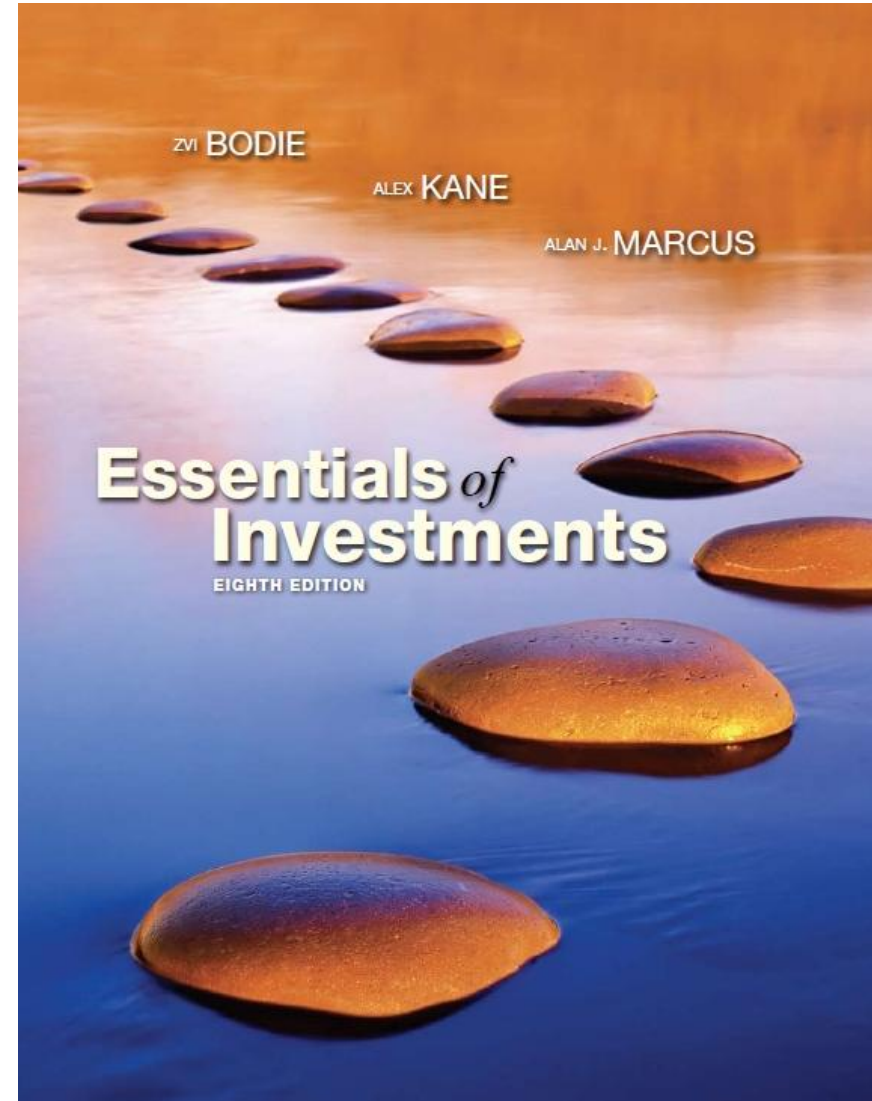


Chapter 3

Securities Markets



3.1 How Firms Issue Securities



Primary vs. Secondary Market Security Sales

- **Primary**

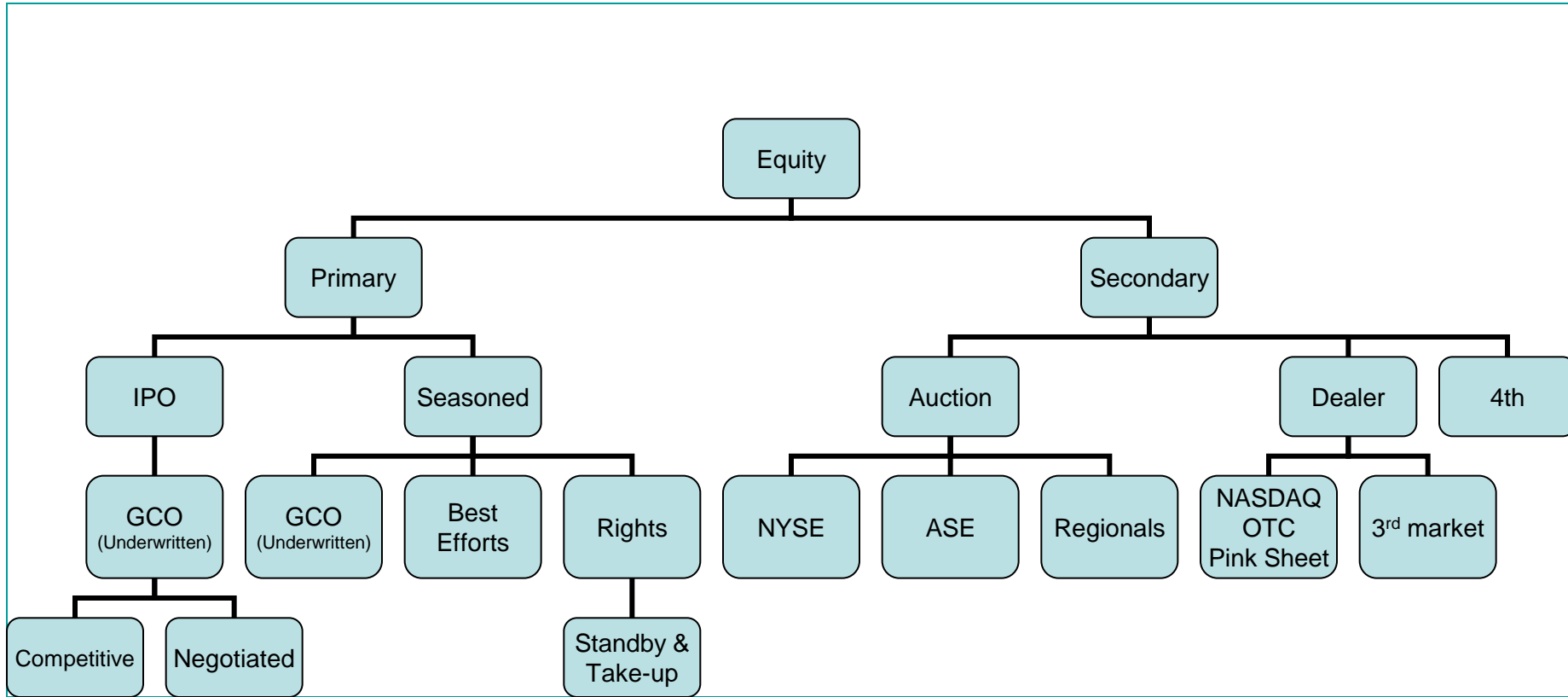
- New issue is created and sold
- Key factor: issuer receives the proceeds from the sale
- Public offerings: registered with the SEC and sale is made to the investing public
- Private offerings: not registered, and sold to only a limited number of investors, with restrictions on resale

- **Secondary**

- Existing owner sells to another party
- Issuing firm doesn't receive proceeds and is not directly involved



Primary vs. Secondary Security Sales



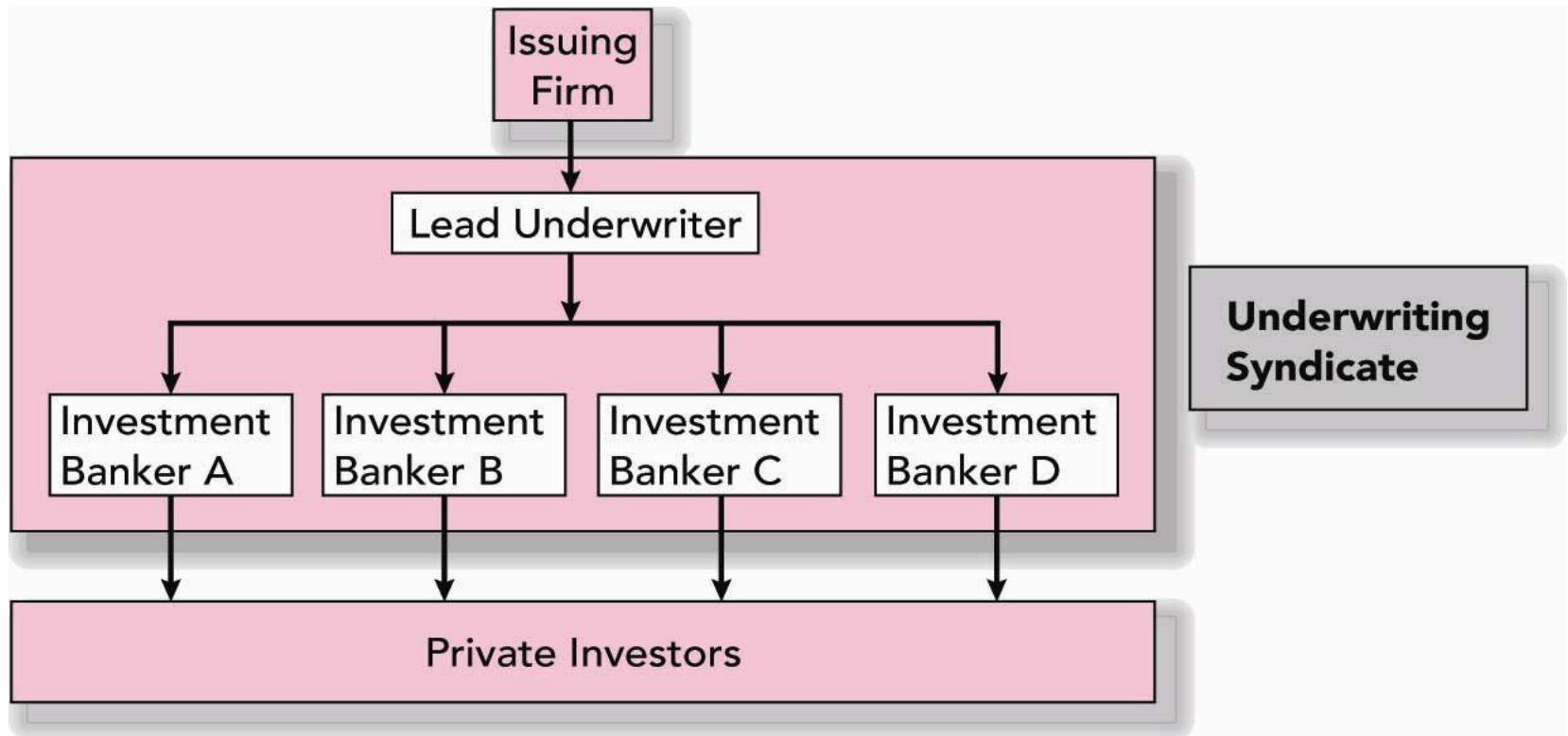
Investment Banking Arrangements

- **Underwritten vs. “Best Efforts”**
 - **Underwritten:** banker makes a firm commitment on proceeds to the issuing firm
 - **Best Efforts:** banker(s) helps sell but makes no firm commitment

- **Negotiated vs. Competitive Bid**
 - **Negotiated:** issuing firm negotiates terms with investment banker
 - **Competitive bid:** issuer structures the offering and secures bids



Figure 3.1 Relationship Among a Firm Issuing Securities, the Underwriters and the Public



Shelf Registrations

- **SEC Rule 415**
 - Security is preregistered and then may be offered at any time within the next two years.
 - *24 hour notice, any part or all of the preregistered amount may be offered*
- Introduced in 1982
- Allows timing of the issues



Private Placements

- **Private placement: sale to a limited number of sophisticated investors not requiring the protection of registration**
 - **Allowed under SEC Rule 144A**
 - **Dominated by institutions**
 - **Very active market for debt securities**
 - **Not active for stock offerings**



Initial Public Offerings

- **IPO Process**

- Issuer and banker put on the “Road Show”
- Purpose: Book building and pricing

- **Underpricing**

- Post initial sale returns average about 10% or more, “Winner’s curse” problem?
- Easier to market the issue, but costly to the issuing firm



3.2 How Securities are Traded



Functions of Financial Markets

Overall purpose: facilitate low cost investment

1. Bring together buyers and sellers at low cost
 2. Provide adequate liquidity by minimizing time and cost to trade and promoting price continuity.
 3. Set & update prices of financial assets
- Reduces information costs associated with investing



Types of Markets

- **Direct Search Markets**
 - Buyers and sellers locate one another on their own
- **Brokered Markets**
 - 3rd party assistance in location buyer or seller
- **Dealer Markets**
 - 3rd party acts as intermediate buyer/seller
- **Auction Markets**
 - Brokers & dealers trade in one location, trading is more or less continuous



Types of Orders

Instructions to the brokers on how to complete the order

- **Market order:** execute immediately at the best price
- **Limit order:** Order to buy or sell at a specified price or better
 - On the exchange the limit order is placed in a limit order book kept by an exchange official or computer
 - E.G.: Stock trading at \$50, could place a buy limit at _____ or a sell limit order at _____.



Types of Orders Continued

- ***Stop loss order:*** Becomes a market sell order when the trigger price is encountered.
 - E.G.: You own stock trading at \$40. You could place a stop loss at _____. The stop loss would become a market order to sell if the price of the stock hits _____.
- ***Stop buy order:*** Becomes a market buy order when the trigger price is encountered.
 - E.G.: You shorted stock trading at \$40. You could place a stop buy at _____. The stop buy would become a market order to buy if the price of the stock hits _____.



Types of Orders Continued

- ***Discretionary order:*** gives the broker the power to buy and sell for your account at the broker's discretion.

Time dimension on orders (other than market orders):

- ***IOC: immediate or cancel***
- ***Day: by default***
- ***GTC: good until canceled (usually 60 days max)***



3.3 U.S. Security Markets



U.S. Security Markets Overview

- **Nasdaq**
- **Small stock OTC**
 - Pink sheets
- **Organized Exchanges**
 - New York Stock Exchange
 - American Stock Exchange
 - Regionals
- **Electronic Communication Networks (ECNs)**
- **National Market System**



NASDAQ

Dealer Markets

- **Dealer market is a market without *centralized order flow***
- **NASDAQ: largest organized stock market for OTC trading; information system for individuals, brokers and dealers**
- **Securities: *stocks, most bonds and some derivatives***



NASDAQ

- **Nasdaq National Market: Types of securities?**
- **Nasdaq SmallCap Market**
- **Levels of subscribers to Nasdaq quotation system**
 - **Level 1: inside quotes**
 - **Level 2: receives all quotes but they can't enter quotes**
 - **Level 3: dealers can see and post quotes**
 - **SuperMontage: Centralized limit order book for Nasdaq securities that allows automatic trade execution**
 - **OTC Bulletin Board**
 - **Pink Sheet Stocks** www.pinksheets.com



Organized Exchanges

- Auction markets are markets with centralized order flow
- Dealership function: can be competitive or assigned by the exchange (Specialists)
- **Securities:** *stock, futures contracts, options, and to a lesser extent bonds*
- **Examples:** *NYSE, ASE, Regionals, CBOE, CME*



Exchange Markets

- ***Members of the exchange:***
 - Purchase a seat on the exchange, gives the right to trade and a say in the governance of the exchange.
- ***Commission broker:***
 - Employee of a member firm, processes orders for the firm, earns a commission.
- ***Floor broker:***
 - Independent broker who works for various member firms as needed.



Exchange Participants

- ***Floor trader:***
 - Independent trader who buys and sells securities for his/her own account. Often called speculator or arbitrageur.

- ***Specialist:***
 - Exchange appointed firm in charge of running the market for a given stock(s).
 - Acts as both a broker and a dealer charged with matching buy and sell orders from customers and/or filling customer's orders by adding to or selling their own inventory of stock.



Specialists

- a) Appointed by exchange to serve as "market maker" for one or more stocks.
- b) Specialist acts as a broker:
 - Facilitating trades for certain types public orders (limit orders)



Specialists

- **c) Specialist acts as a dealer: Charged with maintaining a "continuous, orderly market."**
 - **Must at times trade against the market**
 - **Can petition exchange to halt trading**
 - **Incur inventory costs/risks of holding stock**
 - **Specialists monitor and limit the bid-ask spread**



Placing an order

- Place a market order to buy *1 round lot* of AMD with your broker.
- Broker electronically submits the order to the floor of the NYSE.
- Commission broker takes/sends order to specialist post.
- May trade with another broker or with specialist.



Trade improvement from trading with another broker:

- You place a buy market order when limit inside quotes are Bid \$20.00, Ask \$20.10
- Your buy market order will be executed at _____ against the book.
- A sell market order would execute at _____ against the book.
- In an auction market, if two brokers arrive at the same time both may get price improvement by negotiating a trade at _____.



Electronic Trading on the NYSE

- **SuperDot**
 - **Electronic order routing system allows brokers to electronically send orders directly to specialist.**
 - **Useful for program trading**
- **DirectPlus**
 - **Fully automated trade execution system**
 - **Execution time < 1/2 second**
- **Electronic order placement is growing, large orders still require human intervention.**



Electronic Computer Networks (ECNs)

ECNs allow institutional investors to post quotes and trade directly with each other. (4th Market)

- Public limit order book
- Automatic execution
- Advantages include
 - Lower transactions costs (usually < 1¢ per share)
 - Speed even on large trade sizes
 - Anonymity

ECNs

	Symbol	Web Site
Archipelago	ARCA	www.archipelago.com
Bloomberg Tradebook	BTRD	www.bloombergtradebook.com
Brass Utility	BRUT	www.ebrut.com
Instinet/Island	INET	www.inetats.com
NexTrade	NTRD	www.nextrade.com
TrackData	TRAC	www.trackdata.com



Market Consolidation Trends

- **NYSE:**
 - Merged with Archipelago ECN in 2006
 - Merged with Euronext in 2007
 - Acquired the ASE in 2008
 - Entering Indian and Japanese stock markets
- **NASDAQ**
 - Acquired Instinet/Island in 2005
 - Acquired Boston Stock Exchange in 2007
 - Jointly acquired Swedish exchange OMX



Market Consolidation Trends

- **Euronext**
 - **Formed from merger of Paris, Brussels, Lisbon and Amsterdam exchanges**
 - **Acquired the Liffe in London**
 - **Merged with NYSE in 2007**
- **CME acquired CBOT in 2007**



3.4 Market Structures in Other Countries



Market Structures in Other Countries

Moving to automated electronic trading

Specialist system is largely unique to U.S.

Tokyo Stock Exchange (TSE)

- **No trading floor, all electronic trading**
- **Three sections for different size firms**
- **Two major indexes: Nikkei 225 and TOPIX**



3.5 Trading Costs

- **Commission**: fee paid to broker for making the transaction
- **Spread**: cost of trading with dealer
 - **Bid**: price dealer will buy from you
 - **Ask**: price dealer will sell to you
 - **Spread**: ask - bid
- **Combination**: on some trades both are paid



Characteristics of well-functioning markets

- a) Low cost transfer of funds (competition among market makers and brokers).
 - Operational or internal efficiency
- b) Adequate trading activity to ensure purchases and sales occur in timely fashion without affecting price. (Trading volume)
 - Operational or internal efficiency



Characteristics of well-functioning markets

- **c) Prices speedily reflect public information**
 - **Informational efficiency**

Informational:
Are price changes predictable so that you can earn more than you should for the risk level you are taking?

- **Allocational efficiency**

Allocational:
Are prices accurately reflecting the prospects of firm/issuer's cash flows?



3.6 Margin Trading



Buying on Margin

- **Defined: borrowing money to purchase stock.**
- **Initial Margin Requirement *IMR* (minimum set by Federal Reserve under Regulation T), currently 50% for stocks**
- **The IMR is the minimum % initial investor equity.**


$$1 - \text{IMR} = \frac{\text{maximum \% amount investor can borrow}}{\text{initial investor equity}}$$

Buying on Margin

- From whom do you borrow? What is a hypothecation agreement? Do you pay interest on the loan?

Equity = Position Value - Borrowing + Additional Cash

- Maintenance margin requirement (MMR): minimum amount equity can be before additional funds must be put into the account

Exchanges mandate minimum 25%.



Margin Call

- **Margin call**: notification from broker you must put up additional funds or have your position liquidated.
- **At what price does the investor receive a margin call?**

**While the position is open the investor's equity =
Market Value - Amount borrowed**

Thus a *declining* stock price reduces the investor's equity.



Margin Call

- If the $\text{Equity} / \text{Market Value} \leq \text{MMR}$ a *margin call* occurs.
- $(\text{Market Value} - \text{Borrowed}) / \text{Market Value} \leq \text{MMR}$; solve for Market Value
- A margin call will occur when:
 $\text{Market Value} = \text{Borrowed} / (1 - \text{MMR})$



3.7 Short Sales



Short Sales

How is it done?

- **Mechanics**

- Borrow stock from a broker/dealer, must post margin
- Broker sells stock and deposits proceeds and margin in a margin account (you are not allowed to withdraw the sale proceeds until you 'cover')
- Covering or closing out the position:
Buy the stock and broker returns the stock title to the party from which it was borrowed
- Street name?



The Long & Short of “Round Trips”

- A “Round Trip” is a purchase and a sale
- Long position
 - ❖ Buy first and then sell later
 - ❖ Bullish
- Short position
 - ❖ Sell first and then buy later
 - ❖ Bearish



Short Sales

- **Required initial margin: usually 50% but more for low priced stocks**

Liable for any cash flows: Dividend on stock

Zero tick, uptick rule

Zero tick, uptick rule was eliminated by the SEC in July 2007



Short Sales

- **Naked short sales**
- **Should any or all short sales be prohibited?**
- **Should the zero tick/uptick rule be utilized?**



3.8 Regulation of Securities Markets



Market Regulation

- **Securities Acts of 1933**
 - **Requires full disclosure of information by issuers of new securities**
- **Securities Acts of 1934**
 - **Established the SEC and require periodic disclosure of relevant financial information for firms with publicly traded securities**
 - **Gives authority to regulate exchanges and OTC trading/traders to the SEC**
 - **CFTC retains authority over commodity futures and Federal Reserve sets margin requirements**



Market Regulation

- **Securities Investor Protection Act of 1970**
 - Protects investors from losses if a brokerage firm fails (up to \$500,000 per customer).
- **Self Regulation**
 - **Financial Industry Regulatory Authority (FINRA)**
 - Formed in 2007 by consolidating regulatory arms of the NASD and the NYSE.
 - Examines securities firms, promulgates trading practice rules and administers a dispute resolution forum for investors and firms.



Insider Trading

- **Illegal, but what is it?**
- **Definition of insiders can be ambiguous**
- **SEC's Official Summary of Securities Transactions and Holdings**



Response to Scandals

- **Increased regulation**
- **Sarbanes-Oxley**
- **Additional regulation will occur as a result of the financial crisis**



Response to the Financial Crisis

- Too soon to know the details of what will happen
- Likely have reform of the SEC
- Reform of the ratings agencies approval process and funding model.
- Some type of 'systemic' regulator
- Continued government involvement in the markets

