

➤ Importance: ☆☆

Content:

- Accounting for barter transactions, gross and net reporting of revenue.
- Implications of expense recognition choices for financial analysis.
- financial reporting treatment and analysis of changes in accounting policies.

Exam tips:

- 辨析易货交易,了解收入确认的原则。
- 了解费用确认的原则,以及一些分析运用。(费用确认主要在下一个 SESSION中提到,此处只是简单介绍。)

Basic EPS & Dilutive EPS



Tasks:

- Describe how earnings per share is calculated.
- Distinguish between dilutive and antidilutive securities, and describe the implications of each for the earnings per share calculation.

Earnings per share



EPS is the most commonly used corporate profitability performance measures for publicly-traded firms.

- Basic EPS
- Dilutive EPS

A *simple capital structure* contains no potentially dilutive securities.

> Firm reports only basic EPS.

A *complex capital structure* contains potentially dilutive securities.

> Firm must report both basic and dilutive EPS.





Basic EPS = NI - Div preferred stock

Weighted average number of common shares outstanding

Weighted average number of common share outstanding

- New issue, repurchase is weighted by time (days or months)
- Stock dividend/split is not weighted by time, instead it should adjust the number of common share which exist before the stock dividend or split. (Eg: 3-for-2 split: two shares split to three shares)



Dilutive vs. Antidilutive Securities

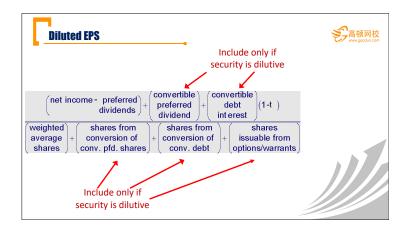


Dilutive securities <u>decrease EPS</u> if exercised or converted to new common stock

- Stock options
- Warrants
- Convertible debt
- Convertible preferred stock

Anti-dilutive securities increase EPS if exercised or converted

to new common stock (Not report Anti-dilutive EPS)



EPS with Warrants/ Stock options



Treasury stock method for options and warrants

- Funds received from the exercise of the options would be used to hypothetically repurchase shares in the market at the average market price.
- The net increase in the number of shares: Exercising the options less the number of shares hypothetically repurchased.

Checking for Dilution



Only those securities that would *reduce EPS* below basic EPS if converted are used in the calculation of diluted EPS.

- > Conv. pfd: is dividends/new shares < basic?
- Conv. debt: is interest (1 t)/new shares < basic?</p>
- > Options and warrants: is avg. price > ex. price?
- If the answer is yes, the security is dilutive



➤ Importance: ☆☆☆

Content:

- · Calculation of basic EPS and dilutive EPS.
- Know about dilutive and antidilutive securities, and describe the implications of each for the earnings per share calculation.

Exam tips:

- · 计算基本和摊薄后EPS。(必出计算题!)
- 会计算复杂资本结构中EPS。(须掌握三种复杂资本结构下EPS的计算、判断是稀释还是反稀释证券。)

Common size income statement and comprehensive income

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Tasks:

- Convert income statements to common-size income statements.
- Describe, calculate, and interpret comprehensive income.

Common-Size Income Statement



- Expresses each income statement item as a percentage of sales.
- Used to analyze changes in cost structure and profitability.

Income statement item	2012	2013	Industry Avg
cogs	58%	63%	60%
SG&A	19%	24%	20%
Net income	8%	12%	10%

Comprehensive Income



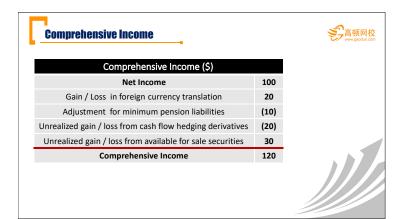
Retained earnings

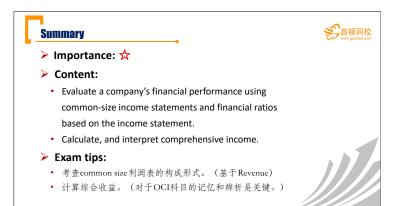
- The net income of the firm is added to stockholders' equity through an account known as retained earnings.
- Any transaction that affects the income statement (net income) will also affect stockholders' equity.

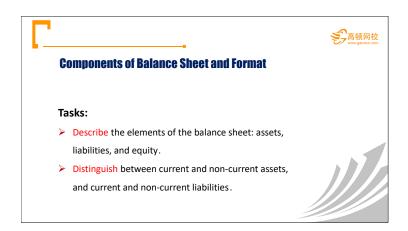
Other comprehensive income

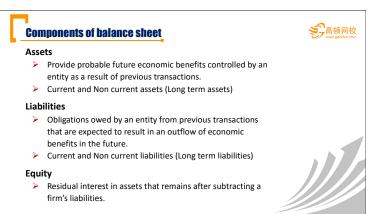
- Foreign currency translation gains and losses.
- Adjustments for minimum pension liability. (DB plan)
- Unrealized gains and losses from cash flow hedging derivatives.
- Unrealized gains and losses from available-for-sale securities.
- Valuation Surplus for long-lived asset (IFRS only)

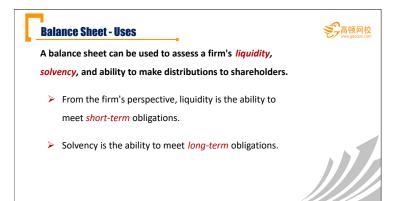


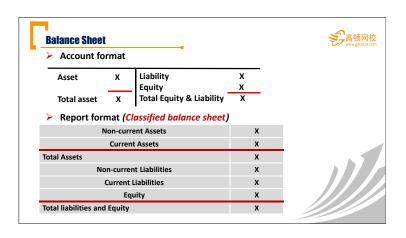


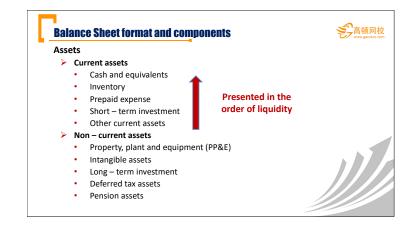


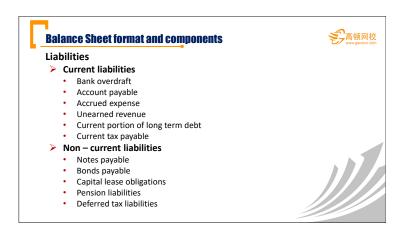












Balance Sheet format and components



Equity

- Capital
- Common stock
- · Preferred stock
- Additional paid-in-capital
- Capital in excess of par.
- > Treasury stock (No voting right, no dividend)
 - · Stock repurchased by the firm but not yet retired.
- Retained earnings (Net income Dividend)
- Other comprehensive income
 - · Foreign currency translation gain and loss.
 - · Adjustments for minimum pension liability.
 - Unrealized gain and loss from cash flow hedging derivatives.
 - Unrealized gain and loss from available-for-sale securities.
- Minority interest

Summary



- ➤ Importance: ☆
- Content:
- Elements of the balance sheet: assets, liabilities, and equity.
- · Classified Balance Sheet.
- > Exam tips:
 - 了解构成资产负债表的会计元素。 (辨析短期还是长期)



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Financial Assets and Common Size Balance Sheet

Tasks:

- Describe different types of assets and liabilities and the measurement bases of each.
- Describe different types of financial assets.
- Describe common size Balance Sheet.

Measurement of financial elements



Historical cost

> The amount originally paid for the asset.

Amortized cost

Historical cost adjusted for depreciation, amortization, and impairment.

Current cost

The amount the firm would have to pay today for the same asset.



Measurement of financial elements



Realizable value

> The amount for which the firm could sell the asset.

Present value

The discounted value of the asset's expected future cash flows.

Fair value

The amount at which two parties in an arm's-length transaction would exchange the asset. (Willingness, Knowledgeable, Unrelated)



Held-to-maturity

- Amortized cost
- Unrealized G/L: not reported
- > Realized G/L: reported in income statement

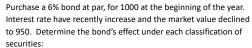
Trading securities

- Fair value
- Unrealized G/L: reported in income statement
- > Realized: G/L: reported in income statement

Available-for-sale securities

- > Fair value
- Unrealized G/L: reported in equity (OCI)
- Realized G/L: reported in income statement

Financial assets



> HTM:

B/S: Financial Asset 1000 I/S: Interest Income 60

> Trading:

B/S: Financial Asset 950

I/S: Interest Income 60 and Unrealized Loss 50

> AF

B/S:Financial Asset 950 and OCI (Equity) 50 I/S:Interest Income 60





► Importance: ☆☆☆

Content:

- Measurement base of B/S and financial assets.
- · Common Size Balance Sheet.

Exam tips:

- · 了解资产负债表中各类measurement base, 理解资产负债表
- 金融资产记账方法 (考查重点)
- · 记忆Common Size 形式的资产负债表的记账方法。





Cash Flow Classification under GAAP and IFRS

Tasks:

- Compare cash flows from operating, investing, and financing activities and classify cash flow items .
- Contrast cash flow statements prepared under GAAP and IFRS.



Cash flow statement



- > Information about a company's cash receipts and cash payments during an accounting period.
- Items on the cash flow statement come from two sources
 - Income statement items
 - Changes in balance sheet accounts

Operating cash flow

- + Investing cash flow
- + Financing cash flow
- = Change in cash balance for the current year
- + Beginning cash balance
- = Ending cash balance



Cash flow statement



Cash flow from operating activities (CFO)

Consists of the inflows and outflows of cash resulting from transactions that affect a firm's net income.

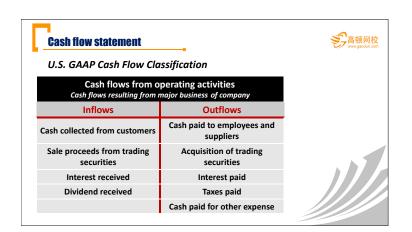
Cash flow from investing activities (CFI)

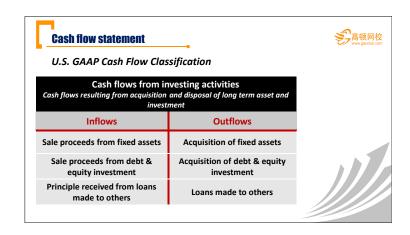
Consists of the inflows and outflows of cash resulting from the acquisition or disposal of long-term assets and certain investments.

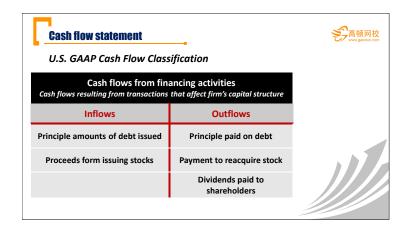
Cash flow from financing activities (CFF)

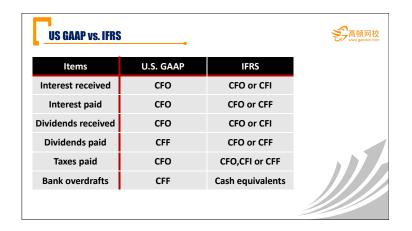
Consists of the inflows and outflows of cash resulting from transactions affecting a firm's capital structure.













➤ Importance: ☆☆☆

Content:

- · Inflows and outflows of CFO, CFI and CFF.
- Cash flow statements prepared under International Financial Reporting Standards (IFRS) and US generally accepted accounting principles (US GAAP).

Exam tips:

- 辨析各种类型的现金流。
- 辨析现金流分类在美国和国际准则间的差异。

Direct & Indirect Method for Calculating CFO

Tasks:

- Distinguish between the direct and indirect methods of presenting cash from operating activities.
- ➤ Describe the steps in the preparation of direct and indirect cash flow statements.



Direct vs. Indirect Method



Direct vs. indirect method refers only to the calculation of CFO, the value of CFO is the same for both methods; CFI and CFF are unaffected.

- Direct method: begin at the top of the income statement and identify cash inflows and outflows.
- Indirect method: begin at the bottom of the income statement with net income and make necessary adjustments.

Disclosure

 US GAAP and IFRS: Encourage direct method, but permits Indirect method.

Calculation the Cash Flow



Basic Setting

Cash inflow + Cash outflow –

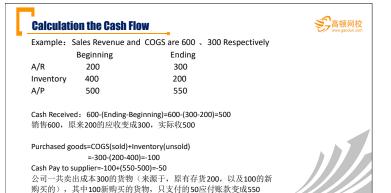
 $Asset = Liability + Equity \Rightarrow$ $\Delta Cash = \Delta Liability + \Delta Equity - \Delta NonCash Asset$

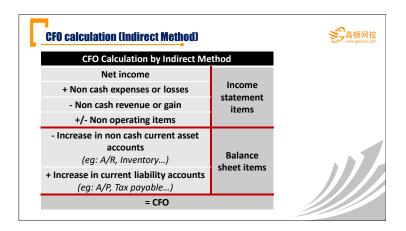
Cash is positively related to the Liability and Equity

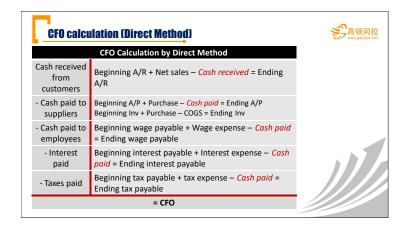
Cash is negatively related to the Non-cash Asset

(Eg: Inventory \ A/R)

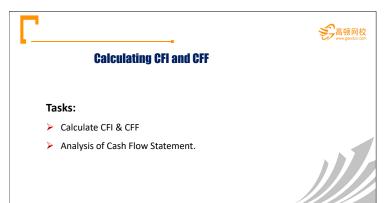












CFI calculation



Cash used in purchase of fixed assets:

- ➢ Book Value = Carrying value = Purchase cost − AD
- ➤ BV end = BV Begin + Purchase Disposal BV Depreciation
- Original value end=Original Value Beg + Purchase-Disposal

Proceeds received from sale of fixed assets:

Gain or loss = proceeds received(Cash) - disposal NBV

CFI calculation-Example

The Company sold a machine. Income statement shows 1 million gain from selling old machine and 4 million depreciation cost. The balance sheet shows:

 2012
 2013

 Machine Original cost
 12
 18

 Accumulated Depreciation
 (5)
 (7)

During the year, company pay 10million for new machine. How much cash did the company received from selling the old one?

Gain=Cash Received-Book Value(Old machine) Original value of old machine: 12+10-18=4 Depreciation of old machine: 5+4-7=2 The book value of old machine: 4-2=2

Cash received from selling the old machine:1+2=3million

CFF calculation



Review long-term debt and stock

Increases supply cash and decreases use cash.

Dividend paid

- ightharpoonup Dividend paid = Dividend declared + Δ dividend payables
- Opening R/E + Net Income Dividend declared = Ending R/E



CFF calculation

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The company's Income statement shows: Net Income 1000

Balance sheet shows:

Beginning Retained Earning

2012 2013 500 1000 300 200

Dividend Payable

Cash dividend paid?

Dividend declared: 500+1000-1000=500 Cash dividend paid: -500+(200-300)=-600

Analysis of cash flow statement



Benefits for the analyst

- Do regular operations generate enough cash to sustain the business.
- > Is enough cash is generated to pay off maturing debt.
- Highlights the need for additional finance.
- > Ability to meet unexpected obligations.
- The flexibility to take advantage of new business opportunities.

Analysis of cash flow statement



Examine the major sources and uses of cash

- Operating Cash Flow
 - A check of the quality of a firm's earnings.
- Investing Cash Flow
 - Increasing capital expenditures, a use of cash, is usually an indication of growth.
- Financing Cash Flow
 - Whether the firm is generating cash flow by issuing debt or equity.
 - Whether the firm is using cash to repay debt, reacquire stock, or pay dividends.





- ➤ Importance: ☆☆
- Content:
 - Calculate CFI and CFF.
 - · Analysis of Cash Flow Statement.
- > Exam tips:
- 计算投资性和融资性现金流(考查计算)。
- 辨析分析师如何基于现金流量表得到结论。



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Common size cash flow statement and Free Cash Flow

Tasks:

- Analyze and interpret both reported and commonsize cash flow statements.
- Calculate and interpret free cash flow to the firm, free cash flow to equity.

Common Size cash flow statement



> Show each item as a % of Net Revenue

Cash flow statement account

Revenue

Show each inflow as a % of total inflows; Show each outflow as a % of total outflows

Cash inflow

Cash outflow

Total cash inflows Total cash outflows

Free Cash Flow



Free cash flow attempts to measure the cash available for discretionary purposes.

Two common measure:

- Free cash flow to firm (FCFF)
 - Cash available to all investors, both equity owners and debt holders.
- Free cash flow to equity (FCFE)
 - · Cash available to equity owners.

Free Cash Flow



FCFF = NI + NCC - WC Inv - FC Inv +[Int * (1 - tax rate)]

FCFF = CFO - FC Inv +[Int * (1 - tax rate)]

FCFE = CFO - FC Inv + Net borrowing(Debt)

NI = net income

NCC = noncash charges (depreciation and amortization)

Int = interest expense

FCInv = fixed capital investment (net capital expenditure)

WCInv = working capital investment

Net borrowing = debt issued - debt repaid



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Content:

- · Common-size cash flow statements.
- Free cash flow to the firm, free cash flow to equity.

Exam tips:

- 转化common size cash flow statement。
- 计算两种自由现金流。(公司和股东)

Ratio and Ratio Analysis



Tasks:

- Classify, calculate, and interpret activity, liquidity, solvency, profitability, and valuation ratios.
- Describe relationships among ratios and evaluate a company using ratio analysis.

Common – size analysis



Income statement account / Revenues

Common - size B/S

Balance sheet account / Total assets

Common - size CFS

- > 1)Cash flow statement account / Revenue
- 2)Cash outflow / total cash outflows
 Cash inflow / total cash inflows



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Ratio and Ratio analysis

Categories of ratios

- Profitability ratio
 - · Ability to generate profit.
- Activity ratio
 - · Efficiency in using assets to generate revenue.
- Liquidity ratio
 - Ability to pay short term debt.
- > Solvency ratio
 - · Ability to pay long term debt.
- > Valuation ratio
 - · Analysis for investment in common equity.



Profitability Ratios



Profit / Net revenue

- Gross profit margin = Gross profit / Net revenue
- Operating profit margin = EBIT / Net revenue
- Pretax margin = EBT / Net revenue
- Net profit margin = Net income / Net revenue

Profit / Capital

- Return on asset (ROA) = [NI + Int(1-t)] / Average total assets
- Operating return on assets = EBIT / Average total assets
- > Return on equity (ROE) = NI / Average total equity

Activity Ratios



Important activity ratios

- > Total asset turnover = Net revenue / Average total assets
- Fixed asset turnover = Net revenue / Average net fixed assets
- Inventory turnover = COGS / Average inventory
- Working capital turnover = Net revenue / Average WC
 - · Working capital = Current assets Current liabilities

高顿网校 **Operating Cycle & Cash Conversion Cycle** Account receivable Inventory Account payable Inventory turnover Receivable turnover = Payable turnover = = COGS / average Net revenue / average Purchase / average inventory A/R Average inventory Average receivable Average payment processing period collection period = 365 / period = **365** / = 365 / Inventory Receivable turnover Payable turnover turnover Operating cycle = Collection period + Inventory period Cash conversion cycle = Collection period + Inventory period -**Payment period**

Liquidity Ratios



A firm's ability to pay short - term debt

- Current Ratio = Current assets / Current liabilities
- Quick Ratio = (Cash + Marketable security + Receivable) / Current liabilities
 - = (Current assets Inventories) / Current liabilities
- Cash Ratio = (Cash + Marketable security) / Current liabilities
 - = (Current assets Inventories Receivables) /
 Current liabilities
- Defensive interval = (Cash + Marketable security + Receivable) / average daily expenditures

Solvency Ratios



A firm's ability to pay long - term debt

- Debt-to-equity ratio = D / E
- Debt-to-capital= D / (D+ E)
- Debt-to-assets = D / A
- Financial leverage = A / E

Coverage ratio

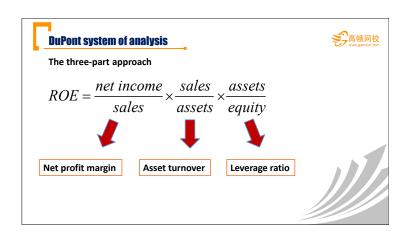
- Interest coverage = EBIT / Interest
- Fixed charge coverage
 - = (EBIT + lease payments) / (Interest + lease payments)

Summary



- ➤ Importance: ☆☆☆
- Content:
- · Common-size method for analysis.
- Activity, liquidity, solvency, profitability, and valuation ratios.
- Exam tips:
 - 辨析各类典型的财务比率。
- 计算Cash/Operating conversion cycle.

DuPont System of Analysis, Equity & Credit Analysis Tasks: Demonstrate the application of DuPont analysis of return on equity, and calculate and interpret effects of changes in its components. Calculate and interpret ratios used in equity analysis and credit analysis.

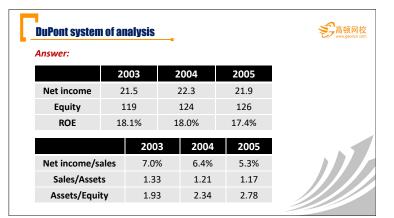


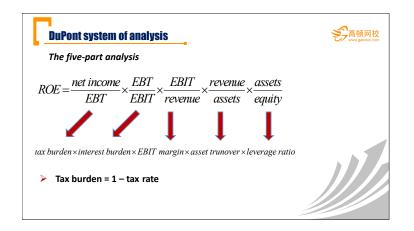
DuPont system of analysis

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Start Inc has maintained a stable and relatively high ROE of approximately 18% over the last three years. Use traditional DuPont analysis to decompose this ROE into its three components and comment on trends in company performance (\$'million).

	2003	2004	2005
Net income	21.5	22.3	21.9
Sales	305	350	410
Equity	119	124	126
Assets	230	290	350









Sustainable Growth Rate:

g =ROE * Retention Ratio=ROE* [1-(Dividend/Net Income)]

	Company A	Company B
EPS	3	4
DPS	1.5	1
ROE	14%	12%

- Company A: g = 14% * 50% = 7%
- Company B: g = 12% * 75% = 9%

Equity analysis, Credit analysis



A firm's ability to service and repay its debt (Credit risk)

- > The analysis of a company's financial reports
- > A broad assessment of a company's operations

Credit analysis

- Z score
 - Z = 1.2 A + 1.4 B + 3.3 C + 0.6 D + 1.0 E
 - A = WC / TA
 - B = RE / TA
 - C = EBIT / TA
 - D = MV of Equity / BV of Debt
 - E = Revenue / TA

If Z<1.8 Bankruptcy

Summary



- ➤ Importance: ☆☆☆
- Content:
- · DuPont analysis of return on equity.
- · Ratios used in equity analysis and credit analysis.
- > Exam tips:
 - 使用杜邦分析分解ROE。(计算题)
 - 股票估值和信用分析中所用到的财务比率。(结合权益)

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Inventory Accounting and Inventory Valuation Method

Tasks:

- Distinguish between costs included in inventories and costs recognized as expenses in the period in which they are incurred.
- Describe different inventory valuation methods (cost formulas).

Inventory accounting



Cost of good sold (COGS)

COGS = beginning inventory + purchases - ending inventory

- Purchase cost contains two parts: Inventory and COGS
- When the inventory sold, inventory goes to income statement as COGS

