

## Topic: Stocks and Their Valuation

### **I. Stock Market:**

- { Primary : new issues (IPO)
- { Secondary : existing shares traded among investors
- { Exchanges : (NYSE, AMEX)
- { OTC : (NASDAQ)
- { 3rd market : the trading of any exchanges-listed security in the OTC market
- { 4th market : the buyer and seller deal directly with each other
- { Auction market: (NYSE, AMEX)
- { Dealer market : (NASDAQ)

\* How to read the stock market listings.

### **II. Stock Valuation:**

1. Measures of stock value
  - (1) Book value
  - (2) Liquidation value
  - (3) Market value
  - (4) Going-concern value
2. Valuing Common Stocks
  - (1) Expected return
  - (2) Dividend Discount Model
    - a) General case
    - b) No-growth case
    - c) Constant-growth case
3. Income Stocks and Growth Stocks
  - (1) Income stocks returns:
    - derived from the dividendyield
    - associated with businesses with a high payout ratio

(2) Growth Stocks returns:

--- derived from a combination of no or relatively small dividend yield (low payout ratio) and a high plowback ratio.

--- Earning high asset return, in excess of that required by the market, on reinvestment.

----  $g = \text{R.O.E.} * (\text{plowback ratio})$

(The growth rate,  $g$  relates to the expected asset returns on reinvested capital adjusted for the plowback ratio.)

Note: Dividends limit the level of reinvested capital and the growth potential of future earnings and dividends.

Example: A firm expects earnings next year of \$10 per share, and has a payout ratio of 65%, a return on equity of 20%, and a required return of 15%. Assume that growth is to be constant.

(a) What is the constant growth rate?

(b) What is the current stock price?

(c) What is the next year's expected stock value?

4. PVGO and P/E ratio

(1) PVGO (Present value of growth opportunities)

-- NPV of a firm's future investments.

-- When rates of return on reinvested capital exceed the required rate of return, the added value (PVGO) is capitalized in the market price of the stock.

-- A positive PVGO means that investment opportunities have "superior" returns.

(2) P/E ratio:

-- Higher P/E ratio is associated with higher growth opportunities.

-- Some portion of the required rate of return is expected to be derived from growth opportunities.

-- Income stocks --> relatively low P/E ratio

Growth stocks --> relatively high P/E ratio

## NYSE (Auction Market)

People on the floor :

- (1) Exchange Employee:  
Oversee activities and report the outcomes of trades to the public.
- (2) Exchange Members: (486 in 1996)  
Trade on their own account.
- (3) Brokers:  
Receive orders from the public and get commission. They do not trade on their own account, but execute for others.
- (4) Specialist:  
Make market for a security.
  - \* Act as a broker: facilitate trade for a security
  - \* Act as a dealer: trade on his/her behalf

### Specialist:

- (1) Make the market:
  - Set bid-ask spread: to match # of buys with # of sells
  - Revise B-A spread: to reflect new information
- (2) Act as a broker: (for 85 - 90% of trades)
  - When the best price is from the book, the specialist facilitates the trade and clean up the book.
  - When price is equal, the book gets the order.

Example:

|         | <u>Book</u> |          | <u>Specialist</u> |       |
|---------|-------------|----------|-------------------|-------|
| To buy  | @           | 39.75 39 | Bid               | 39.50 |
| To sell | @           | 40.25 41 | Ask               | 40.50 |