Construction Accounting and Financial Management

Chapter 6
Analysis of Financial Statements

Financial Ratios

- Affected by:
  - Method of depreciation
  - Retention
  - Timing of financial statements

- When comparing items on the balance sheet and income statement, use the average of the balance before and after the period covered by the income statement

Quick Ratio

- Ability to pay current (short-term) liabilities with cash or other near cash assets
- Quick Ratio = \( \frac{(\text{Cash} + \text{Accounts Receivable})}{\text{Current Liabilities}} \)
- Accounts receivable-retention should not be included in the accounts receivable
- Ideal is 1.00 to 1

Current Ratio

- Ability to use current assets to pay for current liabilities
- Current Ratio = \( \frac{\text{Current Assets}}{\text{Current Liabilities}} \)
- Ideal is 2.00 to 1

Current Liabilities to Net Worth Ratio

- Measurement of the risk that short-term creditors are taking by extending credit
- CL to NW = \( \frac{\text{Current Liabilities}}{\text{Net Worth}} \)
- Ideal is 67% for other industries
  - Construct exceeds this because of heavy use of trade financing

Debt to Equity Ratio

- Risk in the company all creditors are taking compared to the risk the company's owners are taking
- Debt to Equity = \( \frac{\text{Total Liabilities}}{\text{Net Worth}} \)
- Ideal is less than 2.00 to 1
Fixed Assets to Net Worth Ratio

- Measurement of the amount of the owner’s equity that is tied up in fixed assets
- \( \text{FA to NW} = \frac{\text{Net Fixed Assets}}{\text{Net Worth}} \)

Current Assets to Total Asset Ratio

- Measurement of how liquidity a construction company’s assets are
- \( \text{CA to TA} = \frac{\text{Current Assets}}{\text{Total Assets}} \)
- Ideal is:
  - 0.55 to 0.65 for equipment intensive areas
  - 0.70 to 0.80 for all others

Collection Period

- Measurement of the average time it takes a company to collect its accounts receivable
  - Exclude accounts receivable-retention
  - Measurement of how long the company’s capital is being used to finance client’s construction projects
  - Include accounts receivable-retention
- \( \text{Coll. Period} = \frac{\text{Accounts Receivable}}{\text{Revenues}} \times 365 \)
- Ideal is less than 45 days

Average Age of Accounts Payable

- Measure of how extensively a company is using trade financing
- \( \text{AA of AP} = \frac{\text{Accounts Payable}}{\text{Revenues}} \times 365 \)
  (Materials + Subcontract)
- Assumes the bulk of the invoices that pass through the accounts payable are material and subcontract construction costs
- Ideal is less than 45 days

Assets to Revenues Ratio

- Measurement of how efficiently the company is using its assets
- \( \frac{\text{Total Assets}}{\text{Revenues}} \)

Working Capital Turns

- Measurement of how efficiently a company is using its working capital

- Working capital:
  - The working capital represents those funds available for future operations or for the reduction of long-term liabilities
  - \( WC = \text{Current Assets} - \text{Current Liabilities} \)

Working Capital Turns

- \( WCT = \frac{\text{Revenues}}{\text{Working Capital}} \)

- When payments pass through to subcontractors:
  - \( WCT = \frac{(\text{Revenues} - \text{Subcontractor})}{\text{Working Capital}} \)

Accounts Payable to Revenue Ratio

- Measurement of how much a company is using its suppliers and subcontractors as a source of funds

- \( \text{AP to R} = \frac{\text{Accounts Payable}}{\text{Revenue}} \)

  - Includes accounts payable-retention

Gross Profit Margin

- Percentage of the revenues left after paying construction costs and equipment costs

- Measure of what percentage of each dollar of revenue is available to cover general overhead expenses and provide the company with a profit

- \( \text{Gross Profit Margin} = \frac{\text{Gross Profit}}{\text{Revenue}} \)

General Overhead Ratio

- Percentage of the revenues used to pay the general overhead expense

- \( \text{General Overhead} = \frac{\text{General Overhead}}{\text{Revenue}} \)

  - Ideal is less than 10% plus realtor fees

Profit Margin

- Percentage of the revenues that becomes profit

- \( \text{Pretax PM} = \frac{\text{Net Profit Before Taxes}}{\text{Revenues}} \)

  - Ideal is >5%

- \( \text{After-tax PM} = \frac{\text{Net Profit After Taxes}}{\text{Revenues}} \)
Return on Assets
- Measurement of how efficiently a construction company is using its assets
- Return on Assets = \(\frac{\text{Net Profit After Taxes}}{\text{Total Assets}}\)

Return on Equity
- Return the company's shareholders received on their invested capital
- Pretax ROE = \(\frac{\text{Net Profit Before Taxes}}{\text{Equity}}\)
  - Ideal is >15%
- After-tax ROE = \(\frac{\text{Net Profit After Taxes}}{\text{Equity}}\)

Degree of Fixed Asset Newness
- Measurement of how new a company's assets are
- Affected by depreciation method
- D of FAN = \(\frac{\text{Net Fixed Assets}}{\text{Total Fixed Assets}}\)
- Ideal is between 60 and 40%,