Trends Analysis to Evaluate Stability of the Financial System of the UK Construction

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Univariate Analysis

Park (2015) defines univariate analysis as the purest form of a quantitative technique used for statistical evaluation. Univariate analysis, therefore, employs only one variable by describing each variable in a data set and summarising each variable in the data set on its own. Unlike multivariate analysis, which deals with data relationships, univariate analysis describes the data by summarising and finding patterns within the data (Park, 2015, pg. 14). The analysis, through data exploration, describes the single variables using advanced tests and ultimately narrows down the types of univariate analysis to be conducted. The variable data is then consolidated in a frequency distribution table, bar graph, pie charts, and histogram, from which the variables are presented.

Trend Analysis

Trend analysis is a technique that collects information over time and then plots the information horizontally for further review (Park, 2015, pg. 27). The aim of conducting a trend analysis is to detect the pattern in the relationship between the variables associated and finally project the future direction of the model being analyzed. Trend analysis helps evaluate how stable financial systems are, for example, the UK construction industry. Profitability ratios are computed to aid in assessing the profitability of an entity such as the UK construction industry. Liquidity ratios indicate the available working capital that is essential to evaluating an entity’s performance.

Ratios

Ratio class A: profitability ratios

Profitability is defined as the capacity of an industry or a company to make a profit. Therefore, profitability ratios are used to measure the profitability of an entity regarding its performance and efficiency. They assess the ability of an industry to make earnings concerning the expenses and other relevant costs that are incurred during this time. The relative difference in the ratios in subsequent

time periods indicates either strong or reduced profitability of the industry or the company. The profitability ratios to be discussed are return on capital employed (ROCE), return on equity (ROE), and return on assets (ROA).

Return on capital employed (ROCE)

Grant (2016, pg. 48) defines ROCE as "the proportion of the net working profit of the entity to its capital utilized." Therefore, the equation expresses earnings as a percentage of the total capital employed. ROCE is a better tool for assessing the longevity of a company because it considers efficient use of assets and performance while considering long-term financing. ROCE is calculated using the formula below.

ROCE = Earnings Before Interest and Tax (EBIT) / Capital Employed – *Equation 1*

Where:

– EBIT indicates the earnings of a company only from its operations without regard to interest or taxes.

– Capital employed is the total finance used to generate the profits.

Return on Equity (ROE)

According to DeFusco et al. (2015), Return on Equity is also referred to as Return on Net Worth. Return on Equity is the ratio that is used to measure how efficiently the shareholders' investment is used to generate profits for the company. Furthermore, ROE is a profitability metric that compares the profit available to shareholders to the capital owned by shareholders. ROE is calculated using the formula below.

ROE = Net income / Shareholders' Equity – *Equation 2*

Where

- Net income is the total profit after taxes and other deductions have been undertaken.
- Shareholders' Equity is an entity's net worth computed by subtracting total liabilities from total assets.

Return on assets (ROA)

According to Weygandt et al. (2015), it is a profitability ratio that measures the net income produced by total assets during a period by comparing net income to the average total assets. It indicates the efficiency of a company when managing the company's assets to produce revenue within a specified

period (Weygandt, 2015, pg. 113). Because the profit of an entity is measured considering its total assets, the ratio shows the profit generated from the capital a firm has invested in its fixed assets. The formula used to calculate ROA is:

ROA = Net Income / Total Assets – *Equation 3*

Where

- Net income is the total profit after taxes and other deductions have been undertaken.
- Total assets are anything valuable owned by a business.

The average total assets are used because the total assets can vary over time.

Ratio class B: liquidity ratios

Liquidity measures the ease with which a company can convert assets into cash. Grant (2016) states that a liquidity ratio is used to analyze a company's ability to pay off both its current liabilities and long-term liabilities as they become due. Liquid assets are used to analyze current liabilities to evaluate how efficiently a company can cover short-term debts in case of an emergency. Liquidity ratios employed in analyzing the performance of the UK's construction industry include the quick ratio, current ratio, and gearing ratio.

Quick ratio

According to Grant (2016), the quick ratio is also known as the acid-test ratio. The quick ratio measures how effectively a company meets its short-term financial liabilities. He further claims that it indicates the company's short-term liquidity, hence measuring the company's ability to meet its short-term obligations using its most liquid assets. The quick ratio helps determine the level of quickly exchangeable assets relative to current liabilities. The quick ratio is calculated using the formula below.

Quick ratio = (cash + marketable securities + accounts receivables) / current liabilities – *Equation 4*

Where:

- Cash is real money, including cash at hand and account balances.
- Marketable securities are debts to be sold or redeemed within a year.
- Accounts receivable are amounts an entity is owed by its debtors.
- Current liabilities are amounts to be paid to debtors within a year.

Current ratio

It is the most popular and often-used liquidity ratio, which helps evaluate how able a company is to pay off its short-term debt obligations, including accounts payable, accrued taxes, and wages (DeFusco et al., 2015, pg. 77). It indicates the short-term liquidity of a firm within a fiscal year. The ratio is widely used to determine whether an investor should invest in or lend money to an entity. It is calculated using the formula below.

Current ratio = current assets / current liabilities – *Equation 5*

Where:

- Current assets are cash and other assets to be converted to cash within a year.
- Current liabilities are amounts to be paid to debtors within a year.

The resulting ratio is usually stated in numeric format instead of decimal format.

Gearing ratio

Grant (2016) describes the gearing ratio as a type of financial ratio that measures a company's borrowed funds relative to its equity. It indicates the company's financial leverage and the financial risk it is subjected to because excessive debt can lead to financial constraints. According to DeFusco et al. (2015), a company's financial leverage represents the utilization of borrowed funds by a firm to expand its sales, hence profit. The most general equation used to calculate the gearing ratio should include all forms of debt, including both long- and short-term debt and overdrafts.

Gearing ratio = EBIT / interest payable – *Equation 6*

Where

- EBIT is the earnings of a company only from its operations without regard to interest or taxes.
- Interest payable is interest already incurred but not added to the balance sheet.

Ratio class c: efficiency ratios

Omar et al. (2014) state that the efficiency with which a company utilizes its assets to generate revenues, as well as its ability to manage those assets, is important. The efficiency ratio can, therefore, be defined as a measure of a firm's ability to make sales by using its assets and liabilities (Omar et al., 2014, pg. 224). Since a company that is efficient in managing its assets and liabilities becomes profitable, efficiency ratios and profitability ratios go hand in hand. The efficiency ratios used for this analysis are net asset turnover and interest coverage.

Net asset turnover

The net asset turnover ratio is used to calculate the value of the revenue a company generates relative to the amount of its assets. Hence, it shows the sales made from each dollar of the company's assets. It indicates how efficiently a company deploys its assets when making income. When net asset turnover is too high, it indicates that there is too little investment, while a relatively low ratio suggests inefficient management.

Net assets turnover = sales revenue / total assets – *Equation 7*

Where:

- Sales revenue is income from the sale of goods and services minus the cost associated with the sales.
- Total assets are anything valuable owned by a business.

Interest coverage ratio

It is one of the vital ratios that help in risk management and risk reduction. According to Weygandt et al. (2015), the interest coverage ratio is the measure of the number of times a company can pay its debt with its earnings before interest and taxes (EBIT). The ratio is used by creditors and investors to determine the profitability and risk of a company (Weygandt et al., 2015, pg. 170).

Interest coverage Ratio = EBIT / Interest expense – *Equation 8*

Where

- EBIT is the earnings of a company only from its operations without regard to interest or taxes.
- Interest expense is the non-operating expense on the income statement.

References

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