Application of Financial Statement Analysis

1. Evaluating a company's historical performance addresses **not only what happened** but also **the caused behind the company's performance** and **how the performance reflects the company's strategy**.

2. Project a company's future net income and cash flow
   1. Begins with a **top-down** sales in which he analyst forecasts industry sales and the company's marrket share.
   2. By projecting profit margins or expenses
   3. the level of investment in working and fixed capital needed to projected sales.

3. Credit analysis uses financial statement analysis to evaluate credit-relevant factors,including tolerance for leverage,operational statiblity,and margin stability.

4. Adjustments: Materiality--Standards bodies--Accounting methods--Accounting estimates

Financial reporting quality

1. Financial reporting quality
   1. Provides decision-useful information 提供有利于决策的信息
   2. Relevance and faithful representation 相关性和真实表达

2. Earning quality
   1. High quality earnings
      1. Provides **sustainable** 可持续的 and **adequate足够的** return

3. Accounting choices **conservative(保守的)** or **aggressive(激进的)**
   1. **Aggressive**

      Typically refers to choces that aim to enhance the company's reported **performance and financial position** by inflating the amount of revenues,earnings,and or operating cash flow in the period;or decreasing expenses for the period and/or the amount of debt reported on the sheet.

   2. **Conservative**

      Investors may prefer for a positive surprise.

4. Financial reporting quality assessing context

Specific context	Typical situations in issuing low quality reports
Managers "Motivation"	1. Mask poor performance 2. Boot the stock price 3. Increase personal incentive compensation补偿,career concerns职业生涯考虑. 4. Avoid debt covenant violations 5. Personal reasons,such as a bonus,or corporate reasons
Opportunity 有机会	1. Internal opportunity:e.g. poor internal control 2. External opportunity:e.g. divergent accounting policies
Rationalization 合理化	Justify himsel(herself) 为他辩护

5. Financial reporting quality discipline mechanisms

Mechanism	Explanation
Internal discipline	Markets
External discipline	1. **Market regulatory authorities** 2. Auditors 3. Private contracting

Long-term Liabilities

1. Bond amortization schedule
   1. 【重要】$BV_t = BV_{t-1} + Interest\ expense - Coupon\ payments$
      1. $Interest\ expense = BV_{t-1} * Effective\ market rate$
      2. $Coupon\ payments = Coupon\ rate * Par\ Value$
      3. $Amortization = Interest\ expense - Coupon\ payments$
      4. For analysis purpose, the interest expense and the amortization of the premium should be separated
2. Cash flow of bond
   1. Periodic payment of interest / coupon
      1. Unser US GAAP: CFO-
      2. Under IFRS: CFO- or CFF-
   2. Principal
      1. Amount received at issuance: CFF+
      2. Principal repayment at maturity: CFF-
3. At issuance date
   1. Market rate = Coupon rate (par bond)
   2. Market rate > Coupon rate (Discount bond)
      1. Interest decreases overtime，由于bond在不断的趋向于Par value
      2. CFO is overstate,and CFF is understate.(Carrying value of bond on balance sheet)
   3. Market rate < Coupon rate (Premium bond)
      1. Int expense < coupon payment
      2. CFO is understated and CFF is overstated.(Carrying value of bond on balance sheet)
4. Debt covenants 债务契约
   1. 定义：Covenants are restrictions imposed on the borrower to **protect the lender**.
   2. **Affirmative covenants: required actions 肯定性契约：需要采取的行动**
      1. Make principal and interest payments in time
      2. Maintain certain ratios(e.g. liquidity and solvency ratios) above specified levles
      3. Maintain collateral
   3. **Negative covenants: restricted actions 负面契约：限制行动**
      1. Increase dividends or repurchasing shares 增加分红或回购股份
      2. Make new borrowings 进行新的借款
      3. Engage in M&A transactions 从事并购交易
5. Companies are required to disclose the fair value of financial liabilities, including debt.Although permitted to do so,few companies opt to report debt at fair values on the B/S.
6. Lease 租赁

1. 术语
    1. Lease：**A lease(租约)** is **a contract** in which a **lessor(出租人)** grants the **lessee(承租人)** the exclusive right to use a specific underlying asset for **a period of time in exchange payments**.
    2. Lessee(承租人、租户): use the asset
    3. Lessor(出租人): own the asset
2. At the lease inception(租赁开始) under IFRS

7. **Motivations for leasing instead of purchasing**

    1. less upfront cash commitment 减少前期现金承诺
    2. Cheaper financing 更便宜的融资
    3. Less or no down payments 少付或者不付首付
    4. Lower fixed interest rate 较低的固定利率
    5. Less covenant restrictions 减少契约限制
    6. Less risk of obsolescence(陈旧过时)
8. **operating（经营租赁） or finance leases（金融租赁）的区别**

    1. A lease that resembles(像，类似于) a purchase is classified as a finance lease.

        - The lease transfers ownship of the underlying to the lessee.租赁将标的物的所有权转让给承租人

        - The lessee has an option to purchase the underlying asset and is resonably certain it will do so. 承租人有购买标的资产的选择权，并且有理由确信它会这样做

        - The lease term is for a major part of the asset's useful life. 租赁期占资产使用寿命的主要部分

        - The PV of the sum of the lease payments equals or exceeds substantially all of the fair of the asset. 租赁付款额总和的现值等于或超过资产公允价值的几乎全部

            - The underlying asset has no alternative use to the lessor. 标的资产对出租人没有替代用途
    2. All the other leases are operating leases.
9. Financial reporting of leases
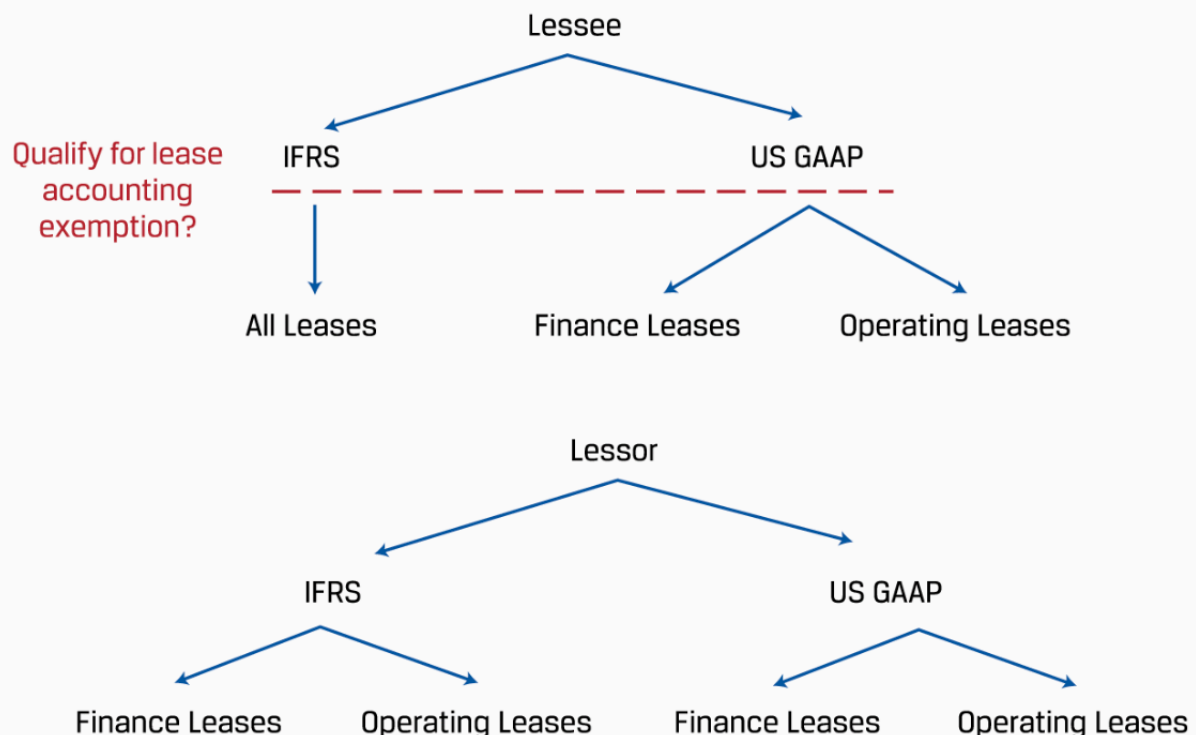
10. Lessee Accounting-IFRS 承租人会计

11. **不区分金融租赁和运营租赁**

12. 报表处理

    1. At the lease inception(IFRS & US GAAP)

        1. Recognize a "right-of-use("ROU")" asset 确定使用权资产
        2. Recognize a lease liabitity 确认一笔租赁负债
        3. Calcualted as the present value of fixed lease payments

    2. After the lease inception under IFRS

        1. B/S

            1. Lease liability is reduced for the portion of the lease payment that represents repayment of the lease liability.

        2. I/S

            1. Depreciation expense on the right-of-use asset
            2. Interest expense on the lease liability.

        3. On the cashflow statement

            1. Interest paid is allowed to classify as CFO/CFF

    3. After the lease inception under US GAAP

        1. A finance lease

            1. The same as IFRS

        2. An operating lease

            1. A single lease expense: a straight-line allocation of the cost of the lease over its term.

        3. On the cashflow statement

            1. Interest paid is allowed to classify as CFO.

13. Categories of lessee's treatment

Standards	Types of lease
IFRS	**Single category: Financial lease**
	Exceptions: short-term(<1 year) and low in value
GAAP	Finance lease
	Operating lease

14. Lessor Accounting（出租人会计-美国会计准则）

    1. Categories of lease for lessor under IFRS

        1. Finance lease 融资租赁

            1. B/S

                - removed leased asset
                - recognize lease asset(lease receivable and residual)

            2. C/S

                1. interest portion of lease payment is ehter CFO+ or CFI+
                2. Receipt of lease principal is CFI+

            3. I/S

                1. If the lessor is a manufacture or dealer,recognize:

                    1. Revenue = Value of the leased asset

2. COGS = Carrying value of the leased asset
            3. Selling profit or loss = Revenue = COGS
         2. Interest revenue recognized over the lease term.
   2. Operating lease
      1. B/S
         1. Retain asset
      2. I/S
         1. Lease recepts recognized as income
         2. Related costs,including depreciation of the leased asset
      3. C/S
         1. Lease payments received are CFO+
2. Categories of lease under for lessor under US GAAP
   1. Sales-type lease 类销售租赁
      1. Similar to finance lease under IFRS
   2. Operating lease 经营租赁
   3. Direct financing lease 直接融资租赁
      1. B/S
         1. removed leased asset
         2. recognize lease receivalbe
      2. I/S
         1. Report interest revenue on lease receivable
      3. C/S
         1. interest portion of lease payment received is CFO+
         2. Receipt of lease principal is CFI

Income Taxes

1. Terminology
   1. Taxable income
      1. Amout of profit subject to taxes 应纳税所得额
   2. Current tax payable
      1. Tax liability for the current period 本期纳税义务
   3. Income tax paid
      1. The actual amount paid for income taxes Income tax paid 实际缴纳的所得税金额
   4. Tax base
      1. Carrying amount of assets and liabilities based on tax purpose 基于税收目的的资产和负债的账面金额
   5. Tax loss carry forward 税收损失转结
      1. Loss used to reduce period's taxable income 用于减少期间应纳税所得额的损失
      2. Can result in deferred tax assets 可能导致递延所得税资产
   6. Accounting profit 会计利润
      1. Pre-tax income,earnings before tax EBT
   7. Income tax expense 所得税费用
      1. Pre-tax income,recognized in income statement 税前收入，在损益表中确认

8. Deferred tax liabilities(DTL) 递延所得税负债

    1. A liability caused by temporary differences 暂时性差异导致的负债
9. Deferred tax assets(DTA) 递延所得税资产

    1. An asset caused by temporary differences 由暂时性差异引起的资产
10. 注：Both DTLs and DTAs are presented on B/S,note netted.

2. Temporary difference

    1. Source of temporary differences

        1. Accrual accouting vs modified cash accounting

            ■ Accounting bias 权责发生制
            ■ Modified cash based accounting 改良收付实现制
        2. Differences in reporing methods and estimates 报告方法和估计的差异

    2. **Tax reporing 税务报告**

        1. Taxable income = Taxable revenue - Tax deductible expense

            1. 应纳所得税额 = 应税收入 - 可扣税的费用
        2. **Current tax payable = Taxable income * Tax rate**

            1. 当期应纳税额 = 应纳税所得额 * 税率
        3. Income tax paid = Actual cash outflow for income tax(C/F)

    3. **Financial reporting 财务报告**

        1. Pretax income税前收入(Accounting profit) = Earning before tax
        2. **Income tax expense所得税费用 = Current tax payable当期应付税款 + △DTL - △DTA**
    4. **Determine deferred tax amount B/S approach 确定递延税额 B/S 方法**

        B/S approach
        Accounting base vs tax base - assets
        Assets with original cost of 1000,000
        Accounting depreciation = 100,000
        Tax depreciation = $300,000

	Accounting base	-	Tax base	=	Temporary difference	*	Tax rate	=	B/S DTL
Year 1	900000	-	700000	=	200000	*	30%	=	60000
Year 2	800000	-	400000	=	400000	*	30%	=	120000

△DTL		B/S DTL	
Year1	Year2	Year1	Year2
60000	60000	6000	120000

    5. **Determine deferred tax amount I/S approach 确定递延所得税额 I/S 方法**

    6. **Income tax expense = Current tax payable + △DTL - △DTA**

        1. DTA and DTL: **should use future tax rate that expected** to apply when the asset is realized or the liability settled
        2. Current tax payable: should use **the current tax rate**
    7. **When the tax rate changes（暂时性差异）**

        1. DTA or DTL_{end} = $Temporary\ Difference_{end}$ * New tax rate

            1. $Temporary\ difference_{end}$ does not change 暂时性差异不变
            2. But the DTA or DTL_{end} will change with the tax rate
            3. △DTA or △DTL will change with the tax rate
3. Permanent difference 永久性差异

    1. Differences between tax and financial reporting which will **not reversed** in the future.
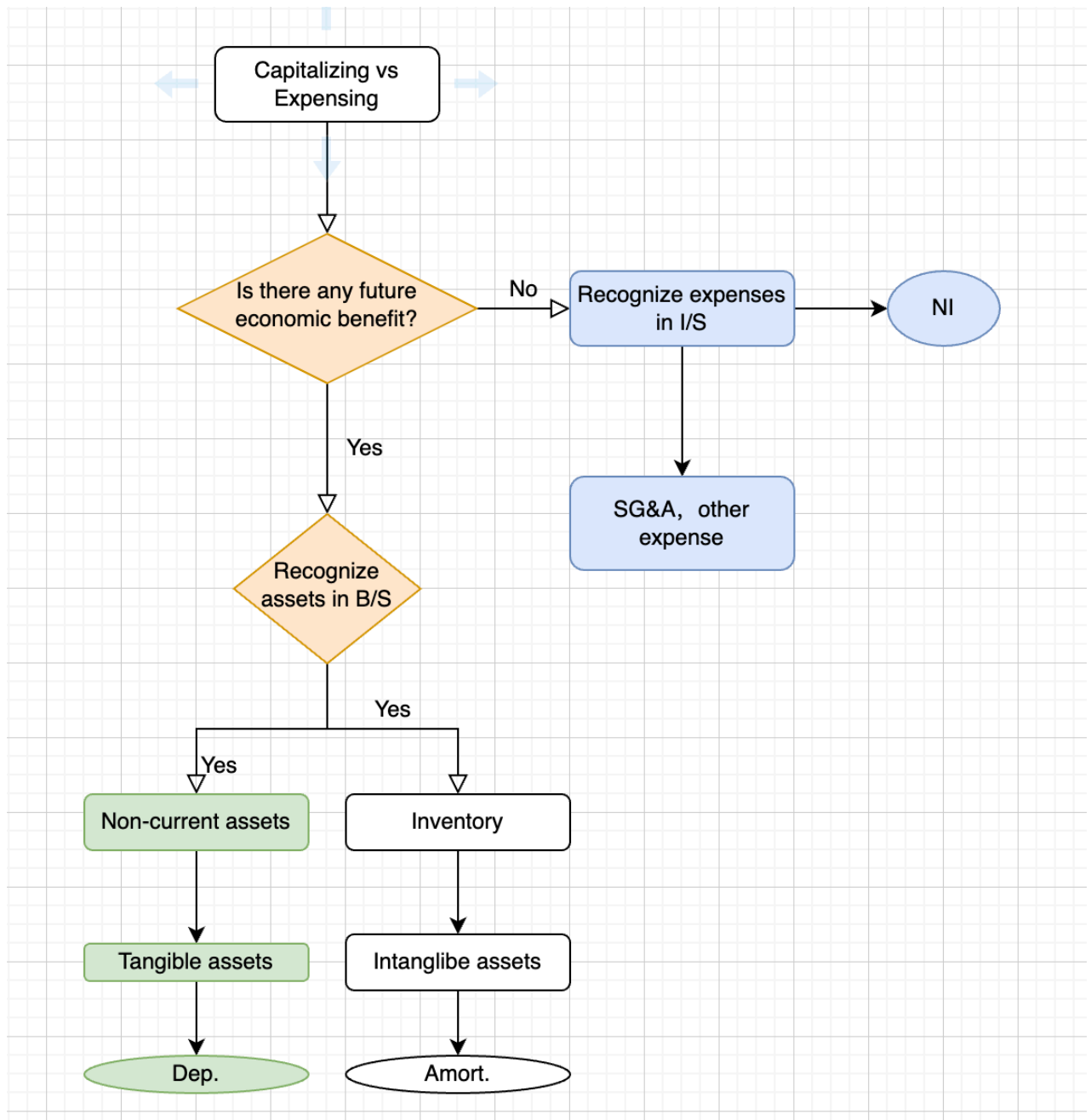
        1. Income or expense items not allowed by tax legislation 税法不允许的收入或费用项目，例如行政

        罚款
2. Tax credits for some expenditures which reduce taxes **减少税收的某些支出的税收抵免，例如国债收入**

2. Effective tax rate有效税率 ≠ Statutory tax rate法定税率

   1. Effective tax rate = Income tax expense/Pretax income

   2. 分析师看有效税率

   3. When effective tax rate ≠ statutory tax rate

      1. Statutory rate vary across countires
      2. Permanent differences
      3. Change in tax rates

4. Tax analysis

  1. Valuation allowance 备抵跌价损失

  2. Recognition of DTA 递延所得税资产的识别

   1. A valuation allowance reduces a DTA
   2. Net DTA = DTA - Valuation allowance

  3. Recognition of DTL 递延所得税负债的识别

   1. If DTL is unlikely to reversed

     1. Treated as equity

  4. If DTL is to be reversed

   1. Treated as ture liability
   2. If non-reversal / reversal is uncertain
   3. Ignored

  5. DTA无法转回

   1. 公司无法在未来盈利，DTA无法转回，GAAP下valuation allowance增加

  6. DTL无法转回

   1. 税务局免除公司递延所得税负债，此时负债计为权益

Long-lived Assets

1. Capitalizing资本化 vs Expensing费用化

  1. Capitalize as an asset on the B/S

  2. Recognize as an expenses in the I/S

```
        Capitalizing vs
          Expensing
              │
              ▽
     ┌─────────────────┐
     │ Is there any future │──No──▷ Recognize expenses ──▷ ( NI )
     │ economic benefit?   │           in I/S
     └─────────────────┘              │
              │ Yes                    ▽
              ▽                  ┌──────────────┐
      ┌───────────────┐         │ SG&A,  other  │
      │  Recognize     │         │   expense     │
      │  assets in B/S │         └──────────────┘
      └───────────────┘
              │ Yes
      ┌───────┴─────────┐
      │ Yes             │
      ▽                 ▽
  Non-current assets   Inventory
      │                 │
      ▽                 ▽
  Tangible assets    Intanglibe assets
      │                 │
      ▽                 ▽
    ( Dep. )          ( Amort. )
```

2. Impact on the c/f statement

    1. capitalized expenditures (资本化开销) are classified as CFI.

    2. expensed expenditures（费用话开销） are classified as CFO.

3. Tangible assets - capitalize or expense

    1. **ready for use** 之前全部资本化

        1. purchase price

        2. Tax, freight and insurance

        3. delivery

        4. installiation

        5. testing

    2. **ready for use** 之后全部费用化

        1. depreciation

        2. Repari and maintenance

        3. Staff training

4. Capitalizing interest costs（借钱买资产产生的利息成本）

1. 在建造期间，incurred interest must be capitalized as asset's cost；
2. under IFRS，借来的钱赚取的利息可以抵扣资本化费用；
3. 资本化利息费用被分类为CFI，不管是IFRS还是US GAAP；
4. 利息费用可以被分类为CFO或者CFF在IFRS下，可以被分类为CFO在US GAAP下。

5. Intangible assets（摊销）

   1. Identifiable intangible assets
   2. Unidentifiable intangibles assets
   3. Internally generated

6. Treatments of R&D expenditure

   1. **Research** should be **expensed** as incurred(IFRS & GAAP)，**八字没一撇**。

   2. Development

      1. IFRS：

         1. 费用化；**达到技术可行性之后，可以资本化；**

      2. GAAP：

         1. expensed except for：**cost of software development**

      3. software development cost under US GAAP

         1. For sales

            1. Expensed;
            2. 一旦技术可行性达到之后，就进行资本化；

         2. For own use

            1. Expensed as incurred
            2. 一旦这个项目完成之后，就可以进行资本化；

7. Depreciation methods 折旧方法

   1. important depreciation terms

      1. book value
      2. historical cost 历史成本
      3. useful life
      4. residual value 残值

   2. Three methods to calculate depreciation

      1. Straight-line depreciation

      $$Depreciation\ expense_t = \frac{Original\ cost - Residual\ value}{Useful\ life}$$

      2. accelerated accumulative depreciation

      $$Depreciation\ expense_t = \frac{2}{Useful\ life} * (Original\ cost - Accurate.Dep.)$$

      3. units of production

      $$Depreciation\ expense_t = \frac{Actual\ output\ in\ current\ period_t}{Total\ capacity\ during\ the\ useful\ life} * (Original\ cost - Residual\ Value)$$

   3. Amortization of intangible asset（无形资产的摊销）

      1. Intangible asset with a finite usefule life

         - Amortization over useful life

      2. Intangible asset with a indefinite useful life

         - Annual impairment test (减值测试)

8. Impairment of long-lived assets 长期资产减值

   1. **Held for use**

|	IFRS	US GAAP
判断	1. BV > Recovarable amount，要减值可收回金额； 2. Higher **Value in use** **NRV = selling price -selling cost**	1. BV > Undiscounted/Expeced future cash flow
减值到	**recoverable amount**	**fair value**
Impairment loss	Impariment loss = Carrying value - Recoverable amount	Impariment loss = Carrying value - Fair value
转回	可以转回，以减值金额为限	不可以转回

2. Held for sale
   1. Held for use --> Held for sale --> impariment test
   2. Test to see if Carrying value > NRV (fair value - cost to sell)
   3. No depreciation from reclassification on
3. Once an asset is written down
   1. Under US GAAP
      1. Held for use: reversals are not allowed
      2. Held for sale: reversals are allowed
   2. Under IFRS
      1. Reversals are allowed except for goodwill
9. Reporting models of long-lived assets
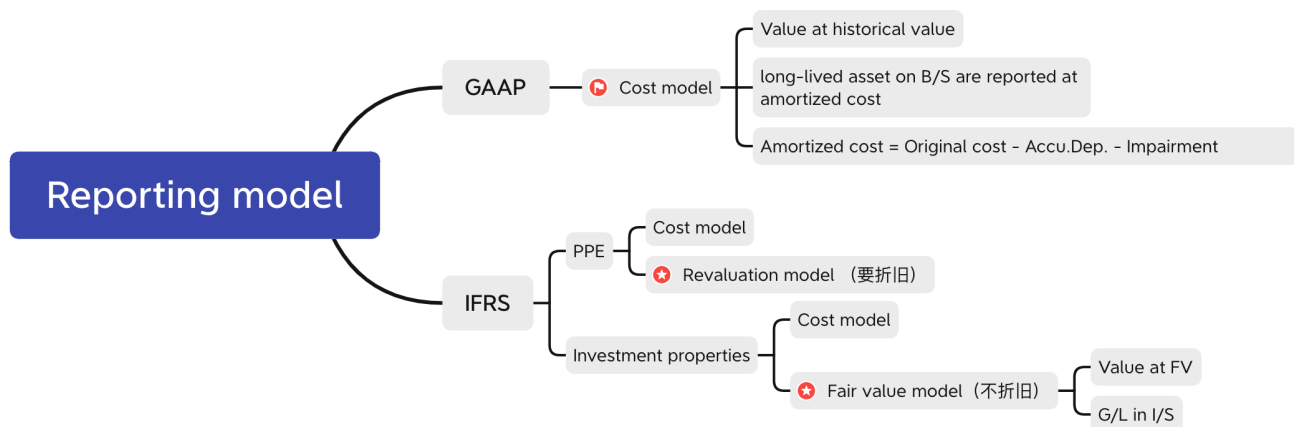
Inventories

1. Inventory recognition and valuation methods
   1. Inventory costs(达到可供出售状态之前的一切必要支出)
      1. Purchase cost - trade discounts and rebates

1. Import and tax-related duties
2. Transprot and related insurance
3. Handling fee
    2. Conversion costs
        1. direct labor
        2. fixed and variable overhead costs
    2. Period costs
        1. Abnormal waste of materials,lavor,or overhead
        2. Storage costs
        3. Administrative overhead and selling costs
    3. COGS
        1. $Inv_{beg} + Purchase - COGS = Inv_{end}$
    4. Inventory valuation methods

IFRS	GAAP
Specific identification	Specific identification
FIFO	FIFO
Weighted average cost	Weighted average cost
N/A	LIFO

5. Periodic inventory system 定期盘存制、实地盘存制
    1. 定义：COGS and inventory ending value are determined at the end of an accounting period
    2. Need a purchase account.
6. perpetual inventory system 永续盘存制
    1. 定义：COGS and inventory ending value are updated **continuously**.
    2. Purchase account is not needed.
7. FIFO没有必要区分永续盘存制还是定期盘存制；
8. LIFO和WAC下，COGS（永续盘存制）≠ COGS（定期盘存制）

2. **Inventory Adjustmens 存货调整**

   NRV = Selling price - Selling cost

	IFRS	GAAP
	The lower of the cost or **net realizable value(NRV)**	Inv is the lower of the cost or market.
判断	If cost >NRV 1. Inventory is written down to NRV on B/S； 2. A loss is recognized in I/S（COGS↑）	1. If Replacement cost（重置成本）> NRV **Market = NRV** 2. If Replacement cost < NRV - Normal profit margin **Market = NRV - Normal profit margin** 3. If NRV - Normal profit margin < Replacement cost < NRV **Market = Replacement cost**
转回	a. Reversal limited to the amout of the original write-down b. Is allowed and a gain is recognized in I/S (COGS↓)	不能转回

Inventory in US GAAP

```
* Inventory is written down to market on B/S
* A loss is recognized in I/S
* No subsequent(随后的) reversal is allowed
```

Impact of inventory adjustments

1. 如下四类产品以NRV计量
    - Agriculturual
    - Forest products
    - Minerals
    - Commodities
2. **Any gain or losses resulting** from changing in value should be **recognized in I/S both under IFRS and US GAAP.**

3. Analysis on Inventory

    1. **LIFO reserve**

        1. LIFO reserve = FIFO inventory - LIFO inventory
    2. **LIFO & FIFO conversion**

        1. Income statement changes

            1. $COGS_{LIFO} - COGS_{FIFO} = \Delta LIFO\ reserve$
            2. $NI_{FIFO} - NI_{LIFO} = \Delta LIFO\ reserve * (1 - tax\ rate)$
        2. Balance sheet changes

            1. $INV_{FIFO} - INV_{LIFO} = LIFO\ reserve$
            2. $R/E_{FIFO} - R/E_{LIFO} = LIFOreserve_{Ending} * (1 - Tax\ rate)$
            3. $Cash_{LIFO} - Cash_{FIFO} = LIFOreserve_{Ending} * Tax\ rate$
    3. LIFO liquidation

        1. 定义：Q进 < Q出
        2. COGS被低估（卖老货，吃老本），COGS no longer reflects recent prices.

3. If P上升，LIFO reserve may decline.
4. 分析师调整--识别.

4. 存货需要报告和披露（GAAP & IFRS）

   1. Cost flow method used；
   2. Total carrying amount of inventories;
   3. Disclose the carrying value of inventory which is valued at net realizable value;
   4. COGS for the period;
   5. The amount of inventory write-down;
   6. The amount of reversal of inventory write-down and the events or circumstances of reversal(IFRS only).

Financial Analysis Techniques

1. Analytical Tools and Techniques -Ratios Analysis

   1. Common-size analysis

      1. Common-size I/S

         1. Income statement account/Revenue

      2. Common-size B/S

         1. B/S ACCOUNT / Total asset

      3. Common-size C/F

         1. Cash flow statement account /Revenue
         2. Cash outflow /Total cash outflow
         3. Cash inflow /Total cash inflow

   2. Ratio analysis

      1. Profitability ratio

         1. Gross profit margin = Gross profit /Net revenue
         2. Operating profit margin = EBIT /Net revenue
         3. Pretax margin = EBT / Net revenue
         4. Net profti margin = NI / Net revenue

      2. Activity ratio

         1. ROA = NI / Average total assets(Definition)
         2. ROA = [NI + Int(1-t)] / Average total assets(For analysis)
         3. Operating ROA = EBIT / Average total assets
         4. ROE = NI / Average total equity

      3. Liquidity ratio(short-term)

      4. Solvency ratio(long-term)

      5. Important activity ratios

         1. Total asset turnover = Revenue / Average total assets

         2. Fixed asset turnover = Revenue / Average net fixed assets

         3. Working capital turnover = Revenue/ Average WC

            1. Working capital = Current assets - Current liabilities

         4. Receivable turnover（营收账款周转率）= Revenue / Average receivable 越大越好

         5. Days of sales outstanding(DSO应收账款周转天数) = 365 / Receivalbe turnover 越小越好

         6. Inventory turnover = COGS / Average inventory 越大越好

         7. Days of inventory on hand(DOH现有库存天数) = 365 / Inventory turnover 越小越好

8. Payable turnover（应付账款周转率） = Purchase / Average trade payable 越小越好

9. Number of days of payable(应付天数) = 365 / Payable turnover 越大越好

Operating cycle = DOH + DSO
Cash conversion cycle = DOH + DSO - Num of days of payables

6. A firm's ability to meet short-term obligations

   1. Current Ratio = Current assets/ Current liabilities
   2. Quick Ratio = (Cash + Short-term marketable security + Receivable)/Current liabilities
   3. Cash Ratio = (Cash + Short-term marketable security)/Current liabilities
   4. Defensive interval(防御性资产够用天数) = (Cash + Short-term marketable security + Receivalbe) / Daily cash expenditures

7. A firm's ability to pay long-term debt

   1. D/E = Total debt / Total equity
   2. D/C = Total debt / (Total debt + Total equity)
   3. D/A = Average total assets /Average total equity
   4. **Financial leverage** = Average total assets/ Average total equity

8. Coverage ratio 偿还能力系数

   1. Interest coverage = EBIT / Interest
   2. Fixed charge coverage = (EBIT + Lease payments) / (Interest + Lease payments)

3. Dupont system of analysis

   1. The three-part approach \

```
<mark>$ROE =\frac{Net\ Income}{Revenue}*\frac{Revenue}{Average\ total\
assets}*\frac{Average\ total\ assets}{Average\ equity}$
 1. The two-part approach \
<mark>ROE = ROA * Financial leverage
 1. The five-part approach \
<mark>$ROE = \frac{NI}{EBT}*\frac{EBT}{EBIT}*\frac{EBIT}{Revenue}*\frac{Revenue}
{Avg.asset}*\frac{Avg.asset}{Avg.equity}$\
Tax burden * Interest burden * EBIT margin * Asset turnover * Leverage ratio \
<mark>Tax burden = 1 - Tax rate
```

2. Equity Analysis，Credit Analysis and Segment Reporting

   1. A coompany must disclose separate information about any operating segment which the segment constitutes 10% or more of the company's revenue,asset,proft
   2. Segment ratios

C/F

1. US GAAP

   1. Cash flow from operating(CFO)
   2. Cash flow from investing(CFI)
   3. Cahs flow from financing(CFF)

2. US GAAP vs IFRS

Items	GAAP	IFRS
Interest received	CFO	CFO or CFI
Dividends received	CFO	CFO or CFI
Interest paid	CFO	CFO or CFF
Dividends paid	CFF	CFO or CFF
Taxes paid	CFO	CFO,CFI or CFF

B/S

1. Basic settings
    1. △Cash = △Liability + △Equity - △Non-cash asset
2. CFO calculation(只有在CFO中才区分直接法和间接法)
    1. Direct method（推荐）（Base 法则）

Direct method	
Cash received from customers	A/R beg + Net Sales - Cash received = A/R end
-Cash paid to suppliers	A/R beg + Net Sales - Cash received = A/R end
-Cash paid to employees	Inv.beg + Purchase - COGS = Inv.end A/P beg + Purchase - Cash paid = A/P end
-Cash paid to employees	W/P beg + Wage expense - Cash paid = W/P end
-Interest paid	I/P beg + Interest expense - Cash paid = I/P end
-Taxes paid	T/P beg + Tax expense - Cash paid = T/P end
= CFO	

   2. Indirect method（GAAP and IFRS）

步骤一（调节利润表）：

NI
+Depreciation/Amortization
+/- Non operating items

步骤二（调整资产负债表）：

-Increase in non-cash current asset accounts（e.g. A/R,Inventory）
+Increase in current liability accounts(e.g. A/P,Tax payable)

=CFO

3. CFI calculation

1. Cash used in purchase of fixed assets
    1. BV = Cost - A.D
        1. BV = Book value(carrying value);
        2. Cost = Original cost
        3. A.D. = Accumulated depreciation
    2. $Cost_{end} = Cost_{beg} + Purchase - Disposal Cost$
    3. $A.D_{end} = A.D_{beg} + Depreciation - Disposal A.D.$
    4. $BV_{end} = BV_{beg} + Purchase - Disposal\ BV - Depreciation$
2. Proceeds received from sale of fixed assets
    1. $Gain/Loss\ from\ disposal = Cash\ proceeds - Disposal\ BV$

4. CFF Calculation
    1. Divdiend paid
        1. R/E end = R/E beg + NI - Div. delcared
        2. Div.payable end = Div.payable beg + Div.declared - Div.paid
5. Analysis of Cash flow
    1. Examine the major sources and uses of cash
        1. CFO（盈利质量）
        2. CFI（Increasing capital expenditures is an indication of growth）
        3. CFF
            1. The nature of company's capital sources
            2. Cash requirement for debt repayments,share repurchase,or dividend payments.
    2. Common size cash flow statement
        1. Cash flow statement account / Revenue
        2. Cash inflow / Total cash inflows
        3. Cash outflow / Total cash outflows
    3. FCF
        1. FCFF
            1. FCFF = NI + NCC - WC Inv. - FC Inv. + [Int. exp. * (1 - tax rate)]
            2. FCFF = CFO - FC Inv. + [Int. exp. * (1 - tax rate)]
        2. FCFE
            1. FCFE = FCFF - [Int.exp. * (1-tax rate)] + Net debt borrowing
            2. FCFE = CFO - FC inv. + Net debt borrowing

B/S

1. Assets
    1. Current asset
    2. Non-current asset
2. Liability
    1. Current liability
    2. Non-current liability
3. Equity
    1. Capital

2. Treasury stock(库存股)

3. R/E

    1. Beg.R/E + NI - Div = End.R/E

4. AOCI

5. Minority interest

4. Financial assets

Items	HTM AMC	Trading FVPL	Available-for-sale FOOCI
Measurement	Amortized cost	Fair value	Fair value
Unrealized G/L	Ignore	I/S	OCI
Realized G/L	I/S	I/S	I/S

I/S

1. Compoents and Format

   Income Statement

Net revenue
- COGS
Gross Profit
- SG&A
Operating income + Other income or gain (- Other expense or loss)
EBIT
- Interest expense
EBT
- Tax expense
NI from continuing operations
+ Income from discountinued operation (net of tax)
NI

2. 收入确认

3. EPS

    1. Basic EPS

       $$EPS = \frac{NI - Div_{preferred\ stock}}{Weighted\ average\ number\ of\ common\ shares\ outstanding}$$

    2. **Diluted EPS 摊薄后每股收益**（计算，重点）

$$Diluted\ EPS = \frac{NI - preferred\ dividends + Conv.debt\ interests(1-t)}{Weighted\ average\ CS. + (CS.\ From\ Conv.PS) + (CS.\ From\ Conv.debt) + (NetCS.from\ options/warrants)}$$

4. Analysis

   1. Common size I/S

   2. Comprehensive income (NI + OCI)

      1. OCI

         1. FX translation（外汇换算） G/L
         2. DB plan actuarial（DB精算假设） G/L
         3. **Unrealized G/L** from CF hedging(derivatives accounted for as hedges 作为对冲的衍生品)
         4. Unrealized G/L from AFS securities
         5. Revaluation surplus for long-lived asset (IFRS only)

Financial reporting standards

1. IFRS framework

   1. IFRS conceptual framework 国际财务报告准则概念框架

      1. 2 Fundamental characteristics 两个基本特征

         - Relevance 相关性
         - Faithful representation 忠实表达

      2. 4 Enhancing charecteristics 四个增强特征

         - Comparability 可比较性
         - Understandability 易懂
         - Timeliness 及时
         - Verifiability 可验证

      3. Constraint 限制、约束

         - Cost/Benefit consideration 成本/收益效益考虑
         - Non-quantifiable information 不可量化的信息

      4. Assumption 假设

         1. Accrual basis 权责发生制
         2. Going concern 持续经营

   2. IASB general requriements 国际会计准则理事会的一般要求

      1. Required financial statements （四表一附注）

      2. General features

         1. No offseting 无偏移
         2. Classified B/S
         3. Comparative info
         4. Reporting frequency