Understanding Financial Statements & Reporting
- Lecture 7 -

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Today’s Content

- Financial Statement analysis
  - Interpreting & understanding what the numbers are saying
  - Objectives
  - Tools & techniques
    - Common size financial statements
    - Liquidity analysis
    - Debt management analysis
    - Asset management analysis
    - Profitability analysis
    - Return to investors analysis

Financial Statement Analysis

- Financial statement analysis
  - Must always be done in context:
    - The overall economy
    - The industry
    - The company itself
  - Many information resources & tools available
    - See the syllabus for suggestions & links

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Analysis Objectives

- Analysis objectives determine your focus:
  - Management needs to analyze their own company’s performance & its relationship to others in the industry
    - How well are we performing? Why?
    - Where are our operational strengths & weaknesses?
    - What is our capital structure relative to others & how does it measure up to our goals?
    - Where are we at risk (vulnerable) to economic changes, credit crunches, competition, etc.?

Common Size Financial Statements

- Common size financial statements
  - Useful for analyzing your company’s internal structure and its relationship to others in the industry regardless of size
  - Restates all Balance sheet items as a percentage of total assets
  - Restates all Income statement items as a percentage of net sales

Common Size Balance Sheet

- Restate every item as a % of Total assets
  - Shows the investment in major asset categories:
    - Current assets/Total assets
    - Long-term assets/Total assets
  - Shows the capital structure:
    - Liabilities/Total assets & Equity/Total assets
  - Shows the debt structure
    - Current liabilities/Total assets
    - Long-term liabilities/Total assets
  - Useful for analyzing your own structure, how it has changed & how it relates to others in the industry
Dell

Common Size Balance Sheet

- Assets:
  - Current/Total assets: 70% 71%
  - Long term/Total assets: 30% 29%
- Capital structure:
  - Liabilities/Total assets: 53.7% 58%
  - Equity/Total assets: 44.3% 42%
- Debt structure:
  - Current liabs/Total assets: 45% 49%
  - Long term liabs/Total assets: 8.5% 9.5%

Common Size Income Statement

- Restate every item as a % of Net sales
  - Shows the relative magnitude of expenses:
    - Advertising expense/Net revenue
    - Repairs & maintenance expense/Net revenue
  - Shows the profit margins (mentioned in Income Statement lecture):
    - Gross, Operating & Net profit margins
  - Shows the relative importance of Other revenues & expenses
  - Useful for analyzing your own structure, how it has changed & how it relates to others in the industry

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Common Size Income Statement

- Magnitude of expenses:
  - Selling & admin/Net rev. 9.8% 9.4% 10%
  - R&D/Net revenue 1.49% 1.48% 1.51%
- Profit margins:
  - Gross profit/Net revenue 22.5% 20.6% 20.2%
  - Operating profit/Net rev. 11.2% 8.9% 8.35%
  - Net income/Net revenue 8.0% 6.6% 6.8%
Liquidity Ratios

- Liquidity ratios also referred to as “short-term solvency” ratios … show the ability to meet short-term debt requirements
  - Current ratio:
    - Current assets/Current liabilities (below 1 is bad!)
    - Note: How liquid are Accts, recv & Inventory
  - Quick ratio (a.k.a. Acid ratio):
    - (Current assets - Inventory)/Current liabilities
  - Cash flow liquidity ratio:
    - (Cash + Marketable securities + CFO)/Current liabilities

Activity Ratios

- Activity ratios show two types of asset turnover information:
  - 1) How liquid accounts receivable and inventory actually are
  - 2) How well sales are being generated from the company’s investments in inventory and other assets

Activity Ratios - Asset Liquidity

- Average collection period:
  - Shows the average number of days to convert receivables into cash
  - Accounts receivable/Average daily sales
- Accounts receivable turnover:
  - Shows how many times receivables are collected during a year
  - Net sales/Accounts receivable
- Inventory turnover
  - Shows how liquid inventory is
  - Cost of goods sold/Inventory
Activity Ratios - Asset Mgmt.

- Fixed asset turnover
  - Shows the company’s ability to generate sales from investments in fixed assets
  - Net sales/Net property, plant & equipment
- Total asset turnover
  - Shows the company’s ability to generate sales from investments in all assets
  - Net sales/Total assets
- Both indicate whether asset investment is too high & how profitable it is

Leverage Ratios

- Leverage ratios show several important aspects of a company’s debt structure and ability to cover debt payments
  - Assets = Liabilities + Stockholder’s equity
  - How much of a company’s financing comes from debt (liabilities) relative to equity?
  - How well is a company able to cover interest and other fixed debt payments?

Leverage Ratios - Debt financing

- Debt ratio
  - The % of assets financed with debt
  - Total liabilities/Total assets
- Long-term debt to total capitalization
  - The % of long-term debt used for permanent financing
  - Long-term debt/(Long-term debt + Equity)
- Debt to equity
  - The riskiness of the capital structure
  - Total liabilities/Stockholder’s equity
Leverage Ratios - \textit{Debt coverage}\newline\begin{itemize}
  \item Times interest earned\newline  \quad – Coverage of interest expense thru operations\newline  \quad – Operating profit/Interest expense\newline  \item Fixed charge coverage\newline  \quad – (Operating profit + lease pmts.)/(Interest expense + lease payments)\newline  \item Cash flow adequacy\newline  \quad – Cash flow from operating activities/Average annual long-term debt maturities
\end{itemize}

Profitability Ratios\newline\begin{itemize}
  \item Profitability ratios show how well a company translates sales dollars into profits & creates returns on investments\newline  \quad – Profit margins from the Income statement\newline  \quad – Cash flow margins from the Statement of cash flows\newline  \quad – Return on assets & equity using figures from various statements
\end{itemize}

Profitability Margins \textit{(Income Statement)}\newline\begin{itemize}
  \item Gross profit margin\newline  \quad – Shows the ability to cover costs of producing products & selling them to customers\newline  \quad – Gross profit/Net sales\newline  \item Operating profit margin\newline  \quad – Shows ability to cover all ordinary business expenses & still make a profit\newline  \quad – Operating profit/Net sales\newline  \item Net profit margin\newline  \quad – Net earnings/Net sales
\end{itemize}
Profitability Margins
*(Cash flow & Returns)*

- Cash flow margin
  - Shows the ability to translate sales into cash
  - Cash flow from operating activities/Net sales
- Return on total assets (investments)
  - Net earnings/Total assets
- Return on equity
  - Net earnings/Stockholder’s equity
- Cash returns on assets
  - Cash flow from operating activities/Total assets

Analysis in Context

- So, what if you have a deteriorating liquidity situation? … Poor liquidity ratios
  - How might that affect you and your decisions?
    - You may have to seek financing to meet current operating requirements
    - How is your debt to equity?
    - How is your accounts receivable turnover?
    - What is the condition of the overall economy?
    - What is the condition of the industry?
    - What is the position of your company within the industry?

Analysis in Context

- So, what if you are highly leveraged? … High debt to equity ratios
  - How might that affect you and your decisions?
    - Maybe it’s a good time to issue stock
    - How are your profitability ratios?
    - What is the condition of the overall economy?
    - What is the condition of the industry?
    - What is the position of your company within the industry?
Summary

- Financial Statement analysis
  - Interpreting & understanding what the numbers are saying
  - Objectives
  - Tools & techniques
    - Common size financial statements
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