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Causal Relationship Between Working Capital Policies and Working Capital Indicators on Firm Performance: Evidence from Thailand

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Abstract

Using structural equation modeling, the study aims to investigate the causal relationship between working capital policies and working capital indicators on firm performance, including profitability and market value (SEM). The samples of 381 firms were selected from various industries listed on the Stock Exchange of Thailand (SET) from 2016 to 2020. The results showed that 1) there is an effect of working capital policies on profitability and market value; 2) there is an effect of working capital indicators on profitability and market value and 3) there is the effect of profitability on market value. From the results, it is suggested that conservative working capital investment policy (CIP) and conservative working capital financing policy (CFP) affect a company's performance in the Thailand context. In addition, shortening the cash conversion cycle (CCC) should be applied in management to increase profitability by reducing the receivables collection period (RCP) and inventory conversion period (ICP) while increasing the payables deferral period (PDP). The practical implications of the study provide the evidence that meeting the dues according to short CCC management can represent healthy liquidity in cash flow that helps gain investor confidence and the investment interest that further increases the market value.

Keywords: Working Capital Management, Working Capital Policies, Working Capital Indicators, Profitability, Market Value, Stock Exchange of Thailand

JEL Classification Code: G30, G32, M40, L25

1. Introduction

Working capital is the amount of funds that a company needs for its daily activities or operations. It consists of two main components: current assets and current liabilities. The determination of working capital management in the success or failure of a business plays a vital role due to its liquidity and risk (Vahid et al., 2012). Recently, working capital management (WCM) has been highly emphasized since it

was found as strategically important that can be a source of a firm's competitive advantage.

The starting point of effective working capital management is, therefore a key part of the overall strategy of the business to increase profitability (Afza & Nazir, 2007). Higher profitability means more opportunities for business growth and increased return for shareholders (Mohamad & Saad, 2010). These indicators further build investor confidence and create investment interest. The investors' need for investment increases the share price of the business and ultimately accrues the market value of the business (Sudiyatno et al., 2017). Thus, working capital management strategies and working capital management indicators may have a causal relationship influencing performance, including profitability and market value.

According to the conceptual framework based on Jingmeng (2013) and Nia et al. (2012), working capital management consists of two main parts. First, working capital strategies or working capital policies that address strategies and policies planning for investment and financing

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in working capital. Second, working capital indicators or management modes focus on managing the liquidity of the business.

In this notion, recent studies found that there is a direct effect of working capital management policies and working capital management indicators on performance, including profitability and market value (e.g., Gachira et al., 2014; Shrivastava et al., 2017; Altaf & Shah, 2017; Sudiyatno et al., 2017; Nguyen, 2020; Pham et al., 2020; Tareq et al., 2021).

In addition, it was suggested that both planning of the policy and controlling the liquidity should be taken into account at the same time. Thus, in this study, it is critical to examine the individual variable of policies and indicators to test their direct effect on the performance. The indirect effects of working capital management influencing market value through profitability are further examined to propose a guideline for the executives to manage working capital and prepare for strategic working capital management planning more efficiently.

2. Literature Review

Based on the theoretical framework of studies of Jingmeng (2013) and Nia et al. (2012), the purpose of this study is to examine the relationship between working capital management policies and indicators of the firm's performance. The components of working capital management policies and indicators are highlighted to determine what variables have an effect on a firm's performance.

2.1. Working Capital Management Policies

According to Afza and Nazir (2007), the working capital management policies are used to determine whether current assets are sufficient for the operation and whether the source of working capital is properly procured.

Previous studies on working capital policies by Sudiyatno et al. (2017) conducted in Indonesia found that working capital investment policies have a positive impact on return on assets (ROA), and working capital financing policies have a negative impact on the ROA. From the study, it can be concluded that the determination of conservative working capital investment policy (CIP) and conservative working capital financing policy (CFP) has an effect on increasing profitability. The results were consistent with the empirical studies of Afza and Nazir (2007) and Raheman et al. (2010) conducted in Pakistan and Mohamad and Saad (2010) conducted in Malaysia. In addition, Mwangi et al. (2014) found that CIP and aggressive working capital financing policy (AFP) could lead to higher ROA in Kenya.

Moreover, working capital policies were found to have a direct impact on market value. Javid and Zita (2014) indicated

that CIP and CFP were used to increase market value by using Tobin's Q ratio. The study was in line with the study of Mohamad and Saad (2010), concluding that working capital investment policies have a positive impact on market value, whereas working capital financing policies have a negative impact on market value. The results of these studies focused on investing in current assets at high amounts, plus working capital financing from long-term funding sources. However, the results of these studies are inconsistent with the recent study by Sabri (2012), indicating that CIP and AFP have an impact on market value. Therefore, the indicators of working capital management are reexamined in this study.

2.2. Working Capital Management Indicators

Working capital management indicators reflect the company's liquidity from 2 perspectives, according to Nia et al. (2012). First, the static working capital management indicators viewed as traditional liquidity ratios (e.g., current ratio) are used to measure a firm's liquidity at a particular point in time. Second, the dynamic working capital management indicators (e.g., cash conversion cycle) are used to assess short to medium firm's liquidity (Moss & Stine, 1993).

From the previous studies that examined the impact of *static working capital management indicators* on a firm's performance, both high liquidity and low liquidity were found to have a positive impact on a firm's increased performance.

In India, the study of Shrivastava et al. (2017) supported that high liquidity management increases ROA. Similarly, Ismail (2016) concluded that the current ratio has a positive impact on ROA from Pakistan's listed firms. Likewise, the recent empirical study of Omesa et al. (2013) also supported that high liquidity has a positive impact on return on equity (ROE).

In addition to the current ratio, quick ratio, and cash ratio, financial liquidity is also highlighted since these indicators collectively determine the convertibility of current assets into cash to pay for current liabilities in the payable payment period (Song et al., 2012). However, Eya (2016) found that although the current ratio and the quick ratio have a positive impact on ROA, the cash ratio has a negative impact on ROA in Nigeria. In East Africa, Marobhe (2014) also found that the current ratio has a positive impact on ROA while the cash ratio has a negative impact on ROA.

On the other hand, some studies argued that low liquidity management could result in higher performance. The studies of Gachira et al. (2014) based on non-financial listed firms in Zimbabwe found that the current ratio has a negative impact on ROA. In addition, Mohamad and Saad (2010) found that the current ratio has a negative impact on some Malaysian listed firms' market value measured by Tobin's *Q* although the results were not statistically significant.

By examining the impact of dynamic working capital management indicators on performance, Deloof (2003) found that a short cash conversion cycle (CCC) leads to increased performance while a long CCC can also lead to increased performance. In the study, the cash cycle is calculated from the receivables collection period (RCP) plus the inventory conversion period (ICP) minus the payables deferral period (PDP).

In India, Shrivastava et al. (2017) found that the CCC has a negative impact on the ROA, which is consistent with Jayarathne's (2014 study in Sri Lanka and Makori and Jagongo's (2013) in Kenya. Moreover, Ahmed et al. (2016) found that the CCC has a negative impact on ROE.

However, some studies indicated that longer CCC can contribute to increased profitability. Gachira et al. (2014) supported that a longer CCC lead to the increased ROA in listed firms in Zimbabwe. Altaf and Shah (2017) also found that the CCC has a positive impact on ROA in listed firms in India. These results were consistent with the study of Omesa et al. (2013) in East Africa addressing that the CCC had a positive impact on ROE.

Several studies found the positive impact of dynamic indicators on the market value. In Jordan, Abuzayed (2012) suggested that a reduction in the company's cash cycle leads to a higher market value measured by Tobin's Q. The result was consistent with previous studies by Ogundipe et al. e (2012) in Nigeria and Wang (2002) in Japan and Taiwan. Similarly, Altaf and Shah (2017) found that the CCC has a positive impact on Tobin's Q in India.

Since various studies found the relationship between performances and CCC, it is essential to highlight the implications of CCC a clearer proper working capital management to increase performance from the CCC. Therefore, in this study, the components of the CCC influenced by RCP, ICP, and PDP are further investigated to clarify to what extent CCC has a negative impact on the firm's performance.

Previous studies mainly examined the impact of working capital management on the dependent variables including profitability and market value. A study by Sudiyatno et al. (2017) found that the ROA has a negative impact on the market value measured by Tobin's Q. The results of this study contradicted the concept that if the firm's profitability is high, investors would have more investment demands leading to an increased market value (Mohamad & Saad, 2010). On the other hand, Alghifari et al. (2013) showed that the ROA has a positive impact on Tobin's Q. This implies that increased profitability leads to increased market value. Thus, it can be concluded that the direct effect of working capital management on performance (profitability and market value). In addition, it is found that profitability has a direct effect on market value.

From the given evidence indicated by Sudiyatno et al. (2017) and Ahmed et al. (2016), it is important to reexamine the indirect effect of working capital management on market

value through profitability in Thailand's market contexts. Furthermore, the direct effect of working capital management on profitability and market value is also tested, resulting in the hypotheses as follows (Figure 1).

H1: There is a direct effect of working capital investment policies on profitability.

H2: There is a direct effect of working capital investment policies on market value.

H3: There is an indirect effect of working capital investment policies on market value through profitability.

H4: There is a direct effect of working capital financing policies on profitability.

H5: There is a direct effect of working capital financing policies on market value.

H6: There is an indirect effect of working capital financing policies on market value through profitability.

H7: There is a direct effect of static working capital management indicators on profitability.

H8: There is a direct effect of static working capital management indicators on market value.

H9: There is an indirect effect of static working capital management indicators on market value through profitability.

H10: There is a direct effect of the inventory conversion period on dynamic working capital management indicators.

H11: There is a direct effect of the receivables collection period on dynamic working capital management indicators.

H12: There is a direct effect of the payables deferral period on dynamic working capital management indicators.

H13: There is a direct effect of dynamic working capital management indicators on profitability.

H14: There is a direct effect of dynamic working capital management indicators on market value.

H15: There is an indirect effect of dynamic working capital management indicators on market value through profitability.

H16: There is a direct effect of profitability on market value.

3. Research Methodology

3.1. Data and Variables

The population in this study is 629 firms from 8 industries listed on the Stock Exchange of Thailand (2020) as of January 15th, 2020. The sampling was calculated by using Yamane (1973)'s sample size formula with a 95% of confidence level, making up the minimum samples of 286. In this study, the financial-service and asset mutual fund firms were excluded since these firms have different operations from other types of firms while being under the control of the Central Bank of Thailand. Since this paper is a 5-year longitudinal study, the samples excluded the firms that have been listed for less than 5 years, and those firms

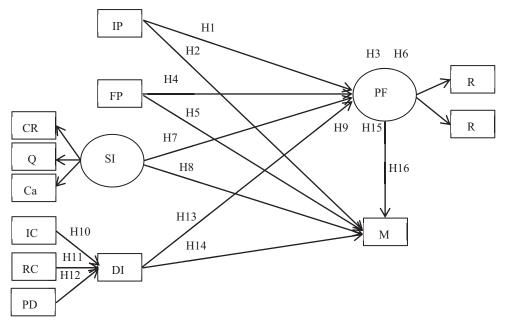


Figure 1: Research Conceptual Framework

Notes: IP: Working Capital Investment Policy measured by total current assets to total assets ratio, FP: Working Capital Financing Policy measured by total current liabilities to total assets ratio, SI: Static Working Capital Indicator, CR: Current Ratio, QR: Quick Ratio, CaR: Cash Ratio, DI: Dynamic Working Capital Indicator measure by Cash Conversion Cycle, ICP: Inventory Conversion Period, RCP: Receivables Collection Period, PDP: Payables Deferral Period, PF: Profitability Ratios, ROA: Return on Assets, ROE: Return on Equity, MV: Market Value measure by Tobin's Q Ratio.

that had been delisted, on pending suspension. As a result, the samples of 381 listed firms in various industries were selected (Table 1).

3.2. Statistical Method

This study employed 2 types of data analysis

- 1) Variance Inflation Factor (VIF) was used to examine the relationship between independent variables and test if the VIF value exceeds 5.00 while assessing multicollinearity whether there is a high correlation of at least one independent variable, according to Hair et al. (2010).
- 2) Inferential statistics analysis using structural equation modeling (SEM) was also used to test research hypotheses to verify the direct and indirect influence of variables and test the consistency of the structural model with empirical data from the samples.

4. Results and Discussion

The determination of the variance inflation factors (VIF) is a method of measuring the level of collinearity

among the variables, according to Hair et al. (2010). If VIF for at least one independent variable is greater than 5, there is collinearity associated with that variable. Whereas multicollinearity analysis cannot be interpreted from only a correlation matrix, variance inflation factors (VIF) for all independent variables used in this study were tested as shown in Table 2.

From Table 2, when taking all independent variables used in this study to analyze the VIF value, it was found that 3 variables including CR, QR, and CaR representing static working capital management indicators were greater than 5.00, meaning that there was high multicollinearity. However, when analyzing the VIF by adding variables to the representatives of the static working capital management indicator one variable at a time, all VIFs of each variable were lower than 5.00, meaning that there was no possibility of significant multicollinearity. When there was no significant multicollinearity, no variable was excluded from the study. The consistency of the structural model with the highest VIFs of the empirical data obtained from the samples is shown in Table 3.

From Table 3, it was found that the structural model testing CR as a static working capital management indicator was consistent with the empirical dataset obtained from the samples.

Table 1: Variables Used in the Study

Variables	Calculation					
Independent Variable: Working Capital Management						
1. Working Capital Management Strategies						
Working capital investment policies	Current assets / Total assets					
Working Capital Financing Policies	Current liabilities / Total assets					
2. Working Capital Management Indicators						
Static: Current ratio (CR)	Current assets / Current liabilities					
Quick ratio (QR)	((Current assets - inventory) / Current liabilities)					
Cash ratio (CaR)	((Cash + marketable securities) / Current liabilities)					
Dynamic: Cash conversion cycle (CCC)	RCP + ICP – PDP					
Receivables collection period (RCP)	((Receivables x 365) / Net Sales)					
Inventory conversion period (ICP)	((Inventory x 365) / Cost of Sales)					
Payable deferral period (PDP)	((Payable x 365) / Cost of Sales)					
Mediator Variable: Profitability						
Return on assets (ROA)	Net profit / Total assets					
Return on equity (ROE)	Net profit / Shareholders' equity					
Dependent Variable: Market Value						
Tobin's Q ratio	The market value of securities / Book value of total assets					

Table 2: Results of Variance Inflation Factor Analysis

	Model 1		Model 2 (CR)		Model	3 (QR)	Model 4 (CaR)	
	Tolerance	VIF	Tolerance	VIF	Tolerance	VIF	Tolerance	VIF
IP	0.507	1.971	0.590	1.695	0.652	1.553	0.682	1.466
FP	0.546	1.833	0.584	1.712	0.642	1.557	0.677	1.477
CR	0.058	17.267	0.616	1.625	_	_	_	_
QR	0.021	48.655	-	_	0.708	1.413	-	_
CaR	0.032	31.416	-	_	-	_	0.763	1.310
CCC	0.210	4.765	0.243	4.118	0.229	4.367	0.240	4.172
RCP	0.285	3.508	0.667	1.478	0.423	2.361	0.676	1.480
ICP	0.216	4.631	0.223	4.479	0.221	4.534	0.218	4.588
PDP	0.584	1.826	0.656	1.525	0.626	1.596	0.648	1.544

By adopting the conceptual model, the highest value of Model Identification (MI) of a pair of variables was initially taken to test the consistency of the structural model with the empirical dataset. When the result of confirmatory factor analysis was not within the suggested criteria, QR and CaR variables were removed to determine the consistency of the

structural model with empirical data. Therefore, by adding one or all of the variables that were the representatives of the static working capital management indicators at a time or modifying the conceptual model based on MI values, the results of hypotheses testing from different models were consistent as shown in Figure 2.

		Conceptual Model		Model CR		Model QR		Model CaR	
Statistics	Criteria	Value	Result	Value	Results	Value	Results	Value	Results
χ^2/df	<5.00	34.042	Inconsistent	3.239	Consistent	4.919	Consistent	3.543	Consistent
CFI	>0.90	0.560	Inconsistent	0.973	Consistent	0.950	Consistent	0.967	Consistent
GFI	>0.90	0.632	Inconsistent	0.963	Consistent	0.946	Consistent	0.960	Consistent
NFI	>0.90	0.554	Inconsistent	0.962	Consistent	0.939	Consistent	0.955	Consistent
RMSEA	<0.08	0.295	Inconsistent	0.077	Consistent	0.102	Inconsistent	0.082	Inconsistent
RMR	<0.08	0.163	Inconsistent	0.074	Consistent	0.069	Consistent	0.054	Consistent

Table 3: Results of Consistency of Structural Model

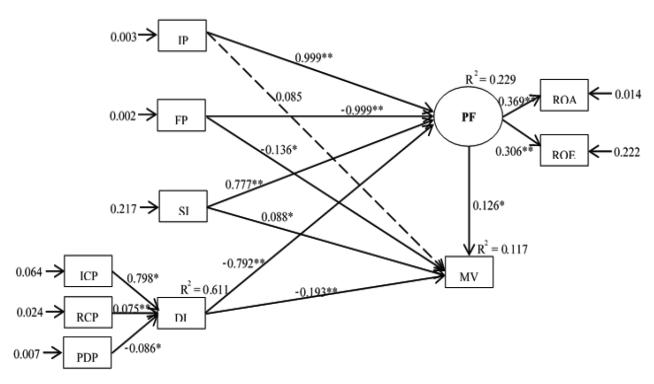


Figure 2: Hypotheses Testing

Standardized Estimate: χ^2 /df: 3.239, CFI: 0.973, GFI: 0.963, NFI: 0.962, RMSEA: 0.077, RMR: 0.074 ** statistically significant as *p*-value < 0.01, * statistically significant as *p*-value < 0.05.

From the statistic results presented in Figure 2 and Table 4, the research and practical implications are discussed and concluded as follows.

4.1. Working Capital Management Strategies

The working capital investment policy has a positive direct effect on profitability; however, it has no significant effect on market value. Therefore, hypothesis 1 is accepted while hypothesis 2 is rejected.

Although previous studies have not yet concluded that a working capital investment policy has a negative direct effect on profitability, it was found that adopting an aggressive working capital investment policy by lowering the level of investment in current assets contributes to higher profitability. From the theoretical views of previous studies, it was suggested that a reduction in working capital investment by avoiding the need for expensive external finance leads to more internal cash flow to finance the day-to-day operations and more opportunities to invest in other

	Dynamic Working Capital Indicators			Profitability			Market Value		
	DE	IE	TE	DE	IE	TE	DE	IE	TE
IP	_	_	_	0.999**	_	0.999**	0.085	0.137*	0.222**
FP	_	_	_	-0.999**	_	-0.999**	-0.136*	-0.150*	-0.286**
SI	-	-	-	0.777**	_	0.777**	0.088*	0.098*	0.186*
DI	-		-	-0.792**	_	-0.792**	-0.193*	-0.099*	-0.293**
ICP	0.798**	_	0.798**	_	-0.632**	-0.632**		-0.234*	-0.234**
RCP	0.075*	_	0.075*	_	-0.059	-0.059		-0.022	-0.022
PDP	-0.086*	_	-0.086*	_	0.068*	0.068*		0.025	0.025
PF	_	_	-	_	_	_	0.126*	_	0.126*

Table 4: Results of Path Analysis of Direct, Indirect, and Total Effects

activities to increase the company's performance (Autukaite & Molay, 2014; Deloof, 2003; Garcia-Teruel & Martinez-Solano, 2007).

However, in the context of Thailand, lowering the level of investment in current assets is unlikely to be applied in practice to increase the company's profitability since the adoption of a conservative working capital investment policy can increase sales and revenues, particularly when the costs associated with the holding of inventory and accounts receivable are high. As a result, high investment in current assets should correspond with a high level of inventory and accounts receivable.

The increase in investment in inventories and trade receivables can prevent production disruptions, reduce the risk of running out of inventory, and reduce supply costs and price fluctuations; therefore, it can increase the company's performance (Deloof, 2003; Garcia-Teruel & Martinez-Solano, 2007; Tauringana & Afrifa, 2013).

Similarly, high investment in accounts receivable can improve a company's performance since it allows customers a longer period to pay which is seen as a product/service differentiation strategy that strengthens the supplier/customer long-term relationship, reduces transaction costs, and allures customers to acquire product/service at times of low demand (Wilner, 2000).

From the theoretical concept of conservative working capital investment policy corresponded with the results of previous empirical studies, it was found that a low level of inventory and accounts receivable would obstruct sales and reduce profitability (Mohamad & Saad, 2010). Nevertheless, the cost of increased working capital investment should not be higher than the expected amount of sales (Deloof, 2003). Therefore, it can be concluded that a high level of current assets investment results in the company's increased

profitability despite the adoption of a conservative working capital investment policy.

In addition, it was found that the working capital financing policy has a negative direct effect on profitability and market value. As a result, hypotheses 4 and 5 are accepted. From the results, it can be concluded that a low amount of working capital financing from short-term funding sources can increase the company's profitability. Therefore, the conservative working capital financing policy has a direct effect on the profitability of listed companies on the Thai Stock Exchange which is consistent with previous studies examining companies in all industry segments listed on the Indonesia Stock Exchange (Sudivatno et al., 2017) and in the Malaysia Stock Exchange (Mohamad & Saad, 2010). On the other hand, the result in this study is inconsistent with the study of Mwangi et al. (2014) indicating that an aggressive working capital financing policy resulted in higher profitability of the companies listed on the Kenya Stock Exchange.

Although no direct effect of investment policy on market value was found in this study, the investment policy was found to have a positive indirect effect on market values through profitability. Therefore, hypothesis 3 is accepted. That is, the business should apply the conservative working capital investment policy to gain higher profitability and ultimately higher market value.

In addition, it was found that the working capital financing policy has a negative indirect effect on the market value through profitability. Therefore, hypothesis 6 is accepted. This can be concluded that the conservative working capital financing policy should be applied to increase the market value through the mediating variable which is profitability.

This study also contributed to the research implications supporting that investing in current assets at high amounts

^{**}Statistically significant as p-value < 0.01, *Statistically significant as p-value < 0.05.

and working capital financing from long-term funding sources can lead to higher financial performances. From the empirical evidence in this study, it was consistent with the given evidence from Raheman et al. (2010) and Sudiyatno et al. (2017) concluding that conservative working capital investment policy (CIP) and conservative working capital financing policy (CFP) have an effect on an increase of profitability. In addition, the findings in this study were also consistent with Mohamad and Saad (2010) who supports using CIP and CFP to increase market value measured by Tobin's Q ratio.

From the empirical results obtained from the companies listed on Thailand Stock Exchange, it can be concluded that the adoption of a conservative working capital financing policy has a positive effect on the company's performance, including profitability and market value although the results were inconsistent with the theoretical concept of working capital management in the point that high investment in current assets would hinder sales activities, which in turn lead to reduced profitability. In line with several empirical studies, the results in this study showed that a conservative working capital investment policy can increase sales which further increases profitability. However, the increased costs of investment in working capital should not be greater than the benefits from boosting sales (Deloof, 2003). Also, requesting more trade credits with trade creditors may result in a loss of cash discounts, leading to reduced profitability.

4.2. Working Capital Management Indicators

Static working capital management indicator measured by the current ratio (CR) has a significant positive direct effect on profitability and market value; therefore, hypotheses 7 and 8 are accepted. It was found that high liquidity results in an increase in profitability and market value by focusing on a higher proportion of current assets than current liabilities.

Moreover, the dynamic working capital management indicator measured by the cash conversion cycle (CCC) has a negative direct effect on profitability and market value, so hypotheses 13 and 14 are accepted. This reflects that short CCC management leads to higher profitability and market value. Since CCC represents healthy liquidity in cash flow, shortening CCC should be applied in management by reducing the receivables collection period (RCP) and inventory conversion period (ICP), as well as increasing the payables deferral period (PDP). Thus, understanding the effect of these periods would help managers prioritize meeting the dues based on shortened CCC to increase profitability and performance.

The analysis of cash cycle management methods shows that RCP and ICP have a positive direct effect on the cash conversion cycle ($\beta = 0.798$ and 0.075 respectively), so hypotheses 10 and 11 are accepted. On the other hand, PDP

has a negative direct effect on the cash conversion cycle $(\beta = -0.086)$, so hypothesis 12 is accepted. Therefore, to shorten the cycle of the cash cycle, reducing the receivables collection period should be primarily considered, followed by increasing the payable deferral period.

In addition, it was found that there is a positive indirect effect of the current ratio on market value through profitability, so hypothesis 9 is accepted. This indicates that higher liquidity results in higher profitability, leading to higher market value. On the other hand, the cash conversion cycle has a negative indirect effect on market value through profitability; therefore, hypothesis 15 is accepted. This shows that cash cycles for shorter periods of time result in higher market values through a mediating variable, namely profitability.

In this study, the results correspond to the research of Omesa et al. (2013), Ismail (2016), and Shrivastava et al. (2017) supporting that the current ratio has a positive impact on profitability. Therefore, high liquidity management is recommended for increasing profitability. In addition, the results of this study are consistent with Makori and Jagongo (2013), Jayarathne (2014), and Ahmed et al. (2016) indicating that the CCC has a negative impact on profitability.

From testing the indicators of dynamic working capital management affecting the market value, the results of this study correspond to the research of Abuzayed (2012) and Ogundipe et al. (2012) supporting that a reduction in companies' cash cycle leads to a higher market value measured by Tobin's Q. However, the results from testing the indicators of static working capital management in this study were inconsistent with the evidence given by Mohamad and Saad (2010) indicating that the current ratio has a negative impact on the market value measured by Tobin's Q although the results were not statistically significant.

From the results of this study, it is suggested that businesses in Thailand should maintain high liquidity in both current asset management and cash flow management to remain working capital in a proper amount for enhancing financial performance in certain operations. For example, investing in trade accounts receivable for providing trade credit to customers is important in the manufacturing industry to boost sales according to the given empirical evidence given by Abiodun and Samuel (2014) and Garcia-Teruel and Martinez-Solano (2007). Otherwise, the shorter cash cycle periods would allow the company to have a faster cash flow for certain operations, or to invest with that cash to generate income. Furthermore, reducing dependency on external funding sources can increase the firm's performance (Deloof, 2003; Jayarathne, 2014).

4.3. Profitability

The results of this study showed that profitability has a positive direct effect on market value, so hypothesis 16

is accepted. It can be concluded that when the profitability of the business increases, the market value increases accordingly. The results of this study correspond to the research of Alghifari et al. (2013) showing that profitability has a positive impact on Tobin's Q. In this notion, the results of this study are in line with the evidence given by Mohamad and Saad (2010) concluding that when an enterprise has higher profitability, there are more growth opportunities and increased returns for its shareholders. This would build investor confidence and create investment interest. As a result, when the need for investors to invest is increasing, the share price of the business ultimately increases the market value in return (Autukaite & Molay, 2014; Sudiyatno et al., 2017).

5. Conclusion

One of the business operations' goals is to maximize profitability for the organization while minimizing possible risks must be ensured. Working capital management is one of the factors that helps achieve this goal. Working capital management involves planning and overseeing current assets and current liabilities to create a balance between risk and liquidity. In this notion, balancing the amounts for investing and financing in financial operations aims to maximize profitability and create higher market value.

The results of this study indicate that both a conservative working capital investment policy and the conservative working capital financing policy for companies listed on the Stock Exchange of Thailand can result in higher profitability and higher market value. In addition, managing liquidity in a manner that the proportion of current assets is higher than current liabilities, as well as managing cash flows to be received in a shorter period should be able to enhance the company's performance (profitability and market value). Finally, when the company has high profitability, the market value increases. Since higher profitability indicates the company's growth, which will build investor confidence and investment interest, and further increases the market value of the company accordingly.

References

- Abiodun, S. A., & Samuel, O. L. (2014). A comparative analysis on working capital management of brewery companies in Nigeria. *International Journal of Finance and Accounting*, *3*(1), 356–371. https://doi.org/10.5923.j.ijfa.20140306.04.html
- Abuzayed, B. (2012). Working capital management and firms' performance in emerging markets: The case of Jordan. *International Journal of Managerial Finance*, 8(2), 155–179. https://doi.org/10.1108/17439131211216620
- Afza, T., & Nazir, M. S. (2007). Is it better to be aggressive or conservative in managing working capital? *Journal of*

- Quality and Technology Management, 3(2), 11–21. https://lahore.comsats.edu.pk/Papers/Abstracts/146-8588087885872039558.pdf
- Ahmed, Z., Awan, M. Z., Safdar, M. Z., Hasnain, T., & Kamran, M. (2016). A Nexus between working Capital management and profitability: A case study of the pharmaceutical sector in Pakistan. *International Journal of Economics and Financial Issues*, 6(3), 153–160. https://www.econjournals.com/index.php/ijefi/article/view/2624
- Alghifari, S. E., Triharjono, S., & Juhaeni, Y. Y. S. (2013). Effect of return on assets (ROA) against Tobin's Q: Studies in food and beverage company in Indonesia stock exchange years 2007– 2011. *International Journal of Scientific and Engineering Research*, 2(1), 722–725. https://www.ijsr.net/archive/v2i1/ IJSRON2013372.pdf
- Altaf, N., & Shah, F. (2017). Working capital management, firm performance and financial constraints: Empirical evidence from India. Asia-Pacific Journal of Business Administration, 9(3), 206–219. https://doi.org/10.1108/APJBA-06-2017-0057
- Autukaite, R., & Molay, E. (2014). Cash holdings, working capital, and firm value: Evidence from France. SSRN Electronic Journal, 132, 53–62. https://doi.org/10.2139/ssrn.1836900
- Nguyen, C. T. (2020). Impact of working capital management on firm performance in different business cycles: Evidence from Vietnam. *Journal of Asian Finance, Economics, and Business*, 7(12), 863–867. https://doi.org/10.13106/jafeb.2020.vol7.no12.863
- Deloof, M. (2003). Does working capital management affect the profitability of Belgian firms? *Journal of Business Finance and Accounting*, 30(3–4), 573–588. https://doi.org/10.1111/1468-5957.00008
- Eya, C. L. (2016). Effect of working capital management on the performance of food and beverage industries in Nigeria. *Arabian Journal of Business and Management Review*, 6(5), 1–7. https://doi.org/10.4172/2223-5833.1000244
- Gachira, W., Chiwanzwa, W., Nkomo, D. J., & Chikore, R. (2014).
 Working Capital management and profitability of non-financial firms listed on the Zimbabwe stock exchange (ZSE). European Journal of Business and Economics, 9(1), 12–15. https://doi.org/10.12955/ejbe.v9i2.517
- 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. https://doi.org/10.1108/17439130710738718
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis*. London: Pearson.
- Ismail, R. (2016). Impact of liquidity management on profitability of Pakistani firms: A case of KSE-100. *International Journal of Innovation and Applied Studies*, 2(14), 304–314. http://www.ijias.issr-journals.org/abstract.php?article=IJIAS-15-285-03
- Javid, S., & Zita, V. P. M. (2014). Impact of working capital policy on Firm's profitability: A case of Pakistan cement industry.

- Research Journal of Finance and Accounting, 5(5), 182–191. https://iiste.org/Journals/index.php/RJFA/article/view/11990
- Jayarathne, T. (2014). Impact of working capital management on profitability: Evidence from listed companies in Sri Lanka. Proceeding of the 3rd the International Conference on Management and Economics, Srilanka, 26–27 February 2014 (pp. 269–274). https://doi.org/10.1.1.703.5066
- Jingmeng, M. (2013). A Study on Working Capital Management System based on Performance. International Journal of Innovation. *Management Technology*, 4(1), 100–103. http:// www.ijimt.org/papers/368-E20006.pdf
- Pham, K. X., Nguyen, Q. N., & Nguyen, C. V. (2020). Effect of working capital management on the profitability of Stell companies on Vietnam stock exchanges. *Journal of Asian Finance, Economics, and Business*, 7(10), 741–750. https://doi. org/10.13106/jafeb.2020.vol7.n10.741
- Makori, D., & Jagongo, A. (2013). Working capital management and firm profitability: Empirical evidence from manufacturing and construction firms listed on Nairobi securities exchange, Kenya. *International Journal of Accounting and Taxation*, *I*(1), 1–14. http://ijatnet.com/vol-1-no-1-december-2013-abstract-1-ijat
- Marobhe, M. I. (2014). An empirical analysis of the relationship between working capital management and profitability: Panel evidence from listed manufacturing companies in east Africa. European Journal of Business and Management, 6(7), 212–219. https://www.iiste.org/Journals/index.php/EJBM/article/ view/11459
- Mohamad, N. E. A., & Saad, N. B. (2010). Working capital management: The effect of market valuation and profitability in Malaysia. *International Journal of Business and Management*, 5(11), 140–147. https://doi.org/10.5539/ijbm.v5n11p140
- Moss, J. D., & Stine, B. (1993). Cash conversion cycle and firm size: A study of retail firms. *Managerial Finance*, 19(8), 25–34. https://doi.org/10.1108/EB013739
- Mwangi, L. W., Makau, M. S., & Kosimbei, G. (2014). Effects of working capital management on the performance of nonfinancial companies listed in NSE, Kenya. *European Journal* of Business and Management, 6(11), 195–205. https://doi. org/10.1.1.433.8083
- Nia, N. M., Alouj, H. A., Gezelbash, A., & Amiri, S. M. S. (2012). An analytical review of the effect of working Capital development on financial performance measures. *American Journal of Scientific Research*, 77, 10–122. https://elmnet.ir/ Content/UserProfile/Document/10000313-7ce380c2-e34d-477a-bcca-b7f0b5f95302.pdf
- Ogundipe, S. E., Idowu, A., & Ogundipe, L. O. (2012). Working Capital management Firms'Performance and market valuation in Nigeria. *International Journal of Social and Human Sciences*, 6(1), 143–147. https://doi.org/10.1.1.309.3455
- Omesa, N. W., Maniagi, G. M., Musiega, D., & Makori, G. A. (2013). Working capital management and corporate performance: Special reference to manufacturing firms on Nairobi securities exchange. *International Journal of Innovative*

- Research and Development, 2(9), 177–183. https://www.academia.edu/12957977/Working_Capital_Management_And_Corporate_Performance_Special_Reference_To_Manufacturing Firms On Nairobi Securities Exchange
- Raheman, A., Afza, T., Qayyum, A., & Bodla, M. A. (2010). Working capital management and corporate performance of manufacturing sector in Pakistan. *International Research Journal of Finance and Economics*, 47, 157–169. https://www.academia.edu/3989106/Working_Capital_Management_and_Corporate_Performance_of Manufacturing Sector in Pakistan
- Sabri, T. B. (2012). The impact of working capital on the value of the company in light of differing size, growth, and debt. *Business and Economic Horizons*, 7(1), 27–41. https://ageconsearch.umn.edu/record/249374/files/v7 1 3.pdf
- Shrivastava, A., Kumar, N., & Kumar, P. (2017). Bayesian analysis of working capital management on corporate profitability: Evidence from India. *Journal of Economic Studies*, 44(4), 568–584. https://doi.org/10.1108/JES-11-2015-0207
- Song, Z., Liu, D., & Chen, S. (2012). A Decision Engineering Method to Identify the Competitive Effects of Working Capital: A Neural Network Model. *Systems Engineering Procedia*, 5, 326–333. https://doi.org/10.1016/j.sepro.2012.04.051
- Sudiyatno, B., Puspitasari, E., & Sudarsi, S. (2017). Working Capital, firm performance, and firm value: An empirical study in the manufacturing industry on Indonesia stock exchange. *Economics World*, 5(5), 444–450. https://doi. org/10.17265/2328-7144/2017.05.007
- Tareq, M. A., Mohammad, A. A., & Mohammed, I. O. (2021). The relationship between working capital management and financial performance: Evidence from Jordan. *Journal of Asian Finance, Economics, and Business*, 8(6), 713–720. https://doi.org/10.13106/jafeb.2021.vol8.no6.0713
- Tauringana, V., & Afrifa, G. (2013). The relative importance of working capital management and its components to SMEs profitability. *Journal of Small Business and Enterprise Development*, 20(3), 1–26. https://doi.org/10.1108/JSBED-12-2011-0029
- The Stock Exchange of Thailand. (2020). *Industry quotation*. https://marketdata.set.or.th/mkt/sectorquotation.do?market=SET§or=TECH&language=en&country=US.
- Vahid, T. K., Mohsen, A. K., & Mohammadreza, E. (2012). The impact of working capital management policies on firm's profitability and value: Evidence from Iranian companies. *International Research Journal of Finance and Economics*, 88, 155–162. https://doi.org/10.12691/jbms-6-1-4
- Wang, Y. J. (2002). Liquidity management, operating performance, and corporate value: Evidence from Japan and Taiwan. *Journal* of Multinational Financial Management, 12(2), 159–169. https://doi.org/10.1016/S1042-444X(01)00047-0
- Wilner, B. S. (2000). The exploitation of relationships in financial distress: The case of trade credit. *Journal of Finance*, *55*(1), 153–178. https://doi.org/10.1111/0022-1082.00203
- Yamane, T. (1973). Statistics: An introductory analysis. New York: Harper & Row.