Stock Markets
Types of Stocks

• Stock
  ➢ An equity or an ownership stake in a firm.

• Common stock
  ➢ Common stockholders have the right to vote.
  ➢ Common stockholders receive dividends.

• Preferred stock
  ➢ Are a hybrid between bonds and common stock.
  ➢ Preferred stockholders receive a fixed dividend.
  ➢ Preferred stockholders have a senior claim on assets.
  ➢ Preferred stockholders do not have voting rights.
Types of Stock Markets

• Primary market
  - The market in which a company offers its stock for public sale for the first time (an initial public offering, IPO).

• Secondary market
  - The market in which outstanding (already issued) shares of stock of companies are traded.
Stock Exchanges Versus Over-the-Counter Markets

- **Stock exchanges**
  - Organized around trading floors where traders execute buy and sell orders for their clients.

- **Over-the-counter (OTC) market**
  - Has no trading floor; traders execute transactions through a computerized telecommunications network.
Stock Markets and Exchanges

• New York Stock Exchange (NYSE)
• American Stock Exchange (AMEX)
• Philadelphia Stock Exchange
• Boston Stock Exchange
• Pacific Stock Exchange
• National Association of Securities Dealers Automated Quotations (Nasdaq)
Stock Market Indexes

• Dow Jones Industrial Average (DJIA)
  ➢ A price-weighted index consisting of 30 large industrial stocks.
    ✤ Its composition is updated occasionally to reflect changes in the economy and the relative importance of industries or of companies within an industry.

• Nasdaq Composite
  ➢ A market value-weighted index of stocks that trade in OTC market.
    ✤ Nasdaq-listed technology stocks have made the Nasdaq Composite an index of technology performance.
Stock Market Indexes (cont’d)

• S&P 500 Index
  ➢ A market value-weighted index of NYSE and AMEX-Nasdaq stocks.
  ➢ It consists of 400 industrial companies, 20 transportation companies, 40 utility firms, and 40 financial companies.
  ➢ Broader than the DJIA, the S&P 500 serves as a performance benchmark for large cap stocks (companies with a market capitalization greater than $5 billion).
Stock Market Indexes (cont’d)

• Wilshire 5000
  ➢ A market value-weighted index that consists of more than 7,000 stocks on the NYSE and the AMEX-Nasdaq.
  ➢ Serves as an index for the entire stock market.

• Nikkei Stock Average Index
  ➢ A price-weighted index of 225 stocks on the Tokyo Stock Exchange that provides a gauge of the performance of Japanese stocks.
Indonesia Stock Market Indexes

- Indonesia Composite Index (IHSG)
- LQ45
- JII (Jakarta Islamic Index)
- Kompas100
- Bisnis-27
- Pefindo25
- SRI-KEHATI
- IDX30
- Sector Index
Foreign Securities

• American depositary receipts (ADRs)
  ➢ Certificates representing shares of foreign companies traded in the United States
    ❖ A broker creates these receipts when he or she purchases shares of a foreign company in its local stock market and deposits the shares with a local custodian in the foreign country.
    ❖ The U.S. depositary bank then issues depositary receipts for trading in the United States.
    ❖ ADRs allow U.S. investors to invest in foreign firms without the problems of settling overseas trades or currency exchange.
• Brokers
  ➢ Help others to complete transactions and earn a commission for their efforts.
  ➢ Do not put their own capital at risk by holding inventory of securities.

• Commission brokers
  ➢ Employees of the firm of a firm that is member of an exchange who buy and sell for retail customers.

• Floor brokers
  ➢ Independent members of an exchange who act as brokers for other members.
Market Makers and Specialists

• Market makers
  - Provide market liquidity by matching sellers and buyers.
  - Use their own capital to purchase an inventory of the securities for which they are market makers.

• Specialists
  - Help maintain a fair and orderly market by acting as both brokers and dealers.
  - Are obligated to buy from sellers, and to sell to buyers when there is a shortage of either buyers and sellers.
Types of Orders

• Market order
  ➢ An investor order that instructs the broker to buy or sell at the best available price in the market.

• Limit order
  ➢ An investor order that tells the broker to buy or sell only at a certain or better price (but not lower).

• Stop loss order
  ➢ An investor order that directs the broker to begin selling a stock for its best available market price if its price has now dropped to a given level.
Margin Transactions

• Buying on margin
  ➢ An investor purchases stock by borrowing some of the cost of the stock (usually for the broker) and using the purchases of stock as collateral for the loan.
  ➢ Has the effect of leveraging the purchase because the rate of return (both positive and negative leverage) on the margin transaction will be greater than on a cash purchase. (OPM)
Margin Transactions (cont’d)

• Initial margin
  ➢ The amount an investor must put up in cash to make a margined purchase of a security.

• Margin call
  ➢ If the price of the security falls, the investor must put additional funds (the variation margin) in the account to bring the account back to the initial margin level.

• Reg T excess equity
  ➢ If the price of the stock purchased on margin rises, the investor can either withdraw the excess equity or use it to buy additional securities.
Short Selling

• Short sale
  ➢ Investors, who think that a particular stock’s price will probably fall, can sell stock that they do not own and then attempt to make a profit by buying the same stock back at a lower market price before they are obligated to deliver the stock they originally sold (cover the short sale).
  ➢ There is no limit to the potential loss in a short sale which makes short selling extremely risky.
Off-Exchange Trading and Electronic Communications Networks

• Electronic communications networks (ECNs)
  ➢ Computerized trade-matching systems unite the best bid and offer prices and allow buyers and sellers to deal directly with each other.
  ➢ Instinet and Island ECNS facilitate most of these transactions.
Transactions Costs

• Direct Costs of Trading
  ➢ Broker commissions for finding sellers and buyers.
  ➢ The bid-asked spread: the difference between the price at which a dealer sells a security and the price at which the dealer buys it.

• Hidden Costs
  ➢ Impact cost: the cost of buying liquidity.
  ➢ Timing cost: the cost of seeking liquidity.
  ➢ Opportunity cost: the cost of not executing a trade.
Types of Traders

• Information traders
  - Attempt to profit by trading on information before the market factors it into the security’s price.

• Value traders
  - Trade because they believe there is a discrepancy between the market price and the equilibrium value of a stock.
  - Supply liquidity to the marketplace because they generally buy when the price falls and sell when the price rises.
Fundamental Technical Analysts

• Fundamental analysis
  ➢ The examination of the financial statements of firms and economic fundamentals to determine the value of a security and its growth prospects.
  ➢ Top-down approach
    ❖ Analysis of the economy and which industries will prosper in general economic outlook.
    ❖ Analysis of companies’ financials to determine their overall financial health, growth prospects, and value of their stocks.
  ➢ Bottom-up approach
    ❖ Analysis beginning at the company level and working up to the aggregate economy to make sure that the economy will support the company and its industry.
Styles of Investing

• Value investors
  ➢ Seek out companies that they believe the market has incorrectly undervalued.

• Growth
  ➢ Seek companies with accelerating earnings growth and firms whose growth rate exceeds expectations.

• Hybrid
  ➢ Looks at both value and growth (GARP).
Styles of Investing (cont’d)

• Sector rotation
  ➢ Investing by rotate a portfolio into different industry sectors in order to prosper from perceived mispricings.
  ➢ In addition to shifting between sectors, investors may shift between value and growth stocks, or between small and large capitalization stocks.

• Market timing
  ➢ Adjusting the stock/bond percentages mix or the risk of a portfolio based on market forecasts of whether stocks are likely to fall or rise.
Economic Analysis

• Interest rate forecasts
  ➢ Determine the cost for firms to expand and be profitable.

• Shifts in the yield curve
  ➢ Shifts in the yield curve indicate future economic activity.

• GDP forecasts
  ➢ Gross Domestic Product (GDP) represents the income of the aggregate economy and so can be important in determining demand for products.
Industry Analysis

• Industry analysis
  - Looks at the profitability and future growth prospects of an industry in order to determine which industries will offer the best investment opportunities.

• Michael Porter identified five factors that determine industry competitiveness:
  - Bargaining power of buyers
  - Bargaining power of suppliers
  - Threat of new entrants
  - Threat of substitutes
  - Rivalry among existing competitors
Industry Analysis (cont’d)

- **Industry life cycle**
  - Analyzing the future profitability of an industry by looking at the five phases an industry passes through over its lifetime:
    - **Pioneering and development**
    - **Rapid accelerating growth**
    - **Mature growth**
    - **Stabilization and market maturity**
    - **Deceleration of growth and decline**
### Competitive Strategies for a Firm

• **Cost leadership**
  - Becoming the overall low cost competitor.

• **Broad differentiation strategy**
  - Covering a large number of market segments by adding features and services attractive to consumers in those segments.

• **Focus or niche strategy**
  - Using either cost leadership or differentiation strategies in a fairly narrow market.
Discounted Cash Flow

- Where $CF_t$ denotes the expected cash flow in period $t$, $n$ denotes the life of the asset, and $r$ denotes the discount rate that reflects the riskiness of the cash flow:

$$Value = \sum_{t=1}^{n} \frac{CF_t}{(1+r)^t}$$
The Constant Growth DCF Model

- Assumes that the company pays dividends, the dividend growth rate is constant, and the discount rate is larger than the dividend growth rate.

\[ P_0 = \frac{D_0(1 + g)}{k - g} = \frac{D_1}{k - g} \]

Where \( P \) denotes the value of the stock, \( D \) is the current dividend, \( g \) is expected dividend growth rate, \( k \) is the discount rate.
Multi-stage Growth DCF Model

\[ P_0 = \frac{D_1}{1 + k} + \frac{D_2}{(1 + k)^2} + \frac{D_2(1 + g)}{(k - g) (1 + k)^2} \]

Where \( P \) denotes the value of the stock, \( D \) is the current dividend, \( g \) is expected dividend growth rate, \( k \) is the discount rate.
Capital Asset Pricing Model (CAPM)

• Assumes the total risk of a stock consists of:
  ➢ **Systematic risk** (not diversifiable) is a measure of the stock’s risk relative to an average stock.
  ➢ **Company-specific risk** is diversifiable.

• The required rate of return for a stock can be estimated using the following formula:

\[
E(R) = R_f + \beta(R_m - R_f)
\]

\(E(R)\) denotes the required rate of return, \(R_f\) is the risk free rate, \(R_m\) is the return on the market portfolio, \(\beta\) (Beta) is the systematic risk of the stock.
Security Market Line

Figure 11.1: The relationship between risk and return.
### Summary of Relative Valuation Approaches

<table>
<thead>
<tr>
<th>Method</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price to earnings</td>
<td>Widely reported and easy to compute.</td>
<td>Cannot be used when a firm does not report earnings. Most P/E ratios use historical earnings rather than future earnings.</td>
</tr>
<tr>
<td>Price to book value</td>
<td>Can be used even if the firm does not report earnings.</td>
<td>Influenced by accounting methods. Cannot be used when a company records negative book value.</td>
</tr>
<tr>
<td>Price to sales</td>
<td>Can be computed for even the most troubled company.</td>
<td>Fails to recognize the cost side. It does not provide a measure of profitability.</td>
</tr>
<tr>
<td>Price to cash flow</td>
<td>Can be used for firms that have negative earnings but positive cash flows.</td>
<td>Fails to recognize amortization and depreciation.</td>
</tr>
</tbody>
</table>
Technical Analysis

• Technical analysis
  ➢ An attempt to identify patterns and trends in a security’s price and volume that are believed to have a tendency to persist, and that these trends can be detected by charts.
Indicators Used by Technical Analysts

- Mutual Fund Cash Ratio
- Short Interest Ratio
- Options (Put/Call) Ratio
- Odd-Lot Theory
- Investment Advisory Opinions
- Short Sales by Specialists
- Moving Average
- Filter Trading Rule
- Breadth of Market
- Momentum and Rate of Change
- Barron’s Confidence Index (BCI)
Support and Resistance

FIGURE 11.2

A

B

P

Resistance

Support

Time
Market Efficiency

- Perfectly efficient market
  - A market in which prices always reflect all known information and prices adjust instantaneously to new information.

- Economically efficient market
  - Market price reflects all relevant information about the security and is an unbiased estimate of the security’s true value.
  - The market price may deviate from the true value of the security, but there is an equal chance that the price will be greater or less than the true value.
Three Levels of Market Efficiency

• **Weak-form efficiency**
  ➢ Current market prices reflect all past market prices and data such that technical analysis is not useful in finding undervalued or overvalued stocks.

• **Semi-strong form efficiency**
  ➢ Current market prices reflect all public information such that fundamental analysis is of no use.

• **Strong-form efficiency**
  ➢ Current market prices reflect all information, public and private, and no mispriced securities can be identified even with inside, private information.
Conditions Fostering Market Efficiency

• The availability of information to all market participants at the same time without costs.
• No transaction costs, taxes, or other barriers to trading.
• Market demand and supply determine the stock prices such that trading by any individual trader does not impact the market price.
• All participants pursuing profit maximization.
### World Stock Indexes

#### Americas

<table>
<thead>
<tr>
<th>Index Name</th>
<th>Value</th>
<th>Change</th>
<th>% Change</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dow Jones Industrial Average</td>
<td>14,512.03</td>
<td>+90.54</td>
<td>+0.63%</td>
<td>16:37:17</td>
</tr>
<tr>
<td>S&amp;P 500 Index</td>
<td>1,556.89</td>
<td>+11.09</td>
<td>+0.72%</td>
<td>03/22/2013</td>
</tr>
<tr>
<td>NASDAQ Composite Index</td>
<td>3,245.00</td>
<td>+22.40</td>
<td>+0.70%</td>
<td>17:16:00</td>
</tr>
<tr>
<td>S&amp;P/TSX Composite Index</td>
<td>12,757.35</td>
<td>+9.48</td>
<td>+0.07%</td>
<td>03/22/2013</td>
</tr>
<tr>
<td>Mexican Stock Exchange Mexican Bolsa IPC Index</td>
<td>42,686.68</td>
<td>+155.61</td>
<td>+0.37%</td>
<td>03/22/2013</td>
</tr>
<tr>
<td>Bovespa Brasil Sao Paulo Stock Exchange Index</td>
<td>55,243.40</td>
<td>-333.27</td>
<td>-0.60%</td>
<td>16:47:30</td>
</tr>
</tbody>
</table>

#### More Americas Indexes »

#### Europe, Middle East & Africa

<table>
<thead>
<tr>
<th>Index Name</th>
<th>Value</th>
<th>Change</th>
<th>% Change</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>EURO STOXX 50 Price EUR</td>
<td>2,681.67</td>
<td>-2.25</td>
<td>-0.08%</td>
<td>18:03:04</td>
</tr>
<tr>
<td>FTSE 100 Index</td>
<td>6,392.76</td>
<td>+4.21</td>
<td>+0.07%</td>
<td>12:35:30</td>
</tr>
<tr>
<td>CAC 40 Index</td>
<td>3,770.29</td>
<td>-4.56</td>
<td>-0.12%</td>
<td>03/22/2013</td>
</tr>
<tr>
<td>Deutsche Borse AG German Stock Index DAX</td>
<td>7,911.35</td>
<td>-21.16</td>
<td>-0.27%</td>
<td>03/22/2013</td>
</tr>
<tr>
<td>IBEX 35 Index</td>
<td>8,329.50</td>
<td>-21.70</td>
<td>-0.26%</td>
<td>03/22/2013</td>
</tr>
<tr>
<td>FTSE MIB Index</td>
<td>16,045.51</td>
<td>+109.52</td>
<td>+0.69%</td>
<td>12:30:59</td>
</tr>
<tr>
<td>AEX-Index</td>
<td>350.74</td>
<td>-1.67</td>
<td>-0.47%</td>
<td>13:05:01</td>
</tr>
<tr>
<td>OMX Stockholm 30 Index</td>
<td>1,196.43</td>
<td>+8.71</td>
<td>+0.73%</td>
<td>13:38:49</td>
</tr>
<tr>
<td>Swiss Market Index</td>
<td>7,744.33</td>
<td>-17.97</td>
<td>-0.23%</td>
<td>03/22/2013</td>
</tr>
</tbody>
</table>

#### More Europe, Middle East & Africa Indexes »

Source: [www.bloomberg.com](http://www.bloomberg.com)
## Asia-Pacific Stock Indexes

### Asia Region

<table>
<thead>
<tr>
<th>Index Name</th>
<th>Value</th>
<th>Change</th>
<th>% Change</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>S&amp;P Asia 50 CME</td>
<td>3,438.65</td>
<td>-12.89</td>
<td>-0.37%</td>
<td>03/22/2013</td>
</tr>
<tr>
<td>MSCI Asia apex 50</td>
<td>880.09</td>
<td>-4.81</td>
<td>-0.56%</td>
<td>12:04:27</td>
</tr>
<tr>
<td>Tokyo Stock Exchange Tokyo Price Index TOPIX</td>
<td>1,038.57</td>
<td>-19.53</td>
<td>-1.85%</td>
<td>02:00:02</td>
</tr>
<tr>
<td>Nikkei 225</td>
<td>12,338.53</td>
<td>-297.18</td>
<td>-2.35%</td>
<td>02:28:01</td>
</tr>
<tr>
<td>JASDAQ Stock Index</td>
<td>77.94</td>
<td>-0.79</td>
<td>-1.00%</td>
<td>02:11:00</td>
</tr>
<tr>
<td>Hong Kong Hang Seng Index</td>
<td>22,115.30</td>
<td>-110.58</td>
<td>-0.50%</td>
<td>03/22/2013</td>
</tr>
<tr>
<td>Shanghai Shenzhen CSI 300 Index</td>
<td>2,618.31</td>
<td>+3.32</td>
<td>+0.13%</td>
<td>03/22/2013</td>
</tr>
<tr>
<td>Shanghai Stock Exchange Composite Index</td>
<td>2,328.28</td>
<td>+4.04</td>
<td>+0.17%</td>
<td>03:15:20</td>
</tr>
<tr>
<td>Shenzhen Stock Exchange Composite Index</td>
<td>960.84</td>
<td>+2.45</td>
<td>+0.26%</td>
<td>03:00:38</td>
</tr>
<tr>
<td>Shenzhen Stock Exchange Component Index</td>
<td>9,343.41</td>
<td>+17.12</td>
<td>+0.18%</td>
<td>03/22/2013</td>
</tr>
<tr>
<td>Taiwan Stock Exchange Weighted Index</td>
<td>7,796.22</td>
<td>-15.62</td>
<td>-0.20%</td>
<td>03/22/2013</td>
</tr>
<tr>
<td>Korea Stock Exchange KOSPI Index</td>
<td>1,948.71</td>
<td>-2.11</td>
<td>-0.11%</td>
<td>05:03:20</td>
</tr>
<tr>
<td>S&amp;P/ASX 200</td>
<td>4,987.26</td>
<td>+7.88</td>
<td>+0.16%</td>
<td>02:01:35</td>
</tr>
<tr>
<td>National Stock Exchange CNX Nifty Index</td>
<td>5,651.35</td>
<td>-7.40</td>
<td>-0.13%</td>
<td>07:05:39</td>
</tr>
<tr>
<td>S&amp;P BSE India Sensex Index</td>
<td>18,735.60</td>
<td>-57.27</td>
<td>-0.30%</td>
<td>06:30:13</td>
</tr>
<tr>
<td>Straits Times Index STI</td>
<td>3,258.57</td>
<td>-9.08</td>
<td>-0.28%</td>
<td>03/22/2013</td>
</tr>
<tr>
<td>FTSE Bursa Malaysia KLCI Index</td>
<td>1,626.89</td>
<td>-3.86</td>
<td>-0.24%</td>
<td>03/22/2013</td>
</tr>
<tr>
<td>Stock Exchange of Thailand SET Index</td>
<td>1,478.97</td>
<td>-50.55</td>
<td>-3.30%</td>
<td>06:07:00</td>
</tr>
<tr>
<td>Jakarta Stock Exchange Composite Index</td>
<td>4,723.16</td>
<td>-79.51</td>
<td>-1.66%</td>
<td>05:00:02</td>
</tr>
<tr>
<td>New Zealand Exchange 50 Gross Index</td>
<td>4,342.89</td>
<td>+0.38</td>
<td>+0.01%</td>
<td>00:30:02</td>
</tr>
<tr>
<td>Philippines Stock Exchange PSEi Index</td>
<td>6,518.71</td>
<td>+45.73</td>
<td>+0.71%</td>
<td>04:30:00</td>
</tr>
<tr>
<td>Karachi Stock Exchange KSE100 Index</td>
<td>17,963.11</td>
<td>+49.49</td>
<td>+0.28%</td>
<td>03/22/2013</td>
</tr>
<tr>
<td>Vietnam Ho Chi Minh Stock Index / VN-Index</td>
<td>489.99</td>
<td>-1.80</td>
<td>-0.37%</td>
<td>03:17:13</td>
</tr>
<tr>
<td>Sri Lanka Colombo Stock Exchange All Share Index</td>
<td>5,788.88</td>
<td>+5.05</td>
<td>+0.09%</td>
<td>03/22/2013</td>
</tr>
<tr>
<td>Laos Securities Exchange Composite Index</td>
<td>1,393.74</td>
<td>0.00</td>
<td>0.00%</td>
<td>00:32:00</td>
</tr>
</tbody>
</table>

Source: www.bloomberg.com
Data of March 23, 2013 - Indonesia Capital Market

Source: www.kontan.co.id