

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 through proper utilization of 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). 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.

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.

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 | 458,313 | 460,396 | (2,083) |
| 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 | 88,278 | 92,032 | (3,754) |
| 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 | 103,939 | 131,711 | (27,772) |
| Total assets | \$ 14,840,623 | \$ 12,540,919 | \$ 2,299,704 |
| 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 | 1,468,003 | 722,950 | 745,053 |
| 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 | 171,904 | 122,890 | 49,014 |
| Total liabilities (excluding subordinated notes) | 14,113,606 | 11,914,835 | 2,198,771 |
| Subordinated notes: | | | |
| 8.25% capital note to Wells Fargo & Company, due 20XZ | 25,000 | 25,000 | — |
| 4.5% capital notes due 20XZ | 50,000 | 50,000 | — |
| Total subordinated notes | 75,000 | 75,000 | — |
| 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 | 247,455 | 190,522 | 56,933 |
| Total stockholders' equity | 652,017 | 551,084 | 100,933 |
| Total liabilities and stockholders' equity | \$ 14,840,623 | \$ 12,540,919 | \$ 2,299,704 |

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.

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

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 accrued interest receivable

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 accrued interest payable

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.

A business entity is **insolvent** if its total assets are greater than its total liabilities. (Banks, however, do not typically become insolvent because they are subject to regulatory takeover and resolution before insolvency occurs.) 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 help prevent liquidity problems and are categorized by regulators as primary reserves and secondary reserves. 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.

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

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.

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 loan to purchase a home is typically funded by, for example, long-term certificates of deposits or longer term purchased funds to offset the long term loan. 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.

net interest income—

The difference between revenues generated by interest-bearing assets and the cost of servicing liabilities.

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

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 or as deemed appropriate by the bank's management, 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). The following major sources of bank income are typically listed in order of 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 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 primary 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 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.

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.



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.

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

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 | 33,371 | 32,560 |
| Total interest income | 1,008,057 | 878,880 |
| | | |
| 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 | 537,909 | 479,812 |
| Net interest income | 470,148 | 399,068 |
| Provision for loan losses | 41,028 | 46,379 |
| Net interest income after provision for loan losses | 429,120 | 352,689 |
| | | |
| 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 | 43,797 | 23,324 |
| Total other operating income | 90,675 | 68,917 |
| | | |
| 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 | 94,331 | 68,317 |
| Total other operating expense | 359,011 | 297,059 |
| Income before income taxes and securities transactions | 160,784 | 124,547 |
| Less applicable income taxes | 73,484 | 61,076 |
| 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 | (1,020) | 40 |
| Net income | \$ 86,280 | \$ 63,511 |
| 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 | (.05) | |
| Net income per share | \$3.98 | \$3.16 |

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.

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

As discussed at the beginning of this chapter, the Federal Reserve controls the nation's supply of money and credit by raising or lowering reserve requirements and the discount rate and by buying and selling securities.

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, assuming otherwise comparable terms and collateral requirements.

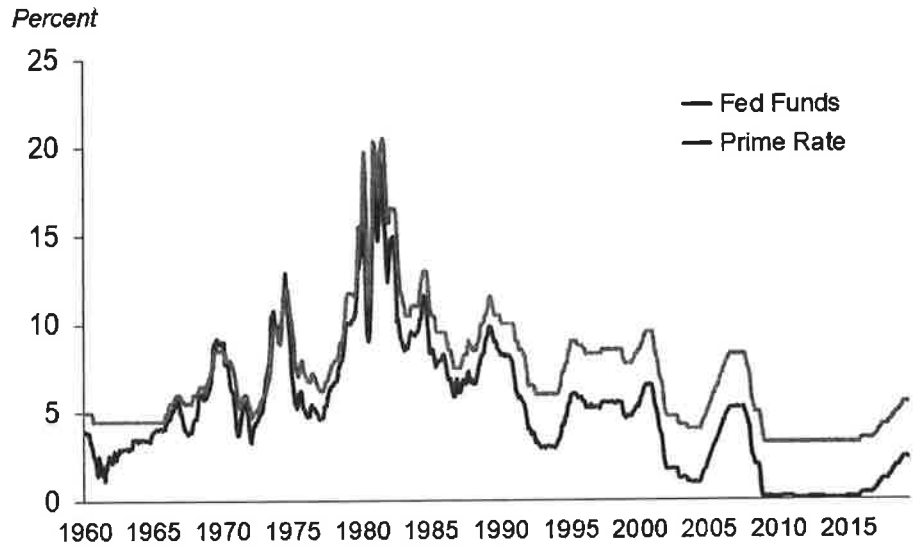
market risk—The risk that the market value of a security or other asset will decrease because of interest rate changes and other market conditions.

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.

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:

Exhibit 2.6: Comparison of Prime and Fed Funds Interest Rates, 1960–2016



Source: Federal Reserve H-15

- **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.
- **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. The LIBOR rate will be discontinued by the end of 2021.
- **Federal Home Loan Bank rates**—The Federal Home Loan Bank is often the first source that a bank will turn to if it needs to borrow funds on a longer term basis or to match fund a loan. These rates can serve as a good base rate for a bank to use when pricing a 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.

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 (GSEs). Government agency securities are guaranteed or protected by the U.S. government while GSE securities are not. Both, however, involve higher risk than direct government obligations, and thus yield higher interest than U.S. government securities of the same maturity.

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:

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.

- **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 four 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

noninterest income—

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

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 Service

- 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

- Entering into fee-based services—for example, offering credit and debit cards, securities processing, international payments, private banking, investment management, treasury management, and fiduciary services
- Deposit growth—for example, by continuing to grow deposits, a bank's fee income will grow

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 this page), and the statement of cash flows (see description on page 44), 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**.

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.

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

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).

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.

CAMELS rating system—

A system used by bank regulatory agencies to evaluate bank safety and soundness.

Bank Regulators

Regulators examine and evaluate bank financials as part of their responsibility to regulate bank safety and soundness. Financial information contained in balance sheets and income statements helps reveal the true financial condition of a bank. Regulators are particularly interested in verifying the adequacy of a bank's capital and liquidity. Banks are required to file regular financial reports with their banking regulator, known as call reports.

Bank Examinations

Officials from federal and state regulatory agencies conduct regular examinations of all banks. Many bank functions are subject to examination, the most common being a safety and soundness examination. Here, the bank's financial soundness is tested by reviewing loans made by the bank, to ensure timely repayment and to test the bank's internal controls for preventing fraud and embezzlement. To help determine the bank's safety and soundness, an examiner relies on the **CAMELS rating system**. Each letter stands for one of six measures of a bank's condition. During an examination, banks are given a score of 1 (best) to 5 (worst) for each of the six measures. An average score of 2 or less is considered to be the benchmark for good safety and soundness. An average score greater than 3 indicates less-than-desirable safety and soundness. The CAMELS rating system allows examiners to focus on the bank's overall financial health and ability to manage bank risk, rather than review details of financial transactions. It is illegal for a bank to reveal its CAMELS rating to any outside party.

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 assets that operate in the bank's local market, or a larger number of similar-sized banks in a broader region. These ratios are compiled by the FFIEC and reports can be found on their website under Uniform Bank Performance Ratios (UBPR)

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.

| | | |
|--|-----------------------|---|
| <div>1 2 3</div> <div>4 5 6</div> <div>7 8 9</div> | By The Numbers | <p>Return on Assets</p> $\text{Return on assets ratio} = \frac{\text{Net profit}}{\text{Total assets}} \times 100$ <p>What is the ROA for a bank with assets of \$532,400,000 and net profit of \$7,986,000?</p> $\frac{7,986,000}{532,400,000} \times 100 = 1.5\%$ |
| <div>1 2 3</div> <div>4 5 6</div> <div>7 8 9</div> | By The Numbers | <p>Return on Equity</p> $\text{Return on equity ratio} = \frac{\text{Net profit}}{\text{Total assets}} \times 100$ <p>What is the ROE for a bank with total equity of \$57,043,000 and a net profit of \$7,986,000?</p> $\frac{7,986,000}{57,043,000} \times 100 = 14\%$ |
| <div>1 2 3</div> <div>4 5 6</div> <div>7 8 9</div> | By The Numbers | <p>Capital Ratio</p> $\text{Capital ratio} = \frac{\text{Capital}}{\text{Assets}} \times 100$ <p>What is the capital ratio for a bank with total assets of \$2.54 billion and capital of \$153 million?</p> $\frac{153,000,000}{2,540,000,000} \times 100 = 6.02\%$ |

Situation

The Jayson Investment Group manages the pension fund for ACME Corp., a manufacturing business with more than 3,000 employees. 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.

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:

- $\text{Return on assets (ROA)} = \text{Net profit} \div \text{Total assets} \times 100$
Measures how well a bank uses assets to produce income
- $\text{Return on equity (ROE)} = \text{Net profit} \div \text{Total equity} \times 100$
Measures the rate of return achieved relative to funds invested (equity)
- $\text{Capital ratio} = \text{Capital} \div \text{Assets} \times 100$
Measures bank stability and strength; the capital account absorbs losses not covered by current earnings and loan loss reserves (capital is also typically measured against asset that have been risk-weighted for a "risk-based capital ratio")
- $\text{Net interest income} = \text{Interest earned} - \text{Interest paid}$
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
- $\text{Earnings per share} = \text{Net income} \div \text{Average number of shares of stock outstanding}$
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

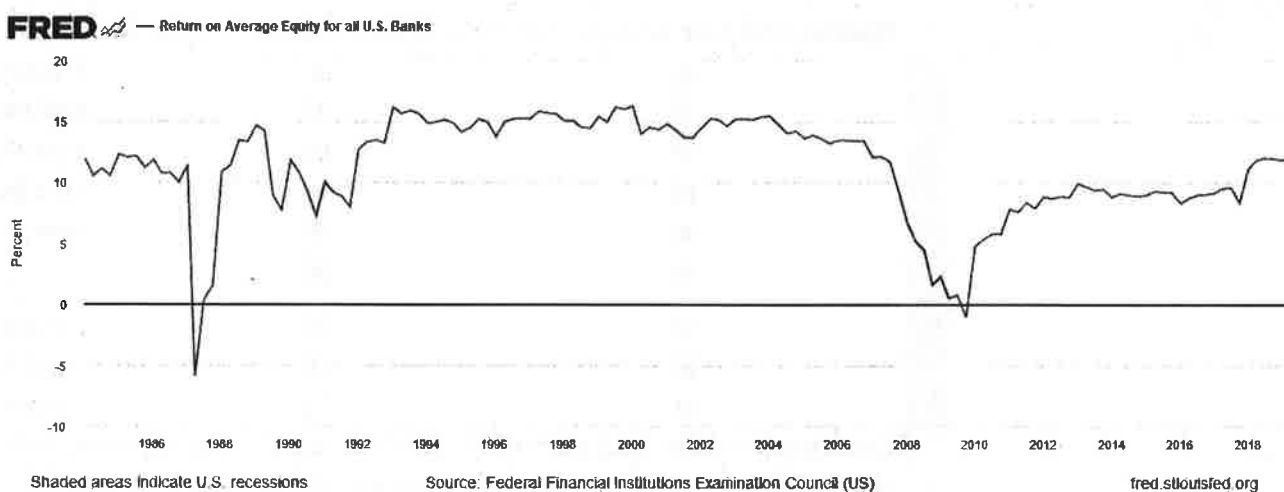
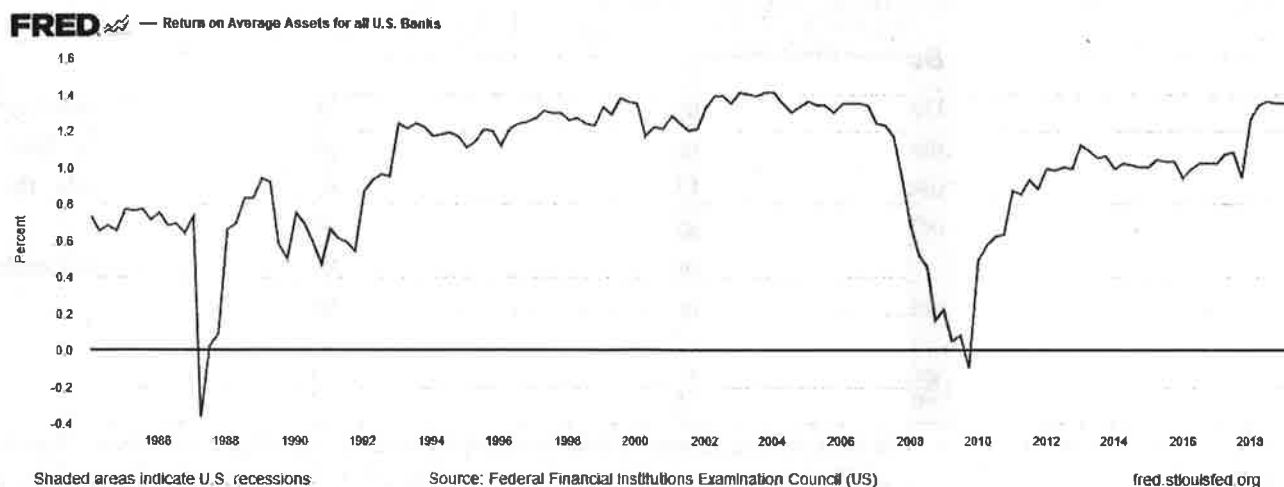
Exhibit 2.8 shows key financial ratios for the banking industry as a whole. Exhibit 2.9 shows the trend in ROA and ROE for the banking industry over the past three decades.

Exhibit 2.8: Financial Ratios for the Banking Industry, 2018

| Ratio | Percentage | Used to Measure |
|--|------------|--|
| Performance Ratios | | |
| Net interest margin | 3.40 | Difference between amount of interest earned and amount of interest paid out |
| Noninterest income to assets | 1.51 | Amount of fee earnings |
| Noninterest expense to assets | 2.61 | Operations overhead cost |
| Loan and lease loss provision to assets | 0.28 | Amount of protection against nonpayment of troubled loans |
| Net operating income to assets | 1.51 | Sustainable rate of earnings |
| Return on assets | 1.35 | Profitability relative to assets |
| Return on equity | 11.98 | Profitability relative to equity |
| Net charge-offs to loans and leases | 0.48 | Losses from nonpayment of loans and leases |
| Loan and lease loss provision to net charge-offs | 105.33 | Amount of protection relative to actual loan losses |
| Efficiency ratio | 56.27 | Ability to control costs and expenses |
| Condition Ratios | | |
| Earning assets to total assets | 90.60 | Assets put to productive use |
| Loss allowance to loans and leases | 1.23 | Amount of protection against nonpayment of loans |
| Loss allowance to noncurrent loans and leases | 124.21 | Amount of protection against nonpayment of troubled loans |

Source: Federal Deposit Insurance Corporation, *Quarterly Banking Profile, Fourth Quarter, 2018*

Exhibit 2.9: Banking Industry ROA and ROE



Source: Federal Financial Institutions Examination Council

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 example, a bank may establish a goal that noninterest expense will not exceed noninterest 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.

SUMMARY

- In their role as financial intermediaries, banks accept deposits from consumers and businesses and make them available to borrowers. As such, they are critical to the flow of funds within the United States. As part of the Federal Reserve System, banks are central to the Fed's money creation function in the United States. The Fed is also responsible for managing the nation's money supply and 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 capital (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 prime, competitor, and fed funds rates.
- 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 miscellaneous investments such as 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, various capital ratios, 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.

Stop Reading Here. Do not answer the 4 questions below. See separate assignment.

SELF-CHECK AND REVIEW

1. How does the Federal Reserve manage the money supply?
2. Why does the Federal Reserve need to manage the money supply?
3. Some banks have experienced losses while others have remained profitable. Who ultimately is accountable for a bank's poor financial performance?
4. What is a bank's largest asset? Its largest liability? Its most important income and expense items?



Learning Check