and how much it is willing to pay for funds in a competitive market.

One of the largest expenses for banks is the interest paid to depositors. A challenge for bankers is to ensure that interest paid is less than the interest received on loans. The difference between the two is known as net interest income (or loss). Each bank's net interest income is important to its efforts to meet payments, generate profits, and grow.

Applying the principle of **matched funding**, short-term loans are funded with short-term deposits and long-term loans with long-term deposits. A 15-year mortgage

matched funding—An asset and liability management technique in which assets are financed with liabilities of the same maturity or duration.

loan to purchase a home is funded by, for example, long-term certificates of deposits. A short-term loan or an adjustable-rate loan that is repriced as market rates change is funded with demand deposits.

Matched funding is applied not to individual loans but to the entire loan portfolio. For this reason, banks are careful to maintain a balance in the types of deposits they attract and the types of loans they make.

BANK INCOME AND EXPENSES

How effectively a bank manages its assets and liabilities determines the income it earns and the expenses it incurs. The difference between a bank's income and expenses is its profit. Income, expenses, and profit are reported on a profit and loss statement.

PROFIT AND LOSS STATEMENT

At the end of every **fiscal year**, banks prepare a profit and loss statement (also called an income statement) that details their financial performance for that given period of time. The bottom line of a profit and loss statement lists the net income. Positive net income is termed a "profit"; negative net income is termed a "loss". Banks, as with all for-profit enterprises, must consistently report a profit on the bottom line to remain viable.

The profit and loss statement lists all categories of income and expense (see exhibit 2.5, next page). The following major sources of bank income are typically listed in order of size and importance:

- Interest and fees earned on loans (loan income)
- Interest and dividends earned on investments (investment income)
- Fees, commissions, and service charges (fee income)

The major items of expense, also listed in order of size and importance, are:

- Interest paid on deposits (deposit interest expense)
- Salaries, wages, and benefits (employee expenses)
- Occupancy and equipment expense (occupancy expense)
- Taxes (federal, state, and local) (income tax expense)

LOANS VERSUS INVESTMENTS

As mentioned, there are three sources of bank income: loan income, investment income, and fee income. Before looking at all three, it is important to understand the distinctions between loans and investments.

Bank loans and investments differ in several basic ways. First, loans take priority over investments. By law, banks must meet the credit needs of customers and their communities by lending money to individuals, businesses, governments, and other banks. Investments, on the other hand, are made chiefly to generate income. The fact that banks contribute to the general well-being of a community by buying the community's notes or bonds is secondary to the income objective. Investments are made after the demand for loans has been met.



Did You Know ...

During the Bank Panic of 1907, anxious depositors around the country lined up outside banks in the hope of withdrawing their cash. Some enterprising people earned as much as \$10 a day holding places in line for weary depositors. Depositors of New York's Knickerbocker Trust Company, which would fail, were so desperate to withdraw their money that Knickerbocker tellers paid out more than \$8 million during a three-hour run. Only with the intervention of J.P. Morgan and other financiers and businesspersons (including John D. Rockefeller, who deposited \$10 million of his own money in New York's financial institutions) was enough liquidity injected back into the banking system to stem the panic.

Source: Federal Reserve Bank of Boston

fiscal year—The 12-month period selected by a business or government as an accounting period, at the end of which the books are closed and profit or loss determined. It may correspond to the calendar year.

Exhibit 2.5: Consolidated Profit and Loss Statement

Interest Income (Thousands of dollars)	December 31	
	20XY	20XX
Interest and fees on loans	\$ 823,415	\$ 693,463
Interest on fed funds sold	6,429	3,496
Interest and dividends on investment securities:		
U.S. Treasury securities	69,938	59,883
Securities of other U.S. government agencies and corporations	16,520	25,228
Obligations of states and political subdivisions	22,504	15,846
Other securities	7,067	7,268
Interest on overseas deposits	24,394	37,658
Interest on trading accounts securities	4,419	3,478
Direct lease financing income	<u>33,371</u>	<u>32,560</u>
Total interest income	<u>1,008,057</u>	<u>878,880</u>
Interest Expense (Thousands of dollars)	December 31	
	20XY	20XX
Interest on deposits	463,733	414,832
Interest on fed funds borrowed and repurchase agreements	35,193	33,019
Interest on other borrowed funds	17,751	12,882
Interest on long-term debt	21,232	19,079
Total interest expense	<u>537,909</u>	<u>479,812</u>
Net interest income	470,148	399,068
Provision for loan losses	<u>41,028</u>	<u>46,379</u>
Net interest income after provision for loan losses	<u>429,120</u>	<u>352,689</u>
Other Operating Income (Thousands of dollars)	December 31	
	20XY	20XX
Trust income	21,635	19,649
Service charges on deposit accounts	25,511	24,254
Trading account profits and commissions	(268)	1,690
Other income	<u>43,797</u>	<u>23,324</u>
Total other operating income	<u>90,675</u>	<u>68,917</u>
Other Operating Expense (Thousands of dollars)	December 31	
	20XY	20XX
Salaries	168,085	145,746
Employee benefits	41,028	32,126
Net occupancy expense	34,919	31,636
Equipment expense	20,648	19,234
Other expense	<u>94,331</u>	<u>68,317</u>
Total other operating expense	<u>359,011</u>	<u>297,059</u>
Income before income taxes and securities transactions	160,784	124,547
Less applicable income taxes	<u>73,484</u>	<u>61,076</u>
Income before securities transactions	87,300	63,471
Securities gains (losses), net of income tax effect of \$(1,233) in 20XY and \$48 in 20XX	<u>(1,020)</u>	<u>40</u>
Net income	<u>\$ 86,280</u>	<u>\$ 63,511</u>
Income per share (based on average number of common shares outstanding):		
Income before securities transactions	\$4.03	\$3.16
Securities transactions, net of income tax effect	<u>(.05)</u>	<u></u>
Net income per share	<u>\$3.98</u>	<u>\$3.16</u>

Second, banks negotiate directly on loans but only indirectly on investments. In making loans, banks and borrowers agree on the amount, purpose, maturity, interest rate, and other conditions, and banks investigate borrowers' **creditworthiness**. In contrast, banks make investments indirectly through bond dealers or underwriters, and the issuers may not know the purchasers. Banks may also rely, but not solely, on rating services to determine investment quality and risk.

Third, banks invest in **securities** to diversify their risk, ensure that assets are productive, and perhaps reduce taxes. Diversifying holdings between loans and investments helps to keep income stable. Securities can be converted to cash easier than loans can be called or paid off, and some investments, such as municipal bonds, provide tax relief, which increases bank earnings.

Fourth, loans and investments present different kinds of risk. The chief risk concern with loans is **credit risk**: will the borrower repay the loan? Investments typically present less credit risk. With U.S. government securities, there is no credit risk because the federal government guarantees repayment. There is very little credit risk when a state, county, or city guarantees debt securities because such issuers can raise taxes to repay the obligation. The difference between the credit risk of bank loans and investments is reflected in the rate of return or yield on investments. In general, investments produce less revenue than loans.

With investments, the chief concern is **market risk**. When a holder wishes to sell a security, market conditions and the desirability of the security determine its market value—the seller cannot control it. The risk is that the market value at the time of sale may be less than the price the bank initially paid to purchase the security. Although U.S. government securities carry no credit risk, like other investments they do have market risk. With respect to loans, market risk comes into play only for loans secured by **collateral**, such as stocks. If the value of the stock decreases, the collateral securing the loan may not be sufficient to repay the loan should the borrower default.

LOAN INCOME

Interest and fees earned on loans is a primary source of bank revenue. Therefore, choosing the interest rate for each loan is important. The interest rate for a particular loan is usually based on the cost and availability of funds, risk factors of the borrower, the term of the loan, and market interest rates.

Cost of Funds

The basic source of loanable funds is customer deposits. Deposits cost the bank the interest it pays on them and the costs of processing, such as teller and check clearing services. Banks monitor the cost of funds to determine the interest rate to charge on loans.

Availability of Funds

The Federal Reserve controls the nation's supply of money and credit by raising or lowering reserve requirements and the discount rate. In addition, purchases and sales of government obligations, as directed by the FOMC, directly affect the availability of loanable funds.

creditworthiness—The ability and willingness to repay a debt, largely demonstrated by the borrower's credit history.

securities—financial instruments such as stocks (equity securities) or bonds (debt securities) that have value and are easily bought and sold between parties.

credit risk—The risk that the borrower cannot or will not repay a loan with interest as scheduled.

market risk—The risk that the market value of a security or other asset will decrease because of interest rate changes and other market conditions.

collateral—Specific property or other assets pledged by a borrower to secure a loan. If the borrower defaults, the lender has the right to sell the collateral to liquidate the loan.

Risk Factors

The interest rate charged on loans is affected by the bank's perception of the risk of loss. Banks also evaluate risk according to the type of loan. Unsecured loans, such as credit card loans, are higher risk than secured loans, such as mortgages or home equity loans. If a borrower defaults on a secured loan, the collateral backing the loan can provide an alternative source of repayment.

Loan Term

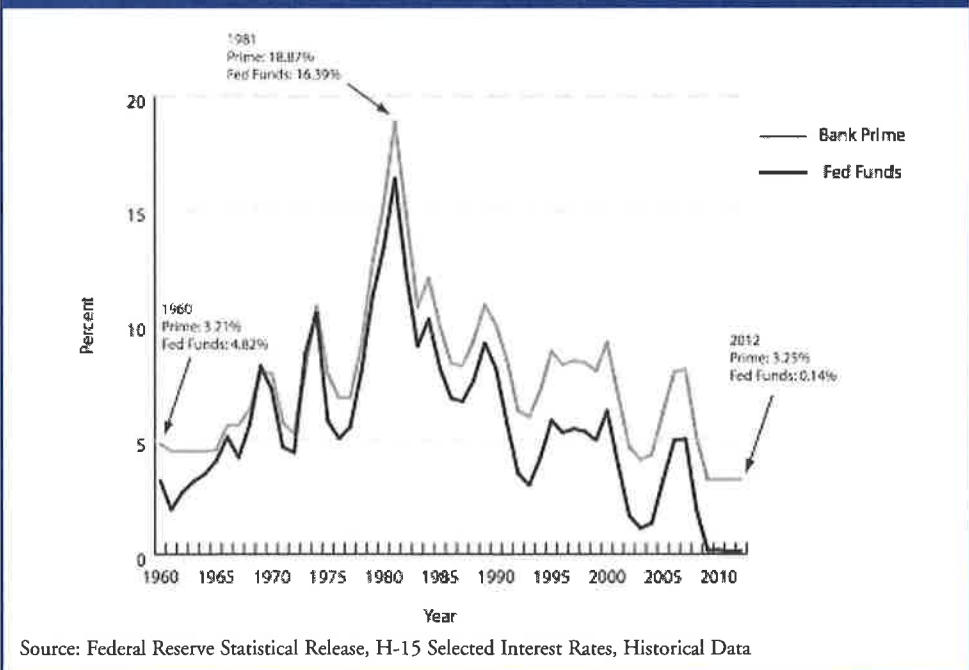
The term of the loan (amount of time before the loan is repaid) affects the interest rate charged. The longer the term, the higher the risk that the borrower's credit standing will deteriorate and jeopardize repayment. The cost of deposits also becomes less certain over time. To offset these risks and costs, banks usually charge higher rates for long-term loans than for short-term loans.

Market Interest Rates

The interest rates in the financial markets is another important factor. Historically, interest rates have fluctuated substantially, but in recent years they have been stable and low (see exhibit 2.6). Several market rates are used:

- **Discount rate**—This is the interest rate the Federal Reserve charges banks for short-term use of its funds.
- **Prime rate**—This is the base rate a bank will charge. Prime rate, or sometimes below-prime rate, loans are reserved for the bank's most creditworthy customers. Rates on other loans are set at a certain percentage above prime rate (such as prime plus 1.25 percent). The prime rate is variable; it is adjusted as the cost and availability of funds change.

Exhibit 2.6: Comparison of Prime and Fed Funds Interest Rates, 1960–2012



- **Fed funds rate**—This is the rate one bank charges another for overnight use of reserve funds to bring reserves up to requirements. Exhibit 2.6 shows the relationship between the fed funds and prime rates and the rates paid on six-month certificates of deposit and Treasury bills.
- **LIBOR rate**—The London Interbank Offered Rate is an international money market rate that represents the average rate offered by banks for interbank placement of Eurodollars. Banks add percentages above LIBOR to set the interest rate on a given loan.

INVESTMENT INCOME

Another important source of revenue is the income banks earn on investments. Investment income is derived from interest and **dividend** payments. Banks diversify their investments—choosing from a variety of instruments with different maturities—to achieve a balance of liquidity, safety, and income.

Banks are also limited by regulation in the percentage of their capital they can invest in the securities of any one issuer, except for the U.S. government.

Many states require banks to pledge U.S. government securities to ensure protection for deposits in public fund accounts beyond the coverage provided by the FDIC. Similarly, many states require bank trust departments to use as reserves federal and state bonds to protect the pension, trust, and profit-sharing funds they manage.

A typical bank investment portfolio consists almost exclusively of four types of holdings: U.S. Treasury securities, U.S. agency securities, state and municipal bonds, and miscellaneous investments.

U.S. Treasury Securities

U.S. Treasury securities are the most acceptable collateral for Fed loans to banks because they are backed by the full faith and credit of the federal government. These include:

- **Treasury bills**—With maturities of less than one year, these securities are readily marketable and have limited market risk.
- **Treasury notes and bonds**—Longer-term securities, they have maturities of between 2 and 10 years, in the case of Treasury notes, and 30 years, in the case of Treasury bonds. They are marketable but bear more market risk than Treasury bills.
- **Treasury Inflation Protected Securities (TIPS)**—With 5-, 10-, and 30-year maturities, these securities protect investors against inflation because the principal increases with the **Consumer Price Index**. When TIPS mature, the investor is paid the inflation-adjusted principal or the original principal, whichever is greater.

U.S. Agency Securities

Unlike Treasury securities, which are liabilities of the U.S. government, U.S. agency securities are liabilities of U.S. government agencies and U.S. government-sponsored enterprises. They are guaranteed or protected by the U.S. government,

dividend—Payments made by a corporation to its stockholders. The payments are based on a percentage of the corporation's after-tax earnings and are usually made quarterly.

Consumer Price Index—A measure of the average change over time in the prices paid by consumers for selected goods and services. It represents whether prices are rising or falling in the U.S. economy and, thus, whether there is inflation or deflation.



Did You Know ...

FDIC-insured institutions earned nearly \$252 billion in noninterest income in 2013.

Source: Federal Deposit Insurance Corporation

and they yield higher interest than U.S. government obligations of the same maturity. Banks invest in two types of agency securities:

- **Mortgage-backed agency securities**—These obligations are issued by U.S. government agencies or U.S. government-sponsored enterprises such as the Government National Mortgage Association (Ginnie Mae), the Federal National Mortgage Association (Fannie Mae), or the Federal Home Loan Mortgage Corporation (Freddie Mac).
- **Nonmortgage-backed agency securities**—These obligations are issued by other U.S. government agencies or U.S. government-sponsored enterprises such as the Export-Import Bank, a government agency that provides financing to American businesses that export goods to other countries.

State and Municipal Bonds

Banks also invest in bonds issued by any government or government agency other than the U.S. government—for example, state, city, county, town, or school district. Although backed by the taxing power of the issuer, they have some credit and market risk. Income is exempt from federal income taxes and sometimes state and local taxes. These investments represent a bank's commitment to the community.

Miscellaneous Investments

Banks also invest in a variety of nongovernment securities. These investments carry more credit and market risk than government obligations. These include:

- **Banker's acceptances**—These investments are drafts or bills of exchange that banks accept as liabilities by pledging their credit on behalf of customers.
- **Negotiable certificates of deposit**—These certificates of deposit (CDs) can be sold before maturity and have a \$100,000 minimum denomination. Rates may be negotiated with depositors. To be attractive investments, CD rates need to be higher than rates on Treasury bills and commercial paper with the same maturities.
- **Commercial paper**—This is the short-term unsecured obligations of large, financially sound corporations, both foreign and domestic. There is no collateral except a firm's good reputation. Companies issue commercial paper, instead of borrowing from a bank, to raise short-term funds.
- **Corporate debt**—Investments in corporations in the form of bonds can provide a good source of income. Banks are permitted to invest in investment-grade securities—that is, bonds that have a high credit quality rating and present a low risk of default.

FEE INCOME

The financial services marketplace is competitive. Although banks used to be the only source of deposits and loans, customers can choose from a variety of financial service providers today. As a result, banks must seek other opportunities to earn

income. Fee-based income has transformed many traditional commercial banks into diversified financial service providers. Income from fees is an important component of **noninterest income**. Exhibit 2.7 lists some sources of fee income. Banks improve fee income in three ways:

- Increasing fees to cover the cost of service—for example, raising check processing fees to reflect the risk of paying checks returned for nonsufficient funds
- Charging for previously free services—for example, charging for a copy of a statement
- Entering into fee-based services—for example, offering credit and debit cards, securities processing, international payments, private banking, investment management, and fiduciary services

EVALUATING BANK PERFORMANCE

The information reported in a bank's financial statements, such as the statement of condition, the profit and loss statement, the annual report (see description on page 44), and the statement of cash flows (see description on page 45), can be used to obtain a good picture of a bank's financial health—how profitable it is and how well it has used its assets and liabilities to earn that profit. This financial information also provides the raw numbers for calculating common measures of performance, thus allowing meaningful comparisons between financial reporting periods and among peer banks and other financial institutions. Information in prior financial reports also provides the starting point for determining subsequent years' budgets.

Public companies must have their financial statements prepared by an independent **certified public accountant (CPA)**. To satisfy the requirement of independence, a CPA cannot be an employee of the company being **audited**.

noninterest income—

Income a bank derives from sources other than interest, for example, fees and service charges, trading income, and investment securities gains.

certified public accountant

(CPA)—An accountant licensed to practice public accounting. To earn this title, a person must pass the Uniform Certified Public Accountant Exam and meet other requirements established by each state for education and experience.

audit—An official examination and verification of accounts and internal controls, usually by an independent accountant, to determine whether financial information is accurate and prepared in conformity with generally accepted accounting principles (GAAP).

Exhibit 2.7: Sources of Fee Income

Deposit Account Fees

- Monthly account fees
- Overdraft and NSF fees
- Early withdrawal fees
- Stop payment fees

Fiduciary Trust Services

- Trust department revenues

All Other Service Fees

- ATM fees
- Safe deposit boxes
- Money orders
- Cashier's and traveler's checks
- Renting bank property

Insurance and Securities

- Insurance brokerage
- Providing insurance
- Securities brokerage and selling
- Handling securities of others
- Securitization

The Annual Report

The annual report is management's summation of the bank's achievements over the course of the year. It describes management's perspective on the past year, including significant achievements, and presents objectives for the future. It also includes information about the bank's financial position and business performance. Many banks post their annual reports on the Internet. An annual report has four main components: promotional information, analysis, financial statements, and an audit report.

- **Promotional information**—Promotes the company to investors using photographs of the bank at work, reports of employee contributions and achievements, and nonfinancial statistics, such as contributions to the community
- **Analysis**—Discusses management's business strategies and how they played out in the previous year
- **Financial statement**—Sets out the numbers that reflect performance, such as the income statement (usually with comparisons to previous years)
- **Audit report**—A written statement by outside accountants attesting to the integrity of the financial reports provided

Accountants base their work on generally accepted accounting principles (GAAP). GAAP ensure that the information accountants report in different financial statements meets similar requirements to ensure comparability. GAAP are continuously being refined to accommodate:

- Innovations in the ways credit is extended and debt financed
- Innovations in the ways accountants calculate and present financial information
- Legal considerations, such as changes in tax laws

Of the organizations that develop GAAP, the most important is the Financial Accounting Standards Board (FASB), which has been authorized by the Securities and Exchange Commission (SEC) to establish accounting standards for public companies. GAAP is widely used by private companies as well. The American Institute of Certified Public Accountants (AICPA) establishes professional standards for CPAs in implementing GAAP.

FINANCIAL INFORMATION USERS

The information in a bank's financial statements and reports is important not only to management and the board of directors, but also to shareholders and investors, banking regulators and other government agencies, employees, and other banks.

Shareholders and Investors

Shareholders and investors are interested in a bank's financial data because the information can have an immediate effect on stock value. For example, if reported earnings are higher than expected, the value of bank stock usually rises. If the financial data suggest that a bank is performing poorly, the stock value typically falls.

Bank Regulators

Regulators examine bank financial reports because the information helps reveal the true financial condition of a bank. Regulators are particularly interested in verifying the adequacy of a bank's capital. Banks are required to file regular financial reports with their banking regulator.

Other Government Agencies

In addition to reporting financial information to their primary regulator, banks are required to report to other federal and state agencies on a whole range of issues relating to taxes, investments, loans, and many other transactions that affect line items on balance sheets and income statements. The agencies to which banks report include the Internal Revenue Service (IRS) and, for certain banks and bank holding companies, the SEC. Small community banks are exempt from reporting financial information to the SEC.

Most publicly traded companies file quarterly reports (Form 10-Q) and annual reports (Form 10-K) with the SEC. For most companies, the Form 10-K must be

filed within 60 days after the bank's fiscal year. The financial information required is typically more detailed than is presented in a company's annual report.

Employees

The financial information produced by a bank affects its employees. Many take pride in the financial results of their organization and are interested in how their bank compares with competitors. Their salaries, bonuses, benefits, and compensation may be tied directly to bank performance. In addition, many banks maintain executive compensation plans that are based on performance, including performance in relation to bank peers.

A primary goal of both management and employees is to increase shareholder value by ensuring that bank financial results are positive. Attaining financial goals helps motivate employees, especially if the bank has a profit-sharing plan that gives the employees a stake in the bank's financial results. Some banks are entirely employee-owned.

Other Banks

Banks seeking to expand through merger or acquisition closely evaluate the financial reports of other banks. Potential acquirers are looking for bargains. If its performance ratios suggest operational inefficiencies, a bank could be a prime candidate for acquisition. The potential acquirer may be able to reduce expenses or take advantage of economies of scale to turn a lackluster bank into a top performer.

Banks judge their own performance relative to their peers as well as to their own goals. One way they do this is by **ratio analysis**.

PERFORMANCE MEASURES

While the bottom line—net income—gives a number to a bank's profitability, it is not necessarily a true measure of its performance. A bank with \$10 billion in assets should be expected to generate more net income than a bank with \$100 million in assets. For this reason, management, investment analysts, state and federal regulators, and shareholders use measures such as ratios to evaluate bank financial performance.

Financial Ratios

Financial ratios are calculated by comparing one entry on a financial statement to another. For example, earnings and other items from the income statement may be compared to assets or capital on the balance sheet. Analyzing these ratios can reveal much about bank profitability and financial performance. Current financial ratios also can be compared to those of previous periods to determine whether or not performance is improving.

But financial ratios offer only one perspective on a bank's financial strength. To get a thorough understanding of a bank's performance, the local economy and the bank's management strategy also must be considered. Therefore, management often compares the bank's financial ratios to those of other banks in similar circumstances—its **peer group**. The peer group might include a few banks with similar amounts of

The Statement of Cash Flows

The statement of cash flows illustrates a bank's sources and uses of cash over a period of time. It details the bank's financing, investing, and operating activities. The statement of cash flows can give bank managers and owners a more complete understanding of where the bank's money came from and how it was used.

To illustrate how the bank funded its business activities and to reconcile changes in cash and liquid assets for a given period, the statement of cash flows uses information from two balance sheets and one income statement for the period, such as a fiscal year.

Bank management uses information from the statement of cash flows to draft financial strategies by anticipating changes in balance sheet items, such as a decline in deposits, and determining how the bank would fund itself if those changes actually occurred.

ratio analysis—A technique for analyzing a financial statement that examines the relationships between certain values reported in the statement.

peer group—In banking, a statistical grouping of banks that have similar characteristics, such as asset size. Each bank is compared to other banks in the group.

Situation

The Jayson Investment Group manages the pension fund for ACME Corp., a manufacturing business with more than 3,000 employees. Mr. Jayson is thinking of investing in several bank stocks. He has read their annual reports and other financial data and has set up a meeting with senior management and auditors to discuss future projections. If Mr. Jayson is satisfied with the banks' prospects, he will invest a large sum of money for the ACME Corp. pension fund.

assets that operate in the bank's local market, or a larger number of similar-sized banks in a broader region.

Return on assets, return on equity, the capital ratio, net interest income, and earnings per share are among the most common ratios used to measure performance. Their formulas and what they measure follow:

- Return on assets (ROA) = $\frac{\text{Net profit}}{\text{Total assets}} \times 100$
Measures how well a bank uses assets to produce income
- Return on equity (ROE) = $\frac{\text{Net profit}}{\text{Total equity}} \times 100$
Measures the rate of return achieved relative to funds invested (equity)
- Capital ratio = $\frac{\text{Capital}}{\text{Assets}} \times 100$
Measures bank stability and strength; the capital account absorbs losses not covered by current earnings and loan loss reserves
- Net interest income = Interest earned – Interest paid
Defines the difference between interest earned on loans and interest paid on deposits; the higher the amount, the greater the profit if other expenses are constant
- Earnings per share = $\frac{\text{Net income}}{\text{Average number of shares of stock outstanding}}$
Establishes income goals, such as \$4 per share; earnings per share is compared with the market price of a stock to determine value in the market



By The Numbers

Return on Assets

$$\text{Return on assets ratio} = \frac{\text{Net profit}}{\text{Total assets}} \times 100$$

What is the ROA for a bank with assets of \$532,400,000 and net profit of \$7,986,000?

$$1.5\% = \frac{7,986,000}{532,400,000} \times 100$$



By The Numbers

Return on Equity

$$\text{Return on equity ratio} = \frac{\text{Net profit}}{\text{Total equity}} \times 100$$

What is the ROE for a bank with total equity of \$57,043,000 and a net profit of \$7,986,000?

$$14\% = \frac{7,986,000}{57,043,000} \times 100$$



By The Numbers

Capital Ratio

$$\text{Capital ratio} = \frac{\text{Capital}}{\text{Assets}} \times 100$$

What is the capital ratio for a bank with total assets of \$2.54 billion and capital of \$153 million?

$$6.02\% = \frac{153,000,000}{2,540,000,000} \times 100$$

Exhibit 2.8 shows key financial ratios for the banking industry as a whole. Exhibit 2.9, page 48, shows the trend in ROA and ROE for the banking industry over the past three decades.

BUDGETING AND PLANNING

Good financial performance is not achieved automatically. Bank management must plan carefully, set earnings objectives, and structure the balance sheet to achieve its goals.

The Budgeting Process

The budget is management's financial plan for attaining its goals. Although budgeting varies from one bank to another, the basic concept is the same: establishing a financial plan at least for the coming year and perhaps for the next three to five years.

Most banks base their budgets on amounts spent the previous year. For

Exhibit 2.8: Financial Ratios for the Banking Industry, 2013

Ratio	Percentage	Used to Measure
Performance Ratios		
Net interest margin	3.25	Difference between amount of interest earned and amount of interest paid out
Noninterest income to earning assets	1.95	Amount of fee earnings
Noninterest expense to earning assets	3.24	Operations overhead cost
Loan and lease loss provision to assets	0.21	Amount of protection against nonpayment of troubled loans
Net operating income to assets	1.05	Sustainable rate of earnings
Return on assets	1.07	Profitability relative to assets
Return on equity	9.60	Profitability relative to equity
Net charge-offs to loans and leases	0.69	Losses from nonpayment of loans and leases
Loan and lease loss provision to net charge-offs	56.99	Amount of protection relative to actual loan losses
Efficiency ratio	60.53	Ability to control costs and expenses
Condition Ratios		
Earning assets to total assets	88.39	Assets put to productive use
Loss allowance to loans and leases	1.75	Amount of protection against nonpayment of loans
Loss allowance to noncurrent loans and leases	66.09	Amount of protection against nonpayment of troubled loans

Source: Federal Deposit Insurance Corporation, *Quarterly Banking Profile, Fourth Quarter, 2013*

example, a bank may establish a goal that noninterest expense will not exceed non-interest expense in the previous year by more than 2 percent.

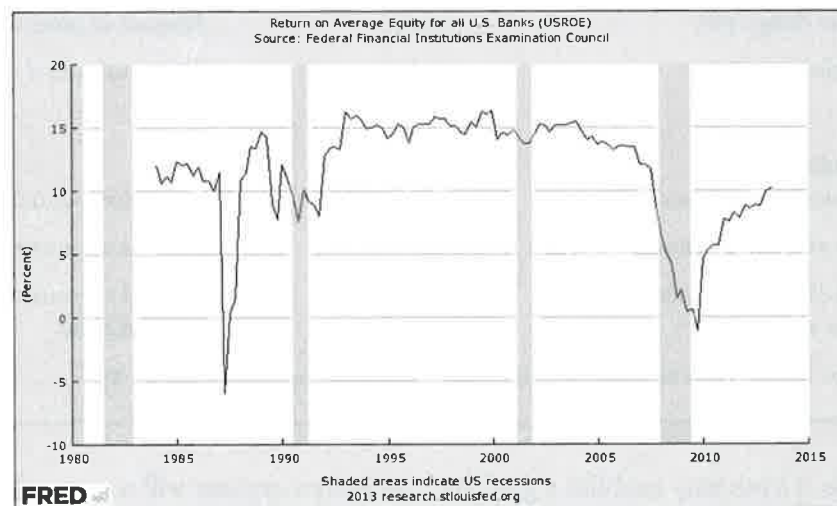
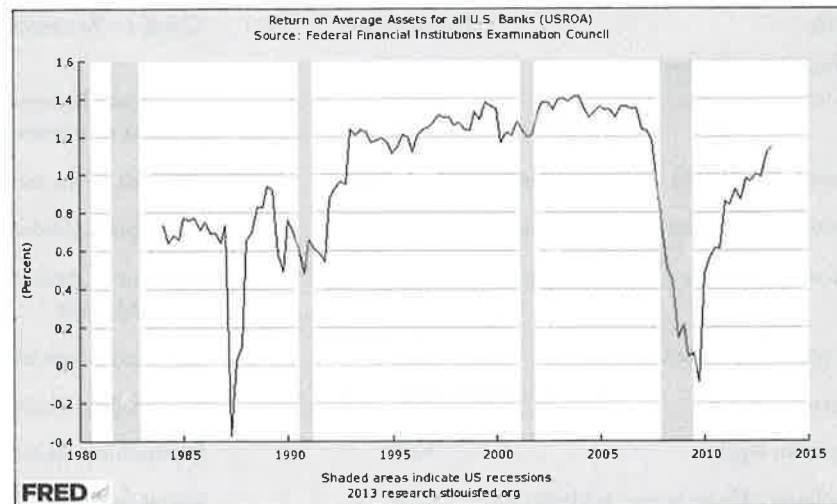
It is difficult to budget for interest income and expense because a bank must project not only loan and deposit volumes but also interest rates and the effect rates will have on interest income and expense. Budgeting is not an exact science, but a properly prepared budget offers a blueprint for the future.

Budget Variances

Unforeseen circumstances cause variances from the budget. An expenditure may be incurred earlier than expected, or business volume may be higher. Banks usually do not adjust the budget once it is in place. Instead, for example, they offset negative variances in income with cost reductions.

Variances that cannot be offset, such as large loan charge-offs, are documented because they will have a negative effect on profitability.

Exhibit 2.9: Banking Industry ROA and ROE



Source: Federal Financial Institutions Examination Council

SUMMARY

- In their role as financial intermediaries, banks accept deposits from consumers and businesses and make them available to borrowers. As such, they are central to the money creation function in the United States. The Federal Reserve (the Fed) is responsible for managing the nation's money supply. The Fed implements monetary policy in three ways: setting reserve requirements, managing its discount operations, and conducting open-market operations. Open-market operations are the Fed's most powerful tool. The Federal Open Market Committee decides whether to purchase or sell government securities in the open market and sets the federal funds target rate.
- Most banks are corporations owned by shareholders. A bank may be closely held by a limited number of individuals or a family, or publicly held by investors. Shareholders appoint the board of directors, and the board's committees oversee

management on behalf of the shareholders. The bank's chief executive officer is the lead member of management. Typically, a bank is organized into departments, each responsible for a specific area of operations—for example, consumer banking, human resources, or marketing. Some banks are organized as bank holding companies or financial holding companies. New banks may be formed (de novo banks), and established banks may consolidate, merge, and close.

- The statement of condition, or balance sheet, lists all of a bank's assets, liabilities, and shareholder equity as of a specific date. An asset is anything of value a bank owns or is owed; a liability is anything the bank owes. A bank's assets are equal to its liabilities plus net worth. A bank's asset and liability management practices are key to its success. In managing its assets and liabilities, banks strive to strike a balance between liquidity, safety, and income, and to fund short-term loans with short-term deposits and long-term loans with long-term deposits.
- The profit and loss statement, or income statement, covers bank operations over a certain length of time such as the quarter, the fiscal year, or the calendar year. It shows all revenues and expenses and the resulting profit or loss.
- To maximize its return on loans and investments, banks must manage both credit and market risk. Because interest income is a primary source of bank revenue, choosing the right interest rate to charge for loans is important. Factors influencing interest rates are the cost of funds, funds availability, risk factors, and the loan term. As a starting point for setting rates, banks look at market interest rates, such as the discount, prime, and fed funds rates, and LIBOR.
- Banks also seek to diversify their investments. The investment portfolio of a typical bank consists of U.S. Treasury and agency securities; mortgage-backed securities issued by Ginnie Mae, Fannie Mae, Freddie Mac, and other U.S. government agencies or U.S. government-sponsored enterprises; nonmortgage-backed agency securities; and miscellaneous investments such as banker's acceptances, negotiable CDs, commercial paper, and corporate bonds.
- A bank's financial information is of interest to many parties, including shareholders and investors, bank regulators, government agencies, employees, and other banks. Net income is only one, and not necessarily the best, measure of financial performance. Return on assets, return on equity, the capital ratio, net interest income (or loss), and earnings per share are among the many ways that a bank's strength can be evaluated over a given period. Using ratios, a bank can compare its performance with its own past performance or with peer group banks. In addition to financial performance measures, many banks establish other types of performance objectives to measure the productivity and quality of specific bank units or employees.
- Good financial performance is not achieved automatically. Bank management must plan carefully, set realistic earnings objectives, and structure the balance sheet appropriately. The budget is the financial plan for attaining the goals set by management.