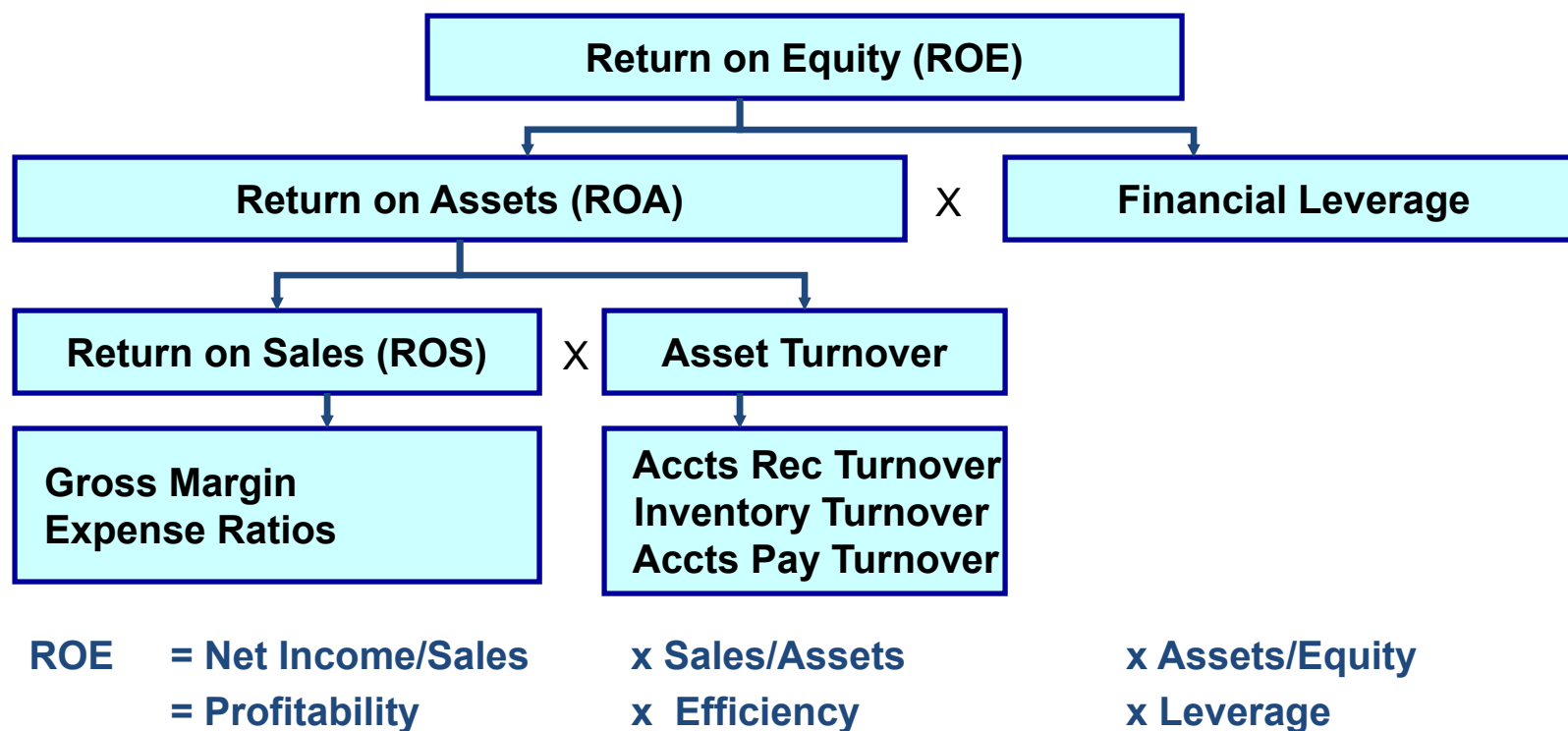


RATIO ANALYSIS: PROFITABILITY AND TURNOVER RATIOS

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DuPont Ratio Analysis Framework



Profit Margin Ratios

- **What are the drivers of profitability?**
 - **Decompose Return on Sales by income statement line item**
- **Gross Margin = (Sales - Cost of Goods Sold) / Sales**
- **SG&A-to-Sales = SG&A Expense / Sales**
- **Operating Margin = Operating Income / Sales**
- **Interest Expense-to-Sales = Interest Expense / Sales**
- **Effective Tax Rate = Income Taxes / Pre-tax Income**

Asset Turnover Ratios

- How many times per year do we cycle through accounts?
 - Example: Inventory Turnover of 8 means that we build and sell Inventory 8 times per year, on average.
- Accounts Receivable Turnover = Sales / Average A/R
- Inventory Turnover = Cost of Goods Sold / Average Inventory
- Accounts Payable Turnover = Purchases / Average Accounts Payable
 - (Purchases = Ending Inventory + COGS – Beginning Inventory)
- Fixed Asset Turnover = Sales / Avg. Net PP&E

Days Outstanding Ratios

- How many days, on average, are accounts outstanding?
 - Example: Days Inventory of 45 means that it takes 45 days, on average, from the time we start building Inventory until we sell it
- Days Receivable (Sales) Outstanding = $365 * (\text{Average A/R} / \text{Sales})$
- Days Inventory = $365 * (\text{Average Inventory} / \text{Cost of Goods Sold})$
- Days Payable = $365 * (\text{Average Accounts Payable} / \text{Purchases})$
- Net Trade Cycle = Days Receivable + Days Inventory - Days Payable
 - Net Trade Cycle represents the gap between cash outflows and cash inflows that we have to bridge with short-term borrowing

