| Installment sales | US GAAP:  
(payments received over a period of time)  
Certain collectibility: normal revenue recognition criteria  
Collectibility could not be estimated reasonably: installment method. Profit recognised when cash is collected. Profit = cash collected x expected % profit of sales  
Highly uncertain collectibility: Cost recovery method (profit is recorded after recovery all costs)  
IFRS:  
Certain collectibility: Discounted PV of installment payment is recorded as revenue at the time of sale. Total installment payment - Discounted PV = interest over time  
Highly uncertain collectibility: Cost recovery method.  
Barter transaction  
(exchange of goods or services)  
US GAAP:  
revenue could be recognised at fair value if the Company has historically received cash payment for that goods/services and could use historical experience to determined fair value  
IFRS:  
revenue must be based on fair value from similar non-barter transactions with third parties  
Gross revenue  
Sales revenue and COS are separated  
Net revenue  
Only report the difference between revenue and COS  
Criteria for Gross revenue reporting under US GAAP  
- Be the primary obligator under the contract  
- Bear the inventory risk and credit risk  
- Be able to choose supplier  
- Have reasonable latitude to establish the price  
Consider when analysing revenue  
- level of conservative of revenue recognition policies  
- how much do the Company’s policies rely on judgement and estimates  
Converged standards for revenue recognition  
1. Identify contract(s) with customer  
2. Identify the performance obligations in the contract(s)  
3. Determine the transaction price  
4. Allocate transaction price to the performance obligations  
5. Recognise revenue when a performance obligation is satisfied  
Contract  
Agreement between 2 or more parties that specifies their obligations / rights  
Performance obligation  
promise to deliver a distinct good or service  
Transaction price  
amount to be received in exchange for goods or services  
Required disclosure  
- Contracts by category  
- Assets / liabilities related to the contract (including balances and changes)  
- Outstanding performance obligations, and transaction price allocated to those  
- Management judgement used in determining the amount and timing of revenue recognition  
Inventory  
Specific identification  
(IFRS + US GAAP)  
Identify exactly which items were sold, which items remain  
FIFO  
(IFRS + US GAAP)  
First item purchased is assumed to be the first item sold  
Appropriate for inventory with limited shelf life (Food industry)  
LIFO  
(US GAAP only)  
Last item purchased is assumed to be the first item sold  
Appropriate for inventory that does not deteriorate with age (Coal)  
Weighted average cost  
(IFRS + US GAAP)  
Cost per unit = cost of available goods / total number of unit available |
| Implication | Receivable / sales \(\rightarrow\) collection problems  
Allowance for doubtful debt: relative to level of sales and growth rate  
Firm could underestimate bad debt \(\rightarrow\) Increase earnings |
|---|---|
| Inventories | Goods held for sale or used in manufacture of goods to be sold  
Inventories include: raw materials, WIP, finished goods |
| Cost of inventories: | - Include: Purchase cost, conversion costs, other costs necessary to bring the inventories to its present location and condition  
- Exclude: abnormal waste (labor, material, overhead), storage (unless necessary as part of the production), admin. overhead and selling costs |
| Costing method of goods produced: | - Standard costing: assign predetermined amount of materials, labor overhead to goods produced  
- Retail method: Inventory cost = retail prices - gross profit |
| IFRS: Inventories are reported at the lower of cost or net realisable value (selling price - completion costs - disposal costs)  
US.GAAP: Inventories are reported at the lower of cost or market (= replacement cost, but cannot be higher than net realisable value or (net realisable value - normal profit margin)) |
| Other current assets | Amounts immaterial if show separately  
E.g:  
- Prepaid expenses: Operating costs that have been paid in advance  
- Deferred tax assets: Tax payable > income tax expense. Reasons are: (1) expenses / losses are recognised before they are tax deductible (expenses recorded but not yet paid); or (2) income is taxable before it is recorded in IS (unearned revenue) |
| Current liabilities | Accounts Payable | Amounts the firm owes suppliers for goods / services purchased on credit  
Could indicate credit problem with suppliers |
| Notes payable | Notes payable: Obligations in form of a promissory note to lenders (Short-term if maturity < 1 year; Long-term if Maturity > 1 year)  
Current portion of LT debt: principle portion due within 1 year or 1 operating cycle |
| Current portion of LT debt | Accrued liabilities | Expenses recognised but not yet due  
E.g: interest expense, wage payable, accrued warranty payable, tax payable |
| Accrued liabilities | Unearned revenue | Cash collected in advance of providing goods / services |
| Unearned revenue | Implication | May indicate future growth |
| Non-current assets | Properties, plant and equipments | Tangible assets used in the production of goods / services  
Benefit for more than 01 year or 01 production cycle  
E.g: land and buildings; machinery and equipment; furniture; natural resources |
| Cost model (IFRS & US GAAP) | PPE: reported at amortised cost (historical cost - accumulated depreciation / amortisation)  
Historical cost = purchasing price + costs to get assets ready to use (delivery, installation)  
*Must be tested for impairment.  
Carrying value > recoverable amount \(\rightarrow\) impair  
Recoverable amount = FV - selling cost / or value in use  
Loss recoveries: allowed under IFRS, not under US GAAP |
| Revaluation model (IFRS only) | FV - accumulated depreciation |
| Investment property | Real estate that:  
- generate rental income; or  
- generate return on investment through future resale  
Reported at amortised cost (like PPE) or fair value (gain/loss through PL) |
| Intangible assets | Non-monetary assets, with no physical substance |
| Identifiable intangible assets | Can be acquired separately, as right of privileges for owners  
E.g: patent, trademark, copyright  
Report using cost model (IFRS + US GAAP, similar to PPE) / or revaluation model (IFRS, only of active market exists) |
### Return on assets

\[ \text{Return on assets} = \frac{\text{Net income}}{\text{Average total assets}} \]

Alternative calculation:

\[ \text{Return on assets} = \frac{\text{Net income} + \text{interest expenses} \times (1 - \text{tax rate})}{\text{Average total assets}} \]

### Operating return on assets

\[ \text{Operating return on assets} = \frac{\text{Operating income}}{\text{Average total assets}} = \frac{\text{EBIT}}{\text{Average total assets}} \]

### Return on total capital

\[ \text{Return on total capital} = \frac{\text{EBIT}}{\text{Average total capital}} \]

Total capital = ST debt + LT debt + preferred equity + common equity

### Return on equity

\[ \text{Return on equity} = \frac{\text{Net income}}{\text{Average total equity (including preferred stock)}} \]

### Return on common equity

\[ \text{Return on common equity} = \frac{\text{Net income} - \text{preferred dividends}}{\text{Average common equity}} \]

### DuPont system of analysis

#### Original approach

\[ \text{ROE} = \frac{\text{net income}}{\text{average equity}} = \frac{\text{net income}}{\text{revenue} \times (\text{net profit margin})} = \frac{\text{net income}}{\text{revenue} \times (\text{net profit margin} \times (\text{equity turnover})} = \frac{\text{net income}}{\text{revenue} \times (\text{net profit margin} \times (\text{asset turnover}) \times \text{leverage ratio})} \]

Low ROE because at least one of th following:
- Poor profit margin;
- Poor asset turnover;
- Too little leverage.

#### Extended 5-way approach

\[ \text{ROE} = \frac{\text{net income}}{\text{average equity}} = \frac{\text{net income}}{\text{EBIT} \times \text{total assets} \times \text{average equity}} = \frac{\text{EBIT}}{\text{revenue} \times \text{total assets} \times \text{average equity}} = \frac{\text{revenue}}{(\text{assets} \times \text{turnover}) \times \text{leverage ratio)} \]

Low ROE because at least one of th following:
- Poor profit margin;
- Poor asset turnover;
- Too little leverage;
- High tax burden;
- High interest burden.

*Note: ↑ leverage → ↑ tax burden → might not always ROE

### Valuation ratios

#### Price to earning

Current market price of share + earnings per share

Other similar measures: Price to cash flow, price to sale, price to book value

#### Per share valuation

Earnings per share (basic and diluted)

Cash flow per share, EBIT per share, EBITDA per share

Not comparable between firms, because different number of outstanding shares

#### Dividends

On a per-common-share basis

Dividend declared: total dividend paid by firm (does not affect EPS & net income)

Retained earnings = Net income - Dividend declared (determinant of the firm’s sustainable growth rate)

\[ g = RR \times \text{ROE} \]

\[ RR = 1 - \frac{\text{dividend declared}}{\text{net income available to common}} \]
<table>
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<th>Description</th>
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<tr>
<td><strong>Non-current liabilities</strong></td>
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</tbody>
</table>
| Book value of bond | Book value of bond = PV of remaining CF discounted @ market interest rate at issuance  
Market interest rate @ issuance = coupon rate → issue at par → book value = face value  
Market interest rate @ issuance > coupon rate → discount bond → book value < face value  
Market interest rate @ issuance < coupon rate → premium bond → book value > face value |
| Interest expense of bond | Interest expense = beginning book value liability x bond's yield @ issuance  
Bond issue @ par → interest expense = coupon payment  
Premium bond → interest expense > coupon payment  
Discount bond → interest expense < coupon payment |
| Bond's issuance cost | US. GAAP: capitalised as an asset, allocated to PL over the bond term  
IFRS: issuance cost is reduced in bond liability  
CFS: CFF inflow = (bond proceed - issuance cost) |
| Bond's derecognition before maturity | Gain / Loss = Redemption price - book value  
Under US. GAAP, written off remaining capitalised issuance cost → PL |
| Debt covenant | Restrictions of the bondholders on the borrower → ↓ default risk → protect bondholders  
Affirmative covenant: Borrower promise to do certain things (make timely payments; maintain ratios and items of FS @ certain level; maintain collateral; etc.)  
Negative covenant: Borrow promise not to do certain things (Increase dividends; repurchase of share; issue more debt; M&A; etc.) |
| Bond's disclosure requirement | - Outstanding of LT debt, and portion due within next year;  
- Nature of the liabilities;  
- Maturities date;  
- Stated and effective interest rate;  
- Call provisions and conversion privilege;  
- Restrictions;  
- Assets pledged as security;  
- Amount of debt maturing in each of the next 5 years. |
| Finance lease requirements | IFRS  
- Title off leased assets transferred to the lessee @ end of the lease;  
- Lessee could purchase the leased asset for a price that is significantly lower than FV of asset @ some future date  
- Lease term covers a major portion of asset's economic life  
- PV of lease payments = FV of the leased asset  
- Lease is so specialised that only lessee could use without significant modification  
US GAAP  
- Title off leased assets transferred to the lessee @ end of the lease;  
- Lessee could purchase the leased asset for a price that is significantly lower than FV of asset @ some future date  
- Lease term ≥ 75% asset's economic life  
- PV of lease payments ≥ 90% FV of the leased asset |
| Lease disclosure requirements | - General description of the lease arrangement  
- Nature, timing and amount of payments to be made/received in each of the next 5 years  
- Lease revenue / expense reported in PL for each period presented  
- Amount receivable and unearned revenues from lease arrangement  
- Restrictions of the lease agreements |
| Pension | Deferred compensation earned over time through employee service  
Defined contribution plan: Retirement plan which Company contributes a sum amount each period to the employee's retirement account. The firm make no promise about the FV of the plan assets → Pension expense = the Company's contribution  
Defined benefit plan: Retirement plan which the Company promises to make periodic payments to employees after retirement → Company must estimate its obligation to employees.  
FV of plan asset > estimated pension obligation → overfunded, net pension asset on BS  
FV of plan asset < estimated pension obligation → underfunded, net pension liability on BS |
### Financial Statement Analysis: Application

<table>
<thead>
<tr>
<th>Concepts</th>
<th>Description</th>
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</table>
| Financial ratios | Trend in financial ratios and difference between firm’s ratios and competitors’ ratios: indicate important aspects of firm’s business strategy. E.g.:  
GM of Companies sell premium goods > GM of companies sell normal goods  
R&D cost of Companies sell premium goods > R&D cost of companies sell normal goods  
GM/OM of Companies sell premium goods > GM/OM of companies sell normal goods  
Company improve EPS by cutting cost → OM, GM overtime will reveal whether the company is able to implement the strategy, or sales have been suffered. |
| Forecast future net income and cash flow | **1. Start with forecasting sales:** Historical data could be used to estimate the GDP growth vs. Industry growth.  
- If firm’s market share is expected to remain the same, Firm’s sales growth = Industry growth.  
- If firm’s market share is expected to increase/decrease, firm’s estimated sales = market share x estimated industry sales for the period.  
**2. In simple forecasting model,** earnings could be forecasted using historical average/trend-adjusted measure of profitability (OM, EBT margin, net margin)  
**3. In complex forecasting model,** items on BS/PL could be forecasted based on separate assumption about its growth in relation to revenue growth  
**4. Multi-period forecast:** use single estimate of sales growth at some point  
**5. To estimate cash flow:** assumption about sources and uses of cash (increase in WorkingCap, CAPEX on new FA, issuance/repayment of debt, issuance/repurchase of stock. Future interest expense should be adjusted for any increase in debt). |
| Credit analysis | **1. Character:** firm management’s professional reputation, firm’s history of debt repayment  
**2. Collateral:** ability to pledge collateral → reduce lender’s risk  
**3. Capacity to repay:** require close examination of FS and ratios  
Credit analysis of credit agencies (S&P, Moody):  
1. Scale and diversification: Wider variety of product line, greater geographic diversification → better credit risk  
2. Operating efficiency (operating ROA, OM, EBITDA margin): higher operating efficiency → better credit risk  
3. Margin stability: More stable profitability margin → higher probability of repayment → better credit risk  
4. Leverage ((operating earning or EBITDA or Free CF) / (interest expense or total debt)): greater earnings in relation to debt → better credit risk |
| Use of FS analysis for stock screening | **1. Use multiple criteria, since single factor might include firms with undesirable features (e.g. low P/E ratio → operating losses, decline sales, or high leverage)  
* might include/exclude many/all firms in particular industry, e.g. low P/E → exclude growth companies; Low P/BV, or high dividend → include financial service companies  
**2. Back testing:** using a specific set of criteria to assess historical performance → forecast future performance.  
* No guarantee that those stock that outperformed in the past would continue to do so |
| Appropriate FS adjustments for comparison | **Inventory Accounting:** Adjust LIFO to FIFO  
- FIFO ending inventory = LIFO ending inventory + ending LIFO reserve  
- FIFO COGS = LIFO COGS - (ending LIFO reserve - beginning LIFO reserve)  
**Depreciation method and estimates:**  
- Difference in depreciation method, useful life and salvage value → difference in income and BS value  
- Adjust upward in asset revaluation recorded in PL or OCI  
- Estimate avg. age (remaining value / depreciation expense); avg. useful life (Historical cost / depreciation expense) and avg. remaining useful life (net book value / depreciation expense) → reveal in future capital spending needs compared to industry  
**Off-BS financing:**  
- Include operating lease in debt ratios  
\[
\text{Estimate PV of operating lease} = \frac{PV \text{ of financing lease} \times \text{sum of future operating lease payments}}{\text{sum of future financing lease payments}}
\]  
**Goodwill:**  
- Goodwill should be subtracted from assets when calculating financial ratios  
- Goodwill impairment expense in current period should be reversed → increase earnings |