

Equity Investments

权益投资

Level I



王牌陈讲CFA

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□ 学神级别的开挂人生

- 中考、高考、研究生一路以第1名身份保送
- 本科阶段就读复旦大学财务金融系，GPA全系第一，获管理学学士学位和法学学士学位；研究生阶段就读复旦大学管理学院
- 以全优成绩通过CFA三个级别考试；一天时间以全优成绩同时通过FRM两个级别考试

□ 财经讲师的王牌之路

- 全职加入高顿财经前，就职于国有商业银行总行和华尔街投行，同时以兼职身份承担高顿CFA/FRM教学工作
- 逾12年教龄，CFA/FRM培训界的教父级人物，学员遍布全球



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小红书



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金融市场基本知识



1.1 金融市场的基本功能

- Achieving entities' purposes in using financial system
 - Saving ■ Raising equity capital ■ Exchanging assets
 - Borrowing ■ Managing risks ■ Information-motivated trading
- Determining equilibrium rates of return
- Capital allocation efficiency

1.2 市场监管和评估

- | | |
|--|--|
| <ul style="list-style-type: none"> □ The objectives of market regulation <ul style="list-style-type: none"> ■ Control fraud ■ Set mutually beneficial standards ■ Control agency problems ■ Promote fairness ■ Prevent undercapitalized financial firms from exploiting their investors by making excessively risky investments ■ Ensure that long-term liabilities are funded | <ul style="list-style-type: none"> □ Characteristics of a well functioning financial system <ul style="list-style-type: none"> ■ Complete markets ■ Operational efficient ■ Informationally efficient ■ Allocational efficient |
|--|--|

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1.3 金融中介

- **Brokers** help clients buy and sell securities by finding counterparties
 - Brokers do not trade with their clients – instead, they search for traders who are willing to take the other side of their clients' orders
 - **Block brokers** provide brokerage service to large traders
- **Dealers** trade by buying for or selling from their own inventory, **provide liquidity** in the market
 - Dealers are proprietary traders who trade with their clients
 - **Broker-dealer** have a conflict of interest with respect to how they fill their customers' orders
- **Investment banks** provide advice to **corporate clients** and help them arrange transactions

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1.3 金融中介

- **Exchanges** provide places where traders can arrange their trades
 - They have regulatory authorities
- **Alternative trading systems** (ATS), a.k.a. **electronic communication networks** (ECNs) or **multilateral trading facilities** (MTFs), serve the same trading function as exchanges
 - They have no regulatory authority
- **Securitizers** buy assets, place them in a pool, then sell securities that represent ownership of the pool
- **Arbitrageurs** buy and sell identical or similar instruments at different prices in different markets
 - They move liquidity through markets
- **Depository institutions** raise funds from depositors and other investors and lend it to borrowers
- **Insurance companies** help people and companies offset risks that concern them
- **Settlement and custodial services**

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2.1 金融市场的分类

- Based on delivery date: spot markets vs. futures markets
- Based on time maturity: money markets vs. capital markets
- Based on position and underlying: traditional markets vs. alternative markets
- Based on capital flow: primary markets vs. secondary markets

2.2 一级市场

- Public offering

1. **IPO (initial public offerings)**: first-time issues by firms whose shares are not currently publicly traded
 - ① **Underwritten offering**: investment bank **guarantees** the sale of the entire issue
 - ② **Best effort offering**: investment bank acts only as **broker**, and is not obligated to buy the unsold portion if the issue is under-subscribed
2. **Seasoned offerings (secondary issues)**: new shares issued by firms whose share are already trading in the marketplace

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2.2 一级市场

- Private placement

- Corporations sell securities directly to a small group of qualified investors

- Shelf registration

- Corporations sell new issues of seasoned securities directly into the secondary market **when** they need capital, and **when** the market is favorable

- Dividend reinvestment plan (DRPs)

- Allow shareholders to **reinvest their dividends** in newly issued shares

- Rights offering

- **Shareholders** are given the **rights to buy** new shares at a discount to the current market price

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2.3 二级市场

- Classified by trading session

	Definition	Advantage	Disadvantage
Call Market	All orders are gathered, a single price is chosen to maximize volume	Easier for buyers and sellers to find trading counterparty	Trade can only execute at the specific time
Continuous Market	Trades are arranged and executed anytime the market is open	Buyers and sellers can trade at anytime as long as the market is open	If buyers and sellers arrive in the market at different time, they can not trade with each other

- Classified by trading mechanism

1. Quote-driven markets, a.k.a. price-driven markets, dealer markets

- Customers trade at the **prices quoted by dealers**
 - They are usually **over-the-counter(OTC) markets**

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2.3 二级市场

- Classified by trading session

2. Brokered markets

- Brokers arrange trades among their clients
- This service is valuable when a client has a unique or illiquid instrument for which finding a buyer or a seller willing to trade is difficult

3. Order-driven markets

- Trades are arranged using rules to match buy orders to sell orders
- Order matching rules: establish an order precedence hierarchy
 - ① price priority ② display precedence ③ time precedence
- Trading pricing rules: determine the price after orders are created using order matching rules
 - uniform pricing rule • discriminatory pricing rule • derivative pricing rule

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3. 资产分类

Financial assets

- Based on underlying characteristic
 - I. Securities
 - Fixed-income: bonds, repos, CDs
 - Equity: common/preferred shares
 - Pooled investment vehicles: close/open-ended fund, ETFs,
 - II. Derivative contracts
- Based on whether trade publicly
 - A. Public securities
 - B. Private securities

Physical assets

- Commodities: industrial metals, agricultural products
- Real assets: real estate, airplanes, machinery

Currencies

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4.1 头寸的概念

- Long positions benefit from an appreciation in the prices of the assets or contracts owned
- Short positions benefit from a decrease in the prices of the assets or contracts sold

	Option Position	Risk Exposure of the Underlying Assets
Buy Call Option	long	long
Sell Call Option	short	short
Buy Put Option	long	short
Sell Put Option	short	long

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4.2 融券卖空

- Unlike a long position, the potential gains on a **short position** are limited to no more than 100 percent, whereas the potential losses are unlimited
- Short sellers must deposit the proceeds of the short sale with the security lenders as collateral
- Security lenders invest the collateral in short-term securities and may return a portion of interest earned to the short sellers
 - **Short rebate rate** is the difference between interest rate from investing collateral and **implicit loan fees**
 - The short rebate rate may be very small or even negative
 - The **implicit loan fees** are affected by the availability of the security, the investment risk of collateral and the default risk of short sellers
- **Payments-in-lieu:** short sellers pay the security lenders all dividends or interest that they otherwise would have received had they not lent their securities

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4.3 杠杆融资

- **Buy on margin:** investors buy securities by borrowing some of the purchase price
 - The borrowed loan is called the **margin loan** (borrowed fund)
 - The interest rate that the **buyers pay for margin loan** is the **call money rate**
 - **Buyer's equity** is the portion of the security price that belongs to the buyer
- **Financial leverage ratio** is the ratio of the value of the position to the value of buyer's equity ◆ **margin rate = 1 / financial leverage ratio**
- **Initial margin requirement** and **maintenance margin requirement**
 - **Margin call:** if the value of the equity falls below the maintenance margin requirement, the buyer will receive a request for additional equity, or the position will be liquidated
 - ◆ **$P_c = P_0 \times (1 - \text{initial margin rate}) / (1 - \text{maintenance margin rate})$**

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5.1 报价指令

- In dealer market, prices quoted by dealers (market makers)
 - **Bid price** is the price at which a **dealer is willing to buy** a security
 - The **best bid** is the **highest bid** in the market
 - **Ask / offer price** is the price at which a **dealer is willing to sell** a security
 - The **best ask / offer** is the **lowest ask / offer** in the market
 - **Bid-ask spread** is the difference between bid and ask price
 - Bid-ask spreads are an implicit **cost of trading**
- Instructions attached to orders
 - **Execution instructions** indicate how to fill the order (5.2)
 - **Validity instructions** indicate when the order may be filled (5.3)
 - **Clearing instructions** indicate how to settle the trade

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5.2 执行指令

- **Market orders** instruct the broker to **buy or sell immediately at the best current price**
- **Limit orders** instruct the broker to obtain the best price immediately available, but in no case accept a price higher than a specified limit price when buying or accept a price lower than a specified limit price when selling
 - **Marketable limit orders:** at least **part of the order** can trade immediately
- **All-or-nothing orders** can only trade if the **entire sizes** can be traded
- **Hidden orders** are exposed only to broker/exchange
 - **Iceberg orders** expose only the display size, the rest of the orders is hidden from the public

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5.3 时效指令

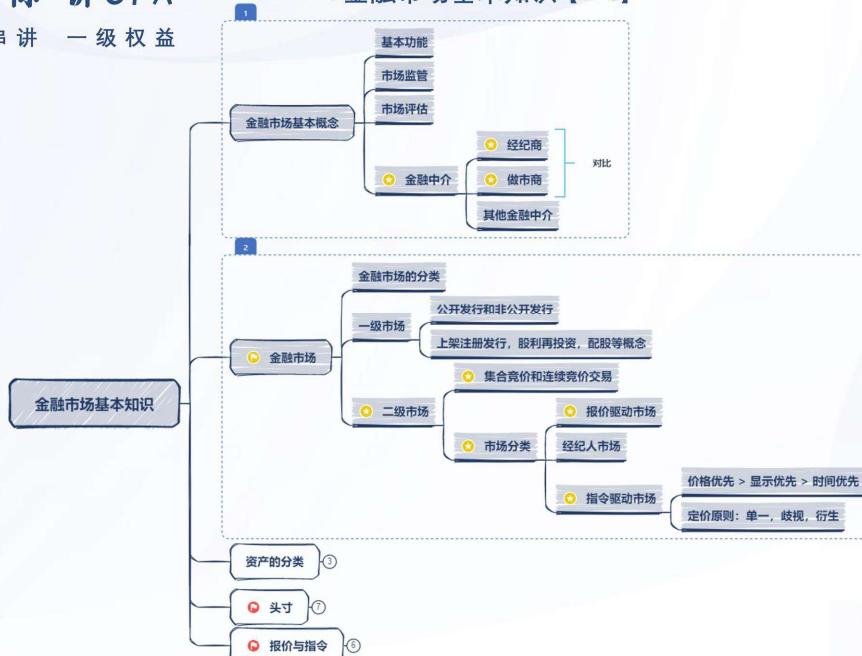
- **Immediate-or-cancel (fill-or-kill)** orders cancel immediately if they can not be filled in part or in whole
- **Day orders** expire if unfilled by the end of the trading day
- **Good-till-cancelled orders** are valid until the orders are cancelled
- **Good-on-close/open orders** can only be filled at the close/open of trading
- **Stop orders** can not be filled until the stop price condition has been satisfied
 - For a **stop sell order**, the execution is suspended until a trade occurs at or below the specified stop price
 - **Stop loss on long position**
 - For a **stop buy order**, the execution is suspended until a trade occurs at or above the specified stop price
 - **Stop loss on short position**

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一. 金融市场基本知识【1-5】



一. 金融市场基本知识【1-5】



证券市场指数

6. 基于指数的投资回报

- The individual securities included in a **security index** are known as **constituent securities**
- ◆ $V = \frac{\sum_{i=1}^n m_i P_i}{D}$ • The divisor D is a number initially chosen at inception, so that the index has a convenient initial value
- **Price return index:** $PR_1 = \frac{V_1 - V_0}{V_0} = \sum_{i=1}^n w_i PR_i$
- **Total return index:** $TR_1 = \frac{V_1 - V_0 + D_1}{V_0} = \sum_{i=1}^n w_i TR_i$
 - As time passes, the value of the total return index will **exceed** the value of the price index

7. 指数的用途

- Uses of security market indices
 - Gauges of market sentiment
 - Proxies for measuring and modeling returns, and systematic risk
 - Proxies for asset classes in asset allocation models
 - Benchmarks for actively managed portfolios
 - Model portfolios for such investment products as index funds and ETFs

8. 各类市场指数

- Equity index**
 - Broad market indices represent an entire equity market
 - Multi-market indices comprise indices from different countries
 - **Fundamental weighting** in multi-market indices weight the securities within each country by market capitalization and weight each country in proportion to its relative GDP
 - Sector indices represent different economic sectors
 - Style indices represent securities classified according to market capitalization, value, growth, etc.
- Fixed-income index**
 - **Broad universe**: fixed-income securities can be classified along many dimensions
 - **High turnover** due to securities mature
 - **Dealer markets and illiquidity**
- Real estate indices** are categorized as **appraisal indices**, **repeat sales indices**, and **REITs indices**
- Hedge fund index**
 - Index providers rely on the voluntary cooperation of hedge funds, and it may have **survivorship bias**
- Commodity indices**: the performance of commodity indices may be quite **different** from their underlying commodities

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9.1 价格加权

□ Price weighting

- The index value is the **arithmetic average of security prices**
- It's simply done by buying an **equal number of shares of each security** in the index
- Advantage: simplicity
- Disadvantage
 - Highly priced securities have a greater influence on index value
 - When a stock-split occurs, the divisor is adjusted so that the index value is maintained unchanged

	P ₀	Shares	P ₁	%
Stock A	\$10	1000	\$11	+ 10%
Stock B	\$20	5	\$21	+ 5%
Stock C	\$300	1	\$270	- 10%

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9.2 市值加权

	P ₀	Shares	P ₁	%
Stock A	\$10	1000	\$11	+ 10%
Stock B	\$20	5	\$21	+ 5%
Stock C	\$300	1	\$270	- 10%

□ Market-capitalization weighting

- The weight is determined by dividing a stock's **market capitalization** by the total market capitalization of the index
- Advantage: constituent stock's weight equals to its actual market fraction
- Disadvantage: firms with **larger market capitalizations** have a **greater influence** on the index's value, which leads to **momentum tilt**

□ Float-adjusted market-cap weighting

- The weight is determined by adjusting its market capitalization for its **market float**, which is the **number of shares available to the investing public**

□ Free-float-adjusted market capitalization weighting

- Further reduce the number of shares by **excluding shares not available to foreign investors**

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	P ₀	P ₁	%
Stock A	\$10	\$11	+ 10%
Stock B	\$20	\$21	+ 5%
Stock C	\$300	\$270	- 10%

9.3 等权重

□ Equal weighting

- Each constituent security has an **equal weight**, and the index return is the **arithmetic mean of HPRs** on index stocks
- The index is matched by investing **equal dollar amount** in each stock
- **Advantage:** simplicity
- **Disadvantage**
 - **Small-cap bias:** small-cap stocks are over-presented
 - Requiring **frequent rebalance** as prices change

9.4 基本面加权

□ Fundamentally weighting

- This method uses measures of a company's size that are independent of its security price to determine the weight on each constituent security, and these measures include **book value**, **cashflow**, **revenues**, **earnings**, **dividends**, and **number of employees**
- It leads to indexes that have a "**value**" **tilt**, and may have a contrarian effect

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10. 指数再平衡与指数重建



□ **Rebalancing** refers to adjusting the weights of the constituent securities in the index

- Price-weighted indexes are not rebalanced
- For market-capitalization-weighted indexes, rebalancing is **less of a concern**, because the indexes largely rebalance themselves
 - They are only adjusted to reflect mergers, acquisitions, liquidations, etc.
- Equal-weighted indexes requires **most frequent rebalancing**

□ **Reconstitution** refers to the process of **changing the constituent securities** in an index

- Constituent securities that no longer meet the criteria are replaced with securities that meet the criteria
- Reconstitution is part of the rebalancing cycle

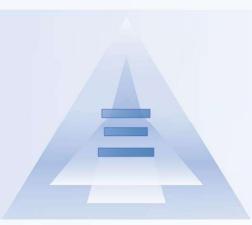
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二. 证券市场指数 [6-10]





市场有效性



11. 市场有效性的相关概念

- **Informationally efficient market** is a market in which asset prices reflect new information quickly and rationally
 - Passive investment strategy is preferred to active strategy due to lower costs
 - Prices react only to the “unexpected” information
 - In an efficient market, market prices accurately reflect intrinsic values
- Factors that affect market efficiency
 - Number of market participants
 - Information availability
 - Limits to trading will impede market efficiency
 - Transaction costs and information-acquisition costs

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12. 有效市场假说

- **Weak form efficient market**
 - Securities prices reflect all historical prices and trading volumes information
 - Investors can not consistently earn abnormal profit using technical analysis
- **Semi-strong form efficient market**
 - Securities prices accurately and quickly reflect all publicly information
 - Investors can not consistently earn abnormal profits using fundamental analysis
 - The semi-strong form encompasses the weak-form
- **Strong form efficient market hypothesis**
 - Securities prices fully reflect both public and private information
 - Insiders can't consistently earn abnormal returns from trading on private information
 - Strong form encompasses semi-strong and weak-form

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13. 市场异象

- **Market anomalies**, if persistent, are exceptions to the notion of market efficiency
 - In the wide-spread search for discovering profitable anomalies, many findings could simply be the product of a process called **data mining** (**data snooping**)

1. Time-series anomalies

① Calendar anomaly

- a) **January effect / turn-of-the-year effect**: stock returns in January are significantly higher compared to the rest of the months of the year
 - This maybe due to “**tax-loss selling**” and “**window dressing**”
- b) **Turn-of-the-month effect**: returns tend to be higher on the last trading day of month and the first three trading days of next month

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13. 市场异象

1. Time-series anomalies

① Calendar anomaly

- c) **Day-of-the-week effect**: the average Monday return is negative and lower than the average returns for the other four days
- d) **Weekend effect**: returns on weekends tend to be lower than returns on weekdays
- e) **Holiday effect**: returns on stocks in the day prior to market holidays tend to be higher than other days

② Momentum and overreaction anomalies

- **Momentum**: securities that have experienced high returns in the short term tend to continue to generate higher returns in subsequent periods
- **Overreaction effect**: stock prices will be inflated (depressed) for those companies releasing good (bad) information

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13. 市场异象

2. Cross-sectional anomalies

- **Size effect**: small-cap stocks tend to outperform on a risk-adjusted basis
- **Value effect**: value stocks, which are generally referred to as stocks with below-average P/E ratios and P/B ratios, have consistently outperformed growth stocks

3. Other anomalies

- **Closed-end fund discounts**: closed-end funds generally trade at a discount from their net asset value (NAV)
- **Earnings surprise**: slow adjustment of prices for unexpected earnings
- **Initial public offerings (IPOs)**: investors able to buy IPO shares at their offering prices may earn abnormal profits

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14. 行为金融学

- **Behavioral finance** attempts to explain why individuals make the decisions that they do, whether these decisions are **rational** or **irrational**
 - The behavior of individuals, in particular their **behavioral biases**, has been offered as a possible explanation for a number of pricing anomalies
- Market efficiency and asset-pricing models **do not require** that each individual is rational – rather, only that the market is rational
- **Loss aversion**: investors **dislike losses** more than they like comparable gains
- **Overconfidence**: investors place too much emphasis on their ability to process and interpret information about a security, which leads to mispricing
- **Representativeness**: investors assess new information and probabilities of outcomes based on similarity to the current state or to a familiar classification

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14. 行为金融学

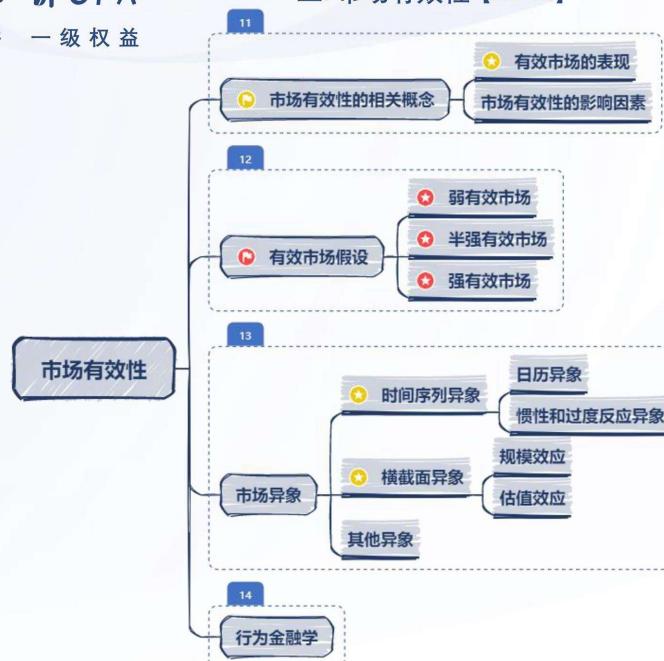
- **Information cascades**: transmission of information from those acting first and whose decisions influence others
 - If the informed traders act first and uninformed traders imitate the informed traders, this behavior is consistent with **rationality**
- **Herding behavior**: trading occurs in clusters and is not necessarily driven by information
- **Mental accounting**: investors keep track of the gains and losses for different investments in separate mental accounts and treat those accounts differently
- **Conservatism**: investors tend to be slow to react to new information and continue to maintain their prior views or forecasts
- **Narrow framing**: investors focus on issues in isolation and respond to the issues based on how the issues are posed

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三. 市场有效性【11-14】





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权益证券概述

16.1 普通股

- **Common shares** represent an ownership interest in a company, and the common shareholders have a **residual claim** on company's net assets in liquidation
- The payments of dividend are **not contractually obligation**
- Participate in the governance process through **voting rights**
 - **Statutory voting**: each share represents one vote
 - **Cumulative voting**: total voting rights are based on the number of shares owned multiplied by the number of board directors being elected
- **Proxy voting** allows a designated party to vote on the shareholders' behalf
- Companies can issue **different classes of common shares**, with each class offering different ownership rights
- **Callable common shares**: issuing company has the right to buy shares back
- **Putable common shares**: shareholder has the right to sell their shares back

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16.2 优先股

- **Preference shares** rank above common shares with respect to the **payment of dividends** and the **distribution of the company's net assets** upon liquidation
- Similar to **debt securities**
 - The dividends are fixed
 - Do not have voting rights
 - Do not share in the operating performance of the company
 - Can be callable or putable
- **Cumulative preference shares**: the unpaid dividends in the prior periods accrue over time
- **Participating preference shares** entitle the shareholders to receive the standard preferred dividend plus the opportunity to receive an additional dividend
- **Convertible preference shares** entitle shareholders to convert their shares into a specified number of common shares
 - Earn a **higher dividend**
 - **Less price volatility** than underlying common shares

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16.3 私募股权证券

- Characteristic of **private equity securities**
 - No active secondary markets ■ Less transparent than public securities
 - Greater ability to focus on long-term prospects because there is no public pressure for short-term results
 - Lower costs ■ Potentially greater return for investors once the firm goes public

16.4 存托凭证

- **Depository receipts (DRs)** represent ownership in a foreign company
 - The price of each DR is affected by factors affecting the price of underlying shares
- **Basket of listed depository receipts** is an exchange-traded fund that represents a portfolio of depository receipts

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16.4 存托凭证

- **Sponsored DR**: foreign company has a **direct involvement** in the issuance and investors have the **same rights** as the direct owners of the common shares
- **Unsponsored DR**: foreign company has **no involvement** with the issuance and investors have **right to receive dividends**, but **no voting rights**, which is held by the issuer of DRs
- **American depository receipts (ADRs)** is a US dollar-denominated security that trades like a common share on US exchange
- **Global depository receipts (GDRs)** are issued outside of the company's home country and **outside of the United States**

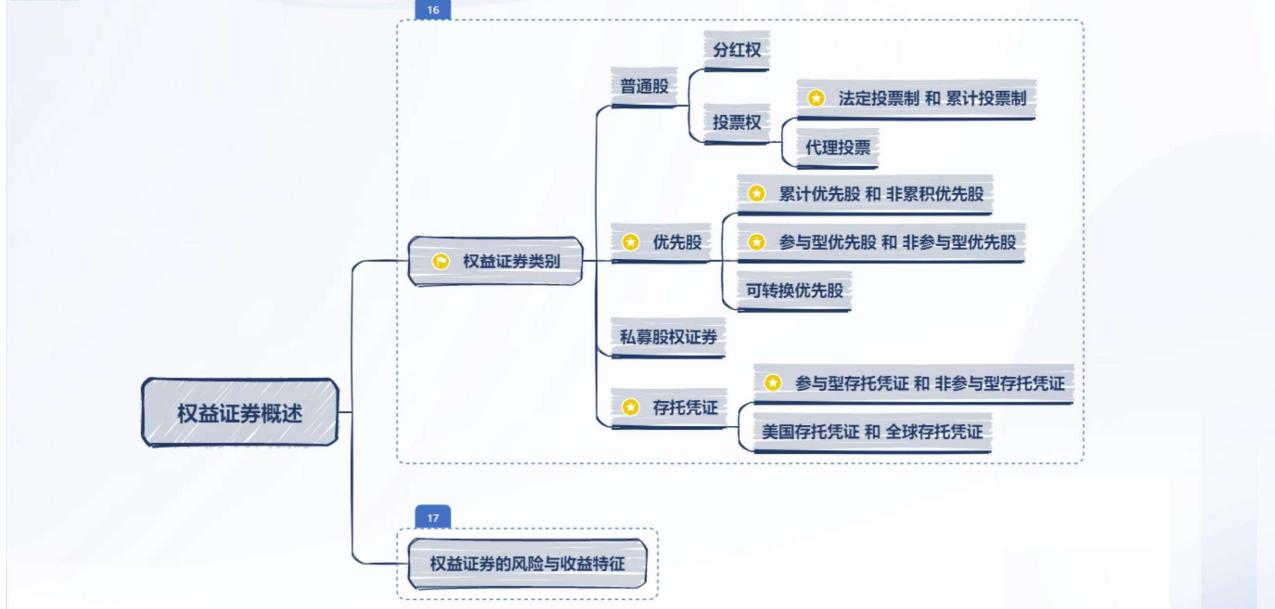
ADR	Level I	Level II	Level III	Rule 144A
Raising capital?	No		Yes	
Trading	OTC	Listed on exchanges	Private offerings	
Listing fees	Low	High	Low	
Size and earnings requirement	None	Yes	None	

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17. 权益证券的风险与收益特征

- Risk of investing on equity securities
 - Preference shares are **less risky** than common shares
 - Putable shares are **less risky** than callable or non-callable shares
 - Cumulative / participating preference shares are **less risky** than non-cumulative / non-participating preference shares
- **Return on equity (ROE)** is used by investors to determine whether the management is efficiently using the equity capital to generate profits
- The company's **cost of equity** is often used as a proxy for the investors' minimum required rate of return
- **Book value of equity** is the total assets minus total liabilities
Market value of equity is the stock trading price times number of shares outstanding
 - Book value and market value are **rarely equal**
 - Management actions can **directly affect the book value**, but they can only **indirectly affect the market value**

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行业与公司基本面分析

18. 公司研究报告

- Analysts demonstrate their **company and industry analysis**, along with their **valuation** and **investment recommendation**, in a **company research report**
 - A sell-side report often consists of **an extensive initial report**, followed by subsequent reports on specific topics or that make updates to a recommendation after the analyst receives new information or conducts additional analyses
- An **initial report**'s primary audience is those who are **not** already knowledgeable about the issuer or security
- **Subsequent reports** are often **shorter** than initial reports and report **quarterly financial results**, because their primary audience is those who are **already familiar** with the issuer or security and require an **update** based on **new information** and analyses or **a change in the analyst's recommendation**
 - The structure of a subsequent report depends on the **analyst's setting** and the **nature of the report**

19.1 业务模式

- A **business model** describes a company's operations
 - Determining the business model is the **first step** in our industry and company analysis framework because it summarizes **important drivers** of an issuer's financial results and position
- Information sources that analysts use
 - **Issuer sources** (available freely if the company is public)
 - **Proprietary third-party sources**
 - **Public third-party sources**
 - **Proprietary primary research**

19.2 收入分析

- Analysts can take a **bottom-up** or **top-down approach** to determining **revenue drivers**, and the two approaches are often **used together**
 - A bottom-up approach decomposes revenues into drivers such as sales volume and price, or revenues by product line, segment, or geography
 - A top-down approach expresses revenues as a function of drivers such as market share, the addressable market or market size, and GDP growth

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19.3 收入分析

- **Pricing power** is a company's ability to **set prices** and other economic terms **without affecting its sales volumes**, and it is primarily a function of both **market structure** and a company's **competitive positioning** in its market
- In the **most competitive markets**, commoditization
 - where firms are selling nearly identical products, firms are **price taker**
 - Little to no product differentiation
 - Low barriers to firm entry
 - Available substitutes
 - A lack of customer loyalty
 - Low switching costs for customers
 - Firms operating in **less competitive markets** tend to have **some degree of pricing power**
 - Product differentiation
 - Barriers to entry
 - Lack of economical substitutes
 - Switching costs for customers
 - A high degree of customer loyalty or retention
- Analysts evaluate pricing power not just by examining a firm's prices over time or relative to competitors, but also by **comparing a firm's prices with its costs**—in other words, its **profit margins**

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20.1 费用类型

- **Operating costs:** all costs related to the acquisition, production, sale, improvement, and delivery of **goods and services**; the management of business activities; and compliance with laws and regulations
 1. By their behavior with output: **variable costs** and **fixed costs**
 2. By their **nature**: what the cost is
 - Compensation of employees, raw materials, merchandise and office supplies
 3. By their **function**: the purpose of the cost
 - COGS, SG&A, R&D
- **Investing costs** are related to the acquisition and production of **long-term assets**, include tangible and intangible assets
- **Financing costs** include **payments to debt and equity investors**

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20.2 规模经济和范围经济

- **Economies of scale** refer to a decline in costs per unit as output grows and generally result from having fixed costs in the cost structure that are spread over more units of output
 - A company with entirely variable costs can also exhibit some economies of scale over time if it increases its bargaining power over suppliers, driving down variable costs per unit
- **Economies of scope** refer to a decline in costs per unit as the number of product or business lines increases and result from shared costs between the product lines
 - Economies of scope result in large global firms competing in many lines of business

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20.3 营运资本分析

- The primary measures of a company's **working capital management** are activity ratios that determine its **cash conversion cycle** and the **ratio of net working capital to sales**
 - A short cash conversion cycle means that the company requires less external financing to fund operations
 - Negative net working capital means that **suppliers** are a source of financing

21.1 公司资金来源与用途

- | | |
|---|--|
| <ul style="list-style-type: none"> □ Company's sources of capital <ul style="list-style-type: none"> ■ Cash flow from operations, including net working capital (if negative) ■ Debt issuance ■ Equity issuance ■ Asset disposals | <ul style="list-style-type: none"> □ Company's uses of capital <ul style="list-style-type: none"> ■ Cash and investments on hand ■ Net working capital (if positive) ■ Capital expenditures and additions to intangibles ■ Acquisitions ■ Debt paydown ■ Dividends and share repurchases |
|---|--|

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21.2 评估资本回报

- Returns on invested capital over the longer run, compared with **investors' required rates of return**, can be used to evaluate whether management has used investors' capital wisely
- Unlevered returns, as measured by **ROIC** or **return on assets**, are augmented by financial leverage to produce **levered returns**
 - **Return on equity** and its decomposition can be used as a comprehensive measure of profitability for a company
 - ◆ **ROE = net margin × asset turnover ratio × equity multiplier**

22.1 经营利润

和净利润

Sales	= P×Q
- Total Variable Cost	- V×Q
= Q × Contribution Margin	= Q×(P-V)
- Fixed Operating Cost	- F
= Operating Income	= Q×(P-V) - F
- Fixed Financing Cost	- Int
= Net Income <small>(Assume NO Tax)</small>	= Q×(P-V) - F - Int

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22.2 经营杠杆和经营杠杆系数

- **Operating risk** shows the sensitivity of operating income to changes in unit sold
 - It is the risk attributed to the **use of fixed cost** in operation: the **greater the fixed operating costs** relative to variable operating costs, the **greater operating risk**
- **Operating leverage** is created by **fixed operating cost**
 - Definition of **leverage**: a given change in one variable **leads to a greater change** in other variable because of fixed cost
 - **Degree of operating leverage (DOL)**
 - ◆ $DOL = \% \Delta EBIT / \% \Delta Q = (\Delta EBIT / EBIT) / (\Delta Q / Q)$
 - ◆ $DOL = [Q \times (P - V)] / [Q \times (P - V) - F] = (EBIT + F) / EBIT$

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22.3 财务杠杆和财务杠杆系数

- **Financial risk** is the risk associated with how a company finances its operations
 - The **more fixed-cost financial obligations**, the **greater the financial risk**
- **Financial leverage** is created by **fixed financial cost**
- **Degree of financial leverage (DFL)** measures the sensitivity of **net income** to changes in **operating income**, and risks related to the capital structure can be measured using DFL
 - ◆ $DFL = \% \Delta NI / \% \Delta EBIT = (\Delta NI / NI) / (\Delta EBIT / EBIT)$
 - ◆ $DFL = [Q \times (P - V) - F] / [Q \times (P - V) - F - I] = EBIT / (EBIT - I)$

22.4 总杠杆和总杠杆系数

- **Degree of total leverage (DTL)** measures sensitivity of **net income** to changes in **units sold**
 - ◆ $DTL = DFL \times DOL = (\% \Delta NI / \% \Delta EBIT) \times (\% \Delta EBIT / \% \Delta Q) = \% \Delta NI / \% \Delta Q$
 - ◆ $DTL = [Q \times (P - V)] / [Q \times (P - V) - F - I] = (EBIT + F) / (EBIT - I)$

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23. 行业分析的作用

- Why analyze an industry
 - Different industry structural factors result in **profitability differences by industry**
 - Industry was the **most important factor** in the sustainability of economic profits
 - Importantly, the **company-specific effects** were much **larger for low performers** than for high performers in an industry, suggesting that industry and competitive forces can act as a **ceiling** on a company's returns but not as a floor
 - Industry and competitive analysis is used to estimate that **base rate** and its determinants
 - Competition "pulls" company profitability to an industry base rate over time
 - By taking an industry perspective and better understanding competitive forces, analysts can **sharpen their forecasts**
 - Industry analysis may **identify an attractive investment candidate** that an analyst was previously unaware of

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24.1 行业分类

Third-party industry classification schemes

1. **Government schemes** were the early third-party industry classification schemes, and were grouped companies by their production characteristics into industries
 - The schemes were **not updated frequently** and became **less useful** as new technologies and business models emerged
2. **Commercial schemes** are **largely used** by analysts, such as the **Global Industry Classification Standard (GICS)**, **Industry Classification Benchmark (ICB)**, and **Refinitiv Business Classification (TRBC)**
 - These schemes are **global**, reviewed and updated **at least annually**, and group companies by **the similarity of the products or services they sell or provide**
 - GICS and ICB cover **public companies**, while TRBC also covers **private companies, non-profits, and government entities**
 - GICS, ICB, and TRBC are strictly **hierarchical taxonomies**:
sub-industries → industry → industry groups → sectors

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24.1 行业分类

Alternative methods of grouping companies

- **Geography**, in which companies are classified by countries such as developed, emerging, and frontier markets
- **Classification by country**, typically by the country where the issuer is incorporated, the country of the primary listing of its equity securities, the location of its headquarters, or market perception
- **Sensitivity to the business cycle**, with groupings such as "**defensive**" and "**cyclical**"
- **Statistical similarities**, group companies based on similarities of financial ratios and market data or co-movements of their securities' investment returns
- **ESG characteristics**

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24.2 行业调查

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) rates** each year or as a **compounded annual growth rate** over a multi-year period

Characterizing industry growth

- Industry growth rate: 1) **growth industries** have idiosyncratic growth drivers **separate from broader economic** 2) **mature industries** have growth rates either **in line with broader economic activity** or **declining** as customer demand migrates to a substitute
- Sensitivity to the business cycle is driven by the **business models** of companies in an industry and **correlates with industry maturity**
 - Factors that determine sensitivity include: the degree to which sales are **discretionary** or **necessary** / **prices** / **interest rate exposure** of the business model / whether the product is a **durable** or **capital good** versus a **recurring purchase** such as **consumables**

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24.2 行业调查

□ Industry profitability measures

- The best measure of industry profitability is a time series of the distribution of returns on invested capital
- Unless the industry is dominated by public companies, obtaining these data is seldom feasible, and two common methods to overcome this challenge:
 1. Assume the profitability of private competitors is similar to that of public companies
 2. Estimate the profitability of private companies or obtain data from government agency or third-party consultancy

□ Market share trends and major players

- Market shares should be interpreted as a range rather than a definitive point estimate
 - Market share trends can reveal whether customers have judged the company's products superior to competitors'
- Rising concentration (consolidation) is associated with falling competitive intensity and higher profitability ◆ Herfindahl-Hirschman Index (HHI) = $\sum S_i^2$

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24.3 行业结构分析：波特“五力”模型

- Porter's Five Forces is a framework for assessing industry structure that determines an industry's long-run profitability
 - 1. Rivalry among existing competitors
 - 2. Threat of new entrants
 - 3. Threat of substitutes
 - 4. Bargaining power of suppliers
 - 5. Bargaining power of buyers

24.4 外部影响分析：“PESTLE”模型

- One framework to look outside the industry is a PESTLE analysis of the political, economic, social, technological, legal, and environmental influences on an industry
 - While Porter's Five Forces is concerned with the determinants of industry profitability, a PESTLE analysis is more concerned with an industry's growth rate and market share dynamics

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25. 公司竞争策略分析

□ Cost leadership

- Economies of scale from fixed costs / favorable access to raw materials / culture of strict cost control / aggressive pricing to gain high volume / low-cost distribution / economies of scope
- Risks to the strategy:
 - Cost inflation, loss of discipline • Desire for premiumization among customers
 - Technological change that results in loss of cost leadership or market share

□ Differentiation

- Investments in advertising, brand, customer service, proprietary distribution channels / protection using trademarks, copyright, patents / superior quality, unique features / culture of strong customer experience / premium pricing / integration of services, software, hardware
- Risks to the strategy:
 - Imitation by competitors • Pricing premium becomes too high for customers to bear
 - Buyers become sophisticated • May preclude high market share

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25. 公司竞争策略分析

□ Focus

- 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
- Risks to the strategy:
 - The differences in demand between the groups narrow
 - Larger competitors outcompete on price
 - Buyers become sophisticated

26. 1 公司财务预测的对象

- Drivers of financial statement lines: forecasting drivers rather than financial statement lines outright has the benefit of improved explanatory value and may improve accuracy
- Individual financial statement lines: analysts can also directly forecast individual financial statement lines without clear drivers, for less-material items
- Summary measures: efficiency [benefit] and less transparency [disadvantage]
- Ad hoc objects: may not yet be reported on historical financial statements

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26. 2 公司财务预测的方法

1. Historical results: assume past is precedent

- May be appropriate for companies operating in industries where the analyst does not expect the industry structure to change, as well as for companies with a low sensitivity to the business cycle
- Also used for objects that are not material or that the analyst does not hold an opinion on
- An “over the cycle” average or median may be appropriate for a multi-year forecast for a cyclical company

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26. 2 公司财务预测的方法

2. Historical base rates and convergence

- Use an industry or peer group average or median, computed over a long period of time, as a “base rate” for an object will converge to over some time frame
- May be appropriate: 1) for companies in well-established industries with many publicly traded peers, 2) for smaller companies that are “maturing into” a financial profile similar to that of larger peers
- May not be appropriate: 1) for companies in changing or new industries for which calculating a base rate is difficult or less relevant, 2) for companies in highly cyclical industries for which a longer-term base rate would obscure, 3) for companies that are industry leaders by a wide margin and account for a substantial proportion of any industry base rate

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26.2 公司财务预测的方法

3. Management guidance

- Management may provide targets for future earnings, revenues, and other measures, known as management guidance which is often **provided as a range** and embeds many **sub-forecasts** and **assumptions** by management
- Appropriate when **it is provided** and when management has demonstrated a track record of reliable estimates

4. Analyst's discretionary forecast

- Most common for: companies in cyclical industries / companies that have no or few comparable / companies do not provide management guidance / companies undergoing a fundamental change like a shift in the competitive or regulatory environment

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27.1 对销售收入的预测

- **Top-down forecast** objects
 - Growth relative to GDP growth
 - Market growth and market share
- **Non-recurring items and effects** should **be excluded** from a forecast object and **considered separately**
- Risk factors to consider for all companies are **competition, changes in the business cycle, inflation and deflation, and technological developments**

□ Bottom-up forecast objects

- Volumes and average selling prices
- Product-line or segment revenues
- Capacity-based measures
- Return or yield-based measures

27.2 对经营费用和营运资本的预测

- A good approach to forecast **cost of sales** is through **gross margin**
 - Analysts should incorporate a company's **hedging strategy** into a forecast: through hedging strategies, a company can mitigate the impact on profitability
 - Margins may not be comparable given differences in **business models**

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27.2 对经营费用和营运资本的预测

- Some **SG&A expenses** often have a **less direct relationship** with revenues
 - Certain SG&A expenses could be more variable than others
 - Specifically, selling and distribution expenses often have a large **variable component** and can be modeled as a **percentage of sales**
- **Working capital** forecasts are typically made by using **efficiency ratios** as the forecast object

27.3 对资本投资和资本结构的预测

- **Capital expenditures**: maintenance capital expenditures (sustain current business) and growth capital expenditures (expand business)
 - **Maintenance capital expenditure** forecasts: often based on **historical depreciation** and amortization expenses, usually with a small adjustment upward to **account for inflation**
 - **Growth capital expenditure** forecasts: more **discretionary**, tied to management's expansion plans and revenue growth

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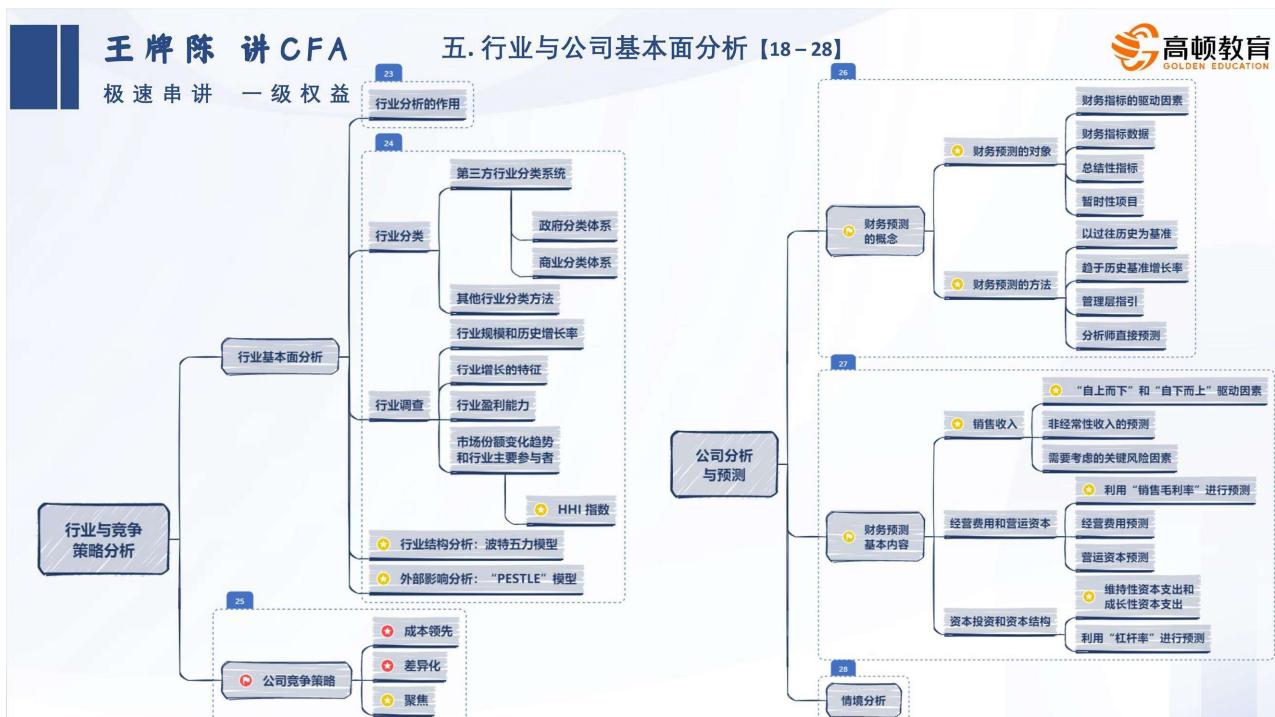
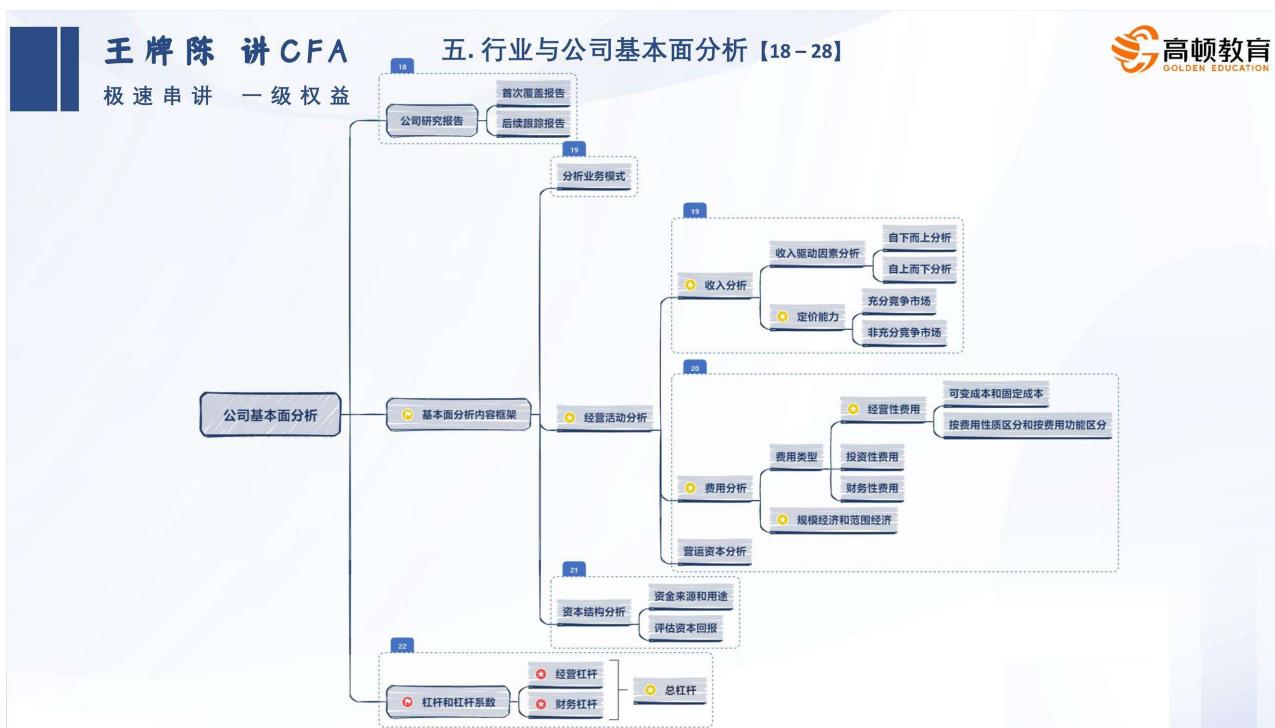
27.3 对资本投资和资本结构的预测

- Leverage ratios — such as debt to capital, debt to equity, and debt to EBITDA — are often used as the forecast object to project future debt and equity levels
- Analysts should consider historical company practice, management's financial strategy, and the capital requirements implied by the capital expenditure assumptions when projecting the future capital structure

28. 财务预测中的情境分析

- The final step in forecasting involves incorporating the possibility of different outcomes based on key risk factors as well as judging their likelihood of occurrence
 - Generic risk factors include changes in the business cycle, competition, inflation and deflation, and technological developments

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权益估值基础

29. 估值模型的选择

1. Present value models, discounted cash flow models, DCF

- ① Dividend discount model, DDM
- ② Free-cash-flow models
 - I. Free-cash-flow-to-equity model, FCFE
 - II. Free-cash-flow-to-firm model, FCFF
- ③ Residual income model

2. Multiplier models, market multiple models

- ① Stock price multiple models: P/E ratio, P/B ratio, P/S ratio, P/CF ratio
- ② Enterprise value multiple model

3. Asset-based valuation model

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30. 1 股利的相关概念

- A **cash dividend** is a distribution of cash to shareholders
 - **Special/extra dividend:** dividend that is not regularly paid to shareholders or as a supplement to **regular cash dividend**
 - Cash dividend payment chronology
 1. Declaration date
 2. **Ex-dividend date (ex-date)** is the first date that a share trades without the dividend
 3. **Holder-of-record date** is the date that a shareholder listed in the corporation's records will be deemed to have ownership of the shares for purposes of receiving the upcoming dividend, and it is typically **one or two business days** after the ex-dividend date
 4. Payment date
 - Share repurchase can be viewed equivalent to cash dividends
- A **stock dividend** is a distribution of additional shares
 - **Stock split and reverse stock split**

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30.2 股利折现模型

$$\text{◆ } V_0 = \sum_{i=1}^{+\infty} \frac{D_i}{(1+r)^i} \quad \text{◆ } V_0 = \frac{D_1}{(1+r)^1} + \frac{D_2}{(1+r)^2} + \dots + \frac{D_n}{(1+r)^n} + \frac{P_n}{(1+r)^n}$$

□ Gordon Growth Model

$$\text{◆ } V_0 = \frac{D_1}{r-g} \quad g = \text{retention rate} \times \text{ROE} = (1 - \text{dividend payout ratio}) \times \text{ROE}$$

■ Assumptions of the Gordon Growth Model

- The dividend growth rate is **forever** and **never change**
- The dividend growth rate is **less than** the required rate of return

□ Two-stage DDM model assumes the company experiences a finite period of high growth,

followed by an infinite period of sustainable growth

$$\text{◆ } V_0 = \sum_{i=1}^n \frac{D_0 \times (1+g_h)^i}{(1+r)^i} + \frac{V_n}{(1+r)^n} = \sum_{i=1}^n \frac{D_0 \times (1+g_h)^i}{(1+r)^i} + \frac{\frac{D_{n+1}}{r-g_s}}{(1+r)^n}$$

□ Preferred stock valuation

$$\text{◆ } V_0 = D / r$$

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31. 自由现金流模型

- The intrinsic value is the present value of the **expected Free cash flow to equity (FCFE)**
 - FCFE is a measure of **dividend-paying capacity**
 - FCFE model is appropriate for a **non-dividend-paying stock**
- $V_0 = \sum_{t=1}^{\infty} \frac{FCFE_t}{(1+r)^t}$

32. 股票价格乘数模型

- Price multiple** compares the share price with some sort of monetary flow or value
 - Choices for the benchmark include: the multiple of a closely similar stock, average or median value of the multiple for the industry
- P/E, P/B, P/S, P/CF**
- Trailing price multiples** use trailing or **current values of the divisor** (P_0 / E_0)
Leading price multiples use leading or **forward values of the divisor** (P_0 / E_1)

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32. 股票价格乘数模型

- Price multiples based on fundamentals**
 - The P/E ratio is **inversely related** to the required rate of return
 - The P/E ratio is **positively related** to the growth rate
 - The relationship between P/E and **payout ratio** is **ambiguous**
- Advantages of price multiples**
 - Allow for relative comparisons, both cross-sectional and in time-series
 - Price multiples are popular among investors
- Disadvantages of price multiples**
 - May generate a contradictory conclusion with those of the discounted cash flow methods
 - Differences in accounting standards and methods can result in multiples not easily comparable
 - The multiples for cyclical companies maybe highly influenced by current economic conditions

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33. 企业价值乘数模型

- Enterprise value multiple = enterprise value / EBITDA
 - ◆ Enterprise value = market value of common stock
 - + market value of preferred stock + market value of debt – cash and cash equivalents
- Enterprise value is often viewed as the cost of a takeover
- It is useful when comparing companies with significant differences in capital structure

34. 基于资产的估值模型

- ◆ Market value of equity = market value of assets – market value of liabilities

Appropriate	Inappropriate
<ul style="list-style-type: none"> • Primarily tangible short-term assets • Assets with ready market values • Firms are held privately • Firms cease to operate and are being liquidated 	<ul style="list-style-type: none"> • Assets that do not have easily determinable market values • Fair values of assets and liability can be very different from their book values • It may underestimate company value with a "floor" value • Hyper-inflationary environment

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