**Financial Ratios**

**ROA/ROI =**

* Measures how much return a company earns from its asset

**Debt Ratio =**

* Evaluate level of debt risk

**AR Turnover =**

* Measures how many times a year it converts AR into cash

**\* Avg Collection Period =**

* Measures how many days to collect AR and convert to cash

**Current Ratio =**

* Ability to pay short-term obligations with short-term assets

**Acid-Test Ratio =**

* Quick Assets = Cash + ST investments + Current AR
* Ability to pay short term obligations using liquid assets

**\* Inventory Turnover =**

* Measures how many times a company sells its inventory

**\* Days’ Sales in Inventory =**

* Estimate days on avg to convert inventory to cash/AR

**\* Number of Days Purchases in AP =**

* Measures how many days’ worth of inventory in AP
* Avg length of time between purchase of inventory on credit and cash payment for that inventory

**Fixed Assets Turnover =**

* Measures efficiency of a company in using fixed assets to generate sales

**TA Turnover =**

* Measures ability in using total assets to generate sales

**Basic EPS =**

* Measures ability to produce income for each ordinary share outstanding

**PE Ratio =**

* Measures the price market pays for current earnings stream

**Dividend Payout Ratio =**

\* Length of operating cycle = Days’ Sales in Inventory + Avg Collection Period

If operating cycle < Number of days purchases in AP, company will have excess temporary capital. Else, company might need internal/external financing.

**Chapter 5: FS Integrity**

5 Basic Categories of Internal Control Structure

1. The control env – corporate culture and top management’s attitude towards internal control
2. Monitoring
3. Risk Assessment
4. Information and communication
5. Control activities – policies and procedures used by management to meet objective

**Preventive Controls**

1. Establish responsibilities and segregate duties
2. Proper procedures for authorization
3. Control assets and records: separate recordkeeping from custody of assets

**Detective Controls**

1. Maintain adequate records
2. Perform regular and independent reviews

**Limitations**

Internal controls can never completely prevent and detect errors and fraud. Human error & Costs must not exceed benefits.

**Chapter 3: Adjustments**

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**Chapter 4: Completing Accounting Cycle**

**Format of an Income Statement (Over a period of time)**

*Sales Revenue*

*- COGS*

*Gross Profit (Gross Margin)*

*- Operating Expenses (Include Salaries, General Admin, Rent, Depreciation, Bad Debt, etc.)*

*Operating Income*

*+/- Non-operating Income/Expense*

*+/- Interest Income/Expense*

*+/- Other Gain/Loss*

*- Income tax Expense*

*+/- Non-recurring events*

*Net Income*

**Format of a Statement of Financial Position (Snapshot)**

*Assets*

*- Current Assets*

*- Noncurrent Assets*

*Liabilities*

*- Current Liabilities*

*- Noncurrent Liabilities*

*Equity*

*- Share Capital*

*- Retained Earnings*

Real accounts 🡪 Balance Sheet accounts

* Not closed at EOP, carried over

Nominal accounts 🡪 Income statement accounts

* Closed at EOP to Retained Earnings, ending balance reset to zero

Closing accounts

* Close revenue & expenses to RE
* Debit revenues
* Credit expenses
* Credit net income if profit
* Close dividends to RE
* Credit dividends to RE

**Chapter 6: Receivables**

1. Estimate and record ECL (expense) at EOP
   1. Loss Allowance (contra-asset) ^
2. Write-off specific AR once uncollectible
   1. Loss Allowance (contra-asset) v

To estimate allowance

1. Identify specific accounts 🡪 Individual
2. All other accounts 🡪 Group assessment with aging analysis
3. Estimates from individual and group 🡪 total allowance required at reporting date

At Dec 31, 2022, an adjusting entry is needed to accrue interest income from note (payment not received) 🡪 adjustment required

Companies can sell receivables (usually at a discount) for cash or use it as a security for loan

**Chapter 7: Cash & Current Liabilities**

Cash is the most susceptible to theft and fraud.

Companies need to plan cash receipts to meet cash payments when due and keep a minimum level of cash necessary to operate.

Credit Terms: 2/10, n/30

* 2% discount if paid in 10 days from date of sale, otherwise full price is due in 30 days from date of sale

Sales Discounts & Returns are contra-revenue accts (debit bal.)

🡪 Sales discount is debited when customer pays full amount within discounted period based on credit terms (reduce inventory costs)

🡪 Sales returns is debited when customers return merchandise. Remember to credit Acc Receivable (if bought on credit) and another journal entry to Dr Inventory and Cr COGS.

**Bank Reconciliation**

|  |  |
| --- | --- |
| **Bank side** | **Book side** |
| *Bank Statement bal.* | *Book bal.* |
| + Deposits in transit | + Interest paid by bank |
| - Outstanding Checks | + Direct deposits |
| +/- Bank errors | - Service charges |
|  | - NSF checks |
|  | - Bank transfer |
|  | +/- Accounting errors |
| Adjusted Bank Balance | Adjusted Book balance |

3 Types of Liabilities:

1. Known Liabilities 🡪 GST, Acc Payable, CPF, UE Rev, ST Notes Payable (360 days to calculate daily interest)

**Start count the day after the note is issued. Eg. Issue 26, count from 27.**

2. Estimated Liabilities 🡪 Warranty liabilities

3. Contingent (Potential) Liabilities 🡪 Lawsuits

*When to record a contingent liability?*

|  |  |  |  |
| --- | --- | --- | --- |
|  | Probable  IFRS: >50%  GAAP: >70% | Reasonably Probable | Remote |
| Estimable | Record as Liability | Disclose in Notes | No disclosure needed |
| Non-estimable | Disclose in Notes | Disclose in Notes | No disclosure needed |

**Chapter 8: Inventory**

**FOB Destination:** Goods in Transit: From seller to public carrier 🡪 Seller inventory. From public carrier to buyer 🡪 Buyer inventory.

**FOB Shipping Point:** Goods on Consignment: Goods we own but are on display for sale at another place 🡪 Ownership is with consignor

|  |  |
| --- | --- |
| **Perpetual system** | **Periodic system** |
| Up-to-date record | COGS is calculated indirectly |
| Purchases are directly added | Purchases are recorded in “Purchases” acc |
| Information on COGS and inventory bal. Is available | Actual physical count of inventory is done at EOP |

COGS = Beg. Inventory + Net Purchases – End. Inv.

|  |  |
| --- | --- |
| Inventory | |
| Beginning Inventory |  |
| Purchases | COGS |
| Ending Inventory |  |

*Periodic system 🡪 To find Net purchases*

Dr Inv, Purchase Returns, Purchase Discounts

Cr Freight-in, Purchases

*Perpetual system 🡪 Adjust for inventory shrinkage (For example, inventory is lost/stolen)*

Dr COGS, Cr Inventory

**Inventory Costing Methods**

*FIFO provides the same amounts for ending inventory and COGS under both periodic and perpetual inventory systems*

1. Specific Identification Method (Impractical)

🡪 Specific cost of that unit is recorded as COGS

2. FIFO

🡪 First goods purchased, considered first goods sold

3. LIFO (Unaccepted by IFRS)

🡪 Last goods purchased, considered first goods sold

4. Weighted Average Cost

🡪 Average cost per unit is assigned to COGS

|  |  |
| --- | --- |
| Rising Costs | FIFO gives lowest COGS 🡪 higher NI |
| LIFO gives highest COGS 🡪 lower NI |
| Weighted Avg is in between |
| Declining Costs | FIFO gives higher COGS 🡪 lower NI |
| LIFO gives lowest COGS 🡪 higher NI |
| Weight Avg is in between |

Ending inventory must be reported at lower of cost or market value. If market value < cost, write-down is needed. Net inv = Inv – Allowance for write-down

Dr COGS, Cr Allowance for Inventory Write-down (Contra asset acc to Inventory)

**NOTE: If ending inventory is US/OS in one period, in the next period, RE will be normalized**

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**Chapter 9: PPE**

If acquiring lump sum PPE, cost will be as a % of appraised value.

Record depreciation 🡪 Dr. Depr. Expense, Cr. Acc. Depr. (Contra-asset)

Net book value (NBV/carrying amt) = Acquisition cost – Acc. Depr.

3 types of depreciation methods:

1. Straight-line method

🡪 Equal portion recognized over asset’s useful life

🡪

2. Units-of-production method

🡪

3. Declining-balance method (DON’T SUBTRACT RESIDUAL VAL)

🡪 , x = 2 for double-declining-balance rate

Residual value is ignored in declining balance method

**Changes in Depreciation estimates**

Does not affect depr. expense already taken, only affect future years. Add back the value of the change to the carrying amt.

**Capitalize or Expense?**

1. R&D

🡪 IFRS: Research cost are expense. Development cost after technological feasibility is established can be capitalized.

🡪 GAAP: Research & development costs are all expensed in period incurred.

2. Repairs

🡪 Ordinary repairs & maintenance 🡪 Expense

🡪 Additions & improvements 🡪 Capitalize

*🡪 Expense affects income statement 🡪 Lower NI*

*🡪 Capitalize affects balance sheet (asset) 🡪 Higher NI*

**Impairment of PPE (NOT Depreciation)**

Impairment is the loss of a portion of value of asset

An equipment bought before has a carrying amt of 8,000 (9,000 cost less 1,000 acc. depr) and a recoverable amt of 7,500.

Impairment = recoverable amt – carrying amt

= 7,500 – 8,000 = 500

Dr Impairment loss on equipment (expense), Cr Acc. Impairment loss (contra-asset acc)

**Disposal of PPE (Voluntary/Involuntary)**

Requires 2 journal entries

1. AJE to debit depr. expense and credit acc. depr. accounts for that particular year

2. Entry to record disposal

Dr Cash & ALL Acc Depr. up till that point (not just that year)

Cr Equipment

Dr Loss, Cr Gain on sale

🡪 Cost of asset and acc. depr. is removed

🡪 Difference between cash received and book value is recorded as gain/loss

If PPE is fully depreciated, the disposal will just be Dr Acc. Depr. full amount and Cr. PPE full amount.

**Intangible Assets**

Definite life (patents, copyrights, franchises): amortized over estimated **useful** life using straight-line method

Indefinite life (trademarks, goodwill): not amortized, but tested annually for possible impairment

Dr Amortization expense, Cr Accumulated Amortization

**Chapter 10: Equity**

**BE CAREFUL NOT TO INCLUDE SHARES THAT HAVE BEEN AUTHORIZED BUT NOT YET ISSUED**

**Authorized shares are the maximum number of shares of capital stock that can be sold to the public.**

Unissued shares are authorized shares of stock that never have been sold.

Issued shares are authorized shares of stock that have been sold.

*Outstanding shares are issued shares that are owned by stockholders while treasury shares are issued shares that have been reacquired by the corporation.*

|  |  |
| --- | --- |
| Par Value | No Par Value |
| Arbitrary amount assigned to each share of stock when it is authorized | No arbitrary amount is assigned to each share of stock |
| When sold above par, it is said to sell at a premium | Used in SG, no authorized share capital in SG |

1. Ordinary Shares

Basic voting stock 🡪 One share one vote

Entitled to receive dividends declared

Rank behind Preference Shares in dividends and liquidation

Can have different voting rights

Can have preemptive rights: permits existing stockholders to purchase additional shares to maintain the same percentage of ownership

2. Preferred Shares

Often no voting rights

Often has specific payment terms that takes priority over ordinary shares

**Convertible/non-convertible** 🡪 convertible to ordinary shares

**Redeemable/non-redeemable** 🡪 option for company to buyback shares

**Cumulative/non-cumulative** 🡪 cumulative shares require all dividends in arrears to be fully paid before ordinary dividends can be paid out

**Participating/non-participating** 🡪 participating shares may receive additional dividend based on predetermined condition

**If share has par value, and issued at premium, Cr Common Stock (at par value) and Cr Paid-in Capital in Excess of Par.**

**If share has no par value, but has a stated value and is issued at a higher value that stated value, Cr Common Stock (at stated value) and Cr Common Stock Premium**

Common Stock == Share Capital, Common Share

Common Stock Premium == Paid-in Capital in excess of par, Share Premium

**Reasons for issuing preference shares**

- To raise capital without sacrificing control

- To boost the return earned by ordinary shareholders through financial leverage

- To appeal to investors who may believe the ordinary shares are too risky

**Treasury Shares** (contra-equity acc 🡪 reduces equity)

*Transactions relating to Treasury shares only affect equity*

**Buying treasury shares will not affect common stock, since treasury shares is a contra-equity, it will be minus from there.**

**# of Common Stock = # Common Stock - # Treasury Shares**

Companies repurchase at cost, but they can be sold back at cost, higher than cost, lower than cost

Higher than cost 🡪 Cr Premium on Treasury shares

Lower than cost 🡪 Check if treasury share premium acc has sufficient balance.

If there is sufficient balance, Dr Premium on Treasury Shares. If not, Dr Retained Earnings.

**Using shares to purchase**

Shares will be calculated at par value, but need to remember to subtract paid-in capital in excess if number of shares is not enough to match with the amount

**Distribution of cash dividends (Rmb to close account to RE)**

1. Declaration date 🡪 Dr Dividends, Cr Dividends Payable

2. Date of record 🡪 No accounting entry

3. Date of payment 🡪 Dr Dividends Payables, Cr Cash

**Stock Dividends**

*Small stock dividends (20-25% of shares): fair value*

@Declaration date: Dr Stock Dividends, Cr Stock Dividends Distributable, Cr Paid-in Capital in Excess of Par

@Distribution date: Dr Stock Dividends Distributable, Cr Common Stock

@Closing: Dr Retained Earnings, Cr Stock Dividends

*Large stock dividends: assign par value*

@Declaration date: Dr Stock Dividends, Cr Stock Dividends Distributable

@Distribution date: Dr Stock Dividends Distributable, Cr Common Stock

@Closing: Dr Retained Earnings, Cr Stock Dividends

|  |  |  |
| --- | --- | --- |
| **Items to be Affected** | **Stock Split** | **Stock Dividends** |
| Number of shares outstanding | Increase | Increase |
| Total equity | No change | No change |
| Retained earnings | No change | Decrease |
| Common stock | No change | Increase |
| Paid-in capital in excess of par, common stock | No change | Increase (if any) |
| Par value per share | Decrease | No change |

**Chapter 11: Statement of Cash Flows**

1. Operating Activities 🡪 Inflows from customers, royalties, fees, commissions, and other revenue. Outflows for purchase of goods and services from suppliers, salaries, income taxes, other operating expenses. Subtract Gain on disposal of PPE, Add Loss on disposal of PPE

2. Investing Activities 🡪 Inflows from sale/disposal of PPE & LT assets, sale/maturity of investments in securities, repayments of loans made to other parties. Outflows for purchase of PPE, purchase of investments in securities, loans made to other parties.

3. Financing Activities 🡪 Inflows from borrowings on loans, notes, bonds, issuing shares to owners. Outflows for repaying principal to creditors, repurchasing shares from shareholders, dividends to owners.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Operating | Investing | Financing |
| Interest received | **Yes** | Yes |  |
| Dividends received | **Yes** | Yes |  |
| Interest paid | **Yes** |  | Yes |
| Dividends paid | Yes |  | **Yes** |

**Format of SCF (Over a period of time)**

***Cash flows from operating activities***

*Net cash provided by operating activities*

***Cash flows from investing activities***

*Net cash provided by investing activities*

***Cash flows from financing activities***

*Net cash provided by financing activities*

***Net increase in cash***

***Cash balance at prior period-end***

***Cash balance at current period-end***

**Calculate SCF using Indirect method (Operating)**

**Watch out for Income Taxes Payable.**

1. Start with Profit before tax

2. Operating items not generating or using cash (Add depreciation & amortization, no cash involved)

3. Changes in noncash current assets and current liabilities (Subtract increase/Add decrease in noncash current assets)

(Add increase/Subtract decrease in current liabilities)

4. Nonoperating items (Subtract gain/Add loss on disposal of long-term assets)

5. Separate reporting of dividend received, interest received/paid & income taxes 🡪 Cash from operating activities (Subtract income taxes paid, add interest expense, subtract interest income, subtract dividend income)

|  |  |  |
| --- | --- | --- |
|  | Change in Account Balance During Year | |
| **Increase** | **Decrease** |
| **Noncash Current Assets** | Subtract from profit | Add to profit |
| **Current Liabilities** | Add to profit | Subtract from profit |

**Calculate SCF (Investing & Financing)**

1. Identify changes in investing/financing-related accounts

2. Explain these changes using reconstruction analysis

3. Report their cash flow effects

**Chapter 12: Analyzing Financial Statements**

**FSA Analysis Tools**

1. Vertical analysis 🡪 compared to base amount

Common-size Percent =

Base amount 🡪 Total assets (SFP) / Net sales revenue (IS)

2. Horizontal analysis 🡪 compared to performance across time

Dollar change = Analysis period amount – Base period amount

Percent change =

Trend Percent =

3. Ratio analysis 🡪 measures proportional relationship between 2 or more financial statement numbers

***1. Profitability***

ROA, EPS

Return on Equity =

Profit Margin =

- Assess operating efficiency in generating profit

- Can replace net income with gross profit or operating income to get gross profit margin or operating profit margin respectively

***2. Liquidity/Efficiency***

Current Ratio, Acid-test Ratio, AR Turnover, Avg Collection Period/Days’ Sales Uncollected, Inventory Turnover, Days’ Sales in Inventory, Days’ Purchases in AP, Total Asset Turnover, Fixed Asset Turnover

Working Capital =

- More working capital suggests a stronger liquidity position and an ability to meet current obligations

***3. Solvency***

Debt Ratio

Time Interest Earned Ratio =

- Indicates how many times a company can pay its interest with its income before interest and tax

Debt-to-Equity Ratio =

- Measures how much liabilities a company has relative to its equity

***4. Market Prospects***

PE ratio, Dividend Payout Ratio

Cash Flow to Net Income =

- Reflects the extent to which accrual accounting assumptions and adjustments have been included in computing net income

Cash Flow Adequacy =

- Used to access if a company is generating enough cash flow from its operations to pay for its capital expenditures in PPE and still have cash left over

**DuPont Framework**

Return on Equity = Profitability x Efficiency x Leverage

= Return on Sales x Asset turnover x Assets-to-equity ratio

=

Profitability = Ability to generate net income per dollar of sales

Efficiency = Ability to generate sales through use of assets

Leverage = Degree to which company uses borrowed funds instead of invested funds

**Limitations of FS and Ratio Analysis**

- Not governed by financial reporting standards, except EPS

- Many variations 🡪 susceptible to manipulation

- Watch out for unexplained large changes in financial statement items that are clouded in general terms such as “other operating expenses” or “other payables” Table

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