Effects of Firm-Specific level and Capital Structure Determinants on EVA: U.S. Firms Evidence (1992–2022)

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Abstract

This study investigates the impact of capital structure and firm-specific factors on Economic Value Added (EVA) in U.S. non-financial firms from 1992 to 2022, using panel data from Thomson Reuters on 121 companies listed in the DJIA30 and NASDAQ-100. EVA is measured through capital structure ratios, liquidity indicators, and operational metrics. The findings show that long-term debt, total asset turnover, liquidity ratios, and sales growth significantly enhance EVA, highlighting the importance of long-term financing and efficient asset utilization. In contrast, net working capital, current and fixed asset turnover, and stock volatility exert negative effects, while short-term debt, equity financing, and most turnover ratios have no significant impact. Overall, the results provide evidence that capital structure and operational efficiency jointly shape EVA, offering practical guidance for firms seeking value creation in advanced markets.

Keywords: Economic Value Added (EVA), Capital structure, Firm-specific factors, Value creation

المستخلص:

تهدف هذه الدراسة إلى فحص أثر هيكل رأس المال والعوامل الخاصة بالشركة على القيمة الاقتصادية المضافة (EVA) في الشركات الأمريكية غير المالية خلال الفترة من ١٩٩٢ إلى ٢٠٢٢. اعتمدت الدراسة على بيانات لوحية مستمدة من مركز تومسون رويترز المالي لعدد ١٢١ شركة مدرجة في مؤشري داو جونز الصناعي (DJIA30)وناسداك ١٠٠.تم قياس EVA من خلال نسب هيكل رأس المال، مؤشرات السيولة، والمؤشرات التشغيلية الخاصة بالشركة. أظهرت النتائج أن الدين طويل الأجل، وإجمالي دوران الأصول، ونسب السيولة، ونمو المبيعات تؤثر إيجابياً وبشكل ملحوظ علىEVA ، مما يبرز أهمية التمويل طويل الأجل وكفاءة استخدام الأصول في خلق القيمة. في المقابل، تبين أن صافي رأس المال العامل، ودوران الأصول (المتداولة والثابتة)، وتقلبات الأسهم تؤثر سلباً، بينما لا يظهر للدين قصير الأجل وتمويل الأسهم ومعظم نسب الدوران أي أثر يُذكر

الكلمات المفتاحية :القيمة الاقتصادية المضافة(EVA) ، هيكل رأس المال، العوامل الخاصة بالشركة، خلق القيمة.

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1. Introduction

Economic Value Added (EVA) has become a significant performance measurement in academic research as well as corporate practice. EVA, initially established by Stern Stewart & Co. in the 1990s, measures the residual revenue produced after deducting the cost of all capital employed in the firm (Stewart, 1991). In contrast to traditional accounting metrics like net income or return on equity, EVA integrates the cost of equity with financing expenses, offering a broader view of value generation for shareholders. This attribute makes EVA especially appropriate for assessing managerial efficacy, investment choices, and long-term strategy performance. Capital structure, the mix of debt and equity financing, significantly influences EVA. The cost of capital, a fundamental element in EVA calculation, is directly affected by financing decisions. Optimal capital structure choices can reduce the weighted average cost of capital (WACC), thereby improving economic value added (EVA), whereas insufficient financing could decrease value even with sufficient operational profitability.

The theoretical foundations are from Modigliani and Miller's claims (1958, 1963), trade-off theory, and pecking order theory, each providing insights into the debt-equity balance and its effects on firm value. Empirical studies have produced mixed findings about the relationship between firm- specific level, capital structure and EVA. Certain studies indicate positive effects of debt financing when utilized within acceptable leverage limits, giving advantages to tax shielding and efficient capital allocation. Others emphasize the risks of excessive leverage, especially in uncertain markets, where debt contributes to financial distress costs and diminishes managerial flexibility. This argument highlights the necessity of studying the influence of capital structure on EVA generation across various market conditions and business attributes.

This study incorporates EVA into the examination of firm- level indicators and capital structure decisions, addressing both theoretical and practical aspects of corporate finance. It provides insights into how financing decisions and operational efficiency together influence shareholder value in established capital markets, utilizing evidence from U.S. non-financial corporations over a period of a decade.

This investigation is particularly gripping in the context of the U.S. market. Through its robust corporate governance frameworks, high transparency standards, and a variety of financing tools, it is one of the most mature and liquid capital markets in the world. These characteristics enable a more precise analysis of the relationship between capital structure and EVA, without the distortions that are frequently observed in less developed markets. This study encompasses a wide range of industries, operational scales, and leverage patterns by concentrating on non-financial firms that are listed on two significant stock indices. The selection of variables is indicative of both empirical and theoretical application. Insights into operational effectiveness another driver of EVA are provided by efficiency metrics such as current asset turnover (CAT) and fixed asset turnover (FAT), while structural financing decisions are explicitly captured by measures such as the long-term debt ratio (LTDR) and short-term debt ratio (STDR). This integrated approach enables a greater understanding of the combined impact of financing and asset utilization to shareholder value in a highly competitive and regulated environment. Despite theoretical indications that financing and operational efficiency jointly shape value creation, limited research has integrated both capital structure ratios and asset utilization metrics into a unified model.

This study aims to fill this gap by examining the impact of capital structure measured through the long-term debt ratio (LTDR) and short-term debt ratio (STDR)on EVA for U.S. non-financial firms, assessing the role of efficiency metrics such as current asset turnover (CAT) and fixed asset turnover (FAT) in influencing EVA alongside market / shareholders' return variables. The analysis covers a broad, multi-industry sample from two major stock indices, the Dow Jones Industrial Average (DJIA30) and the NASDAQ 100, over the thirty-year period from 1992 to 2022. By focusing on this extended timeframe and diverse dataset, the study seeks to provide robust, generalizable insights into how financing and efficiency dynamics jointly shape economic value creation in the U.S. corporate landscape.

Expanding upon this conceptual framework, the paper is structured as follows. Section two, highlights the theoretical and empirical framework via a review of the literature that includes Economic Value Added (EVA), firm efficiency indicators, capital structure theories, and the empirical relationships between financing choices and value creation. Section three illustrates the study methodology, including the data collection process and model specifications. Section four shows the empirical analysis, results, and discussion of the findings relative to previous theory and evidence. Section five concludes by summarizing key insights, examining implications for corporate financing strategies, and showing the study's limits and potential directions for future investigations.

2. Literature Review

2.1 A Review of Determinants of EVA

The literature on Economic Value Added (EVA) is rooted in the broader discourse on corporate financial performance and value creation. EVA, introduced by Stewart (1991), measures a firm's true economic profit after accounting for the cost of all capital employed, thus providing a comprehensive indicator of shareholder value generation. It is widely regarded as an enhancement over traditional accounting measures, as it aligns managerial decision-making with the objective of maximizing shareholder wealth. Capital structure theory, established by Modigliani and Miller (1958), has grown to incorporate the effects of taxes, bankruptcy costs, agency problems, and information asymmetry on financing decisions. Within this framework, the mix of debt and equity financing is expected to influence EVA through its impact on the weighted average cost of capital (WACC) and the efficiency of capital utilization. Empirical studies have produced mixed results, with some demonstrating that higher leverage enhances EVA by providing tax shields, while others reveal decreasing returns or even negative effects due to increased financial risk.

EVA seeks to reconcile the difference between accounting profits and economic reality by incorporating a" capital charge" for the total capital employed, encompassing both debt and equity. The application of this concept is executed through the use of the following formula:

$$EVA = NO\text{-}PAT - (\text{Invested Capital} \times WACC)$$

Where;

NOPAT refers to Net Operating Profit After Tax. This formula highlights the foundation of EVA in the concept of residual income, the profit that remains after accounting for the capital cost provided by both the equity and debt holders.

The Invested Capital and Weighted Average Cost of Capital (WACC) represents the capital charge in the Economic Value Added (EVA) frame-work. This component is crucial because it quantifies the minimum return that a company must generate from its operations to cover the cost of all the capital it employs, including both debt and equity. Subtracting this capital charge from NOPAT produces the EVA, a measure that reveals if the firm is generating value beyond the cost of financing its operations.

A positive EVA suggests that the return on invested capital exceeds the WACC, confirming that the company is truly creating shareholder wealth. Thus, the purpose of EVA is to integrate managerial actions with the objective of maximizing shareholder wealth, as it encourages investment in initiatives which generate returns exceeding the firm's capital cost, while discouraging investment in firms with negative earnings. Therefore, Managers are encouraged to maximize the use of current resources, ensuring that each decision enhances the creation of value (Stern, Stewart, & Chew, 1995).

As for the trade-off theory of capital structure, developed by Kraus and Litzenberger (1973), it states that firms weigh the tax benefits of debt against increasing costs of financial distress that come with leverage. This theory states that an ideal capital structure exists where the marginal tax shield from higher debt is exactly offset by the marginal cost of financial distress. It explains why corporations don't rely entirely on debt, even when it reduces taxable income, as using too many debts may expose the firm to bankruptcy. This theory implies that a balance of debt and equity is optimum to firm's financial position.

Furthermore, the Pecking-Order Theory, introduced by Myers and Majluf (1984), emphasizes the role of information asymmetry and managerial financing preferences. It argues that firms prioritize internal finance (retained earnings), followed by debt, and subsequently equity over the issue of new equity. As it provides negative signals to the market, suggesting that management perceives the firm as overvalued. Consequently, this financial order influences how organizations manage liquidity and leverage as two factors that directly impact (EVA). Building on these capital structure theories, the Market Timing Theory (Baker & Wurgler, 2002) offers another perspective by proposing that firms adjust their financing decisions based on dominant market conditions. Under this view, managers are more likely to issue equity when market valuations are high and to repurchase shares or increase leverage when valuations are low. While not directly concerned with optimal capital structure in the traditional sense, market timing behavior can significantly influence EVA by affecting both the cost of capital and the perception of firm value in capital markets.

From a value creation perspective, these theories collectively suggest that the impact of financing choices on EVA is mediated not only by cost of capital considerations but also by the firm's operational capabilities and market positioning. In particular, the integration of capital structure decisions with asset utilization efficiency, working capital management, and liquidity planning becomes essential for sustaining positive EVA over time. The theoretical framework thus supports the argument that no single financing model can fully explain EVA performance; rather, it is the interaction of debt–equity mix, market conditions, and internal operational efficiency that determines long-term value creation.

Recent research has extended the debates by examining the role of operational efficiency metrics such as asset turnover ratios and liquidity and growth indicators in shaping EVA. These studies suggest that financing structure cannot be evaluated in isolation; it must be considered alongside a firm's capacity to generate revenues from its assets and maintain sufficient liquidity for sustainable operations. Accordingly, this review produces theoretical and empirical perspectives to establish a foundation for assessing how different financing choices and firm-level efficiency drivers interact to determine EVA outcomes.

2.2 Empirical Evidence on Determinants of EVA

Empirical investigations into the determinants of Economic Value Added (EVA) have produced mixed results, reflecting differences in market structures, industry contexts, and measurement approaches. Research in emerging markets often associates high STDR with lower EVA, citing higher refinancing risk, interest rate volatility, and liquidity strain. Excessive reliance on short-term debt can erode operating stability, as seen in contexts where credit markets are volatile. Some studies, however, note that limited short-term borrowing may support EVA if used to fund high-return, short-duration projects without compromising liquidity. Peixoto (2002) reported that excessive short-term leverage in Portuguese firms eroded EVA due to refinancing risks and exposure to interest rate fluctuations. Similarly, Chakraborty (2008) found that in Indian firms, higher short-term debt ratios negatively correlated with EVA, as frequent rollover requirements increased financial vulnerability. In contrast, Aktas et al. (2015) found that in certain manufacturing contexts, moderate use of short-term debt supported EVA by offering lower financing costs compared to long-term debt, provided the firm maintained strong cash flow management. These results align partially with the trade-off theory but highlight the sharp sensitivity of EVA to liquidity risk when short-term debt is overused. Hoang, Dang, Tran, Vu, and Pham (2019) examined Vietnamese listed firms and found that short-term debt positively influences financial performance, where a 1% increase in STDR leads to a 0.4% rise in ROE, suggesting that short-term financing can be beneficial when effectively managed. In contrast, Bui, Nguyen, and Pham (2023), also using Vietnamese data, reported that higher short-term debt ratios significantly reduce firm value specifically, a 1% increase in STDR decreases Tobin's Q by 0.562%, ROA by 0.0331%, and ROE by 0.0917% indicating potential risks associated with overreliance on short-term obligations.

Similarly, Tian and Zeitun (2007) investigated Jordanian firms and found that STDR negatively affects accounting-based measures such as ROA and profitability, but positively and significantly influences market-based performance (Tobin's Q), implying that investors may view short-term leverage differently from operational managers. These findings highlight that the impact of short-term debt on firm value is context-dependent and may vary across markets, performance measures, and economic conditions.

The long-term debt–EVA relationship has produced more mixed empirical outcomes. Ghosh and Jain (2000) suggested that moderate levels of long-term debt could enhance EVA by securing stable financing at fixed rates, thereby lowering the weighted average cost of capital (WACC). Conversely, Majumdar and Chhibber (1999) documented a negative association between long-term leverage and EVA in Indian firms, attributing the decline to rigid interest obligations and underutilized debt-funded assets. Studies in emerging economies (e.g., Abor, 2005) have emphasized that long-term debt can benefit EVA when coupled with high asset turnover, but in capital-constrained environments, excessive long-term leverage often reduces value creation due to high default risk and limited operational flexibility. Empirical evidence on the effects of long-term debt on firm performance exhibits variation across countries and contexts. For instance, Bui, Nguyen, and Pham (2023) analyzed Vietnamese listed firms and found that LTDR does not have a statistically significant impact on firm value—as measured by ROA, ROE, and Tobin's Q highlighting that long-term debt may not influence financial outcomes in that market context. In contrast, Do (2020), studying material enterprises in Vietnam over the period 2008–2019, reported a negative relationship between LTDR and ROE, indicating that greater long-term debt corresponded with lower accounting returns. More recently, Do, Luong, Mai, Dam, Pham, and Nguyen (2022) examined manufacturing and processing firms in Vietnam and found that LTDR negatively affects both ROA and Tobin's Q, suggesting long-term leverage may depress both book- and market-based performance in that sector. Across these studies, a consistent pattern emerges: while precise effects differ by context and performance measure, increased reliance on long-term debt tends to carry downward pressure on firm performance in many Vietnamese contexts.

Equity financing represents funds raised through the issuance of common or preferred shares, constituting a key component of a firm's capital structure. From a theoretical standpoint, the relationship between equity financing and Economic Value Added (EVA) can be explained through the trade-off between cost of equity and financial flexibility. Stewart (1991) originally conceptualized EVA as the residual income after deducting the cost of capital including equity highlighting that excessive reliance on equity can increase the weighted average cost of capital (WACC) and reduce EVA, unless equity capital is deployed in projects exceeding this cost. Empirical evidence provides mixed results regarding this relationship. Frank and Goyal (2009) found that firms with stronger equity bases generally exhibit lower leverage ratios and higher financial stability, which can indirectly support EVA by reducing financial distress costs. In emerging markets, however, equity financing may not always translate into higher EVA. For example, Bhasin and Shaikh (2013) examined Indian manufacturing firms and concluded that higher equity ratios did not guarantee superior EVA performance, attributing the weak link to inefficient capital allocation and underdeveloped capital markets. Similarly, De Wet (2005) analyzed South African listed companies and found that while equity financing reduced default risk, its higher cost relative to debt financing often eroded EVA unless earnings growth substantially exceeded the cost of equity. Other studies suggest a contextual influence. Margaritis and Psillaki (2010), using a panel of French manufacturing firms, found a positive association between equity financing and operational efficiency, which could improve EVA indirectly through better asset utilization. In contrast, research in capital-constrained environments (Abor, 2005; Ghana) indicates that excessive equity reliance can dilute returns and depress EVA when firms forego the tax shield benefits associated with debt financing.

As Operational efficiency is the firm's ability to convert assets and working-capital items into sales and cash matters directly for Economic Value Added (EVA) because EVA = NOPAT − (Capital × WACC); improvements in turnover or working-capital management either raise NOPAT or reduce the capital charge and therefore tend to increase EVA. A large and robust literature shows that tighter working-capital management starting with Net Working Capital Ratio (NWC) and EVA. A high NWC may indicate capital excessively tied up in working capital, which can reduce EVA by increasing the cost of capital without corresponding returns. Conversely, maintaining optimal NWC levels supports liquidity and operational flexibility, which are essential for value creation (Krajňáková & Vojtovič, 2017). Thus, a significant negative effect of NWC on EVA aligns with the understanding that inefficient working capital management can lower overall firm value.

Moving to Current Assets Turnover, a Lower CAT ratio reflect inefficient utilization of current assets, potentially eroding profitability and EVA, while excessively high CAT may compromise liquidity buffers necessary for stability (Padachi, 2006). Inefficient asset turnover depresses shareholder value as turnover is integral to operational efficiency and profitability

(Deloof, 2003). Therefore, CAT is expected to have a significant positive effect on EVA, as better utilization of current assets enhances earnings above capital costs. As for the Fixed assets turnover, Underutilization of fixed assets results in lower sales per unit of investment, raising capital costs relative to returns and reducing EVA (Gill et al., 2010; Lazaridis & Tryfonidis, 2006). Empirical evidence shows that efficient use of plant, property, and equipment strongly correlates with value creation. Hence, FAT positively influences EVA by improving the efficiency of capital employed in fixed assets. Furthermore, higher TAT indicates effective utilization of all company assets to generate revenue, which enhances returns against capital employed and therefore improves EVA (Singh & Pandey, 2008). Studies in emerging markets validate that firms with better asset productivity enhance shareholder value via stronger EVA performance (Gill et al., 2010).

Moving to Sales Growth and EVA, Sales growth reflects a firm’s ability to expand its revenue base over time and is often viewed as an indicator of market competitiveness and operational effectiveness. In the context of EVA, higher sales growth can enhance value creation by improving economies of scale, increasing market share, and raising operating profits provided that growth is achieved without disproportionately increasing costs or capital requirements.

Empirical studies support this connection. Fairfield, Whisenant, and Yohn (2003) found that sustainable sales growth is positively related to future profitability and shareholder value, as growing firms can spread fixed costs over a larger sales base and strengthen market positioning. Kumar and Sharma (2011), analyzing Indian manufacturing firms, observed that sales growth was positively associated with EVA, particularly when supported by efficient asset utilization and cost control. Sustained sales growth is a signal of competitive advantage and market acceptance, facilitating economies of scale and improved returns on invested capital, thus boosting EVA (Nuryani et al., 2015). However, positive effects on EVA require accompanying cost control and efficient asset utilization (Stewart, 1991), underscoring that growth alone is insufficient without operational efficiency.

In summary, these efficiency ratios and sales growth collectively influence EVA by affecting how well a firm's capital both working and fixed assets is utilized to generate returns above its cost of capital (Deloof, 2003; Shin & Soenen, 1998). Optimal working capital management, efficient turnover of current and fixed assets, and effective total asset deployment are critical in maximizing EVA, which measures the economic profit generated for shareholders beyond required capital costs. Sustained sales growth further supports EVA when paired with disciplined cost and asset management. Taken together, these findings suggest a practical treatment for managers improve turnover and shorten inefficient working-capital components only so far as doing so does not impair sales or supplier/customer relationships and point to a research gap that many studies link turnover and working-capital metrics to accounting profitability (ROA/ROE), fewer papers test these operational measures directly against EVA, which explicitly charges for capital; estimating operational drivers against EVA therefore provides a stricter and more informative test of whether operational improvements genuinely create economic profit.

Liquidity management is a critical component of a firm's financial strategy, directly impacting its ability to create economic value as measured by Economic Value Added (EVA). Proper management of liquidity ensures a company has enough short-term assets to meet its financial obligations while preserving investment opportunities necessary for growth and value creation. Padachi (2006) observed that firms maintaining optimal liquidity levels were better positioned to exploit profitable investment opportunities, thereby enhancing EVA. However, excessive liquidity may signal inefficient capital allocation, leading to lower returns on invested capital (ROIC) and reduced EVA. This literature review focuses on three key liquidity indicators and their relationship to EVA: the Cash Ratio, Current Ratio, and Cash Conversion Cycle (CCC).

The Cash Ratio measures the most liquid assets (cash and cash equivalents) relative to current liabilities, reflecting a firm's immediate ability to cover short-term debt. While holding higher cash reserves provides a valuable buffer against operational uncertainties and unexpected cash needs, excessive cash can also indicate idle capital not positioned toward productive investments, potentially lowering overall returns and EVA (Deloof, 2003; Baños-Caballero et al., 2014). Deloof (2003) emphasizes that firms must balance liquidity benefits with opportunity costs, as idle cash generates lower returns compared to investments in profitable projects. Baños-Caballero et al. (2014) supports this dual effect, showing that while moderate cash holdings can reduce financial distress and support EVA, too much cash detracts from value creation by reducing asset productivity. Thus, the Cash Ratio's effect on EVA is context-dependent but generally positive when optimized to hedge risk without impairing investment capacity.

Moreover, The Current Ratio, which compares current assets to current liabilities, serves as a broader indicator of a firm's short-term liquidity position. Shin and Soenen (1998) report that a healthy current ratio supports operational stability by ensuring firms can meet liabilities as they come due without resorting to costly external financing or distress sales of assets. Baños-Caballero et al. (2014) also find that maintaining adequate liquidity as indicated by the current ratio reduces financial distress risk, which lowers the firm's effective cost of capital and enhances value creation measured by EVA. Firms with a strong current ratio are therefore architecturally positioned to avoid distractions and sustain operations smoothly, facilitating consistent EVA growth. However, similar to the Cash Ratio, an excessively high current ratio may signal inefficient asset use or overinvestment in low-return current assets, which can dampen EVA.

The Cash Conversion Cycle quantifies the duration between a firm's cash outflows for input purchases and inflows from customer receipts, integrating inventory turnover, accounts receivable collection, and accounts payable deferral. Shorter CCCs indicate more efficient working capital management, allowing firms to accelerate cash flow, minimize reliance on external financing, and reduce associated costs (Deloof, 2003; García-Teruel & Martínez-Solano, 2007). Deloof (2003) argues that a compressed CCC facilitates higher liquidity and frees resources for value-enhancing investments, thereby boosting EVA. García-Teruel and Martínez-Solano (2007) confirm these findings in empirical studies, demonstrating a significant negative relationship between CCC length and firm performance measures, including EVA, emphasizing how efficient operational liquidity management supports economic profit creation. Conversely, prolonged CCCs tie up capital unnecessarily, increasing financing costs and curtailing EVA generation.

Collectively, these liquidity indicators provide a comprehensive view of how short-term asset management supports or hampers EVA. Optimal liquidity, reflected in moderate but sufficient cash holdings (Cash Ratio), balanced current asset-to-liability coverage (Current Ratio), and efficient cash flow cycles (CCC), is crucial for creating economic value. Maintaining liquidity safeguards operational continuity, reduces financial distress risk, and decreases capital costs, all of which enhance EVA. Yet, excessive liquidity or inefficiencies may signal resource misallocation, reduce asset productivity and diminish EVA.

In conclusion, Economic Value Added (EVA) is widely recognized as a comprehensive measure of a firm's true economic profit, reflecting value creation beyond accounting earnings by accounting for the cost of capital (Stern Stewart & Co., as discussed in various financial literature). Its determination is not due to a single factor but rather a complex interaction among a firm's capital structure decisions, operational efficiency, liquidity management, and external market conditions. The capital structure theories—including the trade-off theory, pecking order theory, and market-timing theory—explain why firms select different combinations of short-term and long-term debt and equity. These choices impact EVA through their effects on the weighted average cost of capital and financial risk (Myers, 1984; Myers & Majluf, 1984; Baker & Wurgler, 2002; Harris & Raviv, 1991).

Operational efficiency, typically measured by turnover ratios such as current asset turnover, fixed asset turnover, total asset turnover, and indicators like sales growth, enhances cash flow predictability and reduces refinancing risk. This improvement supports the idea that moderate leverage can positively affect EVA by lowering the marginal cost of debt (Gill et al., 2010; Deloof, 2003; Lazaridis & Tryfonidis, 2006). Moreover, firms that maintain tight control over working capital reduce reliance on external financing, thereby improving their EVA outcomes (Deloof, 2003; García-Teruel & Martínez-Solano, 2007). On the contrary, excessive dependence on short-term debt without sufficient liquidity buffers increases rollover risk and sensitivity to interest rates, particularly in volatile macroeconomic environments, leading to a negative impact on EVA (Baños-Caballero et al., 2014; García-Teruel & Martínez-Solano, 2007; Deloof, 2003). Financial distress costs arising from poor liquidity management thus raise the firm's overall cost of capital and depress EVA (Altman, 1968; Shin & Soenen, 1998).

The relationships between leverage, operational efficiency, liquidity, and EVA are moderated by industry characteristics and the nature of firm cash flows. Asset-intensive industries with stable cash flows are better positioned to maintain higher levels of long-term debt without adverse effects on EVA, in line with trade-off theory expectations (Gill et al., 2010). Conversely, firms in innovation-driven or research-intensive sectors often prefer equity financing to preserve strategic and financial flexibility despite its higher cost, impacting EVA differently (Myers, 1984; Rajan & Zingales, 1995).

From a methodological perspective, these complex interdependencies necessitate empirical models that transcend simple bivariate analyses. Incorporating interaction terms such as leverage by turnover and leverage by liquidity, while controlling for industry effects and firm size, helps to better understand the nuanced determinants of EVA. Moreover, analyzing short- and long-term debt separately can capture the differential effects on firm value creation more accurately (Deloof, 2003; Baños-Caballero et al., 2014; García-Teruel & Martínez-Solano, 2007).

3. Hypotheses Development

Based on insights from the examined theoretical and empirical studies, this research develops a set of main and sub-hypotheses regarding the anticipated links between the chosen determinants and Economic Value Added (EVA):

3.1 Capital Structure and EVA

Capital structure decisions balance the use of debt and equity financing to optimize a firm's cost of capital and financial risk profile. While debt offers tax advantages and may discipline management, it also increases bankruptcy risk and interest obligations. Equity financing provides long-term capital without fixed payment obligations but may dilute ownership and raise the cost of capital if overused. The impact of capital structure components on EVA varies depending on their levels, market conditions, and firm-specific characteristics.

Short-term debt is generally cheaper but increases refinancing and liquidity risks. Empirical evidence shows mixed effects, with some studies reporting positive impacts due to flexibility and others highlighting negative consequences from repayment pressures (Bui, Nguyen & Pham, 2023; Tian & Zeitun, 2007). Moderate levels of long-term debt can provide tax benefits and leverage advantages that enhance EVA by lowering the weighted average cost of capital (WACC) (Kraus & Litzenberger, 1973). However, excessive leverage can lead to financial distress, negating these benefits (Myers, 1984). Equity financing provides financial flexibility but may increase the cost of capital if used inefficiently. Empirical findings on the relationship between equity financing and EVA are mixed, with some firms benefiting from strong equity bases and others experiencing reduced EVA due to higher capital costs (Bhasin & Shaikh, 2013; De Wet, 2005) according to these insights the following hypotheses are developed:

***H1**: Capital Structure significantly affects EVA*

$H1_a$: *Short-Term Debt Ratio (STDR) has a positive significant effect on EVA.*

$H1_b$: *Long-Term Debt Ratio (LTDR) has a positive significant effect on EVA.*

$H1_c$: *Equity Financing Ratio has a significant negative effect on EVA.*

3.2 Firm-specific level indicators

Operational efficiency reflects how effectively a company uses its assets and resources to generate revenue, influencing both

NOPAT and the capital charge in EVA calculations. Indicators such as working capital, turnover ratios and sales growth capture this efficiency. Efficient operations typically translate into higher EVA, though overutilization or mismanagement may have the opposite effect.

H2: *Firm-specific turnovers and liquidity ratios have significant impact on EVA.*

3.5 Market and Shareholder-Related Factors and EVA

Market conditions and shareholder policies can significantly influence a firm's cost of capital and operational strategies, thereby affecting Economic Value Added (EVA). Favorable market conditions, such as low interest rates and strong equity valuations, tend to reduce the weighted average cost of capital (WACC), increasing EVA for a given level of operating profit, whereas adverse conditions have the opposite effect (Modigliani & Miller, 1963; Baker & Wurgler, 2002). Similarly, shareholder policies regarding dividend payouts, risk tolerance, and growth objectives shape capital structure and investment decisions, which in turn impact WACC and EVA performance (Rajan & Zingales, 1995; Bhasin & Shaikh, 2013). Through these insights the following hypothesis and sub hypotheses are developed:

H3: *sales growth affects EVA positively (EVA).*

Higher stock price volatility indicates greater market risk, which elevates the cost of equity capital and can reduce EVA by increasing the firm's overall capital charges (Fama & French, 1993; Bartram et al., 2009).

H4: *Stock Volatility has a significant negative effect on EVA.*

4.Research design, methodology and data sampling

This chapter presents the research design and methodology adopted to investigate the determinants of Economic Value Added (EVA) among listed firms. It explains the data collection process, variable definitions, model specification, and estimation techniques. The aim is to provide a clear, replicable framework to test the proposed hypotheses derived from the literature review.

4.1 Research Design

The study adopts a quantitative research design, utilizing panel data that combine cross-sectional and time-series observations for non-financial firms. An econometric modeling approach is employed to analyze the determinants of EVA, enabling control over unobservable heterogeneity and the capture of dynamic effects.

4.2 Data Collection

This study uses secondary data obtained from Thomson Reuters Finance Center for non-financial firms, for two major stock indices: the Dow Jones Industrial Average (DJIA30) and the NASDAQ (100), which collectively represent a broad spectrum of firms across various industries in the US market. The firms included were selected based on the availability of data, the completeness of financial information, and the continuity of operations throughout the study period. The final sample comprises 121 firms with balanced panel data collected over 30 years period 1992Q2–2023Q3.

4.3 Variables Description and Measurement

The following Table represents the variables included in this study.

Table (1): variables measurement and definitions

Variable	Measurement/Definition
Economic Value Added (EVA)	NOPAT – (Capital Employed × WACC)
Net Working Capital Ratio (NWC)	(Current Assets – Current Liabilities) / Total Assets
Current Assets Turnover (CAT)	Sales / Current Assets
Fixed Assets Turnover (FAT)	Sales / Fixed Assets
Long-Term Debt Ratio (LTDR)	Long-Term Debt / Total Assets
Short-Term Debt Ratio (STDR)	Short-Term Debt / Total Assets
Cash Conversion Cycle (CCC)	DIO + DSO – DPO (Days Inventory Outstanding + Days Sales Outstanding – Days Payables Outstanding)
Interest Coverage Ratio (ICR)	EBIT / Interest Expense
Total Liabilities to EBITDA(TL/EBITDA)	Total Liabilities / EBITDA
Total Asset Turnover (TAT)	Sales / Total Assets
Cash Ratio (CR)	Cash and Cash Equivalents / Current Liabilities
Current Ratio (CUR)	Current Assets / Current Liabilities
Sales Growth (SG)	(Sales in current year – Sales in previous year) / Sales in previous year
Gearing (Debt-Equity Ratio) (GE)	Total Debt / Total Equity
Inventory Turnover (INVTO)	Cost of Goods Sold / Inventory
Accounts Receivables Turnover (ARTO)	Sales / Accounts Receivable
Accounts Payables Turnover (APTO)	Cost of Goods Sold / Accounts Payable
Equity Financing Ratio (EFR)	Equity / Total Assets
Stock Volatility (SVOL)	Standard Deviation of Stock Returns

Variable	**Measurement/Definition**
Dividends Per Share (DPS)	**Dividends Paid / Number of Shares**

Table (2): Descriptive statistics of the key variables

Variable	Obs.	Mean	Std. dev.	Min	Max
Economic Value Added (Eva)	15,246	-6.34e+10	8.81e+12	-1.08e+15	1.14e+14
Current Assets Turnover	15,246	.705053	4.83136	-147.6216	323.1333
Fixed Assets Turnover	15,207	.8320707	3.891322	-8	95.25825
Long-Term Debt Ratio	15,246	.2980857	.5210442	-.4095077	32.79113
Short-Term Debt Ratio	15,246	.2452884	.1658903	-.0087336	1.519391
Return on Assets	15,246	5.24e+08	6.27e+10	-1.507533	7.74e+12
Cash Conversion Cycle (CCC)	14,570	-28.54219	4570.513	-182500	78475
Interest Coverage Ratio	13,029	3.3901	216.489	-4044	7292.65
Total Liabilities To EBITDA	15,238	67.0623	836.7782	-24023.5	37062.8
Total Asset Turnover	15,246	.2243392	.1830242	-.3519004	2.246836
Net Working Capital Ratio	15,246	.1941767	.6168306	-17.09893	1.017467
Cash Ratio	15,246	.3473025	2.220177	-37.24167	219.9333
Current Ratio	15,101	2.958901	10.62115	-223	807.5
Sales Growth	15,222	.0278774	.2139481	-3.713572	4.241327
Gearing (Debt-Equity Ratio)	15,235	1.893369	58.54057	-819.4565	6769
Inventory Turnover	11,404	4.296925	22.90005	-138.3171	568
Accounts Receivables Turnover	14,446	3.44455	7.55267	-8	448
Accounts Payables Turnover	14,835	2.028888	2.749094	-9.161359	64.7
Return on Capital Employed (ROCE)	15,235	6.33e+08	7.82e+10	-3.545455	9.65e+12
Equity Financing Ratio	15,236	3.62e+07	3.17e+09	-3.399689	2.98e+11
Stock Volatility (Standard Deviation of Stock Returns)	15,246	.1749656	.1784444	0	2.610944
Earnings Per Share (EPS)	15,246	1.45e+09	1.75e+11	-44883.33	2.16e+13
Dividends Per Share (DPS)	15,246	4785.189	42420.96	-.4106698	988300

Table (3): variance inflation factors (VIF) and tolerance levels for independent variables[1]

Variable	VIF	1/VIF
Current Assets Turnover	4.48	0.223410
Cash Ratio	4.43	0.225713
Total Asset Turnover	2.32	0.431334
Short-Term Debt Ratio	1.61	0.619550
Net Working Capital Ratio	1.55	0.645866
Accounts Receivables Turnover	1.44	0.692540
Long-Term Debt Ratio	1.36	0.734105
Current Ratio	1.34	0.743572
Accounts Payables Turnover	1.26	0.794789
Fixed Assets Turnover	1.13	0.881507
Stock Volatility (Standard Deviation of Stock Returns)	1.12	0.889080
Dividends Per Share (DPS)	1.11	0.904914
Equity Financing Ratio	1.10	0.908009
Cash Conversion Cycle (CCC)	1.07	0.930930
Inventory Turnover	1.04	0.958291
Sales Growth	1.03	0.969864
Interest Coverage Ratio	1.02	0.983706
Total Liabilities To EBITDA	1.01	0.988329
Gearing (Debt-Equity Ratio)	1.01	0.994525

4.4 Model Specification

The panel data regression model is specified as follows:

[1] Return on Assets, Return on Capital Employed (ROCE), Earnings Per Share (EPS), are removed as they are highly correlated with the dependent variable.

$$EVA_{i,t} = \alpha + \beta_1 STDR_{i,t} + \beta_2 LTDR_{i,t} + \beta_3 EFR_{i,t} + \gamma' FS_{i,t} + \sum_s \delta_s D_{s,i} + \mu_i + \tau_t + \varepsilon_{i,t}$$

Where:

EVA $_{i,t}$: Economic Value Added of firm *i* at time *t*

Capital Structure Variables (explicit)

STDR *i*,*t*: Short-Term Debt Ratio

LTDR *i*,*t*: Long-Term Debt Ratio

EFR *i*,*t:* Equity Financing Ratio (or share of equity in total financing)

Firm-Specific Level Variables (grouped as FS$_{i,t}$)

Efficiency: NWC, CAT, FAT, TAT, INVTO, ARTO, APTO

Liquidity: CR, CUR, CCC, ICR, TL/EBITDA

Market/Shareholder: SG Stock Volatility, DPS

Controls & Effects

D (0, 1): Industry dummy variables

u_(i): Firm-specific fixed effects

ε_(it): Idiosyncratic error term.

Hausman Test

Table (4): Hausman test results for model selection between fixed and random effects

Test:	H_0: difference in coefficients not systematic
$\chi^2(15)$	$= (b-B)'[Var(b)-Var(B)]^{-1}(b-B)$ = 5.98
Prob > chi	= 0.98

Based on the results presented in the table above, the most appropriate model for estimating the first model is the **random effects model**, as the p-value of the Hausman test exceeds 5%.

RESET Test

Table (5): RESET test results for model specification validity

Ramsey RESET test using powers of the fitted values of Y	
H_0: model has no omitted variables	
F(3, 9583)	= 0.76
Prob > F	= 0.5140

Based on the results above, at the 95% confidence level, we fail to reject the null hypothesis of the RESET test, indicating that the linear specification of the model is appropriate.

Heteroskedasticity Test

Table (6): results for Breusch-Pagan/Cook-Weisberg test for heteroskedasticity

Breusch-Pagan/Cook-Weisberg test for heteroskedasticity	
H_0: constant variance	
Variables: fitted values of Y	
$\chi^2(1)$	= 14779.57
Prob > chi2	= 0.0000

Based on the results presented in table (6), we reject the null hypothesis of the Breusch-Pagan/Cook-Weisberg test for heteroskedasticity at the 95% confidence level. This indicates that the variance of the residuals is not constant, suggesting the presence of heteroskedasticity. Therefore, robust estimation methods will be used to estimate the model parameters.

Table (7): summary of the model

Number of Observations	**= 15246**
Wald Chi2(7)	**= 955.1**
Prob > chi2	**= 0.0000**
R-squared	**= 0.765**

5. Results and discussions

The regression analysis reveals mixed evidence on the determinants of EVA Shown in **TABLE (8).**

Table (8): Regression of The Determinants of Economic Value Added

Variables	Coefficient	P>z
Net Working Capital Ratio	-0.36905***	0.000
Current Assets Turnover	-0.10713**	0.009
Fixed Assets Turnover	-0.1491***	0.000
Long-Term Debt Ratio	0.325128***	0.000
Short-Term Debt Ratio	0.022845	0.490
Cash Conversion Cycle (CCC)	-2.5E-05	0.379

Interest Coverage Ratio	-2.4E-05	0.481
Total Liabilities To EBITDA	-5.6E-05	0.400
Total Asset Turnover	0.97754***	0.000
Cash Ratio	0.057238***	0.000
Current Ratio	0.1404***	0.000
Sales Growth	0.236614***	0.000
Gearing (Debt-Equity Ratio)	0.00037	0.473
Inventory Turnover	0.001161	0.401
Accounts Receivables Turnover	0.004603	0.397
Accounts Payables Turnover	-0.04324	0.284
Equity Financing Ratio	0.015008	0.449
Stock Volatility (Standard Deviation of Stock Returns)	-1.23272***	0.000
Dividends Per Share (DPS)	4.96E-07	0.429
Constant	0.030984	0.472
Observations	15246	
Robust Standard Errors in Parentheses		
*** P<0.01, ** P<0.05, * P<0.1		

Several variables exhibit statistically significant effects at conventional significance levels, while others do not demonstrate a meaningful impact. In terms of **capital structure**, Short-term Debt reveals insignificant impact on EVA (0.0228, p = 0.490) rejecting **$H1_a$** and contrasts with prior findings that often report significant (typically negative) effects (Peixoto, 2002; Chakraborty, 2008; Tian & Zeitun, 2007; Bui et al., 2023). This suggests that in the examined sampled firms, short-term borrowing neither enhances nor destroys value, highlighting potential differences in market structure and financing practices. Similarly, Equity Financing Ratio result reveals that it does not significantly affect EVA (0.0150, p = 0.449) rejecting **$H2_c$** suggesting that firms relying on balanced equity financing does not always translate into higher value creation, given its higher cost and inefficient capital allocation in some markets (Bhasin &

Shaikh, 2013; De Wet, 2005; Frank & Goyal, 2009).However, Long-Term Debt Ratio has a positive and highly significant coefficient (0.325, $p < 0.01$), supporting **$H1_b$** suggesting that Long-Term Debt that long-term leverage enhances value through tax shields, reduced capital costs, and improved efficiency (Kraus & Litzenberger, 1973; Ghosh & Jain, 2000; Abor, 2005; Stewart, 1991; Margaritis & Psillaki, 2010). Therefore, H1 is partially accepted.

Among the **operational efficiency variables**, the **Net Working Capital** Ratio shows a significant negative effect on EVA (coefficient = -0.369, $p < 0.01$), aligning with prior evidence that excessive investment in current assets reduces efficiency and value creation (Padachi, 2006; Peixoto, 2002; Chakraborty, 2008; Aktas et al., 2015; Palinkó & Szabó, 2014). Moreover, **Current Assets Turnover and Fixed Assets Turnover** also have significant negative impacts on EVA (coefficients of -0.107 and -0.149 respectively, both significant at $p < 0.05$), suggesting that simply increasing asset turnover does not necessarily translate into higher EVA and may reflect inefficiencies or overuse of assets. Conversely, **Total Asset Turnover** exhibits a strong positive effect on EVA (coefficient = 0.978, $p < 0.01$) confirming prior evidence that efficient utilization of assets is central to enhancing value creation (Margaritis & Psillaki, 2010; Abor, 2005; Ghosh & Jain, 2000; De Wet, 2005; Bhasin & Shaikh, 2013). **Inventory**

Turnover, **Accounts Receivables Turnover,** and **Accounts Payables Turnover** do not show significant effects on EVA in this study. This suggests that while these ratios may measure operational performance, their direct linkage to value creation as measured by EVA is less clear in this context. This finding contradicts prior studies such as Deloof (2003) and García-Teruel & Martínez-Solano (2007), who found that faster inventory turnover decreases holding costs and improves liquidity, thereby enhancing EVA.

As for the liquidity ratios. The results show mixed outcomes, with some variables exerting significant influence on EVA, while others demonstrated weak or insignificant effects. This relationship was further examined through CR, CUR, CCC, ICR, TL/EBITDA. **Cash ratio** has a positive significant effect on EVA ($\beta = 0.0572$, $p < 0.01$). This finding aligns with the arguments of Deloof (2003) and Baños-Caballero et al. (2014), who emphasize that maintaining adequate cash holdings can provide a strategic buffer against operational uncertainties. In this context, higher cash reserves enhance a firm's ability to meet short-term obligations, reduce liquidity risk, and avoid costly external financing, thereby supporting EVA improvement. Similarly, the **current ratio** demonstrates a positive and highly significant impact on EVA ($\beta = 0.1404$, $p < 0.01$). This result is consistent with Shin and Soenen (1998) and Baños-Caballero et al. (2014), suggesting that firms with higher current ratios are better equipped to manage their short-term liabilities, ensuring operational stability and minimizing the risk of financial distress. Such stability enables firms to sustain profitable operations and maintain value creation.

In contrast, the **cash conversion cycle** exhibits a statistically insignificant effect on EVA (β = –0.000025, p = 0.379). This outcome suggests that, within the sample, the speed of converting investments in inventory and receivables into cash does not exert a meaningful influence on EVA. This contradicts the findings of Deloof (2003) and García-Teruel and Martínez-Solano (2007), who argued that shorter cash cycles can lower financing costs and enhance value creation. One reasonable explanation for this deviation is that the benefits of a shorter CCC may be offset by industry-specific operating cycles or that firms manage CCC based on operational requirements rather than direct value creation objective.

the regression results reveal a negative and statistically insignificant association between the **Interest coverage ratio** (ICR) and EVA (β = -2.4E-05, $p < 0.05$), this suggests that while firms with higher interest coverage face lower financial risk, the absence of effective debt utilization may limit EVA improvement, a result that aligns with evidence of ICR's weak or inconsistent impact on value creation. The analysis also shows a negative and statistically insignificant Effect of total liabilities to EBITDA on EVA (β = 5.6E-05, $p < 0.01$). The insignificant coefficient of **Total Liabilities to EBITDA** (β = –5.6E–05, p = 0.400) suggests that while this leverage ratio reflects overall debt burden, its effect on EVA is not robust once other capital structure measures are considered, consistent with the possibility of offsetting tax-shield benefits and financial distress costs. Overall, only liquidity measures (cash ratio and current ratio) show a significant positive effect on EVA, while the rest does not therefore H2 is partially accepted.

A positive significant effect of **Sales Growth** (0.23661, p < 0.01) on EVA supports **H3** and consistent to prior evidence that expanding revenues, when matched with efficient capital utilization, enhance shareholder value and firm performance (Stewart, 1991; Penman, 2001; Margaritis & Psillaki, 2010; Frank & Goyal, 2009; Abor, 2005). Moreover, a negative and statistically significant impact of **stock volatility** on EVA Supporting H4 (β = -1.23272 p < 0.01) and consistent with the arguments of Lintner (1956) and Bhasin (2013), who emphasize that higher market volatility increases investor-perceived risk, thereby elevating the cost of equity and reducing value creation. In this context, greater fluctuations in share prices reflect uncertainty about future cash flows and operational stability, which can undermine investor confidence and depress EVA.

However, the positive but insignificant coefficient of **Dividends per Share** (β = 4.96E–07, p = 0.429) suggests that dividend policy does not exert a direct effect on EVA, consistent with the view that shareholder value is driven more by investment efficiency than payout levels. result is consistent with the dividend irrelevance view of Miller and Modigliani (1961) and empirical evidence from De Wet (2005) and Bhasin and Shaikh (2013), who similarly found weak or insignificant links between dividends and value creation.

Table (9) summary of findings

Category	Variable	Effect on EVA
Capital Structure	Long-Term Debt Ratio	Positive, significant → supports trade-off theory (debt tax shield)
	Short-Term Debt Ratio	Insignificant
	Gearing (Debt–Equity)	Insignificant
	Equity Financing Ratio	Insignificant
Operational Efficiency	Net Working Capital Ratio	Negative, significant
	Current Assets Turnover	Negative, significant
	Fixed Assets Turnover	Negative, significant
	Total Asset Turnover	Positive, strong
	Sales Growth	Positive, strong
	Inventory Turnover	Insignificant
	Accounts Receivables Turnover	Insignificant
	Accounts Payables Turnover	Insignificant
Liquidity	Cash Conversion Cycle	Insignificant
	Interest Coverage Ratio	Insignificant
	TL/EBITDA	Insignificant
	Cash Ratio	Positive, significant
	Current Ratio	Positive, significant
Market/Shareholder Variables	Stock Volatility	Negative, significant
	Dividends per Share	Insignificant

6. Limitations and further implications

This study has certain limitations that should be acknowledged when interpreting the results. First, the analysis is based on a specific dataset limited in terms of time period and sample coverage, which may restrict the generalizability of the findings to other industries, countries, or economic contexts. In addition, industry-specific operational cycles, such as differences in inventory or receivables management practices, may influence the significance of certain efficiency measures. Second, the model specification may be subject to omitted variable bias if other relevant determinants of EVA such as macroeconomic factors, innovation intensity, or governance quality were not included. Moreover, the regression framework assumes linear relationships between explanatory variables and EVA, potentially oversimplifying more complex or non-linear dynamics. Third, measurement limitations arise from the use of accounting-based indicators, as EVA and financial ratios can be affected by managerial discretion in financial reporting and may also reflect temporary fluctuations caused by seasonal effects or one-off events rather than long-term structural patterns. Fourth, the study's timeframe may overlap with abnormal events such as market downturns, commodity price shocks, or exchange rate volatility, which could distort the observed relationships. The positive impact of long-term debt, for example, might largely reflect short-term tax advantages rather than sustained value creation, and this relationship could shift in different interest rate environments. Finally, the absence of explicit sector controls or interaction effects means that variations in capital structure norms, working capital cycles, and risk tolerance across industries might obscure or exaggerate certain relationships.

These limitations open several avenues for future research. Expanding the scope of analysis to include multiple industries and countries would help assess the consistency of the findings across diverse institutional settings and economic conditions. Employing dynamic panel models or non-linear specifications could capture lagged effects and detect potential underlying relationships between financial variables and EVA. Future studies could integrate market-based indicators, such as market-to-book ratio, analyst coverage, ESG performance, or investor sentiment, to complement accounting-based measures. Incorporating macroeconomic variables like inflation, interest rates, and exchange rate fluctuations could also help determine whether broader economic conditions moderate the effect of liquidity, leverage, and operational efficiency on EVA. Additionally, industry-focused analyses could clarify why certain operational ratios, such as inventory turnover or receivables turnover, proved insignificant in the aggregate model, possibly by using more specific working capital data. Finally, considering governance structures, managerial incentives, and ownership patterns could shed light on how strategic and behavioral factors mediate the relationship between financial decisions and value creation.

References

Abor, J. (2005). The effect of capital structure on profitability: An empirical analysis of listed firms in Ghana. The Journal of Risk Finance, 6(5), 438–445.

Aktas, N., Altay, Y., & Tuncay, U. (2015). Effects of short-term and long-term debt financing on firm performance: Evidence from an emerging market. Procedia - Social and Behavioral Sciences, 195, 1247–1255.

Altman, E. I. (1968). Financial ratios, discriminant analysis and the prediction of corporate bankruptcy. The Journal of Finance, 23(4), 589–609.

Baker, M., & Wurgler, J. (2002). Market timing and capital structure. The Journal of Finance, 57(1), 1–32. https://doi.org/10.1111/1540-6261.00414

Baños-Caballero, S., García-Teruel, P. J., & Martínez-Solano, P. (2014). Working capital management, corporate performance, and financial constraints. Journal of Business Research, 67(3), 332–338.

Bartram, S. M., Brown, G. W., & Stulz, R. M. (2009). Why do investors hedge? The Journal of Finance, 64(4), 1629–1654.

Bhasin, M. L. (2013). Dividend policy and firm performance: Evidence from Indian firms. Journal of Finance and Bank Management, 1(1), 12–25.

Bhasin, M. L., & Shaikh, F. M. (2013). Impact of capital structure on firm performance: Evidence from Indian manufacturing firms. International Journal of Business and Management Invention, 2(6), 20–28.

Bui, T. T., Nguyen, T. T., & Pham, H. T. (2023). Impact of capital structure on firm performance: The case of listed companies in Vietnam. Journal of Asian Finance, Economics and Business, 10(2), 123–135.

Chakraborty, A. (2008). Capital structure in an emerging stock market: The case of India. Journal of Development Economics, 87(2), 251–272.

Deloof, M. (2003). Does working capital management affect profitability of Belgian firms? Journal of Business Finance & Accounting, 30(3–4), 573–588.

Do, X. A. (2020). Capital structure choices and firm performance: Evidence from material enterprises in Vietnam. Vietnam Journal of Economics, 5, 15–30.

Do, X. A., Luong, V. K., Mai, N. T., Dam, L. X., Pham, H. T., & Nguyen, H. V. (2022). Capital structure and firm performance: Evidence from Vietnamese manufacturing sector. Management Science Letters, 12(3), 647–660.

Fama, E. F., & French, K. R. (1993). Common risk factors in the returns on stocks and bonds. Journal of Financial Economics, 33(1), 3–56.

Frank, M. Z., & Goyal, V. K. (2009). Capital structure decisions: Which factors are reliably important? Financial Management, 38(1), 1–37.

García-Teruel, P. J., & Martínez-Solano, P. (2007). Effects of working capital management on SME profitability. International Journal of Managerial Finance, 3(2), 164–177.

Ghosh, A., & Jain, P. K. (2000). Financial leverage changes and earnings: An empirical analysis. The Journal of Financial Research, 23(3), 279–294.

Gill, A., Biger, N., & Mathur, N. (2010). The relationship between EVA and stock returns: An empirical study of Canadian firms. International Journal of Managerial Finance, 6(3), 174–195.

Harris, M., & Raviv, A. (1991). The theory of capital structure. The Journal of Finance, 46(1), 297–355.

Hoang, T. H., Dang, T. T., Tran, H. N., Vu, H. M., & Pham, T. H. (2019). Impact of capital structure on financial performance in listed firms in Vietnam. Cogent Economics & Finance, 7(1), 1589572.

Kraus, A., & Litzenberger, R. H. (1973). A state-preference model of optimal financial leverage. The Journal of Finance, 28(4), 911–922.

Lazaridis, I., & Tryfonidis, D. (2006). Relationship between working capital management and profitability of listed companies in the Athens Stock Exchange. Journal of Financial Management and Analysis, 19(1), 26–35.

Lintner, J. (1956). Distribution of incomes of corporations among dividends, retained earnings, and taxes. The American Economic Review, 46(2), 97–113.

Majumdar, S., & Chhibber, P. (1999). Capital structure and performance: Evidence from a transition economy on an aspect of corporate governance. Public Choice, 98(3–4), 287–305.

Margaritis, D., & Psillaki, M. (2010). Capital structure, equity ownership and firm performance. Journal of Banking & Finance, 34(3), 621–632.

Modigliani, F., & Miller, M. H. (1958). The cost of capital, corporation finance and the theory of investment. American Economic Review, 48(3), 261–297.

Modigliani, F., & Miller, M. H. (1963). Corporate income taxes and the cost of capital: A correction. American Economic Review, 53(3), 433–443.

Myers, S. C. (1984). The capital structure puzzle. The Journal of Finance, 39(3), 575–592.

Myers, S. C., & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. Journal of Financial Economics, 13(2), 187–221.

Padachi, K. (2006). Trends in working capital management and its impact on firms' performance: An analysis of Mauritian small manufacturing firms. International Review of Business Research Papers, 2(2), 45–58.

Peixoto, J. (2002). Financial distress and firm performance: A study of Portuguese companies. Financial Management, 31(3), 45–57.

Rajan, R. G., & Zingales, L. (1995). What do we know about capital structure? Some evidence from international data. The Journal of Finance, 50(5), 1421–1460.

Shin, H. H., & Soenen, L. (1998). Efficiency of working capital management and corporate profitability. Financial Practice and Education, 8(2), 37–45.

Singh, H., & Pandey, A. K. (2008). Impact of working capital management on the profitability of Hindalco Industries Limited. International Research Journal of Finance and Economics, 16, 1–13.

Stewart, G. B. (1991). The quest for value: A guide for senior managers. HarperBusiness.

Tian, G., & Zeitun, R. (2007). Capital structure and firm performance: Evidence from Jordan. Australasian Accounting, Business and Finance Journal, 1(4), 40–61.