



MAKING MONEY IN FINANCIAL SERVICES

Welcome to *Making Money in Financial Services™*! This course is part of PSI's *Inside Financial Services®* curriculum.

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You may be eligible for Continuing Professional Education credit for this course if you are a CPA licensed in the United States. This course offers 1 CPE credit by the National Association of State Board of Accountancy (NASBA). Refer to the associated CPE information pdf for more information on the continuing education credits for this course.

Welcome

This course is designed to help you understand how financial institutions make money and track their own financial performance. You can use this financial information to better understand the strategy, direction and needs of specific financial institutions.

Topics covered in this course include:

- Using financial information
- Sources of revenue and expense
- Financial statements
- Key performance indicators (KPIs)
- Sources of financial information

Course Overview

This 50 minute course is designed for professionals serving the financial services industry, and it provides a fundamental understanding of how financial institutions make money and track their financial performance.

Upon completing this course, you will be able to:

- Identify the sources of revenue and expense for financial institutions
- Name the primary financial statements used by financial institutions



- Define key performance indicators (KPIs) used by financial institutions
- Recall sources of financial information
- Use financial information to better understand specific financial institutions

This course is part of the *Inside Financial Services*® training curriculum. Other courses in this curriculum include:

- *Introduction to Financial Services*
- *Inside Retail Banking*
- *Inside Investment Management*
- *Inside Corporate Finance*
- *Inside Transaction Banking*
- *Inside Capital Markets*
- *Inside Risk Management*
- *Inside Financial Services Regulation*

WHY IS FINANCIAL INFORMATION IMPORTANT?

Financial information allows you to:

- Understand an institution's business and strategy to:
 - Establish your credibility
 - Recognize the institution's revenue and expense drivers
 - Identify areas for improvement
- Participate in conversations with senior business executives
 - Finance is the language of financial services
 - Business executives focus on (and are rewarded on) financial performance
- Prioritize your efforts to:
 - Link your time and services to the institution's strategic priorities
 - Help the institution improve profitability

Let's begin by taking a closer look at how financial institutions make money...

SOURCES OF REVENUE AND EXPENSE

The goal of every financial institution is to generate profitability for its shareholders (or other owners). For financial institutions, profitability (or **net income**) is a function of:

- Net interest income...
- ...plus fee income
- ...minus operating expense

Let's take a closer look at each of these...

Net Interest Income

Net interest income is an important source of revenue for banks.

Net interest income is equal to a financial institution's interest income minus its interest expense.

Interest income is the revenue a financial institution earns from:

- Interest on loans paid by borrowers
- Interest (and dividends) received on **investment securities** held by the financial institution
 - Investment securities are securities financial institutions hold to manage liquidity risk
 - To manage liquidity risk, financial institutions need to ensure they have cash available to meet their cash obligations (such as deposit withdrawals by customers)
 - To do this financial institutions could keep a significant portion of their assets in cash, but holding cash does not generate revenue
 - Instead, financial institutions hold investment securities that:
 - Can be quickly sold for (or "converted into") cash as needed, but also...
 - ...allow financial institutions to earn interest income (and capital gains) on these assets until they need to be converted into cash
 - Buying and selling investment securities is part of a financial institution's asset/liability management
 - Liquidity risk and asset/liability management are covered in more detail in the *Inside Risk Management* course
- Interest and dividends received on **trading assets** held by the financial institution
 - Trading assets are assets related to a financial institution's capital markets activities, including proprietary trading and derivatives
 - These topics are all covered in more detail in the *Inside Capital Markets* course
- Interest earned on interbank loans

Interest expense is the interest paid by a financial institution for borrowing funds from others. Interest expense includes interest paid to:



- Customers for deposits
- Other banks for providing interbank loans
- Investors holding debt (such as commercial paper and bonds) issued by the institution

Net interest income represents the net revenue generated by a financial institution's lending, investing and deposit-gathering activities. Net interest income has traditionally been the largest source of revenue for banks, and it still is today for most small banks. For large banks that have diversified into other financial services over the years, net interest income typically represents about 50% to 60% of total revenue.

Net interest income is also the largest source of revenue for finance companies, but it is a relatively small source of revenue for capital markets firms and other industry participants.

A bank's total net interest income is found on its income statement. In addition to tracking their total net interest income, banks also closely track net interest income generated by specific products, customer segments and geographic regions. Net interest income is also closely related to net interest margin and spread (covered later in this course).

Interest income and interest expense both rise (or fall) as the general interest rate environment changes, however they do not always rise (or fall) in tandem. If interest expense increases faster than interest income, the financial institution's net interest income will drop. This risk is known as interest rate risk, and it is typically managed as part of a financial institution's asset/liability management (ALM).

Provision for Credit Losses

The provision for credit losses (referred to as the **impairment charge** under international accounting standards) is an expense item that represents the amount of new funds moved into an institution's allowance for credit losses to absorb future credit losses. The allowance for credit losses is covered in more detail later in this course.

The provision for credit losses (sometimes referred to as the provision for loan losses) is an important part of a financial institution's credit risk management. Credit risk management is covered in more detail in the *Inside Risk Management* course.

The provision for credit losses is subtracted from net interest income to calculate an institution's **net interest income after provision**.

Fee Income

Fee income is any revenue earned by a financial institution outside of net interest income.

Fee income is also referred to as **noninterest income** and **other operating income**, and most fee income is generated by fees financial institutions charge to customers, including:



- Account fees
 - Account fees are fees charged by financial institutions to maintain customer accounts
 - Account fees are usually charged monthly or annually, and are sometimes waived if customers meet minimum account balances or transaction volumes
 - Examples of account fees include:
 - Service charges on deposits, which includes monthly fees associated with consumer current accounts and commercial operating accounts
 - Annual fees associated with credit card accounts
 - Monthly or annual account fees associated with some retail brokerage accounts
 - Account fees (especially service charges on deposits) are an important source of revenue for many banks
- Transaction fees
 - Transaction fees are fees charged by financial institutions to conduct customer transactions.
 - Examples of transaction fees include:
 - Consumer payment fees, such as transaction fees associated with ACH and debit card payments
 - Treasury service fees, such as fees charged for wire transfers, ACH payments, merchant processing and trade finance services
- Asset management fees
 - Asset management fees are fees financial institutions earn for providing asset management services
 - Asset management fees are typically structured as a percentage of the client assets managed by the financial institution
 - Asset management fees are the primary source of revenue for investment management firms and are an important source of revenue for some banks and brokerage firms
- Advisory fees
 - Advisory fees are fees charged by financial institutions for providing advice to customers
 - Examples of advisory fees include:
 - Financial planning fees charged to investment management clients
 - Advisory fees charged to investment banking clients for providing advisory services related to mergers and acquisitions (M&A) and other financing activities
 - Advisory fees are an important source of revenue for some investment banks, banks and brokerage firms

Other sources of fee income include

- Trading gains
 - Trading gains (or losses) represent the amount a financial institution has earned (or lost) as part of its proprietary trading activities
 - Trading gains are also referred to as **principal transactions**
- Capital gains

- Capital gains (also referred to as **investment gains**) represent profit generated by a financial institution for selling investment securities at prices higher than the original prices paid to purchase the securities
- Of course, financial institutions also sell some securities at prices *lower* than the original prices paid to purchase the securities, generating capital losses

Fee income is the primary source of revenue for non-bank financial institutions, including investment banks and investment management firms.

For banks, fee income is an increasingly important source of revenue. Fee income is a more stable and predictable source of revenue than net interest income. In addition, most fee-based businesses require relatively low levels of capital when compared to traditional bank lending services. Today, large banks typically generate 40% - 50% of their revenue from fee income. For smaller banks, fee income is usually lower.

A financial institution's fee income is found on its income statement. In addition to tracking their total fee income, financial institutions also closely track the amount of fee income generated by specific products, customer segments and geographic regions.

Operating Expense

Operating expense includes all of the costs associated with operating a financial institution, with the exception of interest expense, provisions for credit losses and income tax expense.

Other names for operating expense include **opex**, **noninterest expense**, **operating costs** and **overhead expense**. Operating expense is found on an institution's income statement.

Operating expense includes:

- Compensation costs
 - Compensation costs are the costs of paying employees and include salaries, bonuses and employee benefits, as well as recruiting and training costs
 - For most financial institutions, compensation costs are the largest source of operating expense and are typically 50% or more of a financial institution's total operating expense
 - Compensation costs are especially high in segments of financial services in which the expertise of staff can create competitive differentiation, including investment banking, investment management and capital markets
 - Compensation costs are also referred to as **personnel costs**, **staff expenses**, **compensation and benefits** or **salaries and benefits**
- Occupancy costs

- Occupancy costs are the costs associated with using and operating an institution's physical locations, including branches, offices, ATM locations, operating centers, contact centers and data centers
- Occupancy costs typically include lease payments, real estate taxes, property insurance and utilities
- Equipment expense
 - Equipment expense includes the costs associated with information technology (IT) and telecommunications
 - Equipment expense is often combined with occupancy costs in a line item called **premises & equipment expenses**
- Marketing and advertising costs
- Legal, accounting, auditing and other professional fees

The efficiency ratio (covered later in this course) is a financial ratio often used to measure a bank's ability to manage operating expense.

Check Your Understanding - #1 – type of revenue

Dividends received on investment securities are considered which type of revenue? Select the best answer.

Interest income

Noninterest income

Other operating income

Fee income

FINANCIAL STATEMENTS

Financial institutions use financial statements to monitor their financial performance and present their financial results to shareholders, analysts and regulators.

The primary financial statements used by financial institutions are the:

- Income statement
- Balance sheet



Financial institutions release these financial statements (and other performance metrics) to their shareholders (and the general public) on a regular basis (usually once a quarter).

Income Statement

An income statement is a summary of a financial institution's profitability over a specific period of time (usually a quarter or a year). Other common names for the income statement include **profit & loss account** (or P&L), **statement of operations** or **statement of earnings**.

Bank income statements have five major sections:

- Net interest income
- Fee income
- Provision for credit losses
- Operating expense
- Net income

...which correspond to the primary sources of revenue and expense covered in the previous section of this course.

Income statements for other financial institution often have just three major sections:

- Revenue, encompassing net interest and fee income
- Operating expense
- Net income

Balance Sheet

A balance sheet is a snapshot in time, showing a financial institution's position on a specific date (usually the last day of a year or quarter).

Balance sheets are organized into three major sections:

- Assets, which represent what an institution owns
- Liabilities, which represent what an institution owes to others
- Shareholders Equity, which represents the ownership of shareholders and is equal to assets minus liabilities

Let's take a closer look at each of these...

Assets

Assets on a financial institution's balance sheet represent what the institution owns. This includes money owed to the financial institution by customers and others.

Assets on a **bank's** balance sheet typically include:

- Cash held by the bank
- Deposits at other banks
- Interbank loans (covered earlier in this course)
- Trading assets (covered earlier in this course)
- Investment securities (covered earlier in this course)
- Loans outstanding
 - Loans outstanding (also referred to as **loans to customers** or simply **loans**) is an asset category representing the outstanding balance of customer loans owed to the bank
 - Loans outstanding on the balance sheet is equal to net loans, and net loans are equal to:
 - **Gross loans**, which is the total amount still owed by customers on outstanding loans
 - ...minus the **allowance for credit losses**
 - The allowance for credit losses (referred to as **impairment** under international accounting standards) is the amount of reserves a financial institution has set aside on its balance sheet to absorb future credit losses
 - The allowance for credit losses is recorded as a **contra-asset** on a financial institution's balance sheet (in other words this allowance is recorded as an asset with a negative value, and the allowance is subtracted from gross loans to determine net loans)
 - As money is depleted from the allowance over time to absorb actual loan charge-offs, additional funds are moved into the allowance
 - This movement of funds into the allowance creates an expense on the institution's income statement referred to as the provision for credit losses (in the US) or impairment charge (under international accounting standards)
 - The allowance for credit losses is also referred to as the **allowance for loan losses (ALL)** or **loan loss reserves**
 - For most banks, loans to customers is their largest asset category
- Fixed assets owned by the bank
 - Fixed assets are assets purchased for long-term use and not likely to be converted into cash
 - For financial institutions, fixed assets typically include:
 - Real estate property, including land and buildings
 - IT and telecommunications equipment
 - Office furniture
 - Fixed assets are also referred to as **capital expenditures**

For **capital markets firms**, assets typically include:

- Cash
- Deposits at banks and clearing organizations
- Securities owned by the firm
- Fixed assets

Assets that generate interest income for a financial institution (such as loans and investment securities) are referred to as **earning assets**.

Assets that can be quickly sold for (or "converted into") cash are referred to as **liquid assets**.

Liabilities

Liabilities represent what a financial institution owes to others. Liabilities provide a financial institution with the funding needed to support assets, and liabilities create interest expense for a financial institution.

For banks, liabilities typically include:

- Customer deposits
- Interbank borrowings
- Securities sold under repurchase agreements
- Other short-term borrowings, such as commercial paper
- Long-term debt, such as bonds issued by the bank

For capital markets firms, liabilities typically include:

- Commercial paper and other short-term borrowings
- Securities sold under repurchase agreements
- Long-term debt, such as bonds issued by the firm

Shareholders Equity

Shareholders equity on a financial institution's balance sheet represents the book value of shareholders' ownership in the institution. Shareholders equity is equal to assets minus liabilities.

Shareholders equity includes:

- Common stock issued by the financial institution
 - The value of this common stock is recorded on the balance sheet at the price at which the financial institution sold the shares to investors in the primary market
 - Changes in the price of these shares in the secondary market is not reflected on the financial institution's balance sheet

- Retained earnings
 - Retained earnings represents profits the financial institution has reinvested into itself
 - In most years, financial institutions distribute some of their net income to shareholders through dividends
 - Net income not distributed to shareholders is added to retained earnings (increasing the institution's equity base)

For banks, shareholders equity is an important component of capital ratios (covered later in this course). Shareholders equity is often referred to as **equity capital**.

Check Your Understanding - #2 – Assets

Which asset is considered an earning asset by a financial institution? Select the correct answer.

Loans outstanding

Real estate property

IT and telecommunications equipment

Liquid assets

KEY PERFORMANCE INDICATORS (KPIs)

A **key performance indicator** (or **KPI**) is a metric that quantitatively measures the activity or performance of an organization, business unit, department or individual. KPIs are used by executives, shareholders, analysts, regulators and others to:

- Understand the relationships between different financial variables
- Compare performance to industry benchmarks, peers, other internal groups and previous time periods
- Monitor trends
- Identify potential problems

In this course, we will focus on the most important *financial* KPIs used by financial institutions. However, financial institutions also use other KPIs to measure risk management, operations, sales, customers and products.

Financial KPIs (or ratios) directly measure components of a financial institution's financial performance.

Important financial ratios used by financial institutions include:

- Return on equity (ROE)
- Return on assets (ROA)
- Efficiency ratio
- Spread and net interest margin
- Capital ratios

Return on Equity (ROE)

Return on equity (or ROE) is calculated by taking a financial institution's net income for a reporting period and dividing it by the institution's average equity for that same period of time.

Since equity represents the amount of money shareholders have invested in the financial institution, ROE measures the return on investment the institution is providing to these shareholders. As a result, ROE is one of (if not the) most important measures of success for any publicly-held financial institution.

Most financial institutions today are targeting ROEs of 16% or higher.

Return on Assets (ROA)

Return on assets (or ROA) is calculated by taking a financial institution's net income for a reporting period and dividing it by the institution's average assets for that same period of time.

ROA is used primarily by banks and measures a bank's ability to generate profitability from its earning assets. It is often used to compare the performance of banks of different asset sizes. Banks generally target ROAs of 1.00% or higher.

Efficiency Ratio

Efficiency ratio (also known as the **cost-income ratio** or **expense-income ratio**) is equal to operating expense divided by total revenue.

Efficiency ratio is used primarily by banks and measures a bank's ability to manage costs (such as staff, facilities and IT) in relation to the bank's overall revenue.

A low efficiency ratio is better than a high efficiency ratio, and if a financial institution's revenue grows more quickly than operating expense, its efficiency ratio will improve. Most banks today are targeting efficiency ratios below 60%.

Spread and Net Interest Margin

Spread measures the difference between a financial institution's:

- Yield on assets
 - Yield on assets measures the return provided by an institution's earning assets
 - The yield on assets is equal to:
 - Interest income
 - ...divided by average earning assets
 - ...for a reporting period
 - For example, if a bank:
 - Has \$100 million in average earning assets for a reporting period
 - ...and earned \$5 million in interest income for that same reporting period
 - ...its yield on assets would be 5% (\$5 million divided by \$100 million)
- Cost of funds
 - Cost of funds measures the average rate an institution is paying to borrow funds
 - The cost of funds is equal to:
 - Interest expense
 - ...divided by average interest-bearing liabilities
 - ...for a reporting period
 - For example, if a bank:
 - Has \$100 million in average interest-bearing liabilities for a reporting period
 - ...and paid \$2 million in interest expense for that same reporting period
 - ...its cost of funds would be 2% (\$2 million divided by \$100 million)

For example, if a bank earns an average yield of 5% on its earning assets and has a cost of funds of 2%, its spread is 3% (5% - 2%).

Spread (also called the **interest rate spread**) is used primarily by banks.

Net interest margin is calculated by taking a financial institution's net interest income and dividing it by the institution's earning assets.

Net interest margin is similar to spread. However, net interest margin includes the impact of "interest-free" funding (such as deposits on which the bank does not pay interest), while spread does not include this impact.

Capital Ratios

Capital ratios measure a bank's capital relative to the amount (and type) of assets it holds.

In general, **capital** refers to the amount of equity and reserves a financial institution has in place to absorb losses, primarily losses associated with credit risk and market risk. These losses are part of the



financial services industry, and the ability of individual institutions to absorb these losses as they occur supports the stability and soundness of the overall financial system.

The technical definitions of what is and is not included in capital is determined by regulators, and these definitions can vary by country and change over time. Ensuring banks have enough capital to absorb losses is one of the most important areas of banking regulation and are addressed by capital and supervisory rules, including Basel III guidelines.

To ensure banks have enough capital, regulators require banks to meet or exceed minimums for specific capital ratios. While the purpose of capital ratios does not change over time, the calculation of these ratios and the minimum requirements banks must meet *do* change.

Capital ratios used by regulators today are driven primarily by Basel III guidelines and include **risk-weighted assets** in the calculations.

Risk-weighted assets (sometimes referred to as **risk-adjusted assets**) are calculated by taking a bank's assets and adjusting the value of those assets by a risk weighting. The risk weighting of specific assets varies based upon the potential credit, market and operational risk associated with the assets. Riskier assets have higher risk weightings. For example, highly rated government bonds are considered very low risk, so they may have a risk weighting of 0%. Residential mortgage loans secured by property may have a risk weighting of 50%. Commercial loans to high risk companies may have a risk weighting of 100%.

The methods of determining risk weighting vary. Under Basel I, assets were categorized into a small number of categories defined by regulators with different risk weightings. Under Basel II and Basel III, banks can organize their assets into more discrete risk weighting categories based on internal risk and capital models (if approved by regulators).

Under current guidelines, banks must meet minimum requirements for four different capital ratios.

Check Your Understanding - #3 – performance ratio considers

Which performance ratio is calculated by taking a financial institution's net interest income and dividing it by the institution's earning assets? Select the best answer.

Efficiency ratio

Return on Assets (ROA)

Net interest margin

Return on equity (ROE)



USING FINANCIAL INFORMATION

As we mentioned at the beginning of this course, using financial information allows you to:

- Understand a specific institution's business and strategy
- Participate in conversations with senior business executives
- Prioritize your efforts to:
 - Link your time and services to the institution's strategic priorities
 - Help the institution improve profitability

When reviewing financial information related to a specific financial institution, you should:

- **Analyzing Financial Results**
When reviewing a financial institution's financial statements, you'll want to compare the relative contribution of different financial statement line items and ask:
 - What is the relative percentage of revenue generated by net interest income and fee income?
 - What is the percentage of fee income generated by different business units?
 - What is the percentage of operating expense generated by different sources of expense?
 - What percentage of assets is loans?
 - What percentage of liabilities is deposits?
- **Identifying Trends**
Reviewing trends provides you with insight into a financial institution's performance. When analyzing trends, ask:
 - Which financial statement line items are growing the fastest?
 - Which financial statement line items are decreasing?
 - Which performance metrics are improving? Which are deteriorating?
- **Comparing Peers**
Comparing a financial institution to its peers provides perspective on differences in performance and strategy. When evaluating an institution against its peers, ask:
 - How does the institution's revenue mix compare to its peers?
 - How does the institution's expense mix compare to its peers?
 - How does the institution's asset mix compare to its peers?
 - How does the institution's performance metrics compare to its peers?
- **Uncovering Opportunities**
Use the information you uncover about a financial institution's financial performance to link the services you provide by asking:
 - How can you help the institution grow different sources of revenue or assets?
 - How can you help the institution control operating expense?
 - How can you help the institution improve specific performance metrics?

SOURCES OF FINANCIAL INFORMATION

The financial statements and many of the KPIs covered in this course are publicly available for most financial institutions. Most financial institutions provide this information to its shareholders (and the general public) on a regular basis (usually once a quarter or at least once a year).

To find financial information and other performance metrics for a specific financial institution, consider the following sources:

- The financial institution's Investor Relations site, which may include its:
 - Annual report
 - Quarterly earnings releases
 - Regulatory filings
 - Investor presentations
 - Financial statements and performance metrics (included in annual reports, quarterly earnings releases and regulatory filings)
- Industry regulator sites with information on specific financial institutions, such as:
 - The FDIC's Bank Data & Statistics in the US
 - BaFin's database of companies in Germany
 - OSFI's Financial Data in Canada
- Analyst reports covering the financial institution
 - These reports are written by brokerage firms, investment banks and independent research firms

Check Your Understanding - #4 – sources of financial information

Which sources of financial information are typically found on an institution's Investor Relations site? Select the correct answer.

Regulatory filings, analyst reports and quarterly earnings releases

Analyst reports, annual reports and investor presentations

Annual reports, regulatory filings and investor presentations

Quarterly earnings releases, OFSI Financial Data and annual reports



Check Your Understanding - #5 – using financial information

Which discovery question can help you compare the relative contribution of different financial statement line items? Select the best answer.

Which financial statement line items are growing the fastest.

What is the relative percentage of revenue generated by different business units?

How does the institution's revenue mix compare to its peers?

What percentage of liabilities is deposits?

FINAL TEST

To successfully complete this course, you must score at least 70% on the test. There are 10 questions in total. When you have answered all the questions in the test, submit it to info@goto-psi.com and it will be graded. Good luck!

Question #1

Which are sources of financial information? Select all that apply.

Annual reports

Regulatory filings

Investor presentations

Product brochures

Question #2

What has traditionally been the largest source of revenue for most banks and finance companies? Select the correct answer.

Fee income

Non-interest income

Net interest income



Capital gains

Question #3

Which performance ratio measures an institution's operating expenses as a percentage of total revenue? Select the correct answer.

Spread

Expense ratio

Efficiency ratio

Net Interest Margin

Question #4

Which is a component of net interest income? Select the correct answer.

Asset management fees

Interest paid on deposits

Investment banking fees

Occupancy

Question #5

Why should you use financial information to help you understand a financial institution? Select all that apply.

It improves your understanding of the institution's business

It allows you to participate in conversations with senior executives

It helps you prioritize your efforts

It improves the institution's strategy



Question #6

Which type of revenue includes electronic transfer transaction fees and deposit account fees? Select the correct answer.

Non-interest income

Interest income

Asset income

Liability income

Question #7

What is the primary type of revenue generated by a financial institution's Investment Management line of business? Select the correct answer.

Net interest income

Gross profit

Fee income

Operating profit

Question #8

Which financial statement provides a snapshot in time, showing a financial institution's position on a specific date? Select the correct answer.

Income statement

Balance sheet

Profit & loss account

Statement of operations



Question #9

Which performance ratio measures the difference between an institution's yield on assets and cost of funds? Select the correct answer.

- Spread
- Expense ratio
- Efficiency ratio
- Gross margin

Question #10

Which performance ratio measures a financial institution's net income for a reporting period divided by its average assets for that same period of time? Select the best answer.

- ROA
- ROE
- Efficiency ratio
- Net Interest Margin