Stock Return's Prediction Using Financial Ratios for Malaysian Construction Firms

Nasiha Hashim, Putra Faizurrahman Zahid

University Technology MARA Terengganu Malaysia

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ABSTRACT

This study conceptualized the influence of financial ratios on the prediction of stock returns among construction firms listed on Bursa Malaysia. Specifically, it tries to examine the extent to which selected financial indicators affect stock return performance within the Malaysian construction sector. The analysis is based on accounting data that will be collected from Eikon LSEG, comprising 108 construction firms over a 14-year period from 2010 to 2024. The data should be employing a range of statistical and econometric techniques including descriptive statistics, normality tests, stationarity tests, pooled least squares regression, autocorrelation tests, as well as fixed and random effects models.

Keywords: Stock Return, Ratio, Construction, Malaysia

INTRODUCTION

Economic stability is fundamentally underpinned by a country's economic strength, which in turn is reflected through various indicators, one of the most prominent being the performance of its capital markets (Schrimpf, 2010). Understanding the underlying drivers of economic strength is critical, particularly in emerging markets such as Malaysia. Among these drivers, the performance of listed firms on the stock exchange plays a vital role (Tzu, 2011). In the Malaysian context, firms listed on Bursa Malaysia must meet stringent requirements including robust growth prospects, capable leadership and management, strong corporate governance, and adherence to compliance standards. The performance of these firms in particularly as reflected in their stock returns which can serve as a proxy for assessing overall economic resilience and growth potential.

The stock market functions as a barometer of economic activity and investor sentiment, making it a key indicator of economic health across nations, including Malaysia (Schrimpf, 2010; [Recent Source], 2022). However, fluctuations in global and domestic economic conditions have introduced significant volatility into Malaysia's stock market in recent years, driven by uncertainties such as political instability, commodity price shifts, and global financial cycles (World Bank, 2020; Ibrahim, 2015; Azman-Saini, Habibullah, & Baharumshah, 2006).

The Malaysian construction sector merits special focus due to its pivotal contribution to national economic development and its unique financial characteristics relative to other industries. Construction is a major driver of Malaysia's GDP, employment, and infrastructure modernization, serving as a catalyst for growth in related sectors such as manufacturing, real estate, and services. The sector's performance is closely linked to government policy initiatives, public infrastructure spending, and national development plans, making it a bellwether for the country's economic trajectory. Unlike other sectors, construction firms face distinct challenges such as project-based revenue recognition, exposure to volatile material and labour costs, regulatory shifts, and cyclical demand patterns. These characteristics result in financial structures and risk profiles that differ markedly from those in manufacturing, finance, or consumer sectors. The predictive power and relevance of financial ratios for stock returns may therefore manifest differently in construction than in other sectors. Moreover, the construction sector's sensitivity to macroeconomic shocks and policy changes makes it a critical area for understanding how firm-level financial health translates to market performance, especially in an emerging market context like Malaysia. As noted in the literature, the performance of listed firms on Bursa

Malaysia including those in construction serves as a proxy for assessing overall economic resilience and growth potential (Tzu, 2011; Schrimpf, 2010). Focusing on this sector thus provides actionable insights for investors, policymakers, and corporate managers aiming to foster sustainable growth and resilience in a strategically vital industry.

Given this context, identifying the financial determinants that influence stock return predictability is essential for maintaining investor confidence and sustaining company performance. Prior research has extensively utilized financial ratios to model and predict stock returns. For instance, Wijaya (2015) employed variables such as the dividend-price ratio, price-earnings ratio, return on assets, debt-to-equity ratio, and book-to-market ratio. Meesuwan (2015), on the other hand, considered macroeconomic variables alongside firm-specific indicators, including interest rates, inflation, consumption-wealth ratio, momentum, and sales growth.

Moreover, stock return predictability may also be influenced by behavioural finance factors. According to Chen et al. (2007), inconsistencies in stock return forecasting often stem from investors' misinterpretation of information or irrational behaviour. Studies by Feng and Seasholes (2005) and Shumway and Wu (2006) further highlight phenomena such as overconfidence, herding behaviour, representativeness bias, and the disposition effect as contributing to market inefficiencies. In the Malaysian context, Kok and Goh (1995) found evidence that the local stock market exhibited characteristics of a weak-form efficient market during the mid-1980s to early 1990s, suggesting that market inefficiencies may still pose challenges in accurately forecasting stock returns.

The foundation of modern portfolio theory was introduced by Markowitz (1952) through his pioneering work on portfolio selection, which emphasized the importance of diversification in reducing investment risk. Building on this framework, Sharpe (1964), Lintner (1965), and Black (1972) developed the Capital Asset Pricing Model (CAPM), which provides a method to estimate expected stock returns based on systematic risk, represented by beta. While CAPM became a widely adopted model in financial research and practice, its empirical validity, particularly in explaining cross-sectional variations in stock returns, was later questioned.

Fama and French (1992) critically examined the CAPM and found that it was insufficient in capturing the full spectrum of factors influencing stock returns. As a response, they proposed the Fama-French Three-Factor Model (1993), which incorporates three key factors: market return, firm size (as a proxy for risk), and book-to-market value. This model has since become a standard in asset pricing literature and has been widely applied in empirical studies analysing stock return predictability.

In light of these considerations, this study seeks to evaluate how selected financial ratios influence the predictability of stock returns within Malaysia's construction sector. By doing so, it aims to contribute to the ongoing discourse on market efficiency and financial modelling in emerging markets, particularly within a sector that is pivotal to Malaysia's economic growth.

LITERATURE REVIEW

The Malaysian construction sector operates within a unique set of industry-specific challenges and structural factors that can significantly influence firm performance and stock returns. Construction firms are highly sensitive to macroeconomic cycles, with demand closely tied to government infrastructure spending, property market trends, and broader economic growth (World Bank, 2020; Ibrahim, 2015). The sector is also particularly vulnerable to fluctuations in global and domestic economic conditions, such as political instability and commodity price shifts, which have introduced substantial volatility in recent years (Azman-Saini, Habibullah, & Baharumshah, 2006).

In addition, construction firms in Malaysia often face irregular cash flows due to project-based revenue recognition, which increases financial risk and complicates financial planning. Rising costs of raw materials and persistent labor shortages can further erode profit margins and delay project completion. Regulatory changes and compliance requirements add another layer of complexity, while intense competition and the need for technological adaptation put additional pressure on firms to innovate and remain efficient.

These structural characteristics differentiate construction from other sectors such as manufacturing or finance, resulting in distinct financial risk profiles and influencing the predictive power of traditional financial ratios. Understanding these industry-specific factors is therefore crucial for accurately modeling and forecasting stock returns in the Malaysian construction sector.

The construction sector is uniquely exposed to several risk factors that can significantly influence firm performance and, consequently, the predictive power of financial ratios on stock returns. Key among these are project delays and material cost fluctuations, which are endemic challenges faced by Malaysian construction firms.

Project delays often arise from regulatory hurdles, labor shortages, financing issues, or unforeseen site conditions. Such delays can disrupt cash flows, inflate costs, and reduce profitability, thereby affecting financial ratios like net profit margin (NPM) and return on assets (ROA). For instance, prolonged delays may lead to cost overruns that deteriorate profitability ratios, weakening their positive association with stock returns.

Similarly, material cost fluctuations driven by volatile prices of steel, cement, and other inputs introduce uncertainty into project budgeting and margins. Sudden increases in material costs can elevate the debt-to-equity ratio (DER) if firms resort to additional borrowing to finance projects, increasing financial risk perceived by investors. This heightened risk can negatively impact stock valuations, as reflected in the sensitivity of stock returns to leverage ratios.

These sector-specific risks compound the typical financial dynamics captured by ratios, highlighting the importance of contextualizing financial ratio effects within the operational realities of the construction industry. Ignoring such factors may lead to oversimplified models that fail to capture the true determinants of stock return variability in this sector.

By integrating these risk factors into the discussion, this study acknowledges that financial ratios do not operate in isolation but are influenced by structural and operational challenges unique to construction firms. This contextualization enhances the robustness of stock return predictability models and provides more nuanced insights for investors and policymakers.

Jones (2000) defines stock return as the capital gain or loss realized by investors from holding a stock portfolio. The foundation for stock portfolio selection is grounded in Markowitz's Modern Portfolio Theory (1952), which emphasizes that investors must balance expected return with risk. According to this theory, achieving higher returns necessitates accepting a proportionate level of risk. Markowitz (1952) further argued that as more assets are added to a portfolio, the portfolio's overall risk, typically measured by standard deviation, also increases unless diversification effectively mitigates unsystematic risk.

Stefano (2015) supports this view, noting that rational investors aim to position their portfolios on the "efficient frontier," where the relationship between risk (standard deviation) and return is optimized. In essence, portfolios on the efficient frontier yield the highest possible return for a given level of risk. This risk-return trade-off remains a cornerstone in modern investment decision-making frameworks and has been reaffirmed in recent empirical studies (Nguyen & Pham, 2021).

In conjunction with Modern Portfolio Theory, the concept of rational investor behaviour plays a crucial role. Gitman and Zutter (2012) define rationality as the ability of investors to respond swiftly and objectively to new information, thereby maximizing potential gains. This notion aligns with the Efficient Market Hypothesis (EMH) introduced by Eugene Fama in the 1960s. The EMH posits that in a "perfectly efficient" market, asset prices fully reflect all available information, rendering it impossible to consistently achieve above-market returns through information-based trading strategies (Fama, 1970).

However, recent literature has highlighted limitations to EMH, particularly in behavioural finance contexts. Stefano (2015) and other contemporary scholars argue that not all investors adhere strictly to EMH principles.

Instead, some seek to exploit perceived market inefficiencies to identify undervalued or overvalued stocks, thereby generating abnormal returns. This behaviour is supported by evidence of cognitive biases and heuristics in financial decision-making (Barberis, Shleifer, & Vishny, 1998; Baker, Ruback, & Wurgler, 2022), suggesting that market anomalies and inefficiencies can persist, even in well-developed markets. Thus, while foundational theories like Modern Portfolio Theory and EMH provide a rational framework for understanding stock returns, actual investor behaviour often deviates from these ideals. This discrepancy underscores the importance of incorporating both traditional and behavioural approaches when evaluating stock return predictability in contemporary financial markets.

According to Gitman and Zutter (2012), profitability ratios are commonly used by firms to measure their return, providing insight into how efficiently a company utilizes its assets to generate profits. Similarly, Weygandt, Kimmel, and Kieso (2010) affirm that profitability ratios are instrumental in gauging the income or operational success of a firm over a specific period. They further argue that such ratios enable analysts and investors to evaluate the effectiveness of a firm's management in operating and allocating resources efficiently. As noted by Wijaya (2015) and Ika (2013), ROA serves as a fundamental measure of a company's profitability and is frequently employed to predict stock returns. ROA is calculated by dividing a company's net income (or earnings after tax) by its average total assets, thereby indicating how effectively a firm converts its assets into net earnings (Weygandt, Kimmel, & Kieso, 2010).

Gitman and Zutter (2012) emphasize that excessive debt levels heighten the risk of financial distress and potential bankruptcy, as firms may struggle to meet their financial obligations in volatile or declining market conditions. Similarly, Wijaya (2015) explains that a higher debt ratio amplifies a company's risk exposure, making it less attractive to investors and potentially diminishing returns. Consistent findings have been reported in studies by Stefano (2015), Kusumo (2011), and Ulupui (2007), all of whom concluded that elevated leverage levels typically correlate with weaker stock performance due to increased default risk and reduced operational flexibility. On the other hand, Hermawan (2012) found that the debt-to-equity ratio is negatively and significantly associated with stock return, suggesting that firms with higher leverage tend to yield lower stock performance. This relationship implies that increased financial risk, due to higher debt obligations, adversely affects investor confidence and, consequently, share value.

Dividends are generally defined as periodic distributions of a firm's earnings to its shareholders, commonly paid in the form of cash (Gitman & Zutter, 2012). Ownership in a company is represented by shares or stocks, which entitle shareholders to claim a portion of the firm's assets and earnings. According to Beckert (2011), price can be interpreted both as the cost paid for acquiring goods or services and as the revenue received from such transactions, linking it directly to the concept of value distribution in financial markets. Share price is often viewed as a reflection of the firm's intrinsic value, which is influenced by the trade-off between risk and return (Gitman & Zutter, 2012; Elali & Roubaie, 2013). In efficient markets, this valuation is guided by investors' expectations about the company's future performance and its capacity to generate shareholder returns through dividends and capital gains. Empirical evidence supports the notion that dividend yield positively influences stock returns. Kheradyar and Ibrahim (2011) found a significant positive relationship between dividend yield and stock return in the Malaysian context, indicating that firms offering higher dividend yields tend to experience stronger investor demand, thus enhancing their market performance. This finding aligns with Wijaya (2015), who reported that higher dividend yields are associated with greater cash inflows from stock investments, ultimately leading to improved returns.

Bhandari (1988) also highlighted that firms with higher Earnings Yields often possess greater financial leverage, which could amplify earnings variability and thus attract higher expected returns as compensation for risk. Similarly, Lakonishok, Shleifer, and Vishny (1994) found that value strategies based on high earnings yields consistently outperformed growth strategies, challenging the rational expectations theory and supporting behavioural explanations for market inefficiencies. Estrada (2005) analysed emerging markets and found that Earning Yield exhibited a significant positive relationship with subsequent stock returns, reinforcing the notion that investors undervalue firms with high earnings relative to price. Moreover, investors often use Earning

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Yield in conjunction with other variables such as dividend yield, return on equity, and growth expectations to form a more comprehensive view of expected performance (Penman, 2013).

Outstanding shares comprising both privately and publicly held common stock, represent the portion of a firm's equity held by investors at any given time (Gitman & Zutter, 2012). Among various market-based indicators, the book-to-market (B/M) ratio has received considerable attention in financial research as a robust predictor of stock return. According to Kothari and Shanken (1997), and supported by Schall (1998), the B/M ratio is one of the most influential financial ratios used in explaining stock return behaviour. The book-to-market ratio is typically calculated by dividing a firm's book value per share by its market value per share. It serves as a valuation metric that reflects investor sentiment and perceived risk relative to a firm's underlying fundamentals. A higher B/M ratio suggests that the market is undervaluing the company's net assets, potentially signaling future positive returns as prices revert to intrinsic value levels (Wijaya, 2015). In line with this reasoning, past-period book-to-market ratios (denoted as B/M_{t-1}) are often utilized in empirical models to predict subsequent stock returns. This approach has been consistently employed in prior studies, such as those by Kheradyar and Ibrahim (2011), who emphasize the importance of market ratios including the B/M ratio in forecasting equity performance. The B/M ratio is also commonly interpreted as a proxy for firm-specific risk. As noted by Wijaya (2015), a higher book-to-market ratio may reflect elevated risk levels or investor skepticism, causing shares to trade at a discount to their book value. However, from a value investing perspective, such firms often offer higher expected returns due to market overreaction or mispricing.

Profitability indicators, such as NPM, are often regarded as fundamental determinants of a firm's valuation and, by extension, its stock performance. Fama and French (1992) introduced profitability as an explanatory factor in asset pricing models, and subsequent research has expanded on this by examining the influence of various profitability metrics on returns. Although their original three-factor model emphasized size and value factors, later versions incorporated profitability as a key component (Fama & French, 2015). This inclusion highlights the relevance of firm-level profitability, including NPM, in predicting stock returns.

Net profit margin serves as a key indicator of a company's financial performance, reflecting the proportion of net income generated from total sales after accounting for all operating expenses and income taxes. This metric provides valuable insights into a firm's pricing strategies and its effectiveness in controlling costs. As stated by Dewi and Hidayat (2019), the net profit margin is calculated by dividing net income after taxes by net sales, thereby illustrating the company's ability to convert revenue into actual profit. Several empirical studies have provided evidence supporting the role of Net Profit Margin in driving stock performance. According to Al Shubiri (2010), firms with higher net profit margins are generally perceived as more financially stable and efficient, thereby attracting investor interest and yielding higher stock returns. Moreover, NPM is often used by investors as an indicator of a company's pricing strategy and cost control, both of which are essential for long-term value creation (Brigham & Daves, 2013). A consistently high NPM suggests that a company has a strong competitive position and effective operational management, which can contribute positively to future cash flows and, consequently, to stock prices. Purdianto, Parlina, & Apriliani, (2022) and Suryana & Widjaja (2019) in their research proved that NPM has significant influenced on stock prices.

In emerging markets, the predictive power of Net Profit Margin for stock returns is also evident. For instance, a study by Khan et al. (2012) found a statistically significant positive relationship between NPM and stock returns among listed manufacturing firms in Pakistan. The study concluded that firms with higher NPM are more likely to generate superior returns for shareholders due to stronger profit-generating capacity. Net Profit Margin are often used in stock valuation models and fundamental analysis frameworks. According to Penman (2013), profitability indicators directly influence earnings forecasts and valuation multiples, both of which are central to equity pricing. As such, a rising Net Profit Margin may signal improved financial health, prompting upward revisions in earnings expectations and investor sentiment, thereby exerting a positive effect on stock returns.

Conceptual Framework

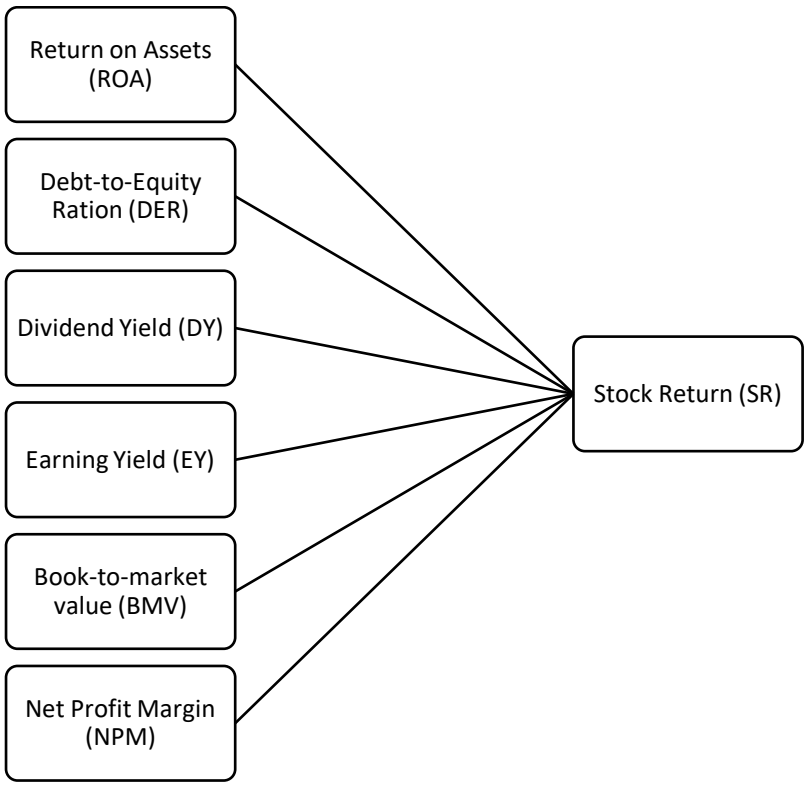

Figure 01: Conceptual framework

SUMMARY OF LITERATURE REVIEW

Table 1: Summary of Literature Review

Author(s) / Year	IV(s) Studied	Main Findings on Stock Return Predictability	Context/Notes
Markowitz (1952); Jones (2000)	-	Stock return is a function of risk and return trade-off; portfolio theory underpins return analysis	Modern Portfolio Theory: Higher returns require higher risk; diversification reduces risk
Gitman & Zutter (2012); Weygandt et al. (2010); Wijaya (2015); Ika (2013)	ROA	ROA is a key profitability measure; higher ROA predicts higher stock returns	ROA = Net Income / Total Assets; reflects asset efficiency
Gitman & Zutter (2012); Wijaya (2015); Stefano (2015); Kusumo (2011); Ulupui (2007); Hermawan (2012)	DER	Higher DER (leverage) is generally negatively associated with stock returns	Excessive debt increases risk and reduces investor confidence
Gitman & Zutter (2012); Kheradyar & Ibrahim (2011); Wijaya (2015)	DY	Higher Dividend Yield (DY) positively affects stock returns	DY attracts investors seeking cash inflows; proven in Malaysian context
Bhandari (1988); Lakonishok et al. (1994); Estrada (2005); Penman (2013)	EY	High Earnings Yield (EY) predicts higher stock returns, especially in value strategies	EY often used with other ratios for comprehensive stock evaluation
Kothari & Shanken (1997); Schall (1998); Kheradyar & Ibrahim	BMV	High Book-to-Market Value ratio predicts higher stock returns; signals	BMV = Book Value / Market Value; proxy for value

(2011); Wijaya (2015)		undervaluation	investing and risk
Fama & French (1992, 2015); Dewi & Hidayat (2019); Al Shubiri (2010); Purdianto et al. (2022); Suryana & Widjaja (2019); Khan et al. (2012)	NPM	Higher Net Profit Margin (NPM) is positively associated with stock returns	NPM = Net Income / Sales; indicator of profitability, cost control, and operational efficiency

Hypotheses Development

According to this research, the development of hypotheses are as follows:

1. **H1:** Return on Assets (ROA) has a positive and significant effect on stock returns of Malaysian construction firms.
2. **H2:** Debt-to-Equity Ratio (DER) has a negative and significant effect on stock returns of Malaysian construction firms.
3. **H3:** Dividend Yield (DY) has a positive and significant effect on stock returns of Malaysian construction firms.
4. **H4:** Earning yield (EY) has a positive and significant effect on stock returns of Malaysian construction firms.
5. **H5:** Book-to-Market Ratio (B/M) has a positive and significant effect on stock returns of Malaysian construction firms.
6. **H6:** Net Profit Margin (NPM) has a positive and significant effect on stock returns of Malaysian construction firms.

METHODOLOGY

In the context for the empirical analysis, a brief descriptive overview of the 108 Malaysian construction firms included in this study is presented. The sample comprises firms listed on Bursa Malaysia from 2010 to 2024, covering a broad cross-section of the industry. On average, these firms have been established for approximately 23 years, with the oldest firm in the sample founded in 1965 and the newest in 2018. The average firm size, measured by total assets, is approximately RM 1.2 billion, with a range spanning from small-scale contractors with assets below RM 50 million to large, diversified construction conglomerates exceeding RM 5 billion in assets. The mean number of employees per firm is around 480, reflecting the labour-intensive nature of the sector. In terms of market capitalization, the average value is RM 800 million, though there is considerable variation, with several firms categorized as small-cap and a handful as large-cap industry leaders. This diversity in firm size, age, and operational scale ensures that the findings of this study are broadly representative of Malaysia's construction sector.

The analysis begins with descriptive statistics to summarize the characteristics of the variables, including measures such as the mean, median, maximum, minimum, and standard deviation. This provides an overview of the data distribution and central tendencies. Subsequently, the data undergoes a normality test and a stationarity test. The normality of the data is assessed using the Jarque-Bera test, where the probability value indicates whether the data follows a normal distribution. Following this, a poolability test is conducted using the Breusch-Pagan Lagrange Multiplier (LM) test to determine the appropriateness of pooled regression versus panel data models. The panel data analysis is then performed using both the fixed effects and random effects models, with the Hausman specification test employed to identify the most suitable model between the two. Additional diagnostic tests are carried out to ensure the robustness of the model, including checks for multicollinearity, heteroscedasticity, and autocorrelation. Based on the results of these tests, the final model for

the study will be selected from among the fixed effects model, random effects model, or pooled ordinary least squares (OLS) method.

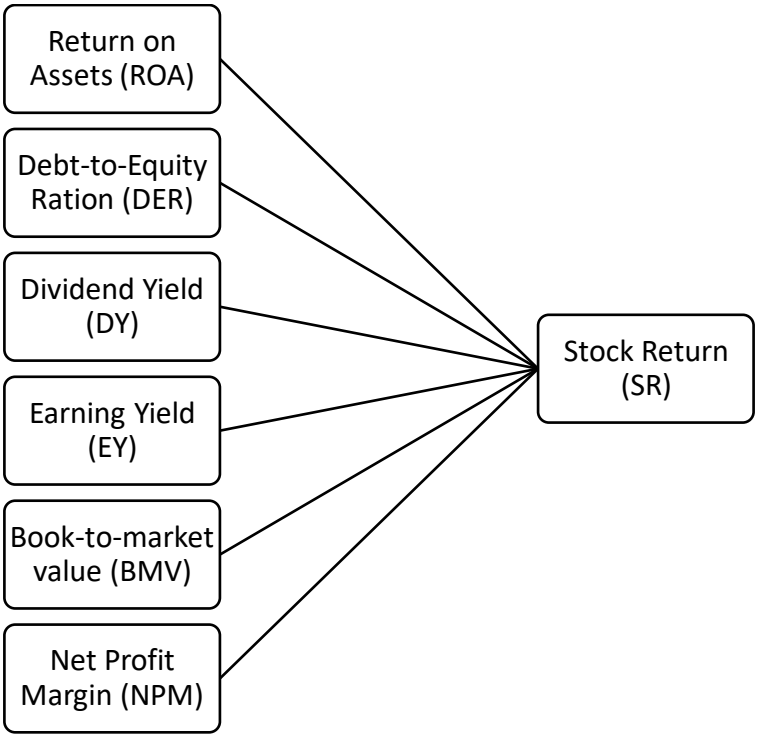

Figure 01: Conceptual framework

The general form of the regression equation based on the described model can be expressed as:

$$SR_{it} = \beta_0 + \beta_1 ROA_{it} + \beta_2 DER_{it} + \beta_3 DY_{it} + \beta_4 EY_{it} + \beta_5 BMV_{it} + \beta_6 NPM_{it} + \epsilon_{it} \dots (1)$$

Where:

- SR_{it} represents the stock return for firm i at time t
- β_0 is the intercept of the regression model.
- β_n is the coefficients representing the estimated impact of each respective financial ratio on stock returns
- ROA_{it} is the Return on Assets for firm i at time t
- DER_{it} is the Debt-to-Equity Ratio for firm i at time t
- DY_{it} is the Dividend Yield for firm i at time t
- EY_{it} is the Earnings Yield (often represented as E/P, the inverse of Price/Earnings ratio) for firm i at time t
- BMV_{it} is the Book-to-Market Ratio for firm i at time t
- NPM_{it} is the Net Profit Margin for firm i at time t.
- ϵ_{it} is the error term, accounting for unobserved factors influencing stock returns

Indicative Findings and Practical Implications

Although this study is conceptual and empirical analysis is forthcoming, prior research provides strong indications regarding the likely relationships between financial ratios and stock returns in the Malaysian construction sector. For example, Kheradyar and Ibrahim (2011) found that dividend yield and book-to-market ratio were significant positive predictors of stock returns among Malaysian firms, while Hermawan (2012) and Wijaya (2015) reported that higher debt-to-equity ratios were associated with lower stock returns, reflecting increased financial risk. Al Shubiri (2010) and Dewi and Hidayat (2019) also documented that firms with higher net profit margins and return on assets tend to experience superior stock performance, as these ratios signal operational efficiency and profitability.

Based on these findings, it is anticipated that:

- **Profitability ratios** (such as ROA and NPM) will be positively associated with stock returns.
- **Dividend yield** and **book-to-market ratios** are expected to have positive effects on stock returns.
- **Debt-to-equity ratio** is likely to show a negative relationship with stock returns, indicating that higher leverage may deter investors due to increased risk.

Practical Implications

These indicative findings suggest that investors can utilize financial ratios as effective screening tools for making investment decisions in the construction sector. Construction firms seeking to enhance their market valuation should focus on improving profitability and maintaining healthy dividend policies, while managing leverage to avoid excessive risk. Policymakers and regulators may also benefit from these insights by designing sector-specific guidelines that promote financial stability and transparency, thereby supporting sustainable growth in Malaysia's construction industry

CONCLUSION

The application of regression model equations to predict stock returns has been extensively studied over the years. In particular, financial ratios derived from accounting data have demonstrated significant potential in forecasting future returns. These ratios serve as crucial indicators of a firm's financial health and performance, thereby offering valuable insights to investors. In the context of construction firms in Malaysia, such financial metrics could form a foundational basis for evaluating corporate performance and investment potential. Ultimately, the integration of financial analysis with predictive modelling represents a promising avenue for advancing investment decision-making and enhancing the transparency and accountability of construction firms in emerging markets like Malaysia.

REFERENCES

1. Al Shubiri, F. N. (2010). Analysis the relationship between market returns and fundamental variables. International Journal of Business and Social Science, 1(1), 18–23.
2. Azman-Saini, W. N. W., Habibullah, M. S., & Baharumshah, A. Z. (2006). Stock market volatility in Malaysia: A case of regime switching. Asian Economic Journal, 20(1), 25–50. https://doi.org/10.1111/j.1467-8381.2006.00176.x
3. Baker, M., Ruback, R. S., & Wurgler, J. (2022). Behavioural corporate finance. In E. Eckbo (Ed.), Handbook of Corporate Finance (Vol. 2). Elsevier.
4. Barberis, N., Shleifer, A., & Vishny, R. (1998). A model of investor sentiment. Journal of Financial Economics, 49(3), 307–343.
5. Beckert, J. (2011). Where do prices come from? Sociological approaches to price formation. Socio-Economic Review, 9(4), 757–786.
6. Bhandari, L. C. (1988). Debt/equity ratio and expected common stock returns: Empirical evidence. The Journal of Finance, 43(2), 507–528.
7. Black, F. (1972). Capital market equilibrium with restricted borrowing. The Journal of Business, 45(3), 444–455.

8. Brigham, E. F., & Daves, P. R. (2013). Intermediate financial management (11th ed.). Cengage Learning.
9. Chen, G., Kim, K. A., Nofsinger, J. R., & Rui, O. M. (2007). Trading performance, disposition effect, overconfidence, representativeness bias, and experience of emerging market investors. Journal of Behavioural Decision Making, 20(4), 425–451.
10. Dewi, S. P., & Hidayat, R. (2019). Pengaruh Net Profit Margin dan Return on Assets terhadap Harga Saham pada Perusahaan Otomotif yang terdaftar di Bursa Efek Indonesia. Journal Ilman: Journal Ilmu Manajemen, 1(1).
11. Elali, W., & Roubaie, A. (2013). The effect of behavioural biases on investors' decision making. International Journal of Business and Social Science, 4(16), 131–136.
12. Estrada, J. (2005). The predictive accuracy of value ratios: Evidence from emerging markets. International Journal of Forecasting, 21(1), 7–24.
13. Fama, E. F., & French, K. R. (1992). The cross-section of expected stock returns. The Journal of Finance, 47(2), 427–465.
14. Fama, E. F., & French, K. R. (2015). A five-factor asset pricing model. Journal of Financial Economics, 116(1), 1–22.
15. Feng, L., & Seasholes, M. S. (2005). Do investor sophistication and trading experience eliminate behavioural biases in financial markets? Review of Finance, 9(3), 305–351.
16. Gitman, L. J., & Zutter, C. J. (2012). Principles of managerial finance (13th ed.). Pearson Education.
17. Gordon, M. J. (1962). The investment, financing, and valuation of the corporation. R.D. Irwin.
18. Hermawan, A. (2012). The influence of corporate governance and earnings quality on stock return. Journal Akuntansi dan Keuangan Indonesia, 9(2), 123–135.
19. Ibrahim, M. H. (2015). Oil and sectoral stock returns in a volatile market: Evidence from Malaysia. Journal of Economic Studies, 42(3), 437–458.
20. Ika, S. R. (2013). Dividend policy and firm value. Journal of Business and Policy Research, 8(1), 1–14.
21. Jones, C. P. (2000). Investments: Analysis and management (7th ed.). Wiley.
22. Khan, K. I., Sajid, M., & Farooq, S. (2012). The relationship of stock returns with earnings yield, book to market and size: Evidence from Karachi stock exchange. International Journal of Business and Social Science, 3(9), 225–230.
23. Kheradyar, S., & Ibrahim, I. (2011). Stock return predictability with financial ratios. International Journal of Trade, Economics and Finance, 2(5), 391–396.
24. Kok, K. L., & Goh, K. L. (1995). The Malaysian stock market and economic factors: A multivariate cointegration analysis. Asian Economic Journal, 9(2), 169–189.
25. Kothari, S. P., & Shanken, J. (1997). Book-to-market, dividend yield, and expected market returns: A time-series analysis. Journal of Financial Economics, 44(2), 169–203.
26. Kusumo, R. H. (2011). The impact of financial ratios toward stock returns. Jurnal Manajemen dan Kewirausahaan, 13(2), 128–134.
27. Lakonishok, J., Shleifer, A., & Vishny, R. W. (1994). Contrarian investment, extrapolation, and risk. The Journal of Finance, 49(5), 1541–1578.
28. Lintner, J. (1965). The valuation of risk assets and the selection of risky investments in stock portfolios and capital budgets. The Review of Economics and Statistics, 47(1), 13–37.
29. Markowitz, H. (1952). Portfolio selection. The Journal of Finance, 7(1), 77–91.
30. Meesuwan, S. (2015). Factors affecting stock return: Evidence from the stock exchange of Thailand. International Journal of Economics and Finance, 7(10), 122–129.
31. Nguyen, H., & Pham, T. (2021). Macroeconomic determinants of stock returns in Vietnam: Evidence from a VAR model. Journal of Asian Finance, Economics and Business, 8(1), 109–118.
32. Purdianto, A., Parlina, N. D., & Apriliani, D. (2022). The Influence of Net Profit Margin and Earning Per Share on Stock Prices in Various Industrial Sector Companies Listed on the Idx for the 2015-2019 Period. Universitas, 1(2), 3.
33. Penman, S. H. (2013). Financial statement analysis and security valuation (5th ed.). McGraw-Hill Education.
34. Schall, L. D. (1998). Introduction to financial management (8th ed.). McGraw-Hill.
35. Schrimpf, A. (2010). International inflation-linked bonds as an asset class: A macro-finance perspective. Journal of Financial and Quantitative Analysis, 45(2), 399–426.

36. Sharpe, W. F. (1964). Capital asset prices: A theory of market equilibrium under conditions of risk. The Journal of Finance, 19(3), 425–442.
37. Shumway, T., & Wu, G. (2006). Does disposition drive momentum? Working Paper, University of Michigan.
38. Stefano, R. (2015). Behavioural finance: Investors' psychology in financial decision-making. International Journal of Economics and Financial Issues, 5(S1), 251–256.
39. Suryana, J., & Widjaja, I. (2019). Pengaruh current ratio (CR), debt to equity ratio (DER), net profit margin (NPM) dan earning per share (EPS) terhadap harga saham perusahaan constructs' & bangunan yang terdaftar di Bursa Efek Indonesia (BEI) periode 2013-2017. Journal Manajemen Bisnis Dan Kewirausahaan, 3(5), 19–24.
40. Tzu, S. C. (2011). Macroeconomic variables and stock market returns in Taiwan. International Research Journal of Finance and Economics, 66, 45–55.
41. Ulupui, I. G. K. A. (2007). The effect of financial performance on stock return: Evidence from the Jakarta Stock Exchange. Journal Akuntansi dan Keuangan, 9(2), 112–123.
42. Wijaya, A. (2015). Financial performance and stock return: Evidence from Indonesia. International Journal of Applied Business and Economic Research, 13(7), 5525–5540.
43. Weygandt, J. J., Kimmel, P. D., & Kieso, D. E. (2010). Financial accounting (7th ed.). Wiley.
44. Williams, J. B. (1938). The theory of investment value. Harvard University Press.
45. World Bank. (2020). Malaysia economic monitor: Weathering the surge. https://www.worldbank.org/en/country/malaysia/publication/malaysia-economic-monitor