Impact of Working Capital Management on Economic Value Added (EVA) Spread of Companies Listed on the Stock Exchange of Thailand

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ABSTRACT

This research aims to investigate the impact of working capital management (WCM) on the economic value added (EVA) of non-financial companies listed on the Thai Stock Exchange. Employing a multiple regression analysis on a sample of 208 firms (1,040 firm-year observations) from 2018 to 2022, the study utilizes cash conversion cycle (CCC), inventory days (IDAY), accounts receivable days (RDAY), and accounts payable days (PDAY) as proxies for WCM. Results indicate that companies with shorter CCC and RDAY tend to generate higher economic value added. Conversely, longer PDAY periods are associated with greater economic value added. In addition, the company should consider inventory management in abnormal situations or economic crises. To achieve a competitive edge by effectively managing periods of stockouts or increased inventory levels. It demonstrates the company's capacity to promptly address consumer demands and prevent customers from turning to competitors due to out-of-stock items. Nevertheless, the company must uphold optimal inventory levels to minimize storage expenses and prevent the accumulation of outdated products.

Keywords: Working Capital Management, Cash Conversion Cycle, EVA, Thai Stock Exchange

ผลกระทบของการจัดการเงินทุนหมุนเวียนที่มีต่อมูลค่าเพิ่มทางเศรษฐศาสตร์ของบริษัทจดทะเบียนในตลาดหลักทรัพย์แห่งประเทศไทย

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คณะบริหารธุรกิจและเทคโนโลยีสารสนเทศ

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บทคัดย่อ

งานวิจัยนี้มีวัตถุประสงค์ เพื่อศึกษาผลกระทบของการจัดการเงินทุนหมุนเวียนที่มีต่อมูลค่าเพิ่มทางเศรษฐศาสตร์ของบริษัทจดทะเบียนในตลาดหลักทรัพย์แห่งประเทศไทย ที่ไม่ใช่กลุ่มธุรกิจการเงิน วิเคราะห์ข้อมูลโดยใช้การวิเคราะห์ถดถอยเชิงพหุคูณของกลุ่มตัวอย่างจำนวน 208 บริษัท (1,040 ข้อมูลรายปี) ครอบคลุมระยะเวลา 5 ปี ตั้งแต่ปี พ.ศ. 2561–2565 ตัวแปรการจัดการเงินทุนหมุนเวียน กำหนดตัวแทนการวัดค่า 4 ตัวแปร ได้แก่ วงจรเงินสด ระยะเวลาขายสินค้าคงเหลือ ระยะเวลาเก็บเงินจากลูกหนี้ และระยะเวลาการจ่ายชำระหนี้ ผลการศึกษาพบว่า วงจรเงินสด ระยะเวลาเก็บเงินจากลูกหนี้ที่ลดลงและระยะเวลาการจ่ายชำระหนี้ให้กับเจ้าหนี้ที่นานขึ้นจะสามารถเพิ่มมูลค่าเพิ่มเชิงเศรษฐกิจได้ นอกจากนี้ บริษัทควรมีการพิจารณาการบริหารจัดการสินค้าคงคลังมาใช้ในภาวะไม่ปกติหรือวิกฤติเศรษฐกิจ เพื่อให้เกิดความได้เปรียบในการแข่งขันเนื่องจาก ระยะเวลาขายสินค้าคงเหลือหรือระดับสินค้าคงคลังที่สูงขึ้น สะท้อนให้เห็นว่า บริษัทมีความสามารถในการตอบสนองความต้องการของผู้บริโภคได้อย่างรวดเร็วและป้องกันไม่ให้ลูกค้าหันไปหาคู่แข่ง เนื่องจากสินค้าขาดสต๊อก แต่อย่างไรก็ตาม บริษัทควรรักษาระดับสินค้าคงคลังที่เหมาะสมเพื่อลดต้นทุนการจัดเก็บและสินค้าล้าสมัย

คำสำคัญ : การจัดการเงินทุนหมุนเวียน วงจรเงินสด มูลค่าเพิ่มทางเศรษฐศาสตร์ ตลาดหลักทรัพย์ไทย

1. INTRODUCTION

Effective working capital management (WCM) is paramount to a company's financial strategy. Striking the right balance between current assets and liabilities is essential because it ensures the ability to meet short-term obligations, facilitates efficient operations, and conveys positive signals to investors regarding financial stability and risk management (Jabbouri et al., 2022). Varying significantly among firms based on their operational and financial objectives, WCM plays a pivotal role in determining short-term liquidity, operational performance, and profitability (Jabbouri et al., 2023). Furthermore, working capital demand and financing levels influence both short-term and long-term obligations, signaling the company's risk to external investors. Notably, businesses employing ineffective WCM strategies often resort to heavy reliance on long-term debt to fulfill short-term financing needs (Akbar et al., 2022; Hatane et al., 2023). Consequently, a company's working capital significantly impacts its valuation, necessitating careful consideration by management in decision-making processes (Umar & Al-Faryan, 2024).

The past decade has underscored the importance and intricacies of WCM, particularly in the aftermath of the global financial crisis. Managers have come to recognize that poor WCM can result in liquidity shortages, thereby jeopardizing the firm's ability to navigate economic downturns (Habib & Kayani, 2022). Faced with liquidity challenges, companies reliant on less stable capital sources found themselves teetering on the brink of insolvency. Consequently, businesses shifted towards a more conservative approach with their cash reserves, often at the expense of potential investments and growth opportunities (Moussa, 2019). Establishing an optimal working capital strategy is essential for businesses to weather the impact of financial crises and economic recessions (Jabbouri et al., 2023). According to a 2019 survey by Ernst & Young, many companies struggled to maintain sufficient short-term cash flows and working capital to sustain operational activities. Working capital serves as a cushion against fluctuations in cash flow; thus, a shortage of working capital can significantly impact firm operations and performance (Boisjoly et al., 2020; Pant et al., 2023).

WCM remains an intriguing topic in Thailand, an emerging market country because the discussion continues to evolve. Several Thai studies have utilized the cash conversion cycle and working capital components as a proxy for WCM, among other indicators. This study provides new perspectives on WCM in Thailand. The novelty of this study lies in its use of Eva-Spread to assess working capital and firm performance, a departure from previous research that typically concentrated on the relationship between WCM and other performance metrics like ROA, ROE, and Tobin's Q. Unlike traditional accounting profit measures, EVA captures economic profit by subtracting all capital expenditures from income, including the opportunity costs of capital. Therefore, this study aims to furnish insights into WCM that can assist executives in evaluating performance management from a stakeholder perspective, balancing the returns from profit management against the risks associated with investment management. Additionally, this study contributes to understanding WCM during financial crises or events like the COVID-19 outbreak for companies listed on the Thailand Stock Exchange, wherein management often

struggles to maintain effective control over short-term cash flows and working capital, impacting performance.

The subsequent section presents a brief review of existing literature and hypothesis development, followed by an explanation of the data and research methodology employed. We then outline the results of the statistical analysis before concluding the study.

2. LITERATURE AND HYPOTHESIS DEVELOPMENT

2.1 The Important of Working Capital Management (WCM)

Working capital serves as a tool for evaluating managerial decision-making by assessing the cycle times or turnover times of the cash conversion cycle (CCC) and its constituents, namely inventory days, accounts receivable days, and accounts payable days (Jabbouri et al., 2022). Given the short lifespan of current assets and their frequent conversion into other asset types, managers devote considerable attention to their daily capital decisions (Abuzayed, 2012). Effective WCM involves optimizing cash release from receivables, accounts payable, and inventory. Companies can reduce their dependence on costly external funding sources by efficiently managing these components, thereby enhancing the utilization of working capital components and, consequently, increasing profitability and market value (Nobanee et al., 2011). This study is based on the tenets of Working Capital Management Theory (WCM Theory), which emphasizes the criticality of enhancing firm performance through the efficient utilization of working capital (Deloof, 2003). The WCM Theory underscores the significance of adeptly managing working capital components and enhancing firm performance. By effectively managing working capital, organizations can optimize liquidity, minimize financing costs, and enhance operational efficiency (Howorth & Westhead, 2003; Roshan & Chatnani, 2023)

The scholarly literature contains numerous variants of CCC. Ding et al. (2013) perform the following calculation for the CCC:

$$CCC = \frac{Inventories}{COGS} * 365 + \frac{Accounts\ receivables}{Net\ sales} * 365 - \frac{Accounts\ payables}{COGS} * 365$$

Notes: COGS is cost of goods sold

The Cash Conversion Cycle (CCC) addresses three primary components of working capital-inventory, accounts receivable, and accounts payable-in a manner that provides insight into a firm's overall WCM.

Richards & Laughlin (1980) proposed the concept of the CCC, which illustrates how companies can mitigate the adverse effects of ineffective WCM by optimizing the duration of their operational cycles. Essentially, this metric quantifies the time elapsed between a company's acquisition of inventory

and the collection of cash from its accounts receivable. The CCC concept enables management to anticipate the duration for which the firm's cash remains tied up in its operations. According to Amponsah-Kwatiah & Asiamah (2021), prolonged delays in recovering payments from customers, excessive inventory holdings, or overly rapid expense payments can extend the cash conversion cycle. A longer cycle suggests delayed cash generation, indicative of potential financial insolvency (Karim et al., 2024). Conversely, if a company accelerates the collection of outstanding invoices, accurately forecasts its inventory needs, or postpones bill payments, it shortens its cash conversion cycle (Aminu & Zainudin, 2015). Therefore, a reduced CCC signifies improved financial health, with surplus funds available for future investments or debt reduction.

The CCC component can be described as:

Inventory Days

Key indicators of inventory management efficiency are inventory turnover and sales duration, which measure the speed at which the organization can produce and sell products or raw materials after acquisition. The timely arrival of new inventory shipments is crucial (Aldubhani et al., 2022), as the quantity of inventory directly influences production and sales levels, highlighting the importance of effective organizational management. Optimizing inventory levels is critical to reducing inventory management costs and ensuring adequate product availability to meet consumer demand. According to Bouk et al. (2020), inventory level imbalances, particularly concerning specific items, pose significant challenges for organizations. Excessive inventory leads to storage capacity issues and inflated storage costs, while inadequate inventory levels result in product shortages, leading to disruptions in operations or unmet customer demands. Thus, effective inventory management holds the potential to create revenue-generating opportunities, but mismanagement can lead to unnecessary financial expenditures, characterized by sunk costs and opportunity costs (Boisjoly et al., 2020; Vlismas, 2024).

Accounts Receivable Days

Trade receivables represent a significant current asset that plays a vital role in driving sales and profitability for a company. Efficient collection of payments from debtors reduces the required working capital (Kayani et al., 2023). Assessing administrative effectiveness involves evaluating the account receivable turnover and the typical debt collection period. Consequently, a company with a shorter debt collection period demonstrates superior debt management capabilities and the potential to generate higher revenue (Tauringana & Adjapong Afrifa, 2013). The firm utilizes funds acquired from debtors to drive sales and profits. However, if a business extends its collection period beyond the norm, it will require additional working capital, leading to increased financial expenses. Failure to obtain adequate working capital promptly to meet demand can result in liquidity issues, ultimately leading to financial difficulties (Boisjoly et al., 2020; Vlismas, 2024).

Accounts Payable Days

Trade accounts payable refer to the financial obligations that arise when a business receives trade credit from its suppliers (Kayani et al., 2023). They are considered a current obligation and play a vital role in providing a company with immediate capital. According to Fisman (2001), small firms were the focus of the research, and collateral frequently has restrictions. Furthermore, financial data or financial reports often suffer from a lack of data integrity. Hence, trade credit might serve as a source of investment for operational purposes, which can be more cost-effective than financing by financial institutions (Kiymaz et al., 2024). Therefore, we can evaluate the effectiveness of trade credit management based on the duration of the cash cycle. If the firm can prolong the payback period for its trade debts, it will enable the business to settle its financial obligations and improve its overall financial standing (Aldubhani et al., 2022). This can lower the costs of acquiring working capital and mitigate risk. However, if the business extends the duration concurrently, it may miss out on cash discounts and potentially face financial difficulties. A long-term decline in business credit will result in constraints in accessing financial resources and encountering both hazards and opportunities (Tauringana & Adjapong Afrifa, 2013).

2.2 The Concept of Firm Performance–Economic Value Added (EVA) Spread.

Measuring shareholder value creation is one of the most explored aspects of corporate finance, and it is likely to remain so (Ismail, 2006). One probable explanation is that firm management is under increasing pressure to deliver value-creation returns in exchange for CEO compensation. The concept of creating value for corporate stakeholders is also critical to an organization's long-term viability (Jabbouri et al., 2022). People have used, developed, or established a wide range of shareholder value-creation indicators throughout the last few decades. Historically, both management and shareholders were satisfied with standard accounting-based indicators like return on assets (ROA), return on equity (ROE), and earnings per share (EPS). However, detractors have repeatedly attacked these criteria for failing to quantify economic profitability (Fisher & McGowan, 1983). However, when researchers, management consultants, and practitioners understood the limitations of these assessments, a new breed of economic-based approaches to reflect shareholder value generation emerged, known as economic value added (EVA) spread. Chen & Dodd (1997), O'Hanlon & Peasnell, (1998), De Wet (2005), Stewart, (2013), Dobrowolski et al. (2022) and Cavero-Redondo et al., (2024) found that profit economics explain much more of the variety in market value fluctuations.

Deducting capital charges from operational profit yields residual income, an accounting performance metric. EVA-spread is a slightly modified version of residual income (Rompho, 2009). Residual income and EVA-spread are both useful accounting performance measurements that assist businesses in determining the profitability of their assets after deducting capital costs (Worthington &

West, 2001). While residual income is a simple approach, EVA-spread gives a more in-depth analysis that takes into account the weighted average cost of capital and tax implications. EVA's appeal stems partly from its strong alignment with shareholder value and proven association with stock prices (Bahri et al., 2011). EVA-spread provides a strong foundation for evaluating company performance by focusing on genuine economic profit, taking into account the total cost of capital, and giving a transparent and objective assessment of performance. This linkage between value creation and investor interests makes EVA-spread a useful tool for both management and investors, resulting in widespread adoption and a favorable influence on stock prices (Rompho, 2009).

Stern Stewart & Co. defines EVA as the wealth that a company generates over a specific time period (Fernández, 2002). Many believe that company should strive to maximize market value added (MVA) to optimize value for shareholders. The easiest approach to doing so is to maximize the EVA, which shows a firm's potential to earn returns that exceed the cost of capital (Bahri et al., 2011).

2.3 Working Capital Management Impact on Firm Performance

The literature indicates that WCM has undergone extensive study in the past. However, it remains under investigation, as indicated in Table I, primarily due to the absence of definitive conclusions within the diverse contexts of the samples studied. Researchers frequently assess WCM in relation to a firm's performance during economic crises like the financial crisis of 2008 or COVID-19, recognizing it as a critical liquidity risk management method to avert bankruptcy risk (Akgün & Memiş Karataş, 2021; Akgün & Memiş Karataş, 2023; Pant et al., 2024). Because of the ongoing coronavirus (COVID-19) outbreak, businesses all over the world have been dealing with unprecedented levels of unpredictability and disruption (Akgün & Memiş Karataş, 2023). As the crisis gets worse and there is less cash flow and funding, businesses may face the risk of going bankrupt (Pant et al., 2024). An investigation by Ernst and Young (2019) discovered that lots of businesses didn't have enough short-term cash flows and operating capital to keep their operations going during COVID-19. When cash flow isn't steady, working capital can help. Because of this, a lack of working capital could affect how the business operates and how well it meets customer needs (for example, its financial and supply chain performance) (Pant et al., 2024).

Table 1 highlights the use of proxies to evaluate WCM. The most widely recognized tool is the cash conversion cycle (CCC), which gauges the time a company requires to collect cash from inventory sales, maintain effective receivables control systems, and extend the payment period to creditors. Utilizing this liquidity management tool, CCC proves advantageous for small businesses with limited financial resources. This stands in contrast to larger companies, which typically enjoy greater access to both the financial and capital markets (Aldubhani et al., 2022).

Companies strive to improve operational efficiency as their primary goal in the realm of business competition. Companies frequently assess operational efficiency through the lens of company performance (Kiymaz et al., 2024). Academic and practical evidence commonly evaluates company performance from two perspectives: accounting profitability and market value. Accounting profitability, rooted in financial figures within financial reports, offers insights into past performance used to evaluate management's operations over a specific period (Aldubhani et al., 2022). Consequently, investigations into performance accounting operations often explore the potential manipulation of accounting figures or profit manipulation to align with management goals. Nevertheless, most studies have identified accounting profits as the primary performance metric. Conversely, firm value serves as a forward-looking indicator for investors, representing tangible value (Ismail, 2006). Therefore, it is difficult to distort the measurement of a company's market value.

As depicted in Table 1, numerous studies have examined accounting profitability. We utilize the EVA-spread for firm value, which examines the company's remaining value after achieving the required return. This metric proves instrumental in evaluating the performance of the company's top management team. The underlying concept incentivizes top management teams to enhance EVA-spread by allocating resources to areas yielding returns that exceed the capital cost. Notably, the EVA-spread holds greater significance compared to other performance indicators solely reliant on accounting profits, as it factors in the cost of invested capital (Hatane et al., 2023).

Table 1: Determinants of Working Capital Management (WCM) Research by Focus

Author	Sample	Country	Methodology	Explanatory variables	Dependence variables	WCM proxy	Key empirical results		
							Factors with (+) impact	Factors with (−) impact	Factors with insignificant
Desai & Mehta, (2024)	162 Manufacturing firms	India	Panel OLS with fixed effects	Firm characteristics	Firm performance (Growth)	WC	WC, current assets, cash		
Karim et al., (2024)	61 Manufacturing firms	Bangladesh	GMM regression	Firm characteristics	Firm performance (ROA, EPS)	CCC		CCC, leverage	Asset turnover
Kiymaz et al., (2024)	1,525 firms	Canada, Germany, France, UK, and US	Panel OLS with fixed effects	Firm characteristics and country-level	Firm performance (ROA)	CCC, IDAY, RDAY, PDAY	PDAY, firm size, growth, GDP, Interest rate	CCC, RDAY, IDAY, leverage, Consumer Price Index	
Kumar et al., (2024)	796 firms	India	Panel OLS with fixed effects	Firm characteristics	Firm performance (Dummy)	CCC, IDAY, RDAY, PDAY	Growth and age	CCC, IDAY, RDAY, and firm size	PDAY and leverage
Pant et al., (2024)	500 Manufacturing firms	India	Panel OLS with fixed effects	Firm characteristics	Firm performance (ROA)	WC	WC, Production efficiency, growth	Age	firm size
Umar & Al-Faryan, (2024)	56 Halal food and beverage firms	Indonesia, Malaysia, Saudi Arabia, Pakistan, UAE	Panel GMM with FGLS regression	Firm characteristics and Country-level	Firm performance (ROA, ROE)	CCC, IDAY, RDAY, PDAY	PDAY and size	CCC, IDAY, RDAY, leverage, tangibility, growth and GDP	
Vlismas, (2024)	72,444 firm-year observations	US	Panel OLS with fixed effects	Moderator: Strategy Firm characteristics	Firm performance (ROA)	CCC, IDAY, RDAY, PDAY	PDAY, ROA, growth, firm size, current ratio	CCC, IDAY RDAY and leverage	Inventory
Yeboah & Kjærtland, (2024)	61 Consumer goods firms	Scandinavia	Panel OLS and GMM	Firm characteristics and country-level	Firm performance (Operating margin)	CCC, WC	ROA, firm size	CCC, WC and ESG	GDP
Akgün & Memiş Karataş, (2023)	8,366 firms	Western European Countries	Panel OLS with fixed and Random effects	Firm characteristics	Firm performance (ROA, ROE, EBITM)	WC	WC	Firm size, leverage and current ratio	
Hatane et al., (2023)	76 firms	Indonesian	Panel OLS with fixed effects	Firm characteristics	Firm performance (ROCE and EVA-Spread)	WC	WC, Firm size	Firm age	

Table 1: Determinants of Working Capital Management (WCM) Research by Focus (Cont.)

Author	Sample	Country	Methodology	Explanatory variables	Dependence variables	WCM proxy	Factors with (+) impact	Factors with (−) impact	Factors with insignificant
								Key empirical results	
Kayani et al., (2023)	6,706 firm-year observations	Egypt and South Africa	Panel OLS with fixed effects	Firm characteristics and country-level	Firm performance (ROA, ROE, NPM, TQ)	CCC, IDAY, RDAY, PDAY	PDAY firm size, growth, current ratio, leverage and GDP	CCC, RDAY, IDAY	
Aldubhani et al., (2022)	50 Manufacturing firms	Qatar	Panel OLS		Firm performance (OPM, ROA, ROCE, ROE)	CCC, IDAY, RDAY, PDAY	IDAY, PDAY, growth	CCC, RDAY, firm size, leverage	
Amponsah-Kwatiah & Asiamah, (2021)	20 Manufacturing firms	Ghana	Panel OLS with fixed effects	Firm characteristics	Firm performance (ROA, ROE)	CCC, IDAY, RDAY, PDAY	PDAY, current asset, current ratio and firm size	CCC, IDAY, RDAY, Leverage	

Notes (s): Working capital (WC), Cash conversion cycle (CCC) and its components, inventory days (IDAY), accounts receivable days (RDAY) and accounts payable days (PDAY)
Source(s): The authors

2.4 Hypothesis Development

Cash Conversion Cycle (CCC)

The CCC definitions talk about the average amount of time that goes by between getting paid for raw materials and getting paid for sales of inventory. This is found by adding up the days that money is owed and the days that inventory is being sold and subtracting the days that money is owed (Abuzayed, 2012). The CCC serves as a reliable metric for assessing a company's flexibility, indicating the duration for which funds remain tied up in working capital (Karim et al., 2024). Companies should endeavor to minimize the CCC without compromising business operations. This optimization enhances profitability, as a longer CCC necessitates more expensive external borrowing (Nobanee et al., 2011). Thus, businesses can operate more efficiently by reducing the time funds immobilize in working capital. The CCC provides small firm owners with insights into actions needed to decrease the amount of cash invested in current assets, thereby enhancing the company's liquidity from an ongoing concern perspective (Moss & Stine, 1993).

Several researchers, including Karim et al. (2024) found significant negative correlations between CCC and the profitability of manufacturing firms in Bangladesh. This underscores the importance of CCC reduction strategies such as minimizing stock inventory days, accelerating accounts receivable collection, and extending account payable payment periods in enhancing profitability for Bangladeshi manufacturing firms.

Similarly, Kiymaz et al. (2024) reported a significant negative association between CCC and profitability across firms in both developed and emerging economies. This highlights the persistent influence of the CCC on corporate performance, irrespective of economic development level.

Furthermore, Kumar et al. (2024) contends that CCC has a negative impact on firm performance in India, emphasizing the need for businesses to optimize their CCC strategies to enhance overall value. This significance becomes even more pronounced during economic downturns, underscoring the crucial role of effective working capital management in benefiting both the economy and society at large.

Yeboah and Kjeld's (2024) study found a significant and negative correlation between the CCC and the profitability of consumer goods companies listed in Scandinavia. This study holds significant implications for financial managers, policymakers, investors, and business owners, illuminating the importance of proactive management of various CCC components to enhance overall business performance. By optimizing the CCC, companies can mitigate costs and boost profitability, with a strategic focus on reducing cash tied up in inventory and accounts receivable while prioritizing accounts payable.

Effective cash conversion cycle management is believed to enhance business performance. As previously discussed, the CCC integrates the concept of time into the firm's liquidity analysis. From this perspective, we anticipate a negative relationship between business success and the CCC, as a

reduction in the CCC would increase cash flow, thereby enhancing the performance of a healthy firm. Consequently, we propose the following hypothesis:

H1. CCC has a negative impact on EVA-spread.

Inventory Days

The study of WCM includes the description of the cash conversion cycle (CCC) as accounts receivable plus inventory minus accounts payable (Amponsah-Kwatiah & Asiamah, 2021; Aldubhani et al., 2022; Kayani et al., 2023; Kiymaz et al., 2024; Kumar et al., 2024; Umar & Al-Faryan, 2024; Vlismas, 2024). Each component was used and tested in our study. CCC is a widely acknowledged alternative to standard measures such as current and quick asset ratios, which have been criticized for being too static (Briones et al., 2024). Reduced inventory days lead to a higher present value of cash flows, which in turn increases the firm's value (Kayani et al., 2023; Briones et al., 2024). Using this technique, companies implicitly reduce storage costs and overheads, thereby increasing profitability (Kayani et al., 2023; Kiymaz et al., 2024; Umar & Al-Faryan, 2024; Vlismas, 2024) and EVA-spread (Hatane et al., 2023).

Briones et al. (2024) note that using an aggressive strategy can lead to increased profitability through lower inventory levels. This happens because lowering inventory levels lowers carrying costs, which include inventory maintenance expenses and opportunity costs. Similarly, Mathuva (2010) finds a negative relationship between inventory day, profitability (Kayani et al., 2023; Kiymaz et al., 2024; Umar & Al-Faryan, 2024; Vlismas, 2024), and EVA-Spread (Hatane et al., 2023). Therefore, we expect inventory day to have a negative correlation with EVA-Spread. Based on these arguments, we have developed and tested the following hypotheses:

H2. Inventory days have a negative impact on EVA-spread.

Trade Credit for Accounts Receivable and Payable

Trade credit is a key component of financial management and strategic planning for businesses, helping to ensure their stability and growth (Tran et al. 2017). Capital market access and creditworthiness greatly improve a company's capacity to raise funds, engage in development possibilities, and maintain financial stability, resulting in long-term success and competitive advantage. Ferrando & Mulier (2013) and Detthamrong & Chansanam (2023) suggest that enterprises optimize performance by managing trade credit through accounts receivable and accounts payable, as they have a mutual influence. This requires simultaneous management of accounts due and payable Ferrando & Mulier (2013). Firms tend to match the maturities of these accounts to lower the risk and danger to their ability to make money (Tran et al. 2017).

Accounts Receivable Days (RDAY)

Accounts receivable period, average collection period (RDAY), days sales outstanding, or debtors' collection period. Measures the average number of days it takes for a corporation to collect payment after a sale. It is a crucial statistic for controlling cash flow and evaluating the effectiveness of a company's credit and collection practices (Umar & Al-Faryan, 2024). Tran et al. (2017) and Kiymaz et al. (2024) mentioned that owners or managers can increase their firm's profitability by reducing the number of accounts receivable days to an optimal minimum. A higher balance of accounts receivable may suggest that the corporation has difficulty collecting from clients when the sums are (Umar & Al-Faryan, 2024).

Kiymaz et al. (2024) conducted an empirical study comparing the impact of WCM on firm performance in a comparative analysis of developed and emerging economies. The study found a substantial negative relationship between RDAY and company performance. Kumar et al. (2024) discovered that RADY considerably affected corporate profitability in India. Tran et al. (2017) discovered that RADY severely affected SMEs' profitability in Vietnam.

However, a few research have found that RADY improves company performance. Bagh et al. (2016) found that RADY considerably increased company performance. Thus, based on the preponderance of the empirical findings, we offer the following hypothesis:

H3. Accounts receivable days have a negative impact on EVA-spread.

Accounts Payable Days (PDAY)

The accounts payable period (PDAY) is the average number of days a company takes to pay its suppliers for purchases made on credit or days payable outstanding (DPO). PDAY measures a company's ability to settle short-term liabilities. According to (Umar & Al-Faryan, 2024), a lower PADY may suggest insufficient use of supplier payment deferral options. Furthermore, the CCC theory predicts that increasing PADY will lower CCC, thereby improving financial performance (Tran et al., 2017; Kiymaz et al., 2024).

Although prior research's conclusions were inconsistent, they generally demonstrated a significant positive association between PDAY and profitability. Umar & Al-Faryan (2024) found that reducing PDAY increased the profitability of halal food and beverage firms. Vlismas (2024) found that PDAY had a considerable negative impact on the financial performance of US-listed firms. Tran et al. (2017) found that PDAY has a negative impact on the profitability of Vietnamese SMEs. Besides, we found a few studies that show that the PDAY did not influence firm profitability. For example, Kumar et al. (2024) established that APP has insignificantly influenced firm profitability. Thus, based on the preponderance of the empirical findings, we offer the following hypothesis:

H4. Accounts payable days have a positive impact on the EVA-spread.

3. DATA AND METHODOLOGY

This section outlines the methodology employed in the study, encompassing data sources, model specification, variable definition and measurement, estimation techniques, and data analysis tools.

3.1 Data Sources and Samples

This study utilizes archival data sourced from the SETSMART database. The population consists of 208 listed companies, spanning the period from 2018 to 2022. The most recent data available for this study is from 2018, as company websites and the Thailand Stock Exchange (SET Smart database) removed earlier data to offer updated financial report data for the current year (5 years). Because the data before 2016 is no longer publicly available, the study has limited access to it. Table 2 and Table 3 detail the sampling criteria.

Table 2: Selection of Firms from SETSMART Database (2018–2022)

Description	No. of firms
Total listed companies on SETSMART – 2018 to 2022	643
Less companies in the financial industry group	(68)
Less companies with missing values*	(195)
Less companies listed in 2018 and thereafter	(35)
Less companies' outliers	(137)
Final sample	208

Notes: *Excluded firms were missing one or more of the following records: assets and liabilities, revenue and expense data for variables. additional for EVA Spread of the risk equity premium, risk-free rate (government's Treasury bills), and beta is the firm's risk factor.

Source(s): Authors' calculations

Table 3: Distribution of Sampled Firms, by Industry Sector

Industry Sector	Firms (*n*)	Observations (*n*)	Sample (%)
Agro & Food Industry	36	180	17.3
Consumer Products	9	45	4.3
Industrials	46	230	22.1
Property & Construction	23	115	11.1
Resources	25	125	12.0
Services	53	265	25.5
Technology	16	80	7.7
Total	208	1,040	100

Source(s): Authors' calculations

Table 2 summarizes the selection process that yielded the final sample of firms, while Table 3 delineates the distribution of businesses within this sample across various industry sectors. The sample encompasses industries from seven major sectors, with a significant concentration in services, representing approximately a quarter of all companies.

3.2 Empirical Models

The study employed an explanatory research design with a deductive methodology. This approach aims to establish a causal relationship between the variables by examining the correlation between WCM and the EVA-spread. Efficient management of working capital is pivotal to enhancing firm performance and value. When the EVA exceeds zero, investors benefit from additional value derived from their profits (Hatane et al., 2023). Therefore, linear regression models can be formulated as follows:

$$EVA_{it} = \beta_0 + \beta_1 CCC_{it} + \beta_2 SIZE_{it} + \beta_3 AGE + \Sigma INDUSTRY \Sigma YEAR \varepsilon_{it} \qquad ....(Model\ 1)$$

$$EVA_{it} = \beta_0 + \beta_1 IDAY_{it} + \beta_1 RDAY_{it} + \beta_3 PDAY_{it} + \beta_4 SIZE_{it} + \beta_5 AGE + \Sigma INDUSTRY \Sigma YEAR \varepsilon_{it} \qquad ....(Model\ 2)$$

β = Regression coefficient (the slope, or the change in Y for any corresponding change in one unit of X)

β_0 = Constant (the intercept, or point where the line cuts the Y axis when X = 0)

ε = Within-firm error

i = Firm

t = time

3.3 Proxy Variables and Measurements

Table 4: Description of the Variables and Expected Relationship

Variables	Definition/Measure	Expected sign
EVA-Spread (EVA)	(Net operating profit after tax - weighted average cost of capital (WACC))/ invested capital (IC)*	N/A
Cash conversion cycle (CCC)	Inventory days + Accounts receivable days – Accounts payable day	–
Inventory days (IDAY)	(Inventory/Cost of Sales) × 365 days	–
Accounts receivable days (RDAY)	(Accounts receivables/Sales) × 365 days	–
Accounts payable days (PDAY)	(Accounts payables/Cost of Sales) × 365 days	+
Firm size (SIZE)	Logarithm of total assets	+
Firm age (AGE)	The number of years of existence of the company since its establishment.	–

Source(s): The authors

* The EVA spread gains importance due to its incorporation of the cost of invested capital, as displayed in the below formula (Anderson et al., 2011 and Hatane et al., 2023):

$$\text{EVA Spread} = \frac{\text{NOPAT}}{\text{IC}} - \text{WACC} \tag{1}$$

The first component of the EVA-Spread is the net operating profit after taxes (NOPAT), which computes profit after subtracting financial costs and taxes. The second component, invested capital (IC), is synonymous with capital employed. Lastly, the weighted average cost of capital (WACC) is the average return rate anticipated by investors, calculated using market value rather than book value. The weights reflect the proportion of each financing source in the company's capital structure.

$$\text{WACC} = \frac{E}{D+E} R_e + \frac{D}{D+E} (1-\tau) R_d \tag{2}$$

where D is the total debt, E is total equity, R_e is cost of equity, R_d is cost of debt before tax and τ is tax. R_e is measured in the capital asset pricing model (CAPM) as displayed in the below formula:

$$Re = Rf + \beta(\text{Expexted Return} - R_f) \tag{3}$$

where Expected Return R_f is the risk equity premium; R_f is risk-free rate (government's treasury bills); and β is the firm's risk factor.

The control factors in this study encompass firm size and firm age, which were also utilized in studies by Kumar et al. (2024), Pant et al. (2024), and Umar & Al-Faryan (2024). The size of a company plays a pivotal role in determining earnings. Kuncová et al. (2016) asserted that large firms have the capacity to explore investment opportunities leading to higher profit margins, whereas smaller enterprises face limitations due to financial constraints. Moreover, larger organizations enjoy advantages over their smaller counterparts as they can diversify into a broader range of product lines, leveraging economies of scale in manufacturing, marketing, management, and capital acquisition. Coad et al. (2013) noted that as a company ages, it tends to experience increased profitability, productivity, size, and equity ratios, coupled with decreased debt ratios. Additionally, newly established companies demonstrate a greater ability to translate sales growth into subsequent increases in profits and productivity. However, there are indications suggesting that firm performance may decline with age. Older firms exhibit lower profitability levels and anticipate slower growth rates in sales, profits, and productivity. Moreover, they appear to have a reduced ability to convert employment growth into sales, profits, and productivity growth (Pant et al., 2024).

4. RESULTS AND DISCUSSION

In this section, the results of the study and discussion are presented. After presenting the descriptive statistics, a discussion of the results ensues, which is followed by correlation analysis and static regression analysis.

4.1 Descriptive Statistics

Descriptive statistics summarize sample data values, including the mean, minimum, maximum standard deviation, and test of normality (skewness and kurtosis).

Table 5: Descriptive Statistics

Variable	Observations	Mean	Min	Max	Std. Dev	Skewness	Kurtosis
CCC	1,040	34.87	−95.76	163.97	45.79	−0.08	−0.17
IDAY	1,040	43.50	0.00	120.32	29.68	0.39	−0.76
RDAY	1,040	50.80	2.39	120.93	25.21	0.35	−0.40
PDAY	1,040	59.42	2.33	198.10	33.05	0.94	0.86
SIZE	1,040	15.98	12.69	21.95	1.63	0.86	0.63
AGE	1,040	38.13	3	142	16.62	1.61	7.41
EVA	1,040	0.09	−0.26	0.53	0.13	0.21	0.87

Note(s):   Here, CCC = Cash conversion cycle; IDAY = Inventory days; RDAY = Accounts receivable days; PDAY = Accounts payable days, SIZE = firm size; AGE = firm age and EVA is EVA-Spread.

Source(s): Authors' calculations

Table 5 presents the descriptive statistics of the variables utilized in the sample. The CCC variable exhibits a mean value of 34.87, signifying that, on average, Thai listed firms take approximately 35 days to complete one cycle of working capital. Regarding the components of working capital management, IDAY suggests that firms require around 44 days to convert inventory back into cash. The average RDAY stands at 51 days, indicating the time taken by companies to collect their receivables and remit payments to suppliers within a two-month timeframe, consistent with the average PDAY value of 60 days. Additionally, the findings reveal that the mean firm size in the sample is approximately 15.98, with an average duration since the company's incorporation of 38 years (firm age) for the entire sample. The sample encompasses firms ranging in age from 3 years at the minimum to 142 years at the maximum. As for the dependent variable, EVA spread, it ranges from a minimum value of −0.26 to a maximum of 0.53. The negative EVA spread suggests losses for certain companies, while the average value of 0.09 indicates that some businesses failed to generate value from their capital investments.

4.2 Classical Assumption Testing

4.2.1 Normality test. Based on Table 1, The skewness ranged from −0.08 to 1.61, while the kurtosis ranged from −0.76 to 7.41. The skewness and kurtosis values of this sample fall within the

recommended thresholds of ±3 for skewness and ±10 for kurtosis, as suggested by Simon et al. (2017), indicating a normal distribution (Hatane et al., 2023).
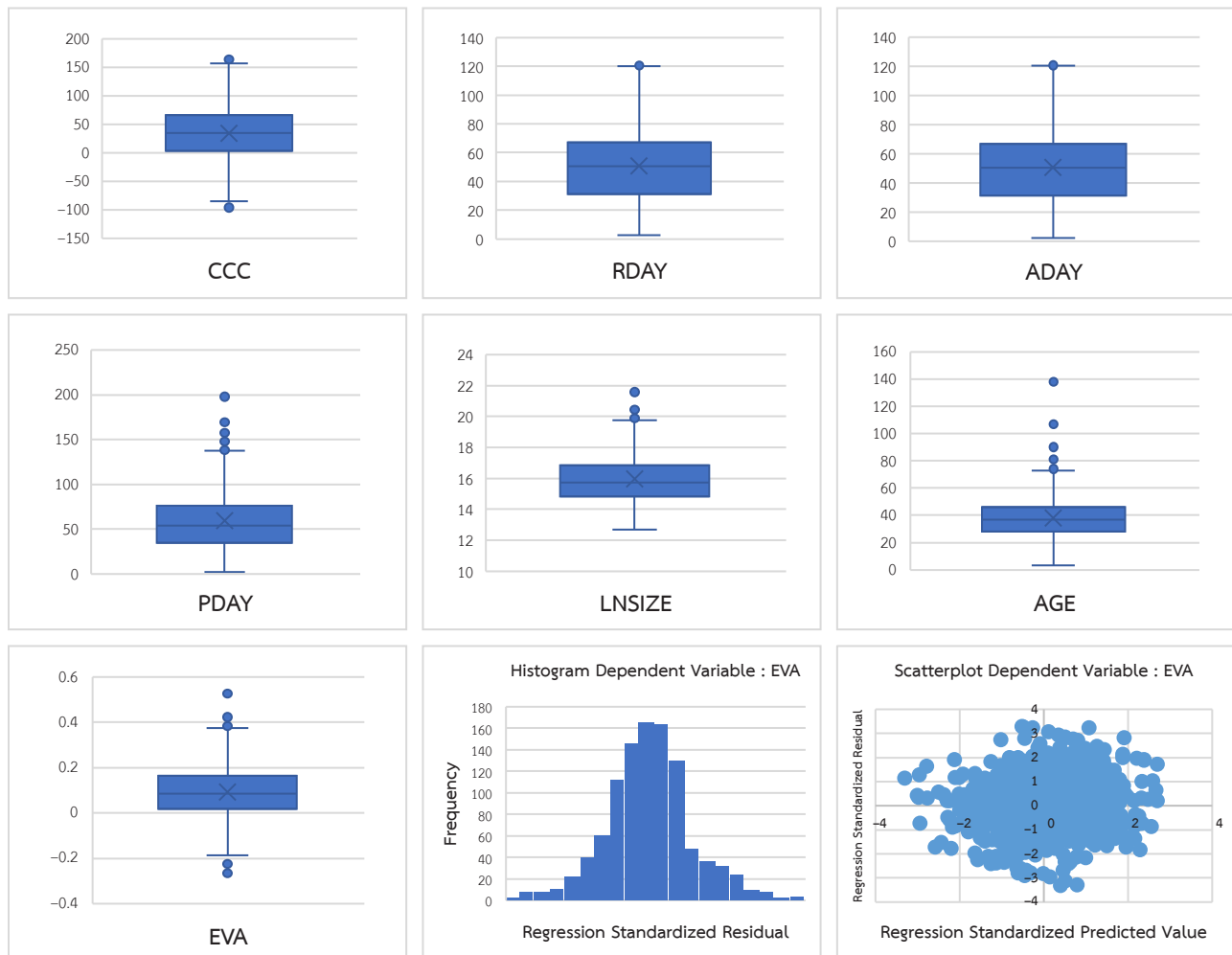

Figure 1: Block plots of variables and normality tests of residual

Source(s): The authors

Boxplots were utilized to gain a better perspective on all variables. Overall, Figure 1 indicates that the box size is nearly the same for each sample. This suggests a consistent distribution of variables, albeit with some outliers observed for PDAY, SIZE, AGE, and EVA. Nonetheless, the position of the median within the box indicates that the distribution within the sample is symmetric. The residual, or estimated error value, represents the difference between the observed and predicted dependent variables (Amadi, 2023). Additionally, the result of the normality test for the residual, as depicted in the histogram presented in Figure 1 (bottom middle), indicates a normal distribution of the data.

4.2.2 Multicollinearity Test: Two fundamental diagnostic tests were employed to assess multicollinearity in the data: the Pearson pairwise correlation test and the variance inflation factor (VIF) test. The numbers in Table 6 did not exceed 0.80 (Altaf & Shah, 2018); however, the results of the VIF test, which were far higher than the threshold value of 10, revealed an issue with multicollinearity. Consequently, in this study, the problem was addressed by removing the CCC from the regression analysis equation, as the CCC is a variable calculated from the results of other variables.

4.2.3 Heteroscedasticity Test: The heteroscedasticity test was employed to ascertain whether there is unequal variance of the residual from one observation to another in the regression model. If the variance of the residual observations remains consistent, the phenomenon is termed homoscedasticity. Homoscedasticity, or the absence of heteroskedasticity, is a desirable characteristic of a regression model. To determine the presence or absence of heteroskedasticity, one must examine for specific patterns on the scatterplot between predictor values of variables related to the residual (Abdillah et al., 2019). The scatterplot graph (Figure 1, bottom right) displays dots randomly positioned both above and below the "0" mark on the "Y" axis. Consequently, there was no evidence of heteroscedasticity in the regression model, suggesting its suitability for application. Thus, the results of this test affirm that the regression model exhibits no signs of heteroskedasticity.

4.2.4 Autocorrelation test: According to the Durbin-Watson (DW) test presented in Table 7, the regression from Model 1 to Model 6 exhibits values ranging between 1.650 and 1.874. This suggests that the Durbin-Watson value (1.5 to 2.5) falls within the acceptable range (Desai & Mehta, 2024), indicating that the issue of autocorrelation has been addressed.

Table 6: Pearson's Correlations Matrix

Variables	CCC	IDAY	RDAY	PDAY	SIZE	AGE	EVA	VIF
CCC	1.000							10051.509
IDAY	.648**	1.000						1.010
RDAY	.375**	.075*	1.000					1.164
PDAY	−.516**	0.058	.310**	1.000				1.178
SIZE	−.166**	0.007	−.157**	.116**	1.000			1.060
AGE	−.097**	0.054	−0.012	.173**	.077*	1.000		1.040
EVA	−.085**	−.062*	−.103**	−0.019	.099**	−.201**	1.000	

Note(s):   Here, CCC = Cash conversion cycle; IDAY = Inventory days; RDAY = Accounts receivable days; PDAY = Accounts payable days, SIZE = firm size; AGE = firm age and EVA is EVA Spread.

*, **, *** Significant at 0.10, 0.05 and 0.01 levels, respectively

Source(s): Authors' calculations

4.3 Multiple regression analysis

Table 7: Results of the Regression Analysis

Dependent Variable: EVA	Expected sign		Model 1	Model 2
CCC	H1	−	−0.002 (−2.687) ***	
IDAY	H2	−		−0.007 (−0.462)
RDAY	H3	−		−0.001 (−4.514) ***
PDAY	H4	+		0.002 (1.846) **
SIZE		+	0.009 (3.728) ***	0.008 (3.313) ***
AGE		−	−0.002 (−7.455) ***	−0.002 (−7.362) ***
Constant			−0.050 (−1.137)	−0.034 (−0.781)
Year dummy			Include	Include
Sub-industry dummy			Include	Include
No. of observations			1,040	1,040
R^2			0.236	0.246
Adjusted R^2			0.217	0.226
Durbin–Watson statistic			1.650	1.653
F-statistic (*p*-value)			12.537***	12.239***

Note(s): Here, CCC = Cash conversion cycle; IDAY = Inventory days; RDAY = Accounts receivable days; PDAY = Accounts payable days, SIZE = firm size; AGE = firm age and EVA is EVA Spread.

*, **, *** Significant at 0.10, 0.05 and 0.01 levels, respectively

Source(s): Authors' calculations

Table 7 presents multiple regression models that illustrate how the firm's working capital management affects EVA spread. The results indicate that CCC holds negative significance (β = −0.002, p value = 0.007) for the EVA of Thai-listed companies. Thus, augmenting the investment in working capital may have a negative impact on economic performance (Umar & Al-Faryan, 2024).

The second regression model assesses the impact of individual components of working capital management. The results reveal that RDAY exhibits a significant negative relationship (β = −0.001, p value = 0.000) with EVA. This underscores the importance of companies considering shortening credit terms with customers to enhance financial performance. It suggests that an increase in RDAY may lead to a reduction in EVA, potentially resulting in liquidity challenges and financial distress (Kayani et al., 2023 and Umar & Al-Faryan, 2024). On the other hand, PDAY shows a significant positive relationship

(β = 0.002, p value = 0.045) with EVA. These findings imply that Thai-listed firms' EVA could improve with an increase in account payable turnover. Furthermore, we found that the results of IDAY had no significant impact on EVA.

Next, we examine the influence of the control variables on the dependent variables. Firm size shows a significantly positive impact on EVA; conversely, firm age has a negative significant impact on EVA.

We conducted a comprehensive investigation of the CCC in each industry to provide further clarification regarding the ongoing discussion. Figure 2 indicates that service industries have shorter cash conversion cycles compared to other industries. This illustrates the exceptional ability of service businesses to effectively manage their working capital.
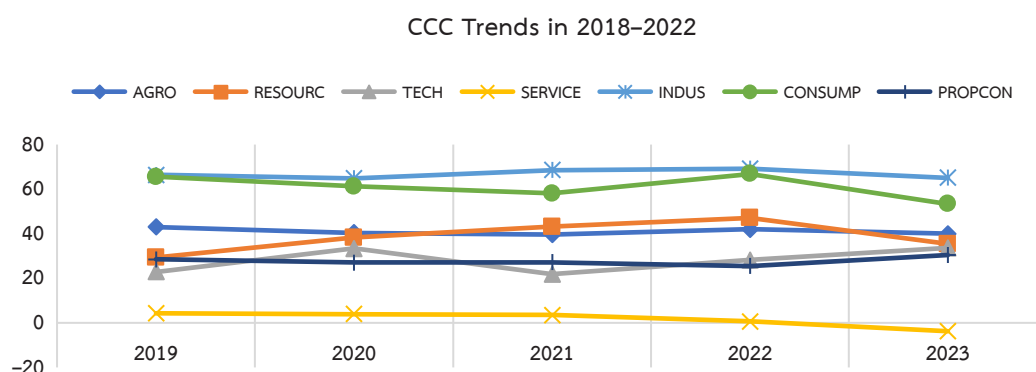

Figure 2: CCC Trends in 2018–2022 by Industry
Source(s): The Authors

Qualitative data from disclosures in the annual report regarding the CCC of the service industry revealed the following findings:

(1) Inventory day: The company conducts ongoing market and consumer behavior surveys. Additionally, it utilizes an information technology system capable of storing sales information, production dates, and product expiration dates. This system enables the analysis of sales statistics, such as product sales speed and product life cycle, facilitating the planning of product production to align with market needs. The management of inventory adapts to the age of the products. For instance, products with limited shelf life are closely monitored by the marketing department, while the sales operations department initiates strategies to boost sales. Similarly, the marketing department promotes products with very short shelf lives to accelerate their sales velocity.

(2) RDAY: The company does not encounter a concentration of credit risk associated with trade receivables. We attribute this to the significant number of trade debtors and the company's proven

track record in debt collection. Moreover, credit is extended only to customers with a proven, reliable financial status, particularly those engaging in large-volume transactions.

(3) PDAY: Typically, corporations have a policy of disclosing information about their trade creditors. The company's timely payment of debts inspires confidence among creditors regarding its ability to fulfill contractual obligations or debt repayment terms. This helps maintain a balance in business operations between the corporation and its large and small business counterparts.

5. ADDITIONAL ANALYSIS

Several academics focus on the impact of financial crises on firm performance, particularly on working capital management. Firstly, during such periods, a company may miss out on potential investment opportunities (Naz et al., 2022). Furthermore, the crisis could negatively affect listed enterprises' performance by reducing investment levels and overall income (Pant et al., 2024). Financial crises can significantly and adversely affect overall demand, especially in terms of consumption and exports (Akgün & Memiş Karataş, 2021). The COVID-19 pandemic significantly affected companies' ability to manage liquidity and working capital. However, the impact of COVID-19's financial crisis on the working capital performance of listed Thai corporations remains largely unexplored. Therefore, we conducted further analysis on this issue to enhance the study's usefulness.

Table 8: Results of Additional the Regression Analysis

Dependent Variable: EVA	Before COVID-19 pandemic		COVID-19 pandemic	
	Model 3	Model 4	Model 5	Model 6
CCC	−0.001		−0.004	
	(−4.181)***		(−0.318)	
IDAY		−0.003		0.004
		(−1.547)		(1.974)**
RDAY		−0.001		−0.001
		(−3.174)***		(−2.725)***
PDAY		0.001		0.0005
		(3.791)***		(0.282)
SIZE	0.015	0.014	0.006	0.005
	(4.010)	(3.819)***	(1.822)	(1.426)
AGE	−0.002	−0.002	−0.002	−0.002
	(−4.909)***	(−4.944)***	(−5.740)***	(−5.695)***

Table 8: Results of Additional the Regression Analysis (Cont.)

Dependent Variable: EVA	Before COVID-19 pandemic		COVID-19 pandemic	
	Model 3	Model 4	Model 5	Model 6
Constant	−0.090	0.041	0.024	−0.034
	(−1.381)	(0.636)	(0.384)	(−0.781)
Year dummy	Include	Include	Include	Include
Sub-industry dummy	Include	Include	Include	Include
No. of observations	416	416	624	624
R^2	0.273	0.276	0.215	0.228
Adjusted R^2	0.234	0.234	0.187	0.199
Durbin–Watson statistic	1.874	1.872	1.674	1.675
F-statistic (p-value)	6.993***	6.483***	7.883***	7.759***

Note(s):   Here, CCC = Cash conversion cycle; IDAY = Inventory days; RDAY = Accounts receivable days; PDAY = Accounts payable days, SIZE = firm size; AGE = firm age and EVA is EVA Spread.

*, **, *** Significant at 0.10, 0.05 and 0.01 levels, respectively

Source(s): Authors' Calculations

Before the COVID-19 pandemic (2018–2019), Table 8 found no differences in working capital management from the overall data analysis. The results show that CCC, RDAY (β = −0.001, p value = 0.000; β = −0.002, p value = 0.002, respectively), and AGE have a significant negative impact on EVA, while PDAY (β = 0.0005, p value = 0.000) and SIZE have a significant positive impact on EVA. In contrast, IDAY has a statistically insignificant impact on EVA. The results show that during the COVID-19 pandemic (2020–2022), CCC, PADY, and SIZE had a statistically insignificant impact on EVA. IDAY (β = 0.004, p value = 0.049) has a positive significant impact on EVA, while RDAY (β = −0.001, p value = 0.007) and AGE have a negative significant impact on EVA.

During the COVID-19 pandemic or financial crises, firms can increase their inventory days to enhance their value and improve their economic value-added (EVA) performance. High inventory levels indicate the company's production capacity to fulfill customer demands promptly, preventing the gradual loss of clients to competitors due to insufficient goods. Organizations should keep inventory growth at a reasonable and optimal level to avoid incurring storage and obsolescence costs. This outcome was consistent with the conclusions reached by Aldubhani et al. (2022), but contradicted the findings of Umar & Al-Faryan (2024) and Vlismas (2024).

Additionally, RDAY has a significant and negative impact on EVA. Therefore, the decline in accounts receivable serves as an indication of the company's proficiency in collecting funds from customers and allocating them toward its operations. As a result, the company's reliance on external financing sources decreases, reducing the burden of external debt. This, in turn, has a positive impact on the company's ability to improve EVA. Aldubhani et al. (2022) and Kayani et al. (2023) conducted research that supports this outcome.

Table 9 presents a summary of the hypotheses. The data support the multiple regression analysis hypotheses and show a strong relationship with EVA-spread.

Table 9: Summary of Hypothesis

Hypothesis	Variables code	Expected sign	Actual sign	Supported
H1. CCC has a negative impact towards EVA-Spread	CCC	(−)	(−)	Yes
H2. Inventory days has a negative impact towards EVA-Spread	IDAY	(−)	(−)	No (Insig)
H3. Accounts receivable days has a negative impact towards EVA-Spread	RAY	(−)	(−)	Yes
H4. Accounts payable days has a positive impact towards EVA-Spread	PDAY	(+)	(+)	Yes

Source(s): The Authors

6. CONCLUSIONS AND IMPLICATIONS

This study aims to investigate the empirical impact of working capital management (WCM) on economic value added (EVA) spread in non-financial Thai-listed companies. We collected data from the SETSMART database covering the period from 2018 to 2022. We employed a regression model using ordinary least squares (OLS) to assess the data collected from the sample and investigate the correlation. We analyzed the data using descriptive statistics, Pearson's correlation, VIF, and multiple regression analysis.

The empirical findings of the study indicate that: (1) the cash conversion cycle (CCC) has a significant negative effect on EVA, implying that companies can increase their economic value by shortening the cash conversion cycle; and (2) inventory days (IDAY) have an insignificant impact on EVA. (3) Accounts receivable day (RDAY) has a significant negative effect on EVA, suggesting that a shorter collection period can increase the firm's EVA. (4) Accounts payable day (PDAY) has a significant positive

impact on EVA; a longer period taken to pay creditors' bills has a significant positive effect on EVA. This implies that companies can generate higher profits by taking a long time to pay creditors.

The results of this study are relevant for both researchers and company finance policymakers. Empirical evidence suggests that firms should implement working capital management strategies to reduce cash cycles. One approach involves shortening the time taken to recover payments from debtors, which entails establishing a credit policy with customers. Conversely, it is advisable to adopt a strategy that allows for the longest feasible duration to repay debts, achieved through negotiating with creditors regarding credit repayments. The objective is to maintain a state of liquidity that bridges the gap between receiving funds and making payments.

Furthermore, to gain a competitive advantage during exceptional circumstances or economic crises, it is important to consider inventory management policies. A higher number of inventory days or levels indicates the company's ability to promptly meet consumer demands, thereby avoiding the potential loss of customers to competitors due to insufficient goods. To mitigate expenses associated with storage and obsolescence, enterprises must maintain an appropriate and optimal level of inventory.

Limitations and suggestions for future research are the result of limitations identified during the study's conduct. Future studies can benefit from this research's insights. Secondly, this study's scope extends beyond a specific industry. Thailand as a whole can also utilize the research's results; however, the outcome may vary when applied to a specific business due to each industry's unique environment and strategy. As a result, future research can focus on one area while detecting patterns in all industries.

Notably, the research does not separately examine working capital management based on the company's size, which can impact various sources of funding. Additionally, the research solely focuses on public companies, which typically have easier access to capital. Future research endeavors should encompass limited companies or SME businesses to provide a more comprehensive understanding of working capital management.

REFERENCES

Akgün, A. İ., & Memiş Karataş, A. (2023). Do impact of cash flows and working capital ratios on performance of listed firms during the crisis? The cases of EU-28 and Western European countries. *Journal of Economic and Administrative Sciences, ahead-of-print*(ahead-of-print). https://doi.org/10.1108/JEAS-01-2023-0018

Aldubhani, M. A. Q., Wang, J., Gong, T., & Maudhah, R. A. (2022). Impact of working capital management on profitability: Evidence from listed companies in Qatar. *Journal of Money and Business, 2*(1), 70–81.

Amponsah-Kwatiah, K., & Asiamah, M. (2021). Working capital management and profitability of listed manufacturing firms in Ghana. *International Journal of Productivity and Performance Management, 70*(7), 1751–1771.

Anderson, R. C., Reeb, D. M., Upadhyay, A., & Zhao, W. (2011). The Economics of Director Heterogeneity. *Financial Management, 40*(1), 5–38.

Bagh, T., Nazir, M. I., Khan, M., & Razzaq, S. (2016). The Impact of Working Capital Management on Firms Financial Performance: Evidence from Pakistan. *International Journal of Economics and Financial Issues, 6*, 1097–1105.

Bahri, M., St-Pierre, J., & Sakka, O. (2011). Economic value added: A useful tool for SME performance management. *International Journal of Productivity and Performance Management, 60*(6), 603–621.

Boisjoly, R. P., Conine, T. E., & McDonald, M. B. (2020). Working capital management: Financial and valuation impacts. *Journal of Business Research, 108*, 1–8.

Briones, O. F., Camino-Mogro, S. M., & Navas, V. J. (2024). Working capital, cash flow and profitability of intensive MSMEs: Evidence from Ecuador. *Journal of Entrepreneurship in Emerging Economies, 16*(2), 396–417.

Cavero-Redondo, I., Saz-Lara, A., Martínez-García, I., Otero-Luis, I., & Martínez-Rodrigo, A. (2024). Validation of an early vascular aging construct model for comprehensive cardiovascular risk assessment using external risk indicators for improved clinical utility: Data from the EVasCu study. *Cardiovascular Diabetology, 23*(1), 33. https://doi.org/10.1186/s12933-023-02104-y

Chen, S., & Dodd, J. L. (1997). Economic Value Added (EVA™): An Empirical Examination of a New Corporate Performance Measure. *Journal of Managerial Issues, 9*(3), 318–333.

De Wet, Jh. (2005). EVA versus traditional accounting measures of performance as drivers of shareholder value-A comparative analysis. *Meditari: Research Journal of the School of Accounting Sciences, 13*(2), 1–16.

Desai, R., & Mehta, B. (2024). Working capital policy of newly incorporated firms. *Asian Journal of Accounting Research, 9*(1), 13–24.

Detthamrong, U., & Chansanam, W. (2023). Do the trade credit influence firm performance in agro-industry? Evidence from Thailand. *Heliyon, 9*(3), e14561. https://doi.org/10.1016/j.heliyon.2023.e14561

Dobrowolski, Z., Drozdowski, G., Panait, M., & Babczuk, A. (2022). Can the economic value added Be used as the universal financial metric? *Sustainability, 14*(5), 2967. https://doi.org/10.3390/su14052967

Fernandez, P. (2002). *Adjustments Suggested by Stern Stewart & Co. For Calculating the EVA*. Academic Press. https://doi.org/10.1016/B978-012253841-4.50031-7.

Ferrando, A., & Mulier, K. (2013). Do firms use the trade credit channel to manage growth? *Journal of Banking & Finance, 37*(8), 3035–3046.

Fisher, F. M., & McGowan, J. J. (1983). On the Misuse of Accounting Rates of Return to Infer Monopoly Profits. *The American Economic Review, 73*(1), 82–97.

Habib, A. M., & Kayani, U. N. (2022). Does the efficiency of working capital management affect a firm's financial distress? Evidence from UAE. *Corporate Governance: The International Journal of Business in Society, 22*(7), 1567–1586.

Hatane, S. E., Winoto, J., Tarigan, J., & Jie, F. (2023). Working capital management and board diversity towards firm performances in Indonesia's LQ45. *Journal of Accounting in Emerging Economies, 13*(2), 276–299.

Howorth, C., & Westhead, P. (2003). The focus of working capital management in UK small firms. *Management Accounting Research, 14*(2), 94–111.

Ismail, A. (2006). Is economic value added more associated with stock return than accounting earnings? The UK evidence. *International Journal of Managerial Finance, 2*(4), 343–353.

Jabbouri, I., Satt, H., El Azzouzi, O., & Naili, M. (2022). Working capital management and firm performance nexus in emerging markets: Do financial constraints matter? *Journal of Economic and Administrative Sciences, ahead-of-print*(ahead-of-print). https://doi.org/10.1108/JEAS-01-2022-0010

Karim, R., Mamun, Md. A. A., & Kamruzzaman, A. S. Md. (2024). Cash conversion cycle and financial performance: Evidence from manufacturing firms of Bangladesh. *Asian Journal of Economics and Banking, 8*(1), 67–82.

Kayani, U. N., Gan, C., Choudhury, T., & Arslan, A. (2023). Working capital management and firm performance: Evidence from emerging African markets. *International Journal of Emerging Markets, ahead-of-print*(ahead-of-print). https://doi.org/10.1108/IJOEM-03-2022-0490.

Kiymaz, H., Haque, S., & Choudhury, A. A. (2024). Working capital management and firm performance: A comparative analysis of developed and emerging economies. *Borsa Istanbul Review, 24*(3), 634–642.

Kumar, S. S., Sawarni, K. S., Roy, S., & G, N. (2024). Influence of working capital efficiency on firm's composite financial performance: Evidence from India. *International Journal of Productivity and Performance Management, ahead-of-print*(ahead-of-print). https://doi.org/10.1108/IJPPM-07-2023-0374

Nobanee, H., Abdullatif, M., & AlHajjar, M. (2011). Cash conversion cycle and firm's performance of Japanese firms. *Asian Review of Accounting, 19*(2), 147–156.

O'Hanlon, J., & Peasnell, K. (1998). Wall Street's contribution to management accounting: The Stern Stewart EVA® financial management system. *Management Accounting Research, 9*(4), 421–444.

Pant, P., Rathore, P., Dadsena, K. kumar, & Shandilya, B. (2024). Working capital and firm performance: Role of COVID-19 disruption. *International Journal of Productivity and Performance Management, 73*(4), 1137–1166.

Rompho, N. (2009). Application of the Economic Value Added (EVA) Protocol in a University Setting as a Capital Budgeting Tool. *Journal of Financial Reporting and Accounting, 7*(2), 1–17.

Roshan, & Chatnani, N. N. (2023). The effect of working capital investment on firm value and long-term investment: Evidence from Indian manufacturing sector. *South Asian Journal of Business Studies, ahead-of-print*(ahead-of-print). https://doi.org/10.1108/SAJBS-06-2022-0221

Stewart, B. (2013). *Best-practice EVA: the definitive guide to measuring and maximizing shareholder value*. John Wiley & Sons.

Tran, H., Abbott, M., & Jin Yap, C. (2017). How does working capital management affect the profitability of Vietnamese small- and medium-sized enterprises? *Journal of Small Business and Enterprise Development, 24*(1), 2–11.

Umar, U. H., & Al-Faryan, M. A. S. (2024). The impact of working capital management on the profitability of listed halal food and beverage companies. *Managerial Finance, 50*(3), 534–557.

Vlismas, O. (2024). The moderating effects of strategy on the relation of working capital management with profitability. *Journal of Accounting & Organizational Change, 20*(2), 276–306.

Worthington, A. C., & West, T. (2001). Economic Value-Added: A Review of the Theoretical and Empirical Literature. *Asian Review of Accounting, 9*(1), 67–86.

Yeboah, S., & Kjærland, F. (2024). Impact of dynamic working capital management on operational efficiency: Empirical evidence from Scandinavia. *Managerial Finance, ahead-of-print*(ahead-of-print). https://doi.org/10.1108/MF-09-2023-0582