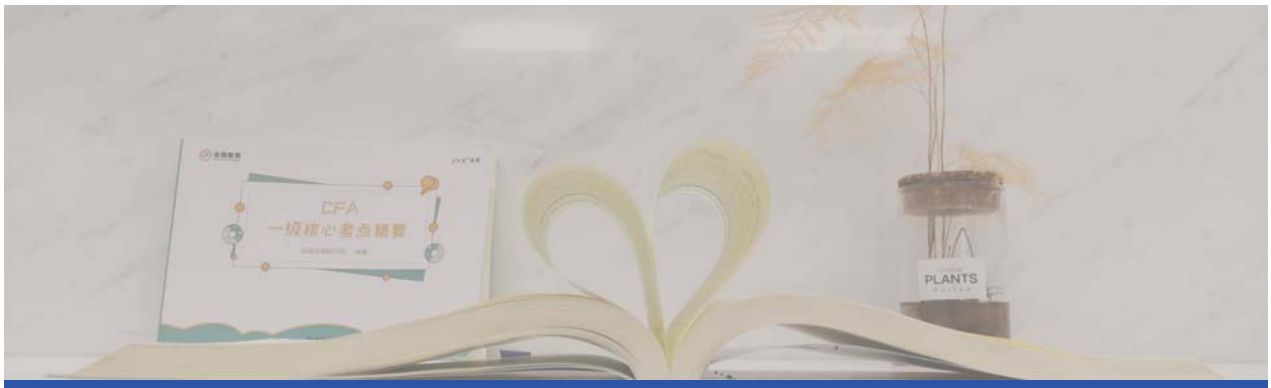


Equity

CFA一级培训项目

讲师：韩霄

韩霄

10年授课，5,000+授课课时

资质证书

- 通过特许金融分析师（CFA）三级
- 注册会计师（CPA）
- 美国注册财务策划师（RFP）
- 量化金融分析师（AQF）
- 注册金融风险管理师（CFRM）

服务客户

- 中国银行、广发证券、中国建设银行、中国工商银行、国家进出口银行、交通银行、招商银行、农业银行、上海银行、太平洋保险、平安证券、兴业证券、国泰君安等。

工作经历

- **金程教育资深培训师**、资深证券分析师、美国注册财务策划师协会（大中华管理中心）特聘资深专家；
- 在财务分析、估值建模、兼并收购、投资理财、税务筹划、资产证券化等方面拥有丰富的管理与实战经验。曾就职于全球顶级咨询公司与会计师事务所，并担任某世界500强企业投资总监，主导并参与多个大型企业兼并收购及IPO项目，投资标的及服务的客户包括阿里巴巴、中国中铁、中国南车、TPG Capital、L C apital、野村证券等。
- 先后为数十家国内外银行、保险公司、证券公司、世界500强企业提供专业培训，备受好评，服务的客户包括中国银行、中国建设银行、国家进出口银行、国泰君安等多家大型金融机构。

Topic Weightings in CFA Level I

Topics	Weights (%)
Quantitative Methods	8-12
Economics	8-12
Financial Statement Analysis	13-17
Corporate Issuers	8-12
Equity	10-12
Fixed Income	10-12
Derivatives	5-8
Alternative Investments	5-8
Portfolio Management	5-8
Ethical and Professional Standards	15-20

课件使用说明

- **强化班知识点说明和使用指南**

序号	课件元名称（知识点）	必考	高频	低频
1	The Main Functions of The Financial System & Market Regulation	**1**	**0**	**0**
2	Types of Financial Intermediaries and Services	**1**	**0**	**0**
3	Classification of Assets	**1**	**0**	**0**
4	Classification of Markets	**1**	**0**	**0**
5	Positions Taken in an Asset	**0**	**0**	**1**
6	Execution, Validity, and Clearing Instructions	**0**	**1**	**0**

- 必考知识点指的是近10年考试中考试频率大于等于75%的考点，在强化班中重点讲解，必须掌握；
- 高频知识点指的是近10年考试中考试频率介于25%到75%的考点，在强化班中重点讲解，必须掌握；
- 低频知识点指的是近10年考试中考试频率小于25%的考点，在基础班中重点讲解，学员可以根据自己的掌握情况在基础班中巩固学习；
- 本学科知识点合计24个，其中必考知识点6个，高频知识点11个，低频知识点5个，掌握必考和高频考点覆盖了近10年93.87%的题目。

Equity Investments

1. Market Organization and Structure
2. Security Market Indexes
3. Market Efficiency
4. Overview of Equity Securities
5. Company Analysis: Past and Present
6. Industry and Competitive Analysis
7. Company Analysis: Forecasting
8. Equity Valuation: Concepts and Basic Tools

Framework

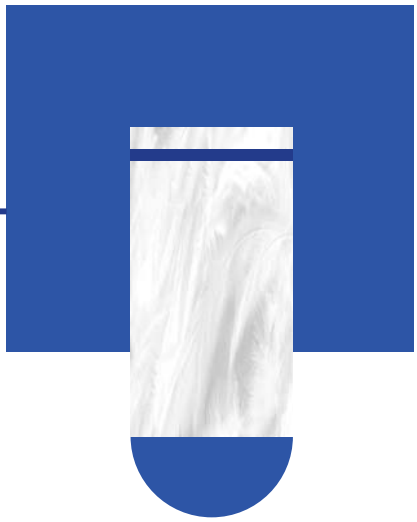
Module

Market Organization and Structure

1. The Functions of the Financial System
2. Types of Financial Intermediaries and Services
3. Classification of Assets
4. Classification of Markets
5. Positions in an Asset
6. Orders and Instructions

Types of Financial Intermediaries and Services

- Intermediaries of Financial Market



Intermediaries of Financial Market

- **Intermediaries of Financial Market (Summary)**
  - Brokers, Dealers and Exchange
  - Securitizers
  - Depository Institutions
  - Insurance Companies
  - Arbitrageurs
  - Clearinghouses and Custodians

Intermediaries of Financial Market

- **Brokers, Dealers and Exchange**
  - **Brokers:** Brokers help their clients buy and sell securities by finding counterparties to trades in a cost efficient manner.
  - **Block Brokers:** Help with the placement of Large trades. Typically, large trades are difficult to place without moving the market.
  - **Investment Banks:** Help corporations sell common stock, preferred stock, and debt securities to investors.
  - **Dealers:** Facilitate trading by buying for or selling from their own inventory. Dealers provide liquidity in the market and profit primarily from the spread (difference) between the price at which they will buy (bid price) and the price at which they will sell (ask price) the security or other asset.
    - ✓ Dealers that trade with central banks to affect the money supply are referred to as **primary dealers.**
    - ✓ Broker-dealers: Some dealers also act as brokers. Broker-dealers have an inherent conflict of interest.
      - Brokers: should seek the best prices for their clients;
      - Dealers: are to profit through prices or spreads.

Intermediaries of Financial Market

- **Brokers, Dealers and Exchange**
  - **Exchanges:**
    - ✓ Provide a venue for traders.
    - ✓ Now arrange trades on the basis of orders placed by brokers and traders.
  - **Alternative Trading Systems (ATS):**
    - ✓ ATSs are trading places where traders arrange their trades.
    - ✓ However, the trade has a lack of regulatory authority.
      - Many ATSs are known as dark pools because they do not display the orders that their clients send to them.
    - ✓ This also known as electronic communications networks (ECNs) or multilateral trading facilities (MTFs).

Intermediaries of Financial Market

- **Securitizers**
  - Securitizers pool large amounts of securities or other assets together and sell interests in the pool to other investors.
    - ✓ By securitizing the assets, the securitizer creates a diversified pool of assets with more predictable cash flows than the individual assets in the pool.
    - ✓ This creates liquidity in the assets, because the ownership interests are more easily valued and traded.
    - ✓ There are also economies of scale in the management costs of large pools of assets and potential benefits from the manager's selection of assets.
  - Assets that are often securitized include mortgages, car loans, credit card receivables, bank loans, and equipment leases.
  - A firm may set up a **special purpose vehicle (SPV) or special purpose entity (SPE)** to buy firm assets, which removes them from the firm's balance sheet and may increase their value by removing the risk that financial trouble at the firm will give other investors a claim to the assets' cash flows.

Intermediaries of Financial Market

- **Depository Institutions**
  - Absorb deposits by paying interest on customer deposits
  - Provide transaction services on one hand, and then make loans with the deposits on the other hand.
- **Insurance Companies**
  - Insurance companies collect insurance premiums in return for providing risk reduction to the insured.
  - Such intermediaries are able to do this by pooling policyholders with uncorrelated risk of losses.
  - Insurance firms also provide a benefit to investors by managing the risks:
    - ✓ **Moral hazard** occurs because the insured may take more risks once they are protected against losses.
    - ✓ **Adverse selection** those who purchase insurance against risk are more likely than the general population to be at risk..
    - ✓ In **fraud,** the insured purposely cause damage or claim fictitious losses so they can collect on their insurance policies.

Intermediaries of Financial Market

- **Arbitrageurs**
  - Arbitrageurs are intermediaries who seek to gain certain return without bearing any risk.
  - In markets with good information, pure arbitrage is rare because traders will favor the markets with the best prices.
- **Clearinghouses and Custodians**
  - **Clearinghouses:** Act as buyers when customers want to sell assets and as sellers when customers want to buy assets, and thus limit counterparty risk.
  - **Custodians:** Also improve market integrity by holding client securities and preventing their loss due to fraud or other events that affect the broker or investment manager.

Summary

Market Organization and Structure

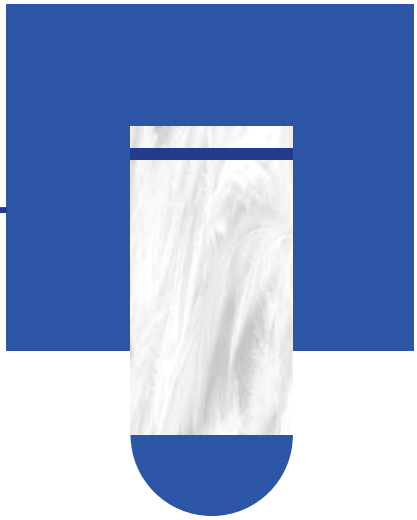
Types of Financial Intermediaries and Services

Intermediaries of Financial Market:

Brokers, Dealers and Exchange, Securitizers, Depository Institutions, Insurance Companies, Arbitrageurs, Clearinghouses and Custodians

Classification of Markets

- Classification of Markets



Classification of Markets

- **Classification of Markets**
  - **Money vs. Capital markets**
    - ✓ **Money markets:** the market for short-term debt instruments (one-year maturity or less).
    - ✓ **Capital markets:** financial markets that trade securities of longer duration, such as bonds and equities.
  - **Traditional vs. Alternative markets**
    - ✓ **Traditional investment markets:** markets for traditional investments, include all publicly traded debts and equities and shares in pooled investment vehicles that hold publicly traded debts and/or equities.
    - ✓ **Alternative markets:** market for investments other than traditional securities investments.
  - **Primary vs. Secondary markets**
    - ✓ **Primary market:** the market where newly issued securities are sold. Newly issued securities involve:
      - **IPO (initial public offerings):** first-time issues by firms whose shares are not currently publicly traded.
      - **Seasoned offerings (secondary issues):** new shares issued by firms whose shares are already trading in the marketplace.

Classification of Markets

- **How securities are sold through primary market**
  - **Sold Publicly**
    - ✓ Underwritten Offering (the most common way)
    - ✓ Best Efforts
    - ✓ Indications of Interest
    - ✓ Book building
  - **Sold Privately**
    - ✓ Private placement
  - **Other transaction methods**
    - ✓ Shelf registration
    - ✓ Dividend Reinvestment Plan
    - ✓ Rights Offering

Classification of Markets

- **How securities are sold through primary market - Sold Publicly:**
  - **Underwritten Offering** (the most common way)
    - ✓ Investment bank purchases the entire issue at a price that is negotiated between the issuer and bank.
    - ✓ Investment bank bears the risk of buying the unsold portion of securities if the target number of shares to be issued does not meet.
  - **Best Efforts**
    - ✓ Unlike underwriting offering, the investment bank doesn't purchase the whole issue.
    - ✓ Bank is not obligated to buy the unsold portion if the issue is undersubscribed.
  - **Indications of Interest:** the investment bank finds investors who agree to buy part of the issue.
    - ✓ This process of gathering indications of interest is called book building, and the investment bank during this process is called book builder or book runner.
    - ✓ If securities must be issued quickly, the process is called accelerated book building.

Classification of Markets

- **How securities are sold through primary market- Sold Publicly:**
  - **Difference between underwritten offering and best efforts.**

Underwritten Offering	Best Efforts
Obligated to buy the unsold portion	Not obligated to buy the unsold portion
Investment bank would prefer that the price be set low enough to gain more profit	Investment bank sets the issue price as high as possible to raise the most funds for the issuer

Classification of Markets

- **How securities are sold through primary market- Sold Privately and other transaction methods:**
  - **Private Placement**
    - ✓ Securities are sold directly to qualified investors, typically with the assistance of an investment bank.
  - **Shelf Registration**
    - ✓ Type of public offering that allows the issuer to file a single, all-encompassing offering circular that covers a series of bond issues.
  - **Dividend Reinvestment Plan**
    - ✓ A dividend reinvestment plan (DRP or DRIP) allows existing shareholders to use their dividends to buy new shares from the firm at a slight discount.
  - **Rights Offering**
    - ✓ In rights offering, existing shareholders are given the right to buy new shares at a discount to the current market price.

Classification of Markets

- **Secondary Capital Markets**
  - **When** securities are traded in a secondary market.
    - ✓ **Call Markets**
      - Trading for individual stocks occurs **at specific times.**
      - All bids and asks are gathered and then a negotiated price is produced to make the demand quantity as close as possible to the supply quantity.
    - ✓ **Continuous Markets**
      - Trades occur **at any time** when market is open.
      - The price is determined either by an auction process or through a dealer bid-ask process. There are differences between dealer markets and an auction market in continuous markets.

Classification of Markets

- **Secondary Capital Markets**
  - **How** securities are traded in Secondary Markets
    - ✓ Order-Driven Market
    - ✓ Quote-Driven Market
    - ✓ Brokered Markets

Classification of Markets

- **Secondary Capital Markets**
  - **How** securities are traded in Secondary Markets
    - ✓ **Order-Driven Market**
      - In order-driven market, orders are executed using trading rules, which are necessary because traders are usually anonymous. Exchanges and automated trading systems are examples of order-driven markets.
      - Order matching rules: establish an order precedence hierarchy.
        - **Price priority:** trades with the highest bid (buy) and lowest ask (sell) prices are traded first, this is so-called price priority.
        - **Time precedence:** if orders are at the same prices, the earliest arriving orders are traded first.

Classification of Markets

- **Secondary Capital Markets**
  - **How** securities are traded in Secondary Markets
    - ✓ **Quote-Driven Market**
      - Quote-driven market is also referred to as a **dealer market, a price-driven market or an over-the-counter market.** Individual dealers provide liquidity for investors by buying and selling the shares of stock for themselves.
      - Numerous dealers compete against each other to provide the highest bid prices when investors are selling and the lowest asking price when investors are buying stock.

Classification of Markets

- **Secondary Capital Markets**
  - **How** securities are traded in Secondary Markets
    - ✓ **Brokered Markets**
      - In brokered markets, brokers trade with the counterparty they find.
      - This service is especially valuable when the trader has a security that is unique or illiquid.
      - Examples are large blocks of stock, real estate, and artwork.

Classification of Markets

- **Secondary Capital Markets**
  - **How** securities are traded in Secondary Markets
    - ✓ Comparison between Quote-Driven Market and Order-Driven Market.

Quote-Driven Market	Order-Driven Market
Dealers make a market in the stock, which means that they are willing to buy or sell for their own account at a specified bid-and-ask price.	Enough buyers and sellers are trading to allow the market to be continuous

Summary

Market Organization and Structure

Classification of Markets

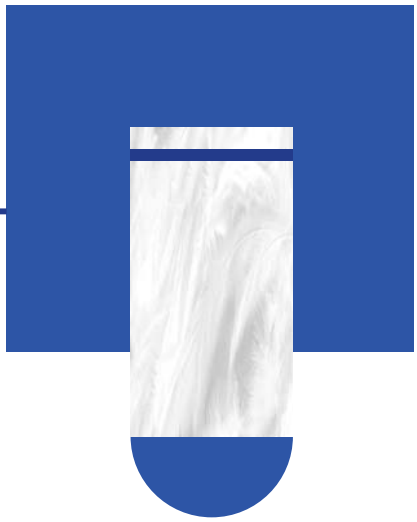
Money vs. Capital markets

Traditional vs. Alternative markets

Primary vs. Secondary markets

Positions in an Asset

- Leveraged Positions



Leveraged Positions

- **Leveraged Positions**
  - **Definition:** An investor is said to be take leveraged positions if he borrowed funds to purchase an asset.
  - **Buy on Margin**: Investors who use leverage to buy securities by borrowing from their brokers are said to buy on margin and the borrowed funds are referred to as a **margin loan.**
  - The interest rate paid on the funds is the **call money rate.**
  - **Leverage Ratio:**
    - ✓ The leverage ratio of a margin investment is the value of the asset divided by the value of the equity position.

Leveraged Positions

- **Leveraged Positions**
  - **Margin Requirement:** the required equity position is called the margin requirement.
    - ✓ **Initial Margin**: a minimum amount of equity at the time of a new margin purchase.
    - ✓ **Maintenance Margin**: the investor's required equity position in the account.
    - ✓ **Margin Call**: if an investor's margin account balance falls below the maintenance margin, the investor will receive a margin call and will be required to either liquidate the position or bring the account back to its **maintenance (minimum) margin requirement.**
  - Computation of the Price Triggering a Margin Call.
    - ✓ Margin Call Price for a **Leverage Position.**

$$P_L^{'} = P_0\left(\frac{1\text{-}IM}{1\text{-}MM}\right)$$

Summary

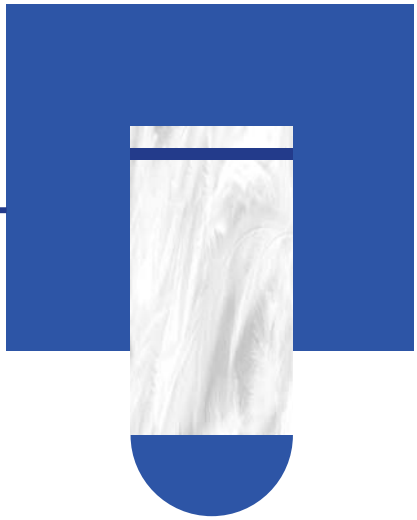
Market Organization and Structure

Positions and Leverage

Leveraged Positions

Orders and Instructions

- Orders and Execution Instructions
- Orders and Validity Instructions



Orders and Instructions

- When investors want to buy or sell, they must enter orders that specify the size of the trade and whether to buy or sell.
  - **Execution Instructions**: that specify how to trade;
  - **Validity Instructions**: that specify when the order can be filled;
  - **Clearing Instructions**: that specify how to settle the trade.

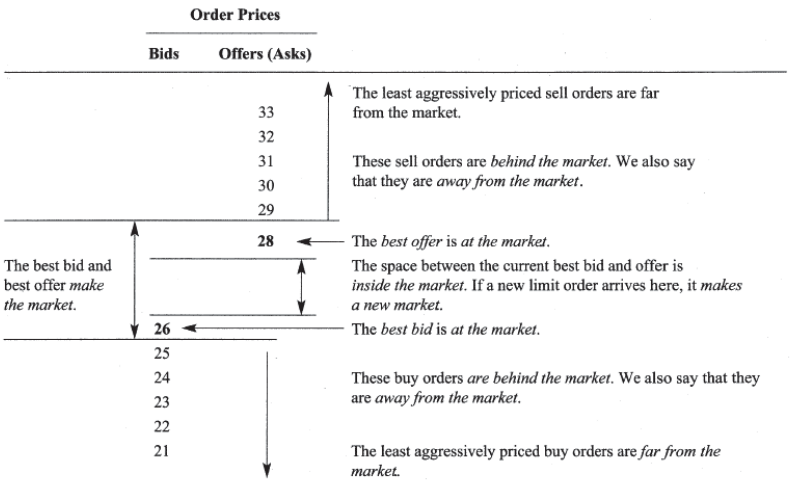
Orders and Execution Instructions

- **Execution Instructions**
  - The most common orders
    - ✓ **Market orders:** orders are the orders to buy or sell a security at the best current price, is the most frequent type of order.
    - ✓ **Limit orders:** orders specify the buy or sell order. Limit orders waiting to execute are called standing limit orders.
      - **Make the market:** a limit buy order at best bid or a limit sell order at the best.
      - **Make a new market:** a limit buy order placed above best bid but below best ask order.
      - **Take the market:** those who trade with them at posted prices are said to.
      - **Behind the market:** a buy order placed below the best bid or a sell order placed above the best offer.
      - **Far from the market:** a behind the market order whose price is far from their best ask/bid.

Orders and Execution Instructions

- **Execution Instructions**
  - Instructions concern the volume of the trade:
    - ✓ **All-or-nothing orders** execute only if the whole order can be filled.
  - Instructions concern the visibility of the trade:
    - ✓ **Hidden orders** are those for which only the broker or exchange knows the trade size.
    - ✓ **Iceberg orders** are orders that traders can also specify certain aspects of the trade so that only part of the trade is visible to the market.

Orders and Execution Instructions



Orders and Validity Instructions

- **Validity Instructions:**
  - Validity instructions specify when an order should be executed.
    - ✓ **Day orders:** means the orders expire if unfilled by the end of the trading day.
    - ✓ **Good-till-cancelled orders(GTC):** In practice, most brokers limit how long they will manage an order to ensure that they do not fill orders that their clients have forgotten
    - ✓ **Immediate or cancel orders:** are cancelled unless they can be filled immediately. They are also known as **fill or kill orders.**
    - ✓ **Good-on-close orders:** are only filled at the end of the trading day. If they are market orders, they are referred to as **market-on-close orders.**
    - ✓ **Good-on-open orders:** are only filled at the open of the trading day.

Orders and Validity Instructions

- **Validity Instructions:**
  - Validity instructions specify when an order should be executed.
    - ✓ **Stop orders:** are those that are not executed unless the stop price has been met. They are often referred to as stop loss orders because they can be used to prevent losses or to protect profits.
      - **Stop-sell order:** If the investor wants to sell out of the position if the price falls 10% to $45, he can enter a stop-sell order at $45. If the stock trades down to $45 or lower, this triggers a market order to sell.
      - **Stop-buy:** is entered with at stop (trigger) above the current market price. Two primary reasons are: (1) A trader with short position; (2) an investor who believes a stock is undervalued, but does not wish to own it until there are signs.
      - Stop orders reinforce market momentum.

Summary

Market Organization and Structure

Orders and Instructions

Orders and Execution Instructions

Orders and Validity Instructions

Summary

Module: Market Organization and Structure

Types of Financial Intermediaries and Services

Classification of Markets

Positions in an Asset

Orders and Instructions

Module

Security Market Indexes

1. Security Market Indexes
2. Price Weighting and Equal Weighting
3. Market Capitalization Weighting and Fundamental Weighting
4. Rebalancing and Reconstitution of an index
5. Other Indexes

Security Market Indexes

- Index Definitions

Index Definitions

- **Index Definitions**
  - **A security market index:** is used to represent the performance of an asset class, security market, or segment of a market.
    - ✓ **Price index:**
      - A price index uses only the prices of the constituent securities in the return calculation.
      - A rate of return that is calculated based on a price index is referred to as a **price return.**
    - ✓ **Return index:**
      - A return index includes both prices and income from the constituent securities.
      - A rate of return that is calculated based on a return index is called a **total return.**

Summary

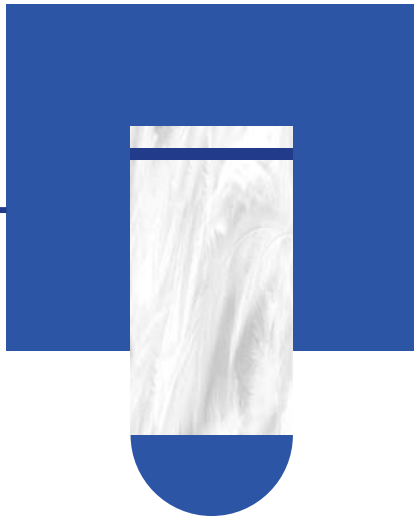
Security Market Indexes

Security Market Indexes

Index Definitions

Price Weighting and Equal Weighting

- Price Weighting
- Equal Weighting



Methods of Index Construction

- **Price Weighting**
  - A price-weighted index is an arithmetic average of current security prices, which means that indexes movements are influenced by the differential prices of the components. The price-weighted index assumes you purchase an equal number of shares (one) of each stock represented in the index.

$$\text{price-weighted index} = \frac{\text{sum of stock prices}}{\text{number of stocks in index}}$$

  - Two major price-weighted indexes are the Dow Jones Industrial Average (DJIA) and the Nikkei Dow Jones Stock Average.
  - **Features: simplicity**, **high priced stocks tilted.**

Methods of Index Construction

- **Price Weighting**
  - A property unique to price-weighted indexes is that a stock split on one constituent security changes the weights on all the securities in the index. To prevent the stock split and the resulting new weights from changing the value of the index, the index provider must **adjust the value of the divisor**.

$$\text{price-weighted index} = \frac{\text{sum of stock prices before stock split}}{\text{number of stocks in index}} = \frac{\text{sum of stock prices after stock split}}{\text{number of stocks in index adjusted for splits}}$$

  - The main disadvantage of price weighting： it results in arbitrary weights for each security. In particular, a stock split in any one security causes arbitrary changes in the weights of all the constituents' securities.

Methods of Index Construction

- **Equal Weighting**
  - The arithmetic average return of the index stocks for a given time period. Places an equal weight on the returns of all index stock, regardless of their price or market value.
  - Two averaging methodologies to the calculation of an un-weighted index:
    - ✓ **Arithmetic mean:** X_i is the return on each stock

$$\text{change in average index value} = \frac{\sum X_i}{n}$$

    - ✓ **Geometric mean:** $X_i = 1 + HPR_i$

$$\text{change in average index value} = \sqrt[n]{x_1 x_2 \cdots x_n} - 1$$

    - ✓ The geometric-averaged index value is always less than the arithmetic-averaged index value.
  - **Features: small cap stocks tilted.**

Summary

Security Market Indexes

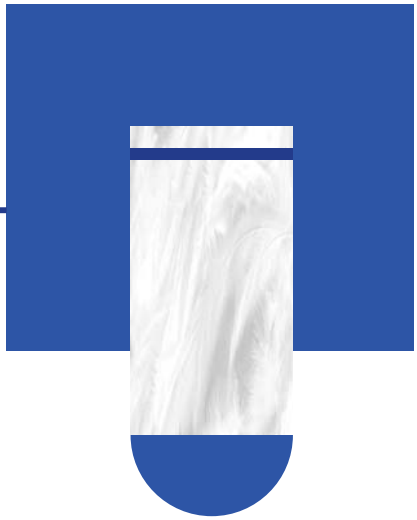
Price Weighting and Equal Weighting

Price Weighting

Equal Weighting

Market Capitalization Weighting and Fundamental Weighting

- Market Capitalization Weighting
- Fundamental Weighting



Methods of Index Construction

- **Market Capitalization Weighting**
  - A market capitalization-weighted index (or value-weighted index): the weight on each constituent security is determined by dividing its market capitalization by the total market capitalization (the sum of the market capitalization) of all the securities in the index.
  - Current index value = $\frac{\text{current total market value of index stocks}}{\text{base year total market value of index stocks}} \times \text{base year index value}$
  - **Features: large cap stocks tilted, momentum effect**

Methods of Index Construction

- **Float-Adjusted Market Capitalization Weighting**
  - The construction method is just like a market capitalization-weighted index.
  - The weight on each constituent security is determined by adjusting its market capitalization for the number of shares of the constituent security that are available to the investing public.

Methods of Index Construction

- **Fundamental Weighting**
  - Weighted by using measures of a company's size that are independent of its security price to determine the weight on each constituent security.
  - **Advantage:** It addresses the disadvantage of market-capitalization weighting method by putting more weights undervalued constituents.
  - **Features: value-tilted, contrarian-style**

Summary

Security Market Indexes

Market Capitalization Weighting and Fundamental Weighting

Market Capitalization Weighting
Float-Adjusted Market Capitalization Weighting
Fundamental Weighting

Summary

Module: Security Market Indexes

Security Market Indexes

Price Weighting and Equal Weighting

Market Capitalization Weighting and Fundamental Weighting

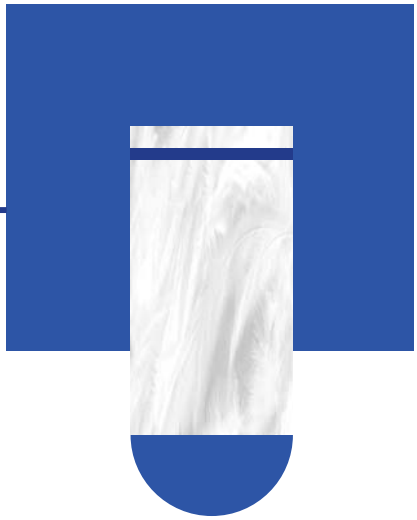
Module

Market Efficiency

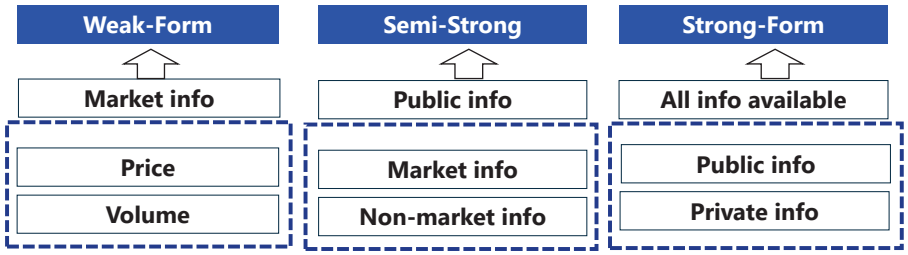
1. Introduction of Market Efficiency
2. Forms of Market Efficiency
3. Market Anomalies
4. Behavioral Finance

Forms of Market Efficiency

- Three Forms of Market Efficiency
- Tests, Implications and Conclusions of EMH



Three Forms of Market Efficiency



Types	Assumption	Implication
Weak-Form EMH	Market info.	Technical Analysis ✕
Semi Strong-Form EMH	Public info.	Technical Analysis ✕ Fundamental Analysis ✕
Strong-Form EMH	All info.	Technical Analysis ✕ Fundamental Analysis ✕ Nobody can win the market ✕

Tests, Implications and Conclusions of EMH

- **Tests of EMH**
  - **Abnormal profit** (or risk-adjusted returns) calculations are often used to test market efficiency. If returns are ,**on average, greater than equilibrium expected returns**, we can reject the hypothesis of efficient prices with respect to the information on which the strategy is based.
    - ✓ **Technical analysis** seeks to earn positive risk-adjusted returns by using historical price and volume data.
    - ✓ **Fundamental analysis** is base on public information such as earnings, dividends, and various accounting rations and estimates.
    - ✓ One method **of testing the semi-strong form** is an **event study**, examining abnormal returns before and after the release of new information that affects intrinsic value.

Tests, Implications and Conclusions of EMH

- **Conclusions of EMH**
  - If markets are **semi-strong form efficient**, investors should **invest passively** (i.e., invest in an index portfolio that replicates the returns on a market index).
  - Indeed, the evidence shows that most mutual fund managers can not outperform a passive index strategy over time.
  - Even if markets are efficient, portfolio managers can add value by establishing and implementing portfolio risk and return objectives and by assisting clients with portfolio diversification, asset allocation, and tax management.

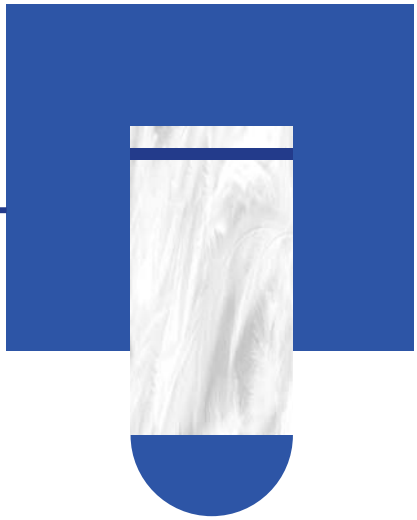
Summary

Module: Market Efficiency

Forms of Market Efficiency

Market Anomalies

- Anomalies in Time-series Data
- Anomalies in Cross-sectional Data
- Other Anomalies



Market Anomalies

- **Market Anomalies**
  - **Definition:** something deviates and helps to disprove the EMH
  - Most evidence suggests anomalies are not violations of market efficiency but are due to the methodologies used in anomaly research, such as data mining or failing to adjust adequately for risk.

Anomalies in Time-series Data

- **Market Anomalies-Anomalies in time-series data**
  - **Calendar anomalies**
    - ✓ The **January effect** is the finding that during the first five days of January, stock returns, especially for small firms, significantly higher than the rest of the year.
    - ✓ Explanations for January effect are:
      - **Tax-loss selling,** as investors sell losing positions in December to realize losses for tax purposes and repurchase stocks in January; and
      - **Window dressing**, as portfolio managers sell risky stocks in December to *remove them from year-end statements* and repurchase them in January.

Anomalies in Time-series Data

- **Market Anomalies-Anomalies in time-series data**
  - **The overreaction effect:** refers to the finding that firms with poor stock returns over the previous three or five years (losers) have better subsequent returns than firms that had high stock returns over the prior period.
  - **Momentum anomalies:** High short-term returns are followed by continued high returns.
  - Both the overreaction effect and momentum effects violate the weak form of market efficiency.

Anomalies in Cross-sectional Data

- **Anomalies in cross-sectional data**
  - **Size effect:** This test indicates that stocks of small-sized firms tend to outperform stocks of large-sized firms.
  - **Value effect:** refers to the finding that value stocks [those with lower price-to-earnings (P/E), lower market-to-book (M/B), and higher dividend yields] have outperformed growth stocks (those with higher P/E, higher M/B, and lower dividend yields).

Other Anomalies

- **Other anomalies**
  - **Closed-end investment funds:** The shares of closed-end investment funds trade at prices that sometimes deviate from the net asset value (NAV) of the fund shares, often trading at large discounts to NAV.
  - **Earnings announcements:** The anomaly is that the adjustment process does not occur entirely on the announcement day.
  - **Initial public offerings**: the long-term performance of IPO shares as a group is below average.
  - **Economic fundamentals**: Research has found that stock returns are related to known economic fundamentals such as dividend yields, stock volatility, and interest rates. However, we would expect stock returns to be related to economic fundamentals in efficient markets.
- The majority of the evidence suggests that reported **anomalies are not violations of market efficiency** but are due to the methodologies used in the tests of market efficiency.
- **Investment management based solely on anomalies has no sound economic basis**.

Summary

Market Efficiency

Market Anomalies

Anomalies in Time-series Data

Anomalies in Cross-sectional Data

Other Anomalies

Summary

Module: Market Efficiency

Forms of Market Efficiency

Market Anomalies

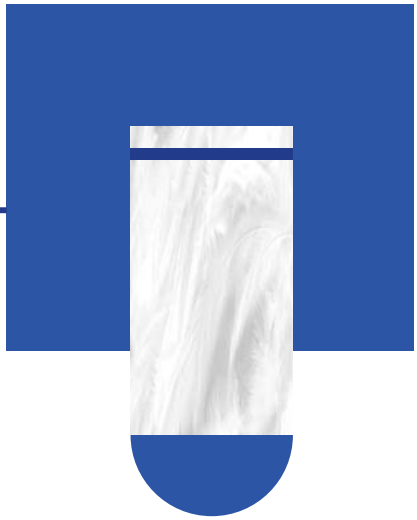
Module

Overview of Equity Securities

1. Types of Equity Investments
2. Non-domestic Equity Securities
3. Risk and Return Characteristics of Equity Securities

Types of Equity Investments

- Characteristics of Equity Securities



Characteristics of Equity Securities

- **Characteristics of Equity Securities**
  - **Common Shares:**
    - ✓ Common shares are the most common form of equity and represent an ownership interest. Common shareholders have a **residual claim** (after the claims of debt holders and preferred stockholders) on firm assets if the firm is liquidated and govern the corporation through **voting rights.**
    - ✓ Common stockholders are able to vote for the board of directors, on merger decisions, and on the selection of auditors.
      - In a statutory voting system, each share held is assigned one vote in the election of each member of the board of directors.
      - Under cumulative voting, shareholders can allocate their votes to one or more candidates as they choose. Cumulative voting makes it possible for a minority shareholder to have more proportional representation on the board.

Characteristics of Equity Securities

- **Characteristics of Equity Securities**
  - **Callable Common Shares**
    - ✓ Callable common shares give the firm the right to repurchase the stock at a pre-specified call price. Investors receive a fixed amount when the firm calls the stock.
  - **Putable Common Shares**
    - ✓ Putable common shares give the shareholder the right to sell the shares back to the firm at a specific price. A put option on the shares benefits the shareholder because it effectively places a floor under the share value.

Callable common share	**Advantage to firm**
Putable common share	**Advantage to shareholder**

Characteristics of Equity Securities

- **Characteristics of Equity Securities**
  - **Preference Shares**
    - ✓ Preference shares (or preferred stock) have features of both common stock and debt.
      - **Features of common stock**: do not mature
      - **Features of debt**: fixed dividend payment, but dividends are not contractual obligation and do not usually have voting rights.
      - Preferred shares have less risk than common shares because the dividend is stable and they have priority over common stock in receiving dividends and in the event of liquidation of the firm.

Characteristics of Equity Securities

- **Characteristics of Equity Securities**
  - **Cumulative Preference Shares**
    - ✓ Usually promised fixed dividends and any dividends that are not paid must be made up before common shareholders can receive dividends.
  - Investors in participating preference shares receive extra dividends if firm profits exceed a predetermined level.

Characteristics of Equity Securities

- **Characteristics of Equity Securities**
  - **Convertible Preference Shares**
    - ✓ Convertible preference shares can be exchanged for common stock at a conversion ratio determined when the shares are originally issued.
    - ✓ It has the following advantages:
      - The preferred dividend is higher than a common dividend.
      - If the firm is profitable, the investor can share in the profits by converting their shares into common stock.
      - Turns more valuable when the common stock price increases.
      - Preferred shares have less risk than common shares.

Summary

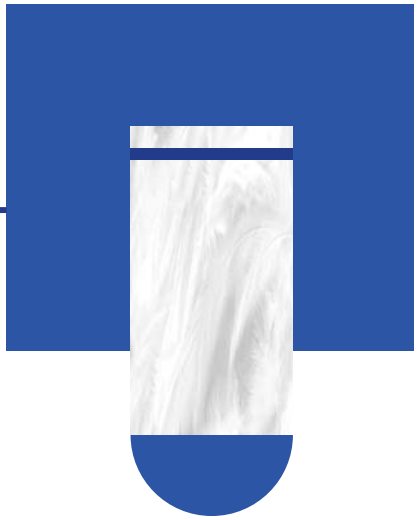
Overview of Equity Securities

Types of Equity Investments

Characteristics of Equity Securities

Non-domestic Equity Securities

- Direct Investing
- Global Registered Shares
- Depository Receipts



Non-domestic Equity Securities

- **Direct Investing**
  - Buying a foreign firm's securities in foreign markets directly. Some obstacles to direct foreign investment are that:
    - ✓ Investment and return are denominated in a foreign currency.
    - ✓ The foreign stock exchange may be illiquid.
    - ✓ Reporting requirements may be less strict, impeding analysis.
    - ✓ Investors must be familiar with the regulations and procedures.
- **Global Registered Shares**
  - Global registered shares (GRS) are traded in different currencies on stock exchanges around the world.

Non-domestic Equity Securities

- **Depository Receipts**
  - Depository receipts (DRs) represent ownership in a foreign firm and are traded in the markets of other countries in local market currencies.
  - A bank deposits shares of the foreign firm and then issues receipts representing ownership of a specific number of the foreign shares**. The depository bank** acts as a custodian and manages dividends, stock splits, and other events.
    - ✓ **Sponsored DR:** the firm is involved with the issue. A sponsored DR provides the investor voting rights.
    - ✓ **Unsponsored DR:** the firm is not involved with the issue. The depository bank retains the voting rights.

Non-domestic Equity Securities

- **Depository Receipts**
  - Depository receipts (DRs) represent ownership in a foreign firm and are traded in the markets of other countries in local market currencies.
    - ✓ **Global depository receipts (GDRs)** are issued outside the U.S. and the issuer's home country. Most GDRs are traded on the London and Luxembourg exchanges.
    - ✓ **American depository receipts (ADRs)** are denominated in U.S. dollars and trade in the United States.
  - **Basket of listed depository receipts**
    - ✓ A basket of listed depository receipts (BLDR) is an exchange-traded fund (ETF) that is a collection of DRs.

Summary

Overview of Equity Securities

Non-domestic Equity Securities

Direct Investing

Global Registered Shares

Depository Receipts

Summary

Module: Overview of Equity Securities

Types of Equity Investments

Non-domestic Equity Securities

Module

Company Analysis: Past and Present

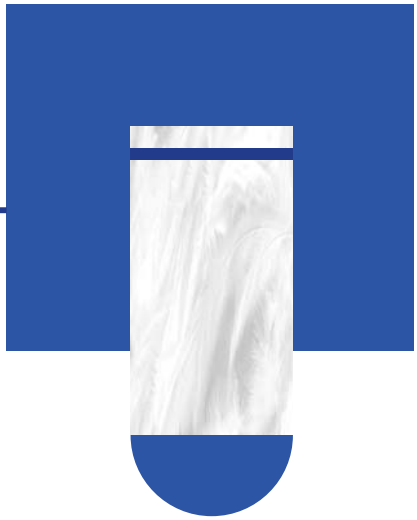
1. Company Analysis: Overview
2. Determining the Business Model
3. Analysis of Historical Financial Results and Position for the Company

Company and Industry Analysis Framework

- **Analysis of the company's past and present**
  - Determining business model
  - Analyze revenue, operating profitability, working capital, capital investments and capital structure
- **Industry and competitive analysis**
  - Define industry
  - Analyze industry size, growth and character, profitability, market shares trends through industry survey
  - Analyze industry structure and external influences
  - Evaluate company's competitive strategy
- **Company forecast**
  - Determine forecast objects and approaches
  - Forecast revenue, operating profitability, working capital, capital investments and capital structure
  - Evaluate key risks and uncertainties

Analysis of Historical Financial Results and Position for the Company

- Revenue Analysis
- Operating Profitability and Working Capital Analysis
- Capital Investments and Capital Structure



Revenue Analysis

- Analysts can take a **bottom-up** or **top-down** approach to determining revenue drivers and analyzing revenue.
  - **Top-down** approach usually begins at the level of the overall economy**.**
    - ✓ Expresses revenues as a function of drivers such as market share, market size and GDP growth.
  - **Bottom-up** approach begins at the level of the individual company or a unit within the company**.**
    - ✓ Decomposes revenue into drivers such as sales volume and price, or revenue by product line, segment, or geography, which may be further broken down into other drivers.

Revenue Analysis

- Prices are a driver of revenue for every firm, prices are constrained by a company's pricing power.
- Pricing power refers to a company's ability to set prices and other economic terms with customer without affecting its sales volumes.
  - Pricing power is primarily a function of both market structure and a company's competitive positioning in its market.
- The companies have **limited pricing power** if
  - **Numerous** substitutes exist
  - Switching costs are **low**
  - The industries are **fragmented**
  - **Limited** growth
  - **High** exit barriers, **high** fixed costs
  - **Identical** product offerings

Operating Profitability Analysis

- Company's operating costs can be categorized and analyzed in the following three ways:

By operating costs **behavior with output**	By operating costs **nature**	By operating costs **function**
Whether the cost varies or not with output in the short run	What the cost is	The purpose of the cost
● Fixed costs. ● Variable costs.	● Compensation of employees. ● Raw materials. ● Merchandise etc.	● Costs of goods sold. ● General and administrative. ● Research and development.

Operating Profitability Analysis

- A useful classification of operating costs for analysts is fixed versus variable:
  - Operating profit

$$\text{operating profit} = [\text{Q} \times (\text{P} - \text{VC})] - \text{FC}$$

    - ✓ $P - VC$ is the contribution margin.
  - Operating leverage

$$\text{DOL} = \frac{\%\ \Delta\ \text{operating profit}}{\%\ \Delta\ \text{sales}}$$

    - ✓ A firm can increase its DOL by increasing the fixed costs and decreasing the variable costs in its cost base.

Operating Profitability Analysis

- Classification of operating cost by functional is also a commonly used approach.
  - This approach leads to all issuers' income statements appearing similar in structure.
  - Measures of operating profitability:

Profit	Margin
$\text{Gross Profit} = \text{Revenue} - \text{COGS}$	$\text{Gross margin} = \frac{\text{Gross Profit}}{\text{Revenue}}$
$\text{EBITDA} = \text{Gross Profit} - \text{Operating Expense}$	$\text{EBITDA margin} = \frac{\text{EBITDA}}{\text{Revenue}}$
$\text{Operating Profit/EBIT} = \text{EBITDA} - \text{Depreciation and Amortization}$	$\text{EBIT/operating margin} = \frac{\text{EBIT/Operating Profit}}{\text{Revenue}}$

Operating Profitability Analysis

- **Economies of scale**
  - A situation in which costs per unit of a good or service produced **fall** as output grows.
  - **Gross and operating margins** tend to be **positively correlated** with sales levels in an industry that enjoys economies of scale.
  - Factors that can lead to economies of scale include, at higher levels of production, greater bargaining power with suppliers, lower cost of capital, and lower per unit advertising expenses;
  - Evidence of economies: lower proportion of COGS; lower proportion of SG&A.
- **Economies of scope**
  - A decline in costs per unit as the number of product or business lines increases and generally result from shared costs between the product lines.

Working Capital Analysis

- Working capital primarily uses activity ratios to measure a company's working capital management.
  - Net working capital = current assets - current liabilities
    - ✓ Negative net working capital means that suppliers are a source of financing.
  - Net working capital turnover = net revenue / average NWC
  - Cash conversion cycle=average inventory period+ average receivables period- average payables period
    - ✓ Short cash conversion cycle means that the company requires less external financing to fund operations.

Capital Investments and Structure Analysis

- Determining the sources and uses of a company's capital is the first step in evaluating a company's capital investment and structure.

Sources of Capital	Uses of Capital
Debt and equity issuance.	Cash and investments on hand.
Cash flows from operations (e.g. negative NWC).	Positive net working capital.
Asset disposals.	Capital expenditures and additional to intangibles.
	Acquisitions.
	Debt pay-down, stock dividends and repurchases.

Capital Investments and Structure Analysis

- **Evaluating capital investments**
  - **WACC** is described as the cost of financing firm assets

$$\text{WACC} = (w_d)[r_d(1-t)] + (w_{ps})(r_{ps}) + (w_s)(r_s)$$

  - **ROIC** is a measure of the profitability of a company relative to the amount of capital invested by the equity- and debt holders.

$$\text{Return on invested capital} = \frac{\text{after tax operating profit}}{\text{average book value of invested capital}}$$

    - ✓ ROIC reflects how effectively a company's management is able to convert capital into profits.

Capital Investments and Structure Analysis

- **Evaluating capital investments**
  - **ROA**
    - ✓ For unlevered returns, as measured by ROA or ROIC.

$$\text{ROA} = \frac{\text{after tax operating profit}}{\text{Average total assets}}$$

  - **ROE**
    - ✓ The analysts can use ROE and its decomposition as a comprehensive measure of profitability for an issuer.

$$\text{ROE} = \frac{\text{NI}}{\text{Average total equity}}$$

=(Net profit margin) × (Total asset turnover) × (Leverage)

=(Operating profit margin) × (Interest burden) × (Tax burden) × (Total asset turnover) × (Leverage)

Capital Investments and Structure Analysis

- **Evaluating capital structure.**

Sensitivity	Leverage	Coverage ratios	Credit rating
$\text{DFL} = \frac{\%\ \Delta\text{Net income}}{\%\ \Delta\text{Operating income}}$	$\text{Debt} - \text{to} - \text{equity ratio} = \frac{D}{E}$ $\text{Debt} - \text{to} - \text{capital} = \frac{D}{D+E}$ $\text{Debt} - \text{to} - \text{assets} = \frac{D}{A}$ $\textbf{Financial leverage} = \frac{\mathbf{A}}{\mathbf{E}}$	$\text{Debt} - \text{to} - \text{EBITDA ratio} = \frac{D}{\text{EBITDA}}$ $\text{Interest coverage} = \frac{\text{EBIT}}{\text{interest}}$ $\text{Fixed charge coverage} = \frac{(\text{EBIT} + \text{lease payments})}{(\text{interest} + \text{lease payments})}$	Third-party rating agencies

Summary

Module: Company Analysis: Past and Present

Analysis of Historical Financial Results and Position for the Company

Revenue Analysis

Operating Profitability and Working Capital Analysis

Capital Investments and Structure

Module

Industry and Competitive Analysis

1. Industry Classification
2. Industry Survey
3. Industry Structure and External Influence
4. Competitive Positioning

Industry Classification

- Third-Party Industry Classification Schemes
- Alternative Methods of Grouping Companies

Third-Party Industry Classification Schemes

- **The major commercial classification schemes**

	Global Industry Classification Standard (GICS)	Industry Classification Benchmark (ICB)	The Refinitiv Business Classification (TRBC)
Initiator	MSCI and S&P Dow Jones Indices	FTSE Russell	Refinitiv
Coverage	Public companies	Public companies	Public companies, private companies, non-profit, government entities.
Similarities	**Global schemes;** **Reviewed and updated at least annually;** **New companies added more frequently;** **Based on "demand" approach rather than "supply" approach of the schemes.**		

Third-Party Industry Classification Schemes

- **Strengths and Weaknesses of Current Systems (Commercial vs. Governmental)**
  - Unlike commercial classification systems, most government systems do not disclose information about a specific business or company, so an analyst cannot know all of the constituents of a particular category.
  - Generally, commercial classification systems are adjusted more frequently than government classification systems, which may be updated only every five years or so.
  - Government classification systems generally do not distinguish between small and large businesses, between **for-profit** and **not-for-profit** organizations, or between **public** and **private** companies.
  - Many commercial classification systems have the ability to distinguish between large and small companies by virtue of association with a particular equity index, and these systems include **only for-profit** and **publicly** traded organizations.

Third-Party Industry Classification Schemes

- **Rules for classifying companies to industry:**
  - Company has single segment/ business line
    - ✓ Classify based on single segment/ business line.
  - Company has multiple segment/ business lines
    - ✓ Classify based on segment/ business line with ≥ **60% revenue**.
    - ✓ Classify based on segment/ business line with > **50% revenue, profits, or assets.**
    - ✓ Use **discretion** or classify as multi-industry/ conglomerate.

Third-Party Industry Classification Schemes

- **Limitations third-party industry classification schemes:**
  - Groupings of companies with business model variations or that sell substitute products.
  - The classification of multi-product companies.
  - Geographical considerations.
  - Changes in groupings over time that affect prior-period comparability of industry statistics.

Alternative Methods of Grouping Companies

- **Alternative methods of grouping companies**
  - Geography
  - Sensitivity to the business cycle
  - Statistical similarities
  - ESG characteristics

Alternative Methods of Grouping Companies

- Companies can also adopt a method **based on geographical grouping**.
  - The companies are classified by country and then countries are aggregated into categories such as developed, emerging, and frontier markets.
  - Classification by country usually includes:
    - ✓ the country where the issuer is incorporated.
    - ✓ the country of the primary listing of its equity securities.
    - ✓ the location of its headquarters.
    - ✓ market perception.
  - Note that classification by the **geographic composition of revenue** is generally **not** the approach taken.
    - ✓ For example, Toyota is universally classified as a Japanese company. However, its largest market by revenues is North America, which is also the location of most of its assets.

Alternative Methods of Grouping Companies

- Firms can also be classified by their **sensitivity to business cycles**. This system has two main classifications: cyclical and non-cyclical firms.
  - **Cyclical firm**: highly dependent on the stage of the business cycle.
    - ✓ **High earnings volatility**
    - ✓ **High operating leverage**
    - ✓ Includes: basic materials and processing, **consumer discretionary**, energy, financial services, industrial and producer durables, and technology
    - ✓ A cyclical company is one whose profits are strongly correlated with the strength of the overall economy

Alternative Methods of Grouping Companies

- Firms can also be classified by their **sensitivity to business cycles**. This system has two main classifications: cyclical and non-cyclical firms.
  - **Non-cyclical firm:** demand is relatively stable over the business cycle.
    - ✓ Includes: Health care, utilities, telecommunications, and **consumer staples**
    - ✓ **Defensive industries:** least affected by the stage of the business cycle and include utilities, consumer staples (such as food producers), and basic services (such as drug stores)
    - ✓ **Growth industries:** demand so strong they are largely unaffected by the stage of the business cycle

Alternative Methods of Grouping Companies

- **Statistical Methods, such as cluster analysis**, can also be used.
  - This method groups firms that historically have had **highly correlated returns**. The groups (i.e., industries) formed will then have lower returns correlations between groups.
- The companies can be grouped **based on ESG characteristics**.
  - Incorporating ESG elements into various classification standards.
    - ✓ e.g.: the ratio of carbon emissions to revenues .etc.
  - These metrics can be aggregated into composite ESG ratings or scores that enable cross-issuer comparability.

Summary

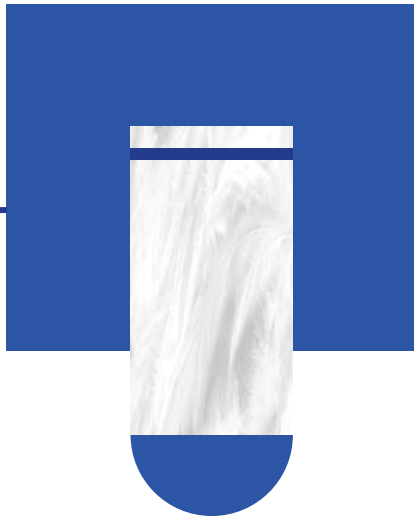
Industry and Competitive Analysis

Industry Classification

Third-Party Industry Classification Schemes
Alternative Methods of Grouping Companies

Industry Survey

- Industry Survey



Industry Survey

- Industry survey include to determining:
  - Industry size and historical growth rate
  - Characterizing industry growth
  - Industry profitability measures
  - Market share trends and major players

Industry Survey

- **Industry size and historical growth rate**
  - Industry size is typically measured by total annual sales from the product or customer perspective.
  - The growth rate is calculated either as year-over-year (YOY) each year or as a compounded annual growth rate over a multi-year period.
  - For private companies, the common practice to estimate industry size from:
    - ✓ Economic indicators published by government agencies.
    - ✓ Third-party consultancy's data obtained from surveys.
    - ✓ Issuer's investor presentations based on proprietary sources.
  - All these data sources require analysts to verify their rationality, otherwise it may lead to ineffective analysis.

Industry Survey

- **Characterizing industry growth**
  - **Style boxes** can be used to describe the pattern of historical growth of the industry. The style box has two dimensions:
    - ✓ **the magnitude of its growth rate. (i.e. mature vs. growth)**
    - ✓ **sensitivity to the business cycle. (i.e. defensive vs. cyclical)**

Mature	Utilities Pharmaceutical	Nature gas Crude oil
Growth	Software Biotechnology	Fintech Semiconductors
	Defensive	**Cyclical**

Industry Survey

- **Industry profitability measures**
  - The best measure of industry profitability is a time series of the distribution of returns on invested capital, which captures after-tax operating profits for each dollar of invested capital and is agnostic about capital structure.
  - For private companies, obtaining these data is seldom feasible. Two common methods to overcome this challenge in practice are:
    - ✓ Measure the profitability of listed companies and assume that the profitability of private competitors is similar. —— either using various sources to estimate the profitability of non-public companies or obtaining data from a government agency or third-party consultancy.

Industry Survey

- **Market share trends and major players**
  - Market share is measured by expressing the annual income of industry participants as a percentage of industry size per year.
    - ✓ Analysts prefer market share trends to point estimation of market share.
  - Another consideration in the analysis is the degree of industry concentration, which is usually measured by **Herfindahl-Hirschman Index (HHI)**

$$\mathrm{HHI} = \sum_{n=1}^{\infty} S_n^2$$

S_n: the market share of market participant n.

- ✓ Antitrust regulators consider markets with an HHI between 1500 and 2500 is moderately concentrated, over 2500 is highly concentrated.
- ✓ In highly concentrated markets, HHI has increased over 200 points, often facing regulatory challenges.

Summary

Industry and Competitive Analysis

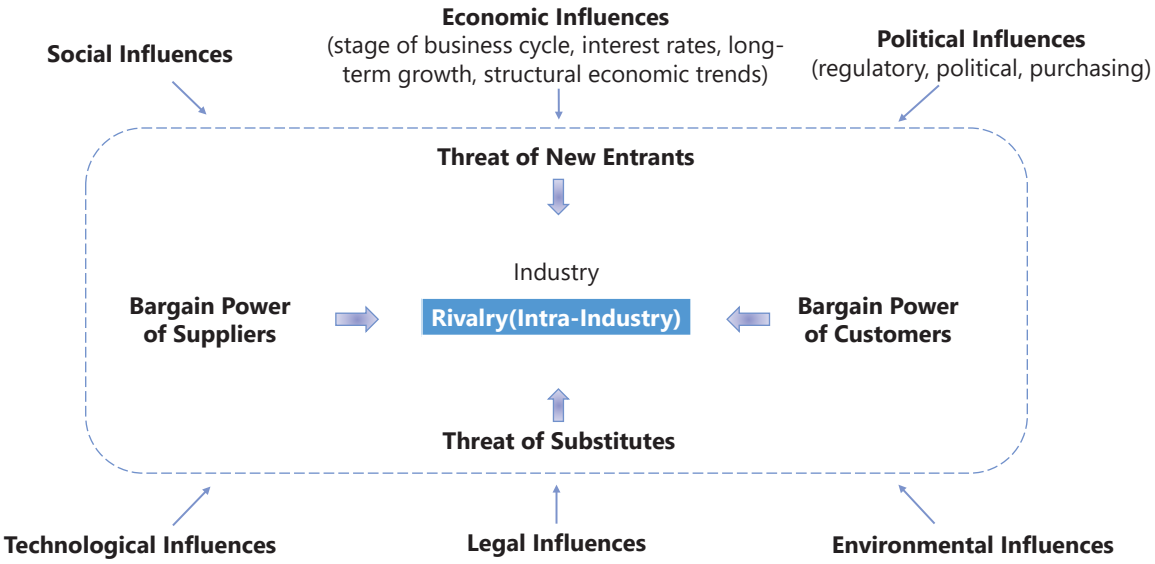
Industry Survey

Industry Survey

Industry Structure and External Influences

- A Framework for Industry Analysis
- Porter's Five Forces
- PESTLE Frameworks

A Framework for Industry Analysis



Porter's Five Forces

- **Porter's Five Forces**
  - Analysis framework developed by **Michael Porter delineates five forces** that determine industry competition:
    - ✓ **Rivalry among existing competitors.** Rivalry increases when many firms of relatively equal size compete within an industry.
    - ✓ **Threat of new entrants**. Industries that have significant barriers to entry will find it easier to maintain premium pricing.
    - ✓ **Threat of substitute products.** Substitute products limit the profit potential of an industry.
    - ✓ **Bargaining power of buyers.** Buyers' ability to bargain for lower prices or higher quality influences industry profitability.
    - ✓ **Bargaining power of suppliers.** Suppliers' ability to raise prices or limit supply influences industry profitability.

PESTLE Frameworks

- **The external influences on industry growth, profitability, and risk**
  - **Political influences**
    - ✓ include changing fiscal and monetary policies, governments' direct selling and purchasing activities, regulatory changes, and geopolitical conditions and actions.
  - **Economic influences**
    - ✓ Can be cyclical or structural (longer-term) trends, most notably economic output as measured by GDP or some other measure, such as interest rates, inflation and education level.

PESTLE Frameworks

- **The external influences on industry growth, profitability, and risk.**
  - **Social influences**
    - ✓ Including cultural and consumer trends, as well as changes in demographic and lifestyle.
  - **Technological influences**
    - ✓ Change an industry dramatically through the introduction of new or improved products.
    - ✓ There are two types of technological innovation:
      - sustainable innovation: improve product or service performance without fundamental changes in functionality.
      - disruptive innovation: fundamental changes in functionality, existing participants face the "innovator's dilemma" in disruptive innovation

PESTLE Frameworks

- **The external influences on industry growth, profitability, and risk.**
  - **Legal influences**
    - ✓ The legal influences include changes in laws and regulations from courts and policymakers.
  - **Environmental influences**
    - ✓ Consumer perception for certain brands, products, and services.
    - ✓ Increased government regulations and protections.
    - ✓ Potential disruptions to supply chains and the ability to operate, such as an increase in natural disasters or resource shortages in water or energy.

Summary

Industry and Competitive Analysis

Industry Structure and External Influences

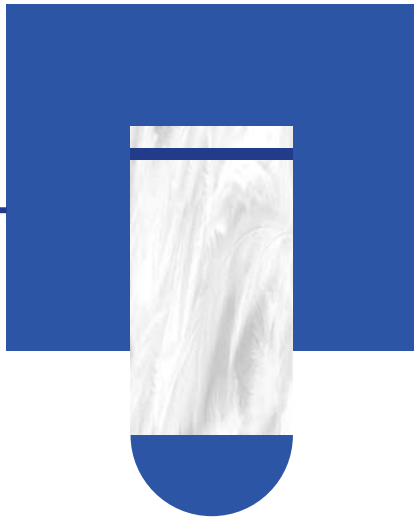
A Framework for Industry Analysis

Porter's Five Forces

PESTLE Frameworks

Competitive Positioning

- Cost Leadership
- Differentiation
- Focus



Competitive Positioning

- **Three Generic Competitive Strategies**
  - **Cost Leadership**
  - **Differentiation**
  - **Focus**

Cost Leadership

- **Cost Leadership**
  - **Cost leadership:** With the same product, the firm seeks to a lower cost.
  - **Means of execution**
    - ✓ Economies of scale from fixed costs and low-cost distribution
    - ✓ Aggressive pricing and culture of strict cost control
  - **Five forces influences**
    - ✓ Threat of new entrants: Capital requirements and scale advantages deter entrants.
    - ✓ Bargaining power of customers: Customers can only bring prices down to the costs of the marginal producer, leaving margin for the cost leaders.
    - ✓ Industry rivalry: Rivals may not be able to compete on price with cost leaders

Cost Leadership

- **Cost Leadership**
  - **Industry appropriateness**
    - ✓ Capital intensive
    - ✓ Price-conscious customers
    - ✓ Customers do not value or notice product differences
    - ✓ Minimal innovation in industry
  - **Risks to the strategy**
    - ✓ Cost inflation
    - ✓ Technological change
    - ✓ Desire for premiumization among customers

Differentiation

- **Differentiation**
  - **Differentiation**: With the same cost, the firm seeks to provide product benefits that other firms do no provide.
  - **Means of execution**
    - ✓ Investments in advertising, proprietary distribution channels, and a strong customer experience culture.
    - ✓ Superior quality, unique features, premium pricing, integration of services, software, and hardware.
  - **Five forces influences**
    - ✓ Threat of new entrants and of substitutions: Customer loyalty to unique product can deter switching.
    - ✓ Bargaining power of customers: Customers may be unable to unwilling to comparison shop or switch.
    - ✓ Bargaining power of suppliers: The company may have the ability to pass along price increases to customers and/or margin to absorb cost increases.

Differentiation

- **Differentiation**
  - **Industry appropriateness**
    - ✓ Price is not foremost concern for customers
    - ✓ Customers value distinctiveness
    - ✓ Innovation in industry, with products varying in features and forms
  - **Risks to the strategy**
    - ✓ Imitation by competitors
    - ✓ Buyers become sophisticated, no longer demand level of service
    - ✓ Pricing premium becomes too high for customers to bear
    - ✓ May preclude high market share, as customers value exclusivity

Focus

- **Focus**
  - **Focus:** The firm targets a niche with either a cost or a differentiation focus.
  - **Means of execution**
    - ✓ Proximity to customers and strong understanding of their needs.
    - ✓ May incorporate elements of strategy from both cost leadership and differentiation, but focused on particular group.
  - **Five forces influences**
    - ✓ Threat of new entrants and of substitutions: Customer loyalty to unique product can deter switching.
    - ✓ Bargaining power of customers: Customers may be unable or unwilling to comparison shop or switch.

Focus

- **Focus**
  - **Industry appropriateness.**
    - ✓ Difficult or uneconomical to serve customer group, product, or geography for other players.
  - **Risks to the strategy.**
    - ✓ Larger competitors outcompete on price.
    - ✓ The differences in demand between the narrow group and industry as a whole narrow.
    - ✓ Buyers become sophisticated, no longer demand level of service.

Summary

Industry and Competitive Analysis

Competitive Positioning

Cost Leadership
Differentiation
Focus

Summary

Module: Industry and Competitive Analysis

Industry Classification
Industry Survey
Industry Structure and External Influence
Competitive Positioning

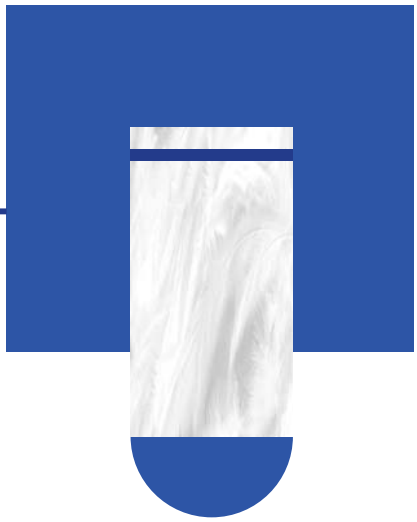
Module

Company Analysis: Forecasting

1. Forecast Objects, Principles, and Approaches
2. Forecasting

Forecast Objects, Principles, and Approaches

- Forecast Objects
- Forecast Approaches



Forecast Objects

- Analysts have different forecast objects, but has the following four common forecast objects:
  - **Drivers of financial statement lines**
  - **Individual financial statement lines**
  - **Summary measures**
  - **Ad hoc objects**

Forecast Objects

- **Drivers of financial statement lines**
  - Forecasting drivers rather than financial statement lines outright has the benefit of improved explanatory value and may improve accuracy.
    - ✓ e.g: Analysts do not directly predict revenue, using a top-down approach, consider revenue as a function of market share, target market or market size, and GDP growth drivers.
- **Individual financial statement lines**
  - The analyst directly forecast individual financial statement lines.
  - This approach is often used for lines without clear drivers or less-material items.

Forecast Objects

- **Summary measures**
  - The benefit of using these as forecast objects is efficiency, but less transparency and making it difficult to audit the forecast.
  - This objects is most appropriate if the summary measure is stable and predictable.
- **Ad hoc objects**
  - May not have been reported in historical financial statements.
    - ✓ e.g: issuer's announcing a material legal proceeding, government regulatory action, a tax dispute, or a natural disaster.

Forecast Approaches

- For any objects, there are **four** general forecast approaches that are often combined for use:
  - **Historical results approach**
    - ✓ This approach uses past observed or calculated as a forecast.
    - ✓ Assuming historical recurrence.
      - e.g. The industry has grown on average by 5% each year for the last 10 year, and assuming 5% market growth each year going forward.
    - ✓ This approach may be appropriate for:
      - companies operating in industries where the analyst does not expect the industry structure to change;
      - companies that have a low sensitivity to changes in the business cycle;
      - objects that are not material or that the analyst does not hold an opinion on.

Forecast Approaches

- For any objects, there are **four** general forecast approaches that are often combined for use:
  - **Historical base rates and convergence**
    - ✓ This approach uses an industry or peer group average or median, computed over a long period of time, as a "base rate" for forecasting that an object will converge to over some time frame.
    - ✓ The base rate could also be a macroeconomic variable such as GDP growth.
    - ✓ This approach may be appropriate for:
      - Companies in well-established industries with many publicly traded peers, such as banks, airlines, restaurants, automakers, and retailers;
      - smaller companies that are "maturing into" a financial profile similar to that of larger peers with scale.

Forecast Approaches

- For any objects, there are four general forecast approaches that are often combined for use:
  - **Management guidance approach**
    - ✓ Guidance can be detailed or rather directional and is often updated throughout the year.
    - ✓ Guidance is often provided as a range (e.g., "sales growth of 2%–4%") and embeds many sub-forecasts and assumptions by management.
    - ✓ This approach may be appropriate:
      - when the guidance is provided and when management has demonstrated a track record of reliable estimates.

Forecast Approaches

- For any objects, there are four general forecast approaches that are often combined for use:
  - **Analyst's discretionary forecast approach**
    - ✓ Discretionary forecast approach include surveys, quantitative models, probability distributions.
    - ✓ This approach may be appropriate for:
      - companies in cyclical industries;
      - companies that have no or few comparables;
      - companies that do not provide management guidance, and/or
      - those undergoing a fundamental change like a shift in the competitive or regulatory environment.

Summary

Company Analysis: Forecast

Forecast Objects, Principles, and Approaches

Forecast Objects
Forecast Approaches

Summary

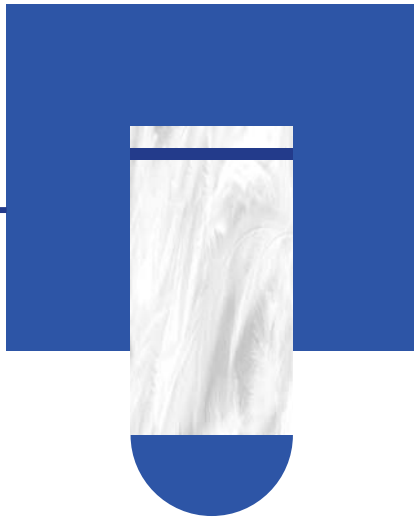
Module: Company Analysis: Forecasting

Forecast Objects, Principles, and Approaches

Module

Equity Valuation: Concept and Basic Tool

1. Introduction of Equity Valuation
2. Discounted Cash Flow Models
3. Price Multiples and Enterprise Value Multiples
4. Asset-Based Models



Discounted Cash Flow Models

- Preferred Stock Valuation
- The Gordon Growth Model
- Multistage Dividend Discount Models
- Free-Cash-Flow-to-Equity Model

Preferred Stock Valuation

- **Preferred Stock Valuation**
  - The preferred stock holders are promised to receive a stated dividend for an infinite period.
  - Preferred stock is perpetuity since it has no maturity.
  - Valuation model of a preferred stock:
    - ✓ $V_p=\frac{D_p}{(1+r_p)}+\frac{D_p}{(1+r_p)^2}+\cdots+\frac{D_p}{(1+r_p)^n}=\frac{D_p}{r_p}$

The Gordon Growth Model

- **The Gordon Growth Model (GGM)**
  - **Assumptions**
    - ✓ Dividends grow at a constant rate.
    - ✓ The constant growth rate will continue for an infinite period.
    - ✓ The required rate of return r is greater than the infinite growth rate g...if it is not, the model gives meaningless results.

$$V_0=\frac{D_0(1+g)}{(1+r)}+\frac{D_0(1+g)^2}{(1+r)^2}+\cdots+\frac{D_0(1+g)^\infty}{(1+r)^\infty}$$

$$V_0=\frac{D_0(1+g)}{r-g}=\frac{D_1}{r-g}$$

The Gordon Growth Model

- **The Gordon Growth Model (GGM)**
  - **Limitations**
    - ✓ Very sensitive to estimates of r and g
    - ✓ Difficult with non-dividend stocks
    - ✓ Difficult with unpredictable growth patterns (use multi-stage model)
  - **Important Conclusions**
    - ✓ The wider is the difference between r and g, the smaller the value of the stocks.
    - ✓ Small changes in the difference between r and g will cause large changes in the stocks' value

The Gordon Growth Model

- **Other Variable Parameters**
  - **The required rate of return (capital asset pricing model(CAPM))**

$$r=RFR_{nominal}+\beta(R_M-RFR_{nominal})$$

  - **Another way to estimate required rate of return**

$$r = \text{current bond yield} + \text{equity risk premium}$$

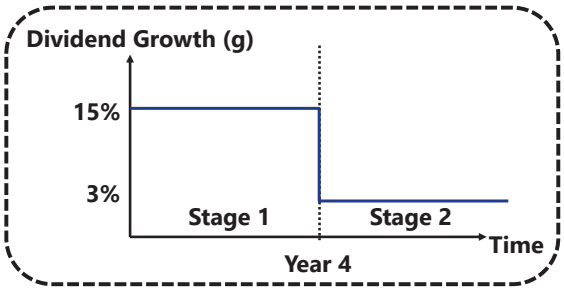
  - **Growth rate in dividends**
    - ✓ Use the historical growth in dividends for the firm.
    - ✓ Use the median industry dividend growth rate.
    - ✓ Estimate the sustainable growth rate.

g=sustainable growth rate = b × ROE

b = retention ratio = 1 – dividend payout rate

Multistage Dividend Discount Models

- **Multistage Dividend Discount Models**
  - **Two-stage DDM**
    - ✓ the growth rate starts at a high level for a relatively short period of time, then reverts to a long-run perpetual level.



Free-Cash-Flow-to-Equity Model

- **Free-Cash-Flow-to-Equity Model**
  - Valuation obtained by using FCFE involves discounting expected future FCFE by the required rate of return on equity. FCFE reflects the firm's capacity to pay dividends.
  - FCFE is useful the firm that does not pay dividends or pays dividends but the dividends paid differ significantly from the company's capacity to pay dividends;

FCFE= net income + depreciation-increase in working capital-fixed capital investment (FCInv)-debt principal repayments + new debt issues

FCFE = Cash Flow from Operations - FC_{Inv} + Net Borrowing

$$V_0=\sum_{t=1}^{\infty}\frac{FCFE_t}{(1+r)^t} \qquad V_0=\frac{FCFE_0(1+g)}{r-g}$$

Summary

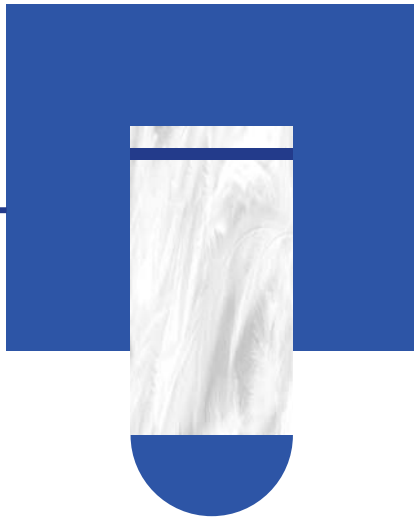
Equity Valuation: Concept and Basic Tool

Discounted Cash Flow Models

Preferred Stock Valuation
The Gordon Growth Model
Multistage Dividend Discount Models
Free-Cash-Flow-to-Equity Model

Price Multiples and Enterprise Value Multiples

- Price Multiples
- Enterprise Value Multiples



Price Multiples

- **Two main ways to apply these price multiples**
  - **Price multiples based on Fundamentals:**
    - ✓ The value justified by (based on) fundamentals or a set of cash flow predictions **(intrinsic value)** therefore are independent of the current market prices.
  - **Price multiples based on Comparables:**
    - ✓ Compare relative values between one firm to another using price multiples with **market price**.

Price Multiples

- **Multiples Based on Fundamentals**
  - The Earnings Multiplier Model Derived from DDM
    - ✓ According to infinite period DDM

$$P_0 = \frac{D_1}{r-g}$$

    - ✓ **Justified P/E:** Assume we divide both sides of the equation by E_1 (expected 12-month earnings), the equation changes to:
      - **Leading P/E:** Expected earnings(dividends) used are of next period.

$$\frac{P_0}{E_1} = \frac{D_1/E_1}{r-g} = \frac{1-b}{r-g} = \frac{p}{r-g}$$

      - **Trailing P/E: Based on actual earnings for the previous period.**

$$\frac{P_0}{E_0} = \frac{D_0/E_0}{r-g} \times (1+g) = \frac{(1-b)\times(1+g)}{r-g} = \frac{p\times(1+g)}{r-g}$$

Price Multiples

- **Multiples Based on Comparables**
  - The methodology involves using a price multiple to evaluate whether an asset is fairly valued, undervalued, or overvalued in relation to a benchmark value of the multiple.
  - Identify companies that are most similar according to a number of dimensions. These dimensions include (but are not limited to) overall size, product lines, and growth rate.
  - The economic rationale underlying the method of comparables is the **law of one price**: Identical assets should sell for the same price.

Price Multiples

- **Multiples Based on Comparables**
  - **Price multiples are widely used because:**
    - ✓ Can be calculated easily.
    - ✓ Can be used both cross-sectional (versus the market or another comparable) and in time series.
  - **Disadvantages of using price multiples**
    - ✓ The conclusion drawn under the comparable and fundamental method may be reverse.
    - ✓ Price multiples may lose validity when firms use different accounting methods.
    - ✓ Price multiples for **cyclical firms** may be highly influenced by current economic conditions.

Enterprise Value Multiples

- **Enterprise Value (cost to acquire the firm)**
  - Enterprise value (EV) is total company value, not equity.
  - EV = market value of common stock + market value of preferred equity + market value of debt– cash and short-term investments
- **Advantages**
  - Useful for comparing firms with different degrees of financial leverage and different tax rates
  - EBITDA is useful for valuing capital-intensive business EB.
  - EBITDA is usually positive even when EPS is not.
  - EBITDA is useful for comparing firms with different effective tax rate.
- **Disadvantages**
  - Market value of debt is often not available.
    - ✓ Market value of similar debt can be used.
    - ✓ Book value of debt can be used.

Summary

Equity Valuation: Concept and Basic Tool

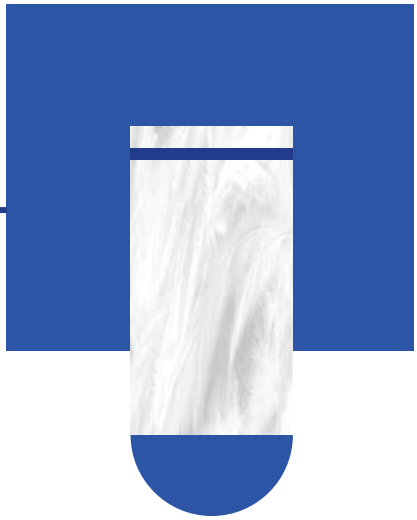
Price Multiples and Enterprise Value Multiples

Price Multiples

Enterprise Value Multiples

Asset-Based Models

- Asset-Based Valuation



Asset-Based Valuation

- An asset-based valuation of a company uses estimates of the **market or fair value of the company's assets and liabilities**. Because market values of the firm assets are usually difficult to obtain, the analyst typically starts with the balance sheet to determine the values of assets and liabilities.
- **The asset-based valuation approach is not applicable when:**
  - Intangible assets or "off the books" assets take up a large proportion.
  - Under a hyper-inflationary condition.
  - Companies with assets don't readily determinable market (fair) value——such as those with significant property, plant, and equipment.
- **The asset-based valuation approach is most applicable when:**
  - Financial companies, natural resource companies, and formerly going-concerns that are being liquidated.
- **Asset-based models are frequently used for valuation of private companies.**

Summary

Equity Valuation: Concept and Basic Tool

Asset-Based Models

Asset-Based Valuation

Summary

Module: Equity Valuation: Concept and Basic Tool

Discounted Cash Flow Models

Price Multiples and Enterprise Value Multiples

Asset-Based Models

问题反馈

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- **如何告诉我们?**
  - 将您发现的问题通过扫描右侧二维码告知我们，具体的内容包含:
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    - ✓ 所在班级
    - ✓ 问题所在科目(若未知科目，请提供章节、知识点和页码)
    - ✓ 您对问题的详细描述和您的见解
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