CH10 - Financial Anaylsis

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🐳 Info — Horizontal Analysis

- Study of percentage changes from year-to-year

- $\frac{\text{New Dollar - Older Dollar}}{\text{Old Dollar}}$

- Trend $\% = \frac{\text{Any Year}}{\text{Base Year}}$

🐳 Info — Vertical Analysis

- Shows relationship between financial statement to its base

- Vertical Analysis Income Statement $\% = \frac{\text{Each income statement item}}{\text{revenue}}$

- Vertical Analysis Balance Sheet $\% = \frac{\text{Each Asset Item}}{\text{Total Assets}}$ or $= \frac{\text{Each L + SE Item}}{\text{Total L + SE}}$

🐳 Info — Common Size Statement

- Report only vertical analysis percents, in $\%$ of revenue
  - Not dollar amount

-Help in the comparison of different companies
- Financial result in terms of a common denominator

Ratio

🐳 Info — Abilitiy to Pay Current Liability

- Working capital ($ amount) $=$ Current Asset $-$ Current Liability

- Current Ratio (not $ amount)$= \frac{\text{Current Asset}}{\text{Current Liability}}$ (preferrably 1.5)

- Quick Ratio (Acid Test) $= \frac{\text{Cash+Short-term investment + Net current receivables}}{\text{Current liability}}$ (stricter version of liquidity)

Turnover plus Cash Conversions

🐳 Info — Inv Turnover and Days Inventory Outstanding

- Inventory Turnover $= \frac{\text{COG}}{\text{Average Inventory}}$ or $\frac{2 \cdot \text{COG}}{\text{Beg. Inv. + End Inv.}}$

- Days Inventory Outstanding (DIO) $= \frac{365}{\text{Inventory Turnover}}$

(DIO is inversely proportional to Inventory Turnover)

> 🐳 **Info — A/R Turnover and Days of Sales Outstanding**
>
> - A/R Turnover $= \frac{\text{Net Sales}}{\text{Average Net A/R}} = 2 \cdot \frac{\text{Net Sales}}{\text{Beg. A/R} + \text{End A/R}}$
> - Days Sales Outstanding(DSO) $= \frac{365}{\text{A/R Turnover}}$
>
> The higher the turnover the better

> 🐳 **Info — A/P Turonver and Days Payables Outstanding**
>
> - A/P Turnover $= \frac{\text{COG}}{\text{Average A/P}}$
> - Days Payables Outstanding (DPO) $= \frac{365}{\text{A/P Turnover}}$

> 🐳 **Info — Cash Conversion Cycle**
>
> $$\text{Cash Conversion Cycle} = \text{DIO} + \text{DSO} - \text{DPO}$$
>
> Cash Conversion Cycle can be negative number, (i.e DPO is very high, meaning not paying payables)
>
> The lower the Cash Conversion Cycle the better. But it is the reason that DIO and DSO are lower but not DPO is higher.

Leverage

> 🐳 **Info — Debt Ratio and Time Interest Earned**
>
> $$\textbf{Debt Ratio} = \frac{\textbf{Total Liability}}{\textbf{Total Asset}}$$
>
> The higher the ratio, the higher risk of investment is. That is, the asset of a company is mostly funded by debts.
>
> $$\textbf{Times-Interest Earned} = \frac{\textbf{Income from operations}}{\textbf{Interest Expense}}$$
>
> The higher the ratio the better the company is performing. It illustrates how number of times interest expense is earned
>
> $$\textbf{Leverage (Equity Multiplier) Ratio} = \frac{\textbf{Average Total Assets}}{\textbf{Average Common Shareholders' Equity}}$$
>
> The higher the ratio, the higher risk of investment is. That is, the asset of a company is mostly funded by debts rather than equity.

Profitability

> 🐳 **Info — Marigin/Percentage**
>
> $$\text{Revenue} - \text{Cost of Goods Sold} = \text{Gross Profit}$$
>
> $$\text{Gross Profit Marigin/Percentage (GPM)} = \frac{\text{Gross Profit}}{\text{Net Sales}}$$
>
> $$\text{Operating Profit Marigin/Percentage (OPM)} = \frac{\text{Operating Income}}{\text{Net Sales}}$$
>
> $$\text{Net Profit Marigin/Return on Sales (NPM)} = \frac{\text{Net Income}}{\text{Net Sales}}$$
>
> Revenue is also sales.
>
> Net Sales = Sales − Allowances
>
> The higher ratios are, the more profitable the company is.

> 🐳 **Info — Assets**
>
> $$\text{Asset Turnover} = \frac{\text{Net Sales}}{\text{Average Total Asset}} = \frac{2\ \text{Net Sales}}{\text{Beg. Asset} + \text{End Asset}}$$
>
> $$\text{Return on Total Assets} = \frac{\text{Net Income}}{\text{Average Total Assets}} = \frac{2\ \text{Net Income}}{\text{Beg. Asset} + \text{End Asset}}$$

> 🐳 **Info — Common Shareholder Equity**
>
> $$\text{Return on Common Shareholders Equity} = \frac{\text{Net Income} - \text{Preferred Dividends}}{\text{Average Common Shareholders' Equity}}$$
>
> $$\text{Earnings Per Share (\$ amount)} = \frac{\text{Net Income} - \text{Preferred Dividends}}{\text{Average Number of Common Outstanding Shares}}$$

Generally:

x Turnover = $\frac{\text{Net Sales}}{x}$

Return on x = $\frac{\text{Net Income}}{x}$

Shares as an Investment

Signs of Poor Performance of a company

1. Earnings problems
2. Decreased cash flow
3. Too much debt
4. Inability to collect receivables
5. Buildup of inventories
6. Trends of sales, inventory and receivables