Chapter 2

Firms and the Financial Market
Chapter 2 and Lecture Contents

• Learning Objectives
  1. Describe the structure and functions of financial markets.
  2. Distinguish between commercial banks and other financial institutions in the financial marketplace.
  3. Describe different securities markets for bonds and stock.

• Core Principles Used in this Chapter to Explain:
  1. Basic Structure of the U.S. Financial Markets
  2. Financial Marketplace – Financial Institutions
Principles Used in this Chapter

• **Principle 2: There is a Risk-Return Tradeoff.**
  - Financial markets are organized to offer investors a wide range of investment opportunities that have different risk and different expected rates of return that reflect those risks.

• **Principle 4: Market Prices Reflect Information.**
  - It is through the operations of the financial markets that new information is efficiently impounded in security prices.
THE BASIC STRUCTURE OF THE U.S. FINANCIAL MARKETS

• There are three principal sets of players that interact within the financial markets:

  1. Borrowers
     • Individuals and businesses that need money to finance their purchases or investments.

  2. Savers (or sometimes called lenders)
     • Those who have money to invest. These are principally individuals although firms also save when they have excess cash.

  3. Financial Institutions (or sometimes called Financial Intermediaries)
     • The financial institutions and markets help bring borrowers and savers together.
Financial Markets, Institutions, and the Circle of Money

Financial markets consist of institutions that facilitate the transfer of savings from individuals and firms with excess cash to borrowers who have less cash than they need.

- **Saver (Investor)**: exchange cash for financial instruments.
- **Borrower**: $ Financing Obtained
- **Financial Market (Institutions)**: $ Financing Repaid
- **The Financial Market**
  - **Financial Intermediaries**
    - Commercial banks
    - Finance companies
    - Insurance companies
    - Investment banks
    - Investment companies
  - **Securities Markets**
    - Debt market
    - Stock market
Financial Intermediary Example: John’s three sons are grown up and are looking to buy their first home.

- There is no intermediation if John directly gives them the funds they need
- There is intermediation where a bank doles out the funds and John is free to place his monies in any bank he chooses to do so.
Financial Intermediaries (cont.)

- Financial institutions like commercial banks, finance companies, insurance companies, investment banks, and investment companies are called **financial intermediaries**.
  - They help bring together those who have money (savers) and those who need money (borrowers).
Money versus Capital Market

- The **money market** refers to debt instruments with maturity of one year or less.
  - **Examples**: Treasury bills (T-bills), Commercial paper (CP).

- The **capital market** refers to long-term debt and equity instruments.
  - **Examples**: Common stock, Preferred stock, Corporate bond, Treasury bond, Municipal bond.
Capital markets are markets for short term debt instruments maturing in less than one year, and money markets are markets for long term debt instruments maturing in more than one year.

1. True
2. False
Commercial Banks
Everyone’s Financial Marketplace

• Commercial Bank Activities/Functions
  – Collect the savings of individuals as well as businesses and then lend those pooled savings to other individuals and businesses.

  – They make money by charging a rate of interest to borrowers that exceeds the rate they pay to savers.

  – In the United States, banks cannot own industrial corporations.
Table 2.1  Four Largest Commercial Banks in the United States at the End of 3rd Quarter 2009

Commercial banks are ranked by the total dollar value of their deposits. Most large banks are owned by holding companies, which are companies that own other types of businesses in addition to the bank. However, the types of businesses that holding companies can own are restricted by Federal law. Any firm that owns or controls 25% or more of a commercial bank is classified as a bank holding company and must register with the Federal Reserve System, which is the primary regulator of commercial banking in the United States. The financial crisis of 2008–09 led to consolidations of weaker banks, most notably the acquisition of Wachovia by Wells Fargo.

<table>
<thead>
<tr>
<th>Institution Name</th>
<th>Description</th>
<th>Total Deposits ($ in thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank of America Corporation (BAC)</td>
<td>As of December 31, 2008, the company operated approximately 6,100 retail banking offices and 18,700 automated teller machines. Bank of America was founded in 1874 and is headquartered in Charlotte, North Carolina.</td>
<td>$1,002,708,983</td>
</tr>
<tr>
<td>JPMorgan Chase &amp; Co. (JPM)</td>
<td>This financial holding company provides a range of financial services worldwide through six segments: Investment Banking, Retail Financial Services, Card Services, Commercial Banking, Treasury and Securities Services, and Asset Management. The company was founded in 1823 and is headquartered in New York, New York.</td>
<td>$ 962,505,000</td>
</tr>
<tr>
<td>Citigroup, Inc. (C)</td>
<td>As of December 31, 2008, Citigroup operated through a network of 7,730 branches. The company was founded in 1812 and is based in New York, New York.</td>
<td>$ 785,801,000</td>
</tr>
<tr>
<td>Wells Fargo Bank (WFC)</td>
<td>Wells Fargo &amp; Company was founded in 1852 and is headquartered in San Francisco, California. The bank acquired Wachovia Corporation in 2008, resulting in 11,000 branches and 12,160 automated teller machines.</td>
<td>$ 438,737,000</td>
</tr>
</tbody>
</table>

Non-Bank Financial Intermediaries

• These include:
  – Financial services corporations, like GE Capital Division;
  – Insurance companies, like Prudential;
  – Investment banks, like Goldman Sachs;
  – Investment companies including mutual funds, hedge funds and private equity firms.
Financial Services Corporations

- **Financial services corporation** are in the lending or financing business, but they are not commercial banks.
  - One well known financial service corporation is GE capital, the finance unit of the General Electric Corporation.
  - GE capital provides commercial loans, financing programs, commercial insurance, equipment leasing, and other services in over 35 countries around the world.
  - GE capital also provides credit services to more than 130 million customers that range from retailers, auto dealers, consumers offering products and services from credit cards to debt consolidation to home equity loans.
Insurance Companies

- **Insurance companies** sell insurance to individuals and businesses to protect their investments.
  - They collect premium and hold the premium in reserves until there is an insured loss.
  - Then pay out claims to the holders of the insurance contracts.
  - Later, these reserves are deployed in various types of investments including loans to individuals, businesses and the government.
Investment Banks & Companies

• **Investment banks** are specialized financial intermediaries that:
  - help companies and governments raise money
  - provide advisory services to client firms on major transactions such as mergers
  - **Firms** that provide investment banking services include Bank of America, Goldman Sachs, Morgan Stanley and JP Morgan Chase.

• **Investment Companies**
  - **Investment companies** are financial institutions that pool the savings of individual savers and invest the money in the securities issued by other companies purely for investment purposes.
Mutual Funds

- **Mutual funds** are professionally managed according to a stated investment objective.
  - Individuals can invest in mutual funds by buying shares in mutual fund at the net asset value (NAV).
  - NAV is calculated daily based on the total value of the fund divided by the number of mutual fund shares outstanding.
  - Mutual funds can either be load or no-load funds. The term **load** refers to the sales commission that you pay when acquiring ownership shares in the fund. These commissions typically range between 4.0 to 6.0%.
  - A mutual fund that does not charge a commission is referred to as a no-load fund.
Exchange Traded Funds (ETFs)

- An **exchange-traded fund** (ETF) is similar to a mutual fund except that ownership shares in ETF can be bought and sold on the stock exchange.
  - Most ETFs track an index, such as the Dow Jones Industrial Average or the S&P 500, and generally have relatively low expenses.
  - Mutual funds and ETFs provide a cost-effective way to diversify and reduce risk.
  - If you had only $10,000 to invest, it would be difficult to diversify since you will have to pay commission for each individual stock.
  - However, by buying a mutual fund that invests in S&P 500, you can indirectly purchase a portfolio that tracks 500 stocks with just one transaction. Alternatively, you might purchase an ETF, such as SPDR S&P 500 (SPY), which tracks S&P 500.
Hedge Funds

- **Hedge funds** are similar to mutual funds but they tend to take more risk and are generally open only to high net worth investors.
  - Management fees also tend to be higher for hedge funds and most funds include an incentive fee based on the fund’s overall performance, which typically runs at 20% of profits.
Private Equity Firms

- Private equity firms include two major groups: Venture capital (VC) firms and Leveraged buyout firms (LBOs).
  - **Venture capital firms** raise money from investors (wealthy individuals and other financial institutions) that they then use to provide financing for private start-up companies when they are first founded.
    - For example, Venture capital firm, Kleiner Perkins Caufield & Byers (KPCB) was involved in initial financing of Google.
  - **Leveraged buyout firms** acquire established firms that typically have not been performing very well with the objective of making them profitable again and selling them. An LBO typically uses debt to fund the purchase of a firm. LBO transactions grew from $7.5 billion in 1991 to $500 billion in 2006.
    - Prominent LBO private equity firms include Cerberus Capital Management, L.P., TPG (formerly Texas Pacific Group), and KKR (Kohlberg, Kravis, and Roberts).
Securities Markets

• A security is a *negotiable instrument* that represents a financial claim and can take the form of ownership (such as stocks) or debt agreement (such as bonds).
  - The securities market allow businesses and individual investors to trade the securities issued by public corporations.

• **Primary versus Secondary Market**
  - A *primary market* is a market in which securities are bought and sold for the first time.
  - In this market, the firm selling securities actually receives the money raised. For example, securities sold by a corporation to investment bank.
Primary versus Secondary Market (cont.)

• A secondary market is where all subsequent trading of previously issued securities takes place.
  – In this market, the issuing firm does not receive any new financing.
  – The securities are simply transferred from one investor to another.
  – Thus secondary markets provide liquidity to the investor. For example, the New York Stock Exchange.
Figure 2.2

Security Markets Provide a Link between the Corporation and Investors

Step 1: Initially, the corporation raises funds in the financial markets by selling securities (a primary market transaction); Step 2: The corporation then invests this cash in return-generating assets—new projects; Step 3: The cash flow from those assets is either reinvested in the corporation, given back to the investors, or paid to the government in the form of taxes; and Step 4: Immediately after the securities have been issued they are traded among investors in the secondary market, thereby setting their market price.
Process of Raising Money in the Securities Market (Figure 2-2)

1. The firm sells securities (debt or equity) to investors in the primary market.
2. The firm invests the funds it raises in its business.
3. The firm distributes the cash earned from its investments.
4. Security continues to trade in the secondary market.
Types of Securities

- **Debt Securities**: Firms borrow money by selling debt securities in the debt market.
  - If the debt has a maturity of less than one year, it is typically called notes, and is traded in the money market.
  - If the debt has a maturity of more than one year, it is called bond and is traded in the capital market.
  - Most bonds pay a fixed interest rate on the face or par value of bond.
  - For example, a bond with a face value of $1,000 and semi-annual **coupon rate** of 9% will pay an interest of $45 every 6 months or $90 per year, which is 9% of $1,000. When the bond matures, the owner of the bond will receive $1,000.
Types of Securities (cont.)

• **Equity securities** represent ownership of the corporation.
  - There are two major types of equity securities: **common stock** and **preferred stock**.

• **Common stock** is a security that represents equity ownership in a corporation, provides voting rights, and entitles the holder to a share of the company’s success in the form of **dividends** and any capital appreciation in the value of the security.
  - Common stockholders are residual owners of firm. They earn a return only after all other security holder claims (debt and preferred equity) have been fully satisfied.
  - Dividend on common stock are neither fixed nor guaranteed. Thus a company can choose to reinvest all of the profits in a new project and pay no dividends.
Types of Securities (cont.)

- **Preferred stock** is an equity security. However, preferred stockholders have preference with regard to:
  - **Dividends**: They are paid before the common stockholders.
  - **Claim on assets**: They are paid before common stockholders if the firm goes bankrupt and sells or liquidates its assets.

- Preferred stock is also referred to as a **hybrid security** as it has features of both common stock and bonds.
Types of Securities (cont.)

• Preferred stock is similar to common stocks in that:
  – It has no fixed maturity date,
  – The nonpayment of dividends does not result in bankruptcy of the firm, and
  – The dividends are not deductible for tax purposes.

• Preferred stock is similar to corporate bonds in that:
  – The dividends are typically a fixed amount, and
  – There are no voting rights.
Stock Markets

• A stock market is a public market in which the stocks of companies is traded.

• Stock markets are classified as either organized security exchanges or over-the-counter (OTC) market.

• **Organized security exchanges** are tangible entities; that is, they physically occupy space and financial instruments are traded on their premises. The New York Stock Exchange (NYSE) is located at 11 Wall Street in Manhattan, NY. The total value of stocks listed on the NYSE fell from $18 trillion in 2007 to just over $10 trillion at the beginning of 2009.
Stock Markets (cont.)

• The **over-the-counter markets** include all security market except the organized exchanges.
  - NASDAQ (National Association of Securities Dealers Automated Quotations) is an over-the-counter market and describes itself as a “screen-based, floorless market”. In 2009, nearly 3,900 companies were listed on NASDAQ, including Starbucks, Google, Intel.

• **Accessing and Reading Stock Quotes**
  - Figure 2-3 illustrates how to read stock quotes from [www.google.com/finance](http://www.google.com/finance).
  - Similar information is available at [http://finance.yahoo.com](http://finance.yahoo.com)
Common Stock Price Quotes
The following is typical of what you would see if you looked at www.google.com/finance.

Stock Price and Change from Previous Day: For Disney, the current price is $23.19, which represents a decline of 0.36 or $0.36 from the previous day’s closing price.

Name and Symbol: These are used to identify the stock. For example, the symbol for Disney is “DIS.” You can also use the stock’s symbol when using online systems to look up information on the stock.

Open, High, and Low: On this day, Disney’s stock price opened the day at $23.08, and ranged between a high of $23.25 and a low of $22.95.

Mkt Cap: Market Cap refers to the total value of all the company’s common stock outstanding.

52Wk High and 52Wk Low: These are the highest and lowest prices paid for the stock over the past 52 weeks, excluding the latest day’s trading. These prices will give you a sense of the direction the stock price is taking—whether its price is generally going up or down and by how much.

Dividend and Yield: Dividend is the stock’s annual cash dividend, while Yield is the dividend yield, which is obtained by dividing the firm’s annual cash dividend by the closing price of the stock that day.

The Walt Disney Company (Public, NYSE: DIS)

23.19 -0.36 (-1.53%)
Real-time: 12:40PM EDT

Vol and Avg. Vol: Vol represents the number, or volume, of shares of stock that were traded so far during the day, while Avg Vol represents the average volume on a typical day.

P/E, F P/E: P/E stands for price-earnings ratio (P/E ratio, also called the “earnings multiple”). The P/E ratio is the stock’s price divided by the income, or profit, earned by the firm on a per-share basis over the previous 12 months. In effect, it states the multiple that investors are willing to pay for one dollar of earnings. High P/E may result as investors are willing to pay more for a dollar of earnings because they believe that earnings will grow dramatically in the future. Low P/E are generally interpreted as an indication of poor or risky future prospects. F P/E is the forward price-earnings ratio, and uses estimated earnings over next 12 months. If there is no estimate, it is not given.

EPS: The earnings per share.

Beta: A measure of the relationship between an investment’s returns and the market’s returns. It will be discussed in detail later.

Shares, Inst. Own: Shares represents number of shares outstanding while Inst. Own identifies the percent of the shares outstanding that are owned by institutions such as mutual funds and institutional ownership.
Other Financial Instruments

- Table 2-2 provides a list of different financial instruments used by firms to raise money

  - Begin with the shortest maturity instruments that are traded in the money market

  - Moving downward through to the longest maturity instruments that are traded in the capital market.
### Table 2.2 Characteristics of Different Financial Instruments

**Money Market Debt**

**For the Borrower:**
- Good way of inexpensively raising money for short periods of time.
- Rates tend to be lower than long-term rates.
- Can borrow money to match short term needs.
- If interest rates rise, the cost of borrowing will immediately rise accordingly.

**For the Investor:**
- Very Liquid—you have access to your money when you need it.
- Safe—generally invested in high quality investments for brief periods.
- Low Returns—rates tend to be close to the rate of inflation.

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Market</th>
<th>Major Participants</th>
<th>Riskiness</th>
<th>Original Maturity</th>
<th>Interest Rates*</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. Treasury bills</td>
<td>Money-Debt</td>
<td>Issued by U.S. Treasury</td>
<td>Default-free</td>
<td>4 weeks to 1 year</td>
<td>0.033% to 0.286%</td>
</tr>
<tr>
<td>Bankers’ acceptances</td>
<td>Money-Debt</td>
<td>A firm’s promise to pay, guaranteed by a bank</td>
<td>Low risk of default, dependent on the risk of the guaranteeing bank</td>
<td>Up to 180 days</td>
<td>0.22% to 0.36%</td>
</tr>
<tr>
<td>Commercial paper</td>
<td>Money-Debt</td>
<td>Issued by financially secure firms to fund operating expenses or current assets (e.g., inventories and receivables)</td>
<td>Low default risk</td>
<td>Up to 270 days</td>
<td>0.13% to 0.30%</td>
</tr>
<tr>
<td>Negotiable certificates of deposit (CDs)</td>
<td>Money-Debt</td>
<td>Issued by major money-center commercial banks with a denomination of at least $100,000 to large investors</td>
<td>Default risk depends on the strength of the issuing bank</td>
<td>2 weeks to 1 year</td>
<td>0.20% to 0.25%</td>
</tr>
<tr>
<td>Money market mutual funds</td>
<td>Money-Debt</td>
<td>Issued by mutual funds and invested in debt obligations like Treasury bills, CDs and commercial paper, held by individuals and businesses</td>
<td>Low degree of risk</td>
<td>No specific maturity date (can be redeemed any time)</td>
<td>0.88%</td>
</tr>
<tr>
<td>Consumer credit, including credit card debt</td>
<td>Money-Debt</td>
<td>Non-mortgage consumer debt issued by banks/credit unions/finance companies</td>
<td>Risk is variable</td>
<td>Varies</td>
<td>Variable depending upon the risk level</td>
</tr>
</tbody>
</table>

**Long-Term Debt and Fixed Income Securities Market**

**For the Borrower:**
- Interest rates are locked in over the entire life of the debt.
- Has a tax advantage over common stock in that interest payments are tax deductible while dividend payments are not.

**For the Investor:**
- Can be used to generate dependable current income.
- Some bonds produce tax-free income.
- Long-term debt tends to produce higher returns than short-term debt.
- Less risky than common stock.
- Investor can lock in an interest rate and know the future returns (assuming the issuer does not default on its payments).