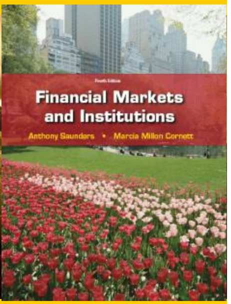
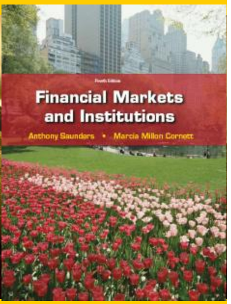
Financial Markets and Institutions



Chapter One

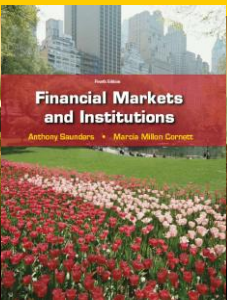
Introduction and Overview of Financial Markets



Financial Market definition

- Financial markets are structures through which funds flow.
- A financial market is a market in which people and entities can trade financial securities and commodities at low transaction costs and at prices that reflect supply and demand.
- Securities include stocks and bonds, and commodities include precious metals or agricultural goods

Financial Market definition



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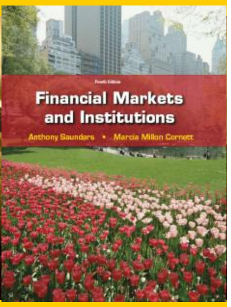
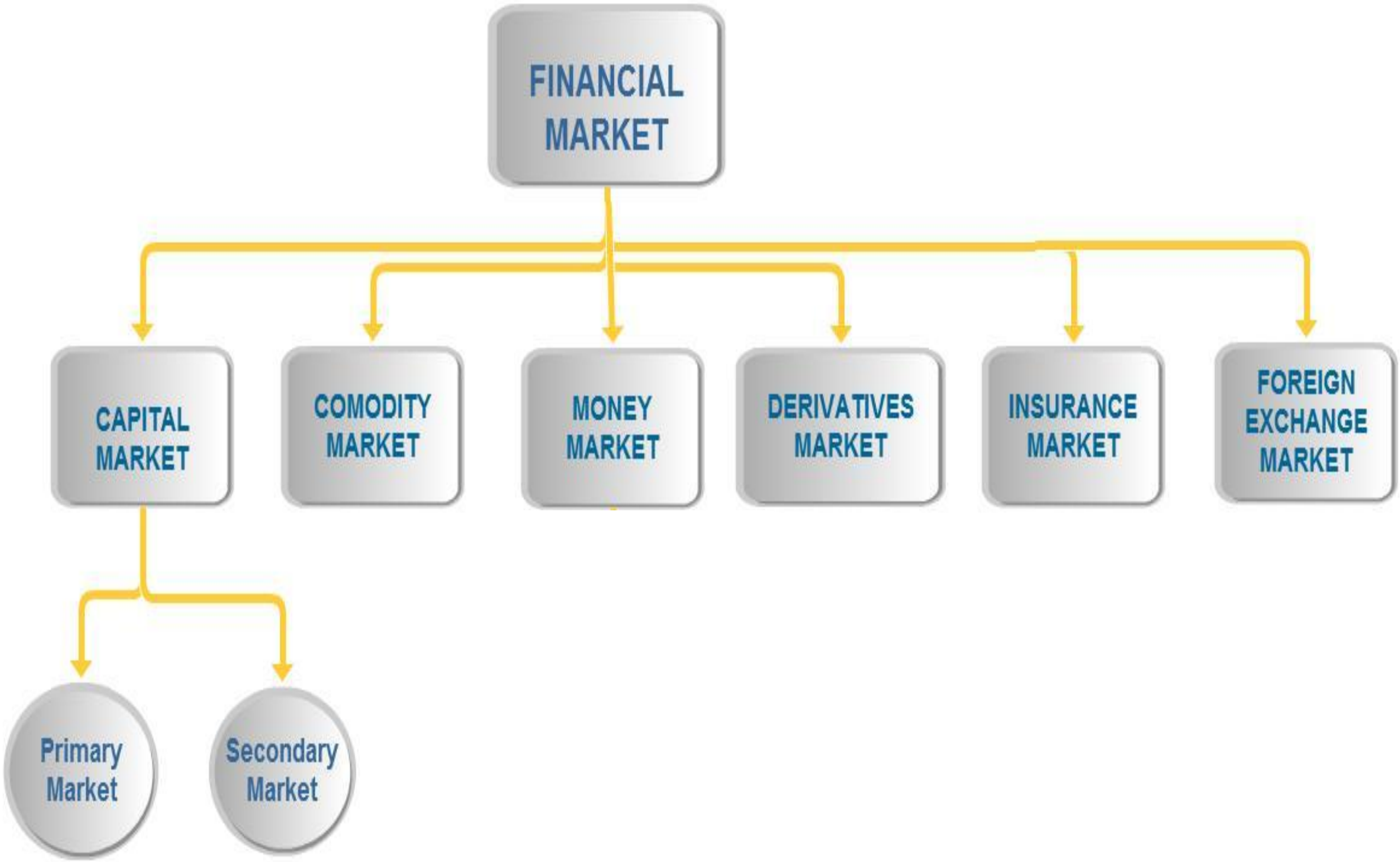
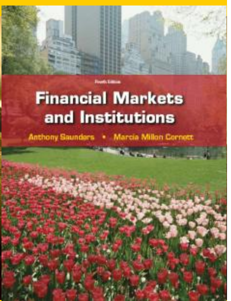
Types of Financial Markets





Money Markets versus Capital Markets



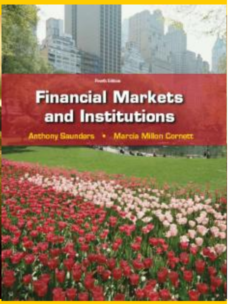
- **Money Markets**

  markets that trade debt securities with maturities of one year or less (e.g. CD’s, U.S. Treasury bills)

- **Capital Markets**

  markets that trade debt (bonds) and equity (stock) instruments with maturities of more than one year.

  The capital markets may also be divided into **primary markets** and **secondary markets**.



Primary Markets versus Secondary Markets

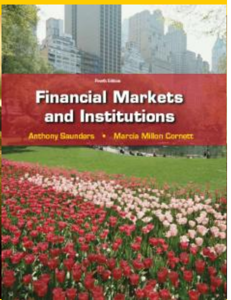
- **Primary Markets**

  markets in which users of funds (e.g. corporations, governments) raise funds by issuing financial instruments (e.g. stocks and bonds)

- **Secondary Markets**

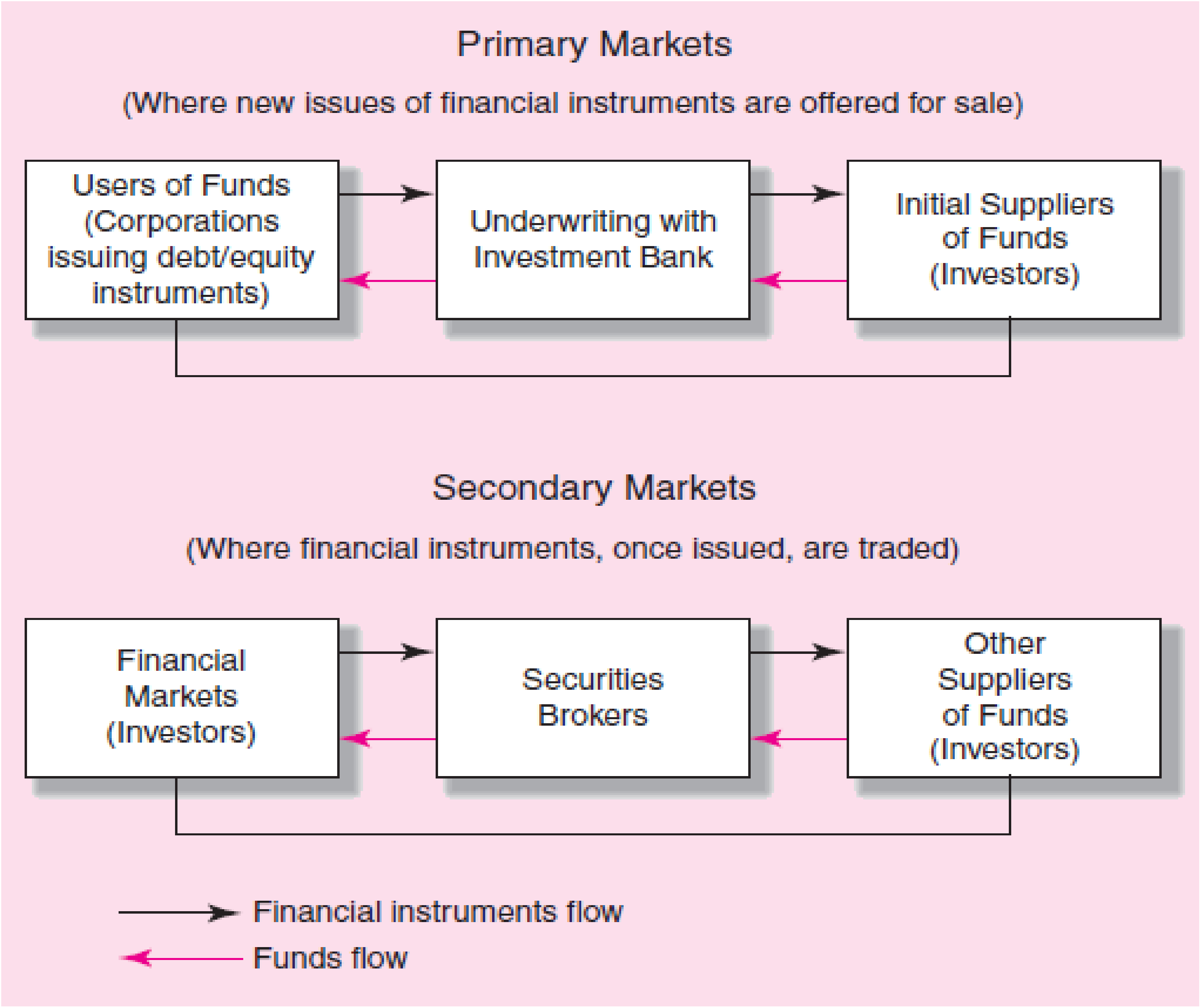
  markets where financial instruments are traded among investors (e.g. NYSE, NASDAQ)

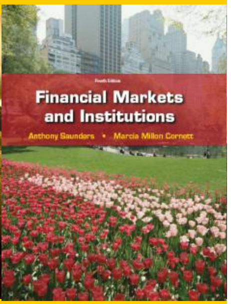
Primary Markets versus Secondary Markets



- Newly formed (issued) securities are bought or sold in primary markets, such as during initial public offerings. The first-time issues are usually referred to as **initial public offerings (IPO)**.
- An initial public offering (IPO) is the first public issue of financial instruments by a firm
- Secondary markets allow investors to buy and sell existing securities.
- The transactions in primary markets exist between issuers and investors, while in secondary market transactions exist among investors.

Primary and Secondary Market Transfer of Funds Time Line

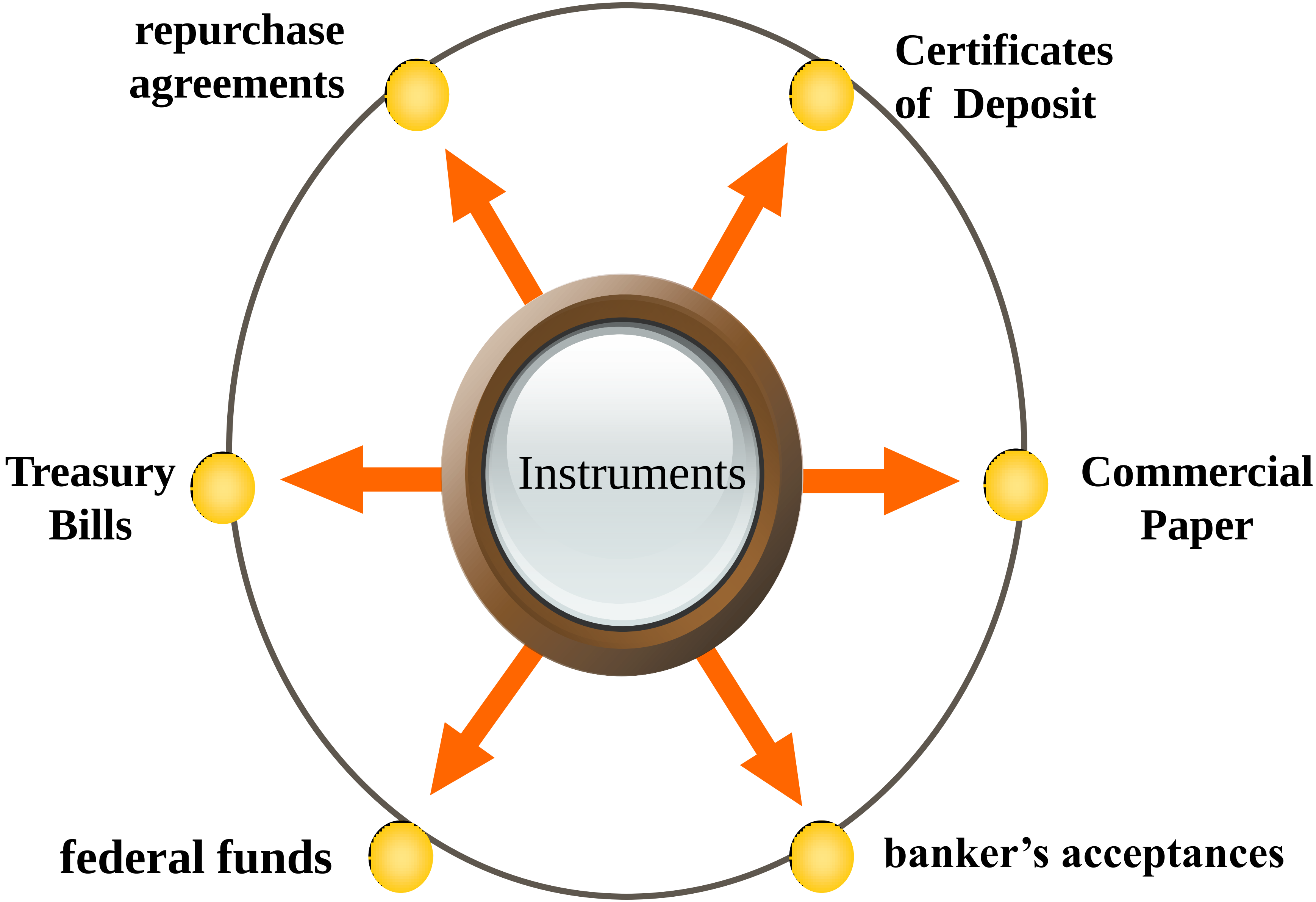




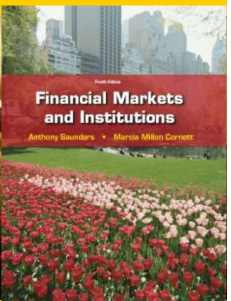
Money Market Instruments

- A variety of money market securities are issued by corporations and government units to obtain short-term funds.
- Money markets involve debt instruments with original maturities of one year or less.
- These securities include
  - Treasury bills
  - federal funds
  - repurchase agreements
  - commercial paper
  - negotiable certificates of deposit
  - banker’s acceptances

Money Market Instruments



Money Market Instruments



Treasury Bills:

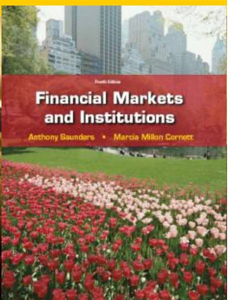
short-term obligations issued by the U.S. government.

Federal Funds:

short-term funds transferred between financial institutions usually for no more than one day.

Repurchase Agreements:

agreement involving the sale of securities by one party to another with a promise by the seller to repurchase the same securities from the buyer at a specified date and price.



Money Market Instruments

Commercial Paper:

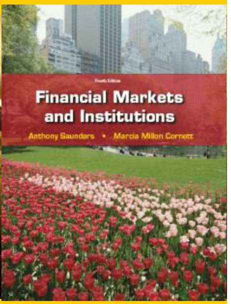
short-term unsecured promissory notes issued by a company to raise short-term cash.

Negotiable Certificates of Deposit:

bank-issued time deposit that specifies an interest rate and maturity date and is negotiable, i.e., can be sold by the holder to another party.

Banker Acceptances:

time draft payable to a seller of goods, with payment guaranteed by a bank.

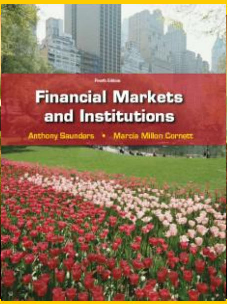


Capital Market Instruments

- Capital markets is consist of **Stock markets**, which provide financing through the issuance of shares or common stock, and enable the subsequent trading thereof. And **Bond markets**, which provide financing through the issuance of bonds, and enable the subsequent trading thereof.

- The common capital market instruments include:
  - Stocks
  - Mortgages
  - Corporate Bonds
  - State and Local Government Bonds
  - U.S. Government Agencies
  - Bank and Consumer Loans

Capital Market Instruments (cont.)



Corporate Stocks:

the fundamental ownership claim in a public corporation.

Mortgages:

loans to individuals or businesses to purchase a home, land, or other real property.

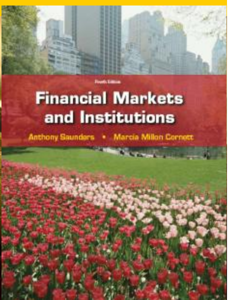
Corporate Bonds:

long-term bonds issued by corporations.

Treasury Bonds:

long-term bonds issued by the U.S. Treasury.

Capital Market Instruments (cont.)



State and Local Government Bonds:

long-term bonds issued by state and local governments.

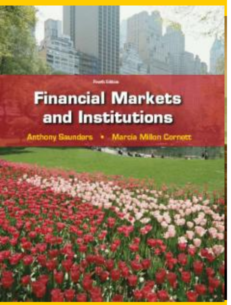
U.S. Government Agencies

long-term bonds collateralized by a pool of assets and issued by agencies of the U.S. government.

Bank and Consumer Loans:

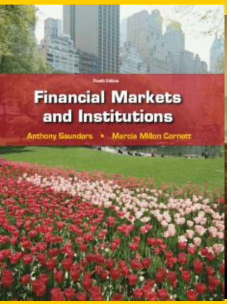
loans to commercial banks and individuals.

Common Stock



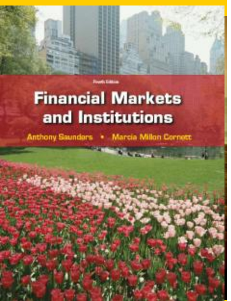
- Common stock is the **fundamental ownership claim** in a public or private corporation
- **Dividends** are discretionary and are thus not guaranteed
- Common stockholders have the lowest priority claim in the event of bankruptcy (i.e., a **residual claim)**
- **Limited liability** implies that common stockholders can lose no more than their original investment
- Common stockholders control the firm's activities indirectly by exercising their **voting rights** in the election of the board of directors

Preferred Stock



- **Preferred stock** is a hybrid security that has characteristics of both bonds and common stock
- Generally has **fixed dividends** that are paid quarterly
- Generally **does not have voting rights** unless dividend payments are missed

Bonds



Bonds are loans given to either a government or to a corporation. Bonds have three basic components:

The Par Value (Face Value)

This is the amount that the purchaser pays for the bond, and that will be repaid by the issuer when the bond matures.

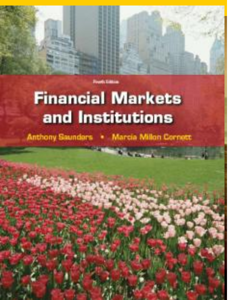
The Maturity

This is the length of time before the bond is repaid by the issuer.

The Coupon Rate

This is the interest rate that will be paid by the issuer to the purchaser of the bond.

Bond Value

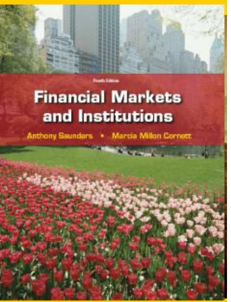


Bond Value = PV of coupons + PV of par

Bond Value = PV annuity + PV of lump sum

Remember, as interest rates increase, the PVs decrease.

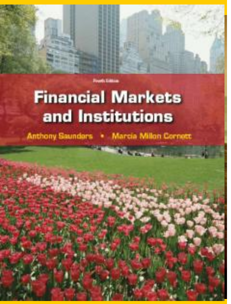
So, as interest rates increase, bond prices decrease and vice versa



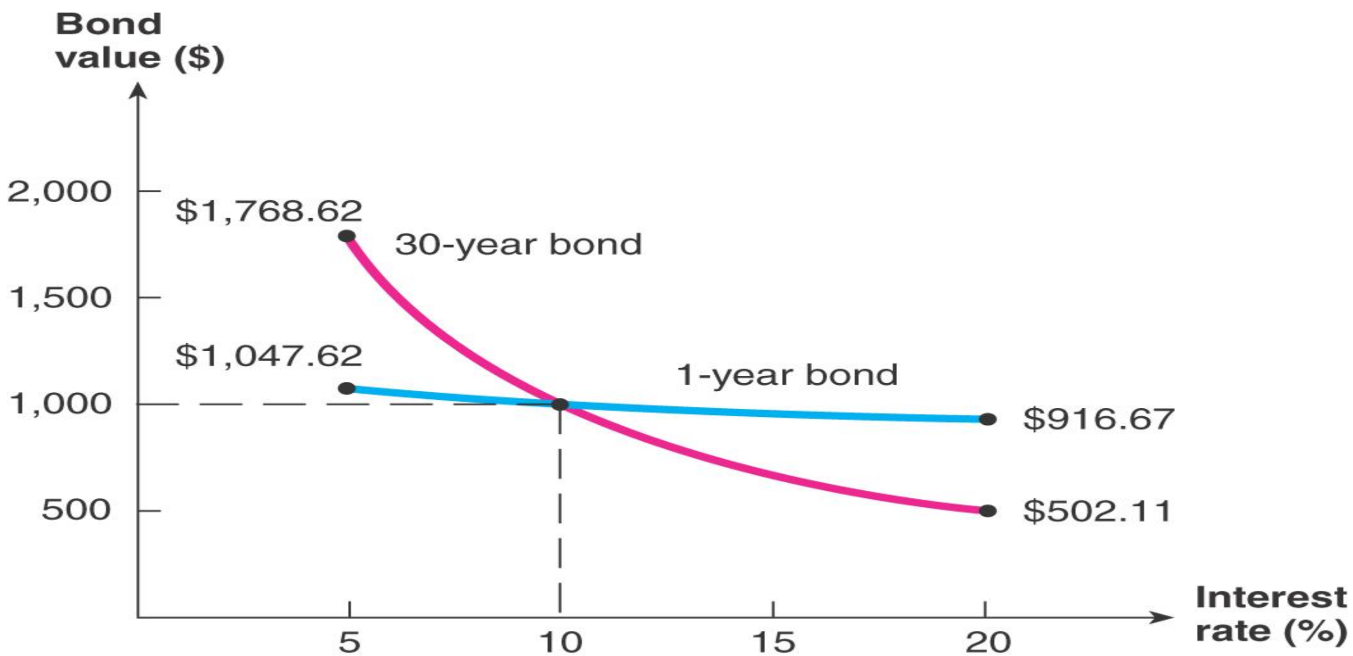
The Bond-Pricing Equation

$$\text{Bond Value} = C\left[\frac{1-\dfrac{1}{(1+r)^{t}}}{r}\right] + \frac{P}{(1+r)^{t}}$$

C = Coupon payment
P = Par value



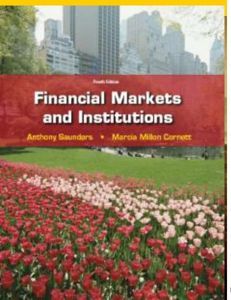
Graphical Relationship Between bond Value and Interest Rate



Value of a Bond with a 10 Percent Coupon Rate for Different Interest Rates and Maturitie

	Time to Maturity	
Interest Rate	1 Year	30 Years
5%	$1,047.62	$1,768.62
10	1,000.00	1,000.00
15	956.52	671.70
20	916.67	502.11

Differences Between Debt and Equity



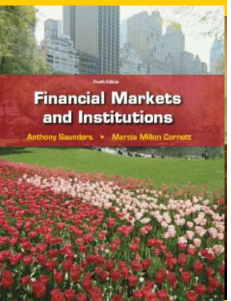
Debt

1. Not an ownership interest
2. Creditors do not have voting rights
3. Interest is considered a cost of doing business and is tax-deductible
4. Creditors have legal recourse if interest or principal payments are missed
5. Excess debt can lead to financial distress and bankruptcy

Equity

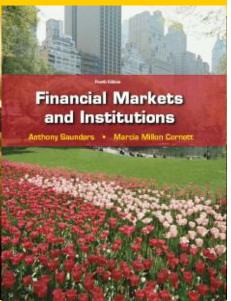
1. Ownership interest
2. Common stockholders vote to elect the board of directors and on other issues
3. Dividends are not considered a cost of doing business and are not tax deductible
4. Dividends are not a liability of the firm until declared. Stockholders have no legal recourse if no dividends are declared
5. An all-equity firm cannot go bankrupt

Derivative Security Markets

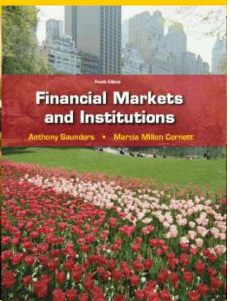


- Derivative security markets are the markets in which derivative securities trade.
- A derivative security is a financial security (such as a futures contract, option contract, or swap contract) whose payoff is linked to another, previously issued security such as a security traded in the capital or foreign exchange markets.
- Derivative securities generally involve an **agreement** between two parties to exchange a standard quantity of an asset or cash flow at a predetermined price and at a specified date in the future.

Derivative Security Markets (cont.)



- As the value of the underlying security to be exchanged changes, the value of the derivative security changes.
- the derivative security markets are the newest of the financial security markets.
- Derivatives are used for hedging and for speculation
- Types of Derivatives:
  - Option
  - Future
  - Forward
  - Swap



Classification of Derivatives

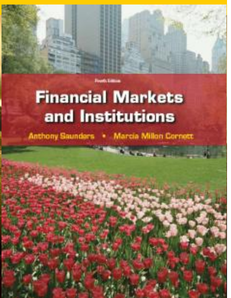
- Future Contracts
- Forward Contracts
- Options
- Swaps

Exchange Traded Derivatives

OTC (Over the counter) trading

Over the Counter (OTC) derivatives are those which are **privately** traded between two parties and involves no exchange or intermediary.

Non-standard products are traded in the so-called over-the-counter (OTC) derivatives markets



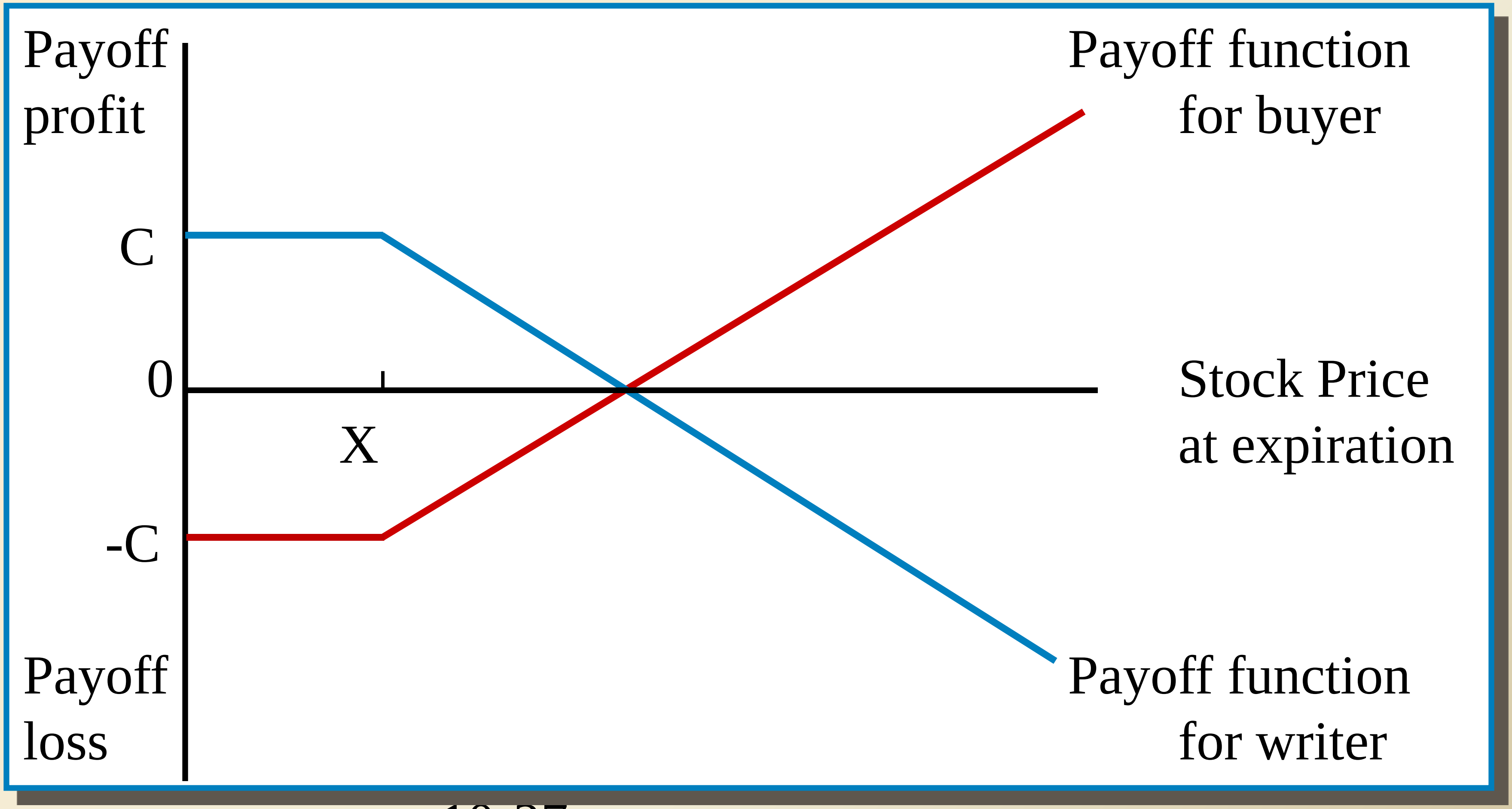
Options

- An **option** is a contract that gives the holder the **right**, but not the obligation, to buy or sell the underlying asset at a specified price within a specified period of time

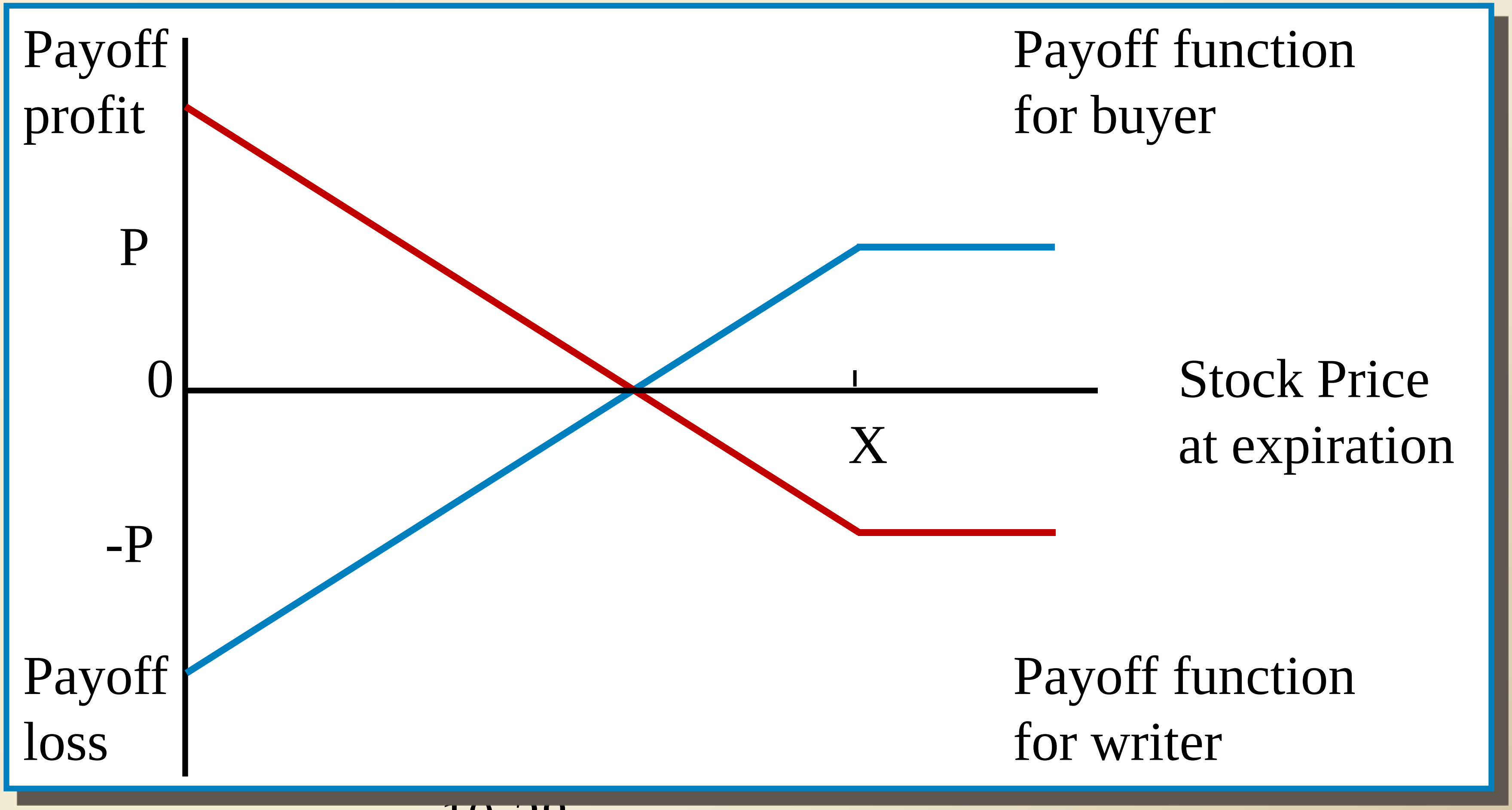
- A **call option** is an option that gives the purchaser the right, but not the obligation, to buy the underlying security from the writer of the option at a specified exercise price on (or up to) a specified date.

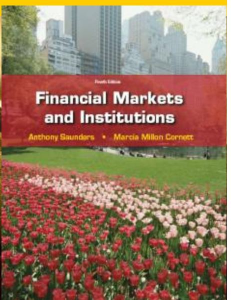
- A **put option** is an option that gives the purchaser the right, but not the obligation, to sell the underlying security to the writer of the option at a specified exercise price on (or up to) a specified date

Payoff Functions for Call Options



Payoff Functions for Put Options

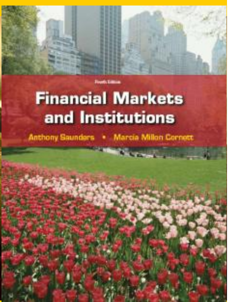




Forward Contracts

- Forward contract is An **agreement** where one party agrees to buy (or sell) the underlying asset at a specific future date and a price is set at the time the contract is entered in to.

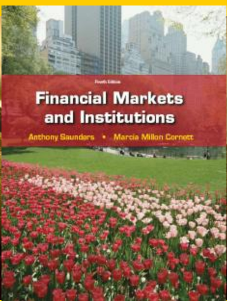
- Forward is a **non-standardized contract** between two parties to buy or sell an asset at a specified future time at a price agreed today



Future Contracts

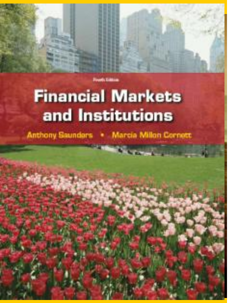
- Futures contract is a **standardized contract** between two parties to exchange a specified asset for a price agreed today (the futures price or the strike price) with delivery occurring at a specified future date, the delivery date.

- Since such contract is traded through exchange, the purpose of the futures exchange institution is to act as intermediary and minimize the risk of default by either party



Swap

- A swap is **an agreement** between two parties to exchange assets or a series of cash flows for a specific period of time at a specified interval.
- An interest rate swap is an exchange of fixed-interest payments for floating-interest payments by two counterparties
  - the swap buyer makes the fixed-rate payments
  - the swap seller makes the floating-rate payments
  - the principal amount involved in a swap is called the notional principal.



Test Questions

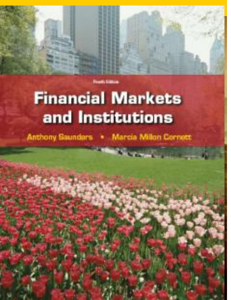
1. Which of the following is/are money market instrument(s)?

A. Negotiable CDs
B. Common stock
C. T-bonds
D. 4-year maturity corporate bond

2. Which of the following is/are capital market instruments?

1. 10-year corporate bonds
2. 30-year mortgages
3.15-year U.S. government agency bonds
4. All of the above

Test Questions



3. Commercial paper is

1. a loan to an individual or business to purchase a home, land, or other real property

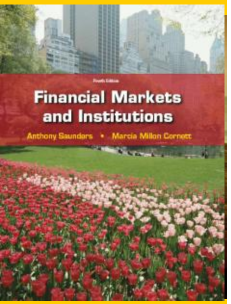
2. short-term funds transferred between financial institutions usually for no more than one day

3. a short-term unsecured promissory note issued by a company to raise funds for a short time period

4. Which of the following is/are capital market instruments?

1. 10-year corporate bonds
2. 30-year mortgages
3. 15-year U.S. government agency bonds
4. All of the above

Test Questions



5. If the maturity of a debt instrument is less than one year, the debt is called ________.

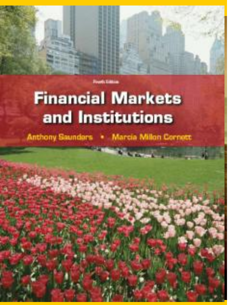
A) short-term B) intermediate-term

C) long-term D) prima-term

6. Equity holders are a corporation`s ________. That means the corporation must pay all of its debt holders before it pays its equity holders.

A) Debtors B) brokers

C) residual claimants D) underwriters



Test Questions

7. Which of the following is not a secondary market?

A) foreign exchange market

B) futures market

C) options market

D) IPO market

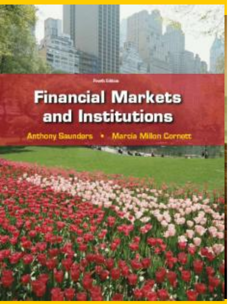
8. A financial market in which previously issued securities can be resold is called a ________ market.

A) Primary

B) secondary

C) Tertiary

D) used securities



Test Questions

9. Secondary markets make financial instruments more

A) solid. B) vapid.

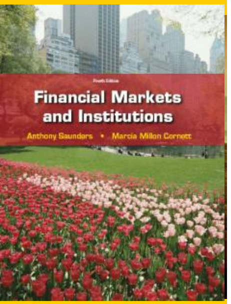
C) liquid. D) risky

10. A financial market in which only short-term debt instruments are traded is called the ________market.

A) Bond B) money

C) Capital D) stock

Test Questions



11. A short-term debt instrument issued by well-known corporations is called

A) commercial paper.

B) corporate bonds.

C) municipal bonds.

D) commercial mortgages

12. Which of the following instruments are traded in a capital market?

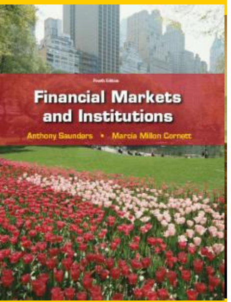
A) U.S. Government agency securities.

B) Negotiable bank CDs.

C) Repurchase agreements.

D) U.S. Treasury bills.

Test Questions



13. A short-term debt instrument issued by well-known corporations is called

A) commercial paper.   B) corporate bonds.

C) municipal bonds.   D) commercial mortgages

14. Stockholders are residual claimants, meaning that they

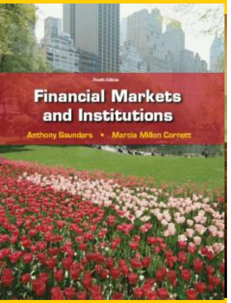
A) have the first priority claim on all of a company`s assets.

B) are liable for all of a company`s debts.

C) will never share in a company`s profits.

D) receive the remaining cash flow after all other claims are paid.

Test Questions



15. According to maturity of the claims, a financial markets for short term financial assets is called the …… , and the one for longer maturity financial assets is called the ……

A) capital market- debt market

B) Capital market – money market

C) Money market – capital market

D) Debt market – equity market

16. In case a company goes bankrupt, who will be the last group to receive:

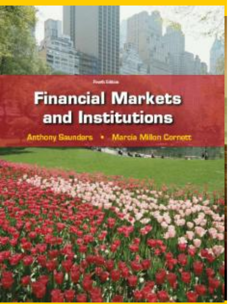
1) preferred stock holders

2) bond holders

3) Creditors

4) stockholders

Test Questions



17. Interest rate and bond prices…

1) move in the same direction

2) Move in opposite direction

3) Some times move in the same direction,) Some times move in the opposite direction,

4) Have no relationship with each other

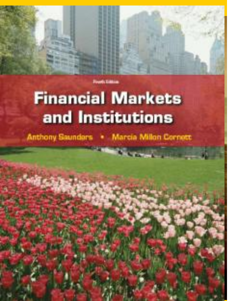
18. A major disadvantage of preferred stock is:

a. dividends are not tax-deductible

b. there is no secondary market for preferred stock

c. the preferred dividend may vary greatly year to year

d. None of the above



True or False Questions

1. Primary markets are markets where users of funds raise cash by selling securities to funds' suppliers.

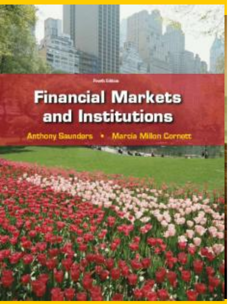
   a. True b. False

2. Money markets are the markets for securities with an original maturity of 1 year or less.

   a. True b. False

3. Secondary markets are markets used by corporations to raise cash by issuing securities for a short time period.

   a. True b. False



True or False Questions

4. A derivative security is a security that has a maturity of greater than one year.

   a. True b. False

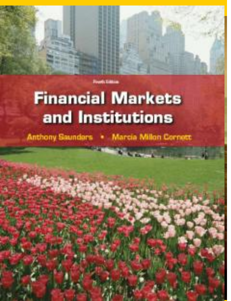
5. Preferred stockholders have a claim senior to common stock but junior to bondholders.

   a. True b. False

6. The market in which firms sell new securities to raise cash is called the secondary market.

   a. True b. False

True or False Questions



7. An advantage of issuing a bond relative to stock is that the bond interests are tax deductible.

a. True b. False

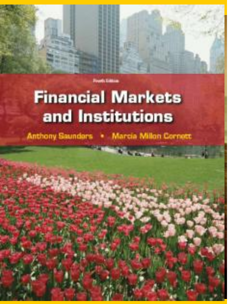
8. Issuing bonds dilutes the voting power of the common shareholders because bonds have preferential voting right

a. True b. False

9. For bonds, price sensitivity to a given change in interest rates generally increases as years remaining to maturity increases

a. True b. False

True or False Questions



10. The major disadvantages of issuing a bond are the risk of bankruptcy and the negative impact on cash flow because debt be repaid at a specified date in the future

a. True b. False