วารสารวิชาการ **มหาวิทยาลัยหอการค้าไทย** มนุษยศาสตร์และสังคมศาสตร์
ปีที่ 41 ฉบับที่ 1 เดือนมกราคม - มีนาคม 2564

The Relationship between Working Capital Management and Firm Performance of the SET50 Index in Thailand

Pratoomma Puriboriboon[1,*]

Received: July 17, 2020 Revised: August 20, 2020 Accepted: December 2, 2020

Abstract

The purpose of this study was to analyze the relationship of working capital management with firm performance of the SET50 Index in Thailand. Working capital management was used as the independent variable, which was measured by cash conversion cycle and quick ratio. The dependent variables comprised other measures such as profitability (return on assets and return on equity ratios) and market value (price earnings and price-book value ratios). Sales growth and debt ratios were used as control variables. This study compiled 5 years of data for 25 companies from 2014-2018, and analyzed the data using multiple regression analytical methods. The results showed that the cash conversion cycle had a significant inverse relationship with profitability and market value. This further showed that a shorter cash conversion cycle resulted in increased profitability and market value. Moreover, the study also found a significant positive relationship between quick ratios and profitability. However, there was no evidence of a statistical relationship between quick ratios and market value in the study. However, it was found that an increase in quick ratio performance resulted in an increase in profitability.

Keywords: working capital management, firm's performance, profitability, market value

[1] Faculty of Business Administration, Asia-Pacific International University

[*] Corresponding author. E-mail: pfangpet@apiu.edu

ความสัมพันธ์ระหว่างการบริหารเงินทุนหมุนเวียนและผลการดำเนินงานของบริษัทกลุ่ม SET50 ตลาดหลักทรัพย์แห่งประเทศไทย

ประทุมมา ภูริบริบูรณ์[1,*]

วันรับบทความ: July 17, 2020 วันแก้ไขบทความ: August 20, 2020 วันตอบรับบทความ: December 2, 2020

บทคัดย่อ

การศึกษานี้มีวัตถุประสงค์เพื่อวิเคราะห์ความสัมพันธ์ของการบริหารเงินทุนหมุนเวียนกับผลการดำเนินงานของบริษัทในกลุ่ม SET50 ที่จดทะเบียนในตลาดหลักทรัพย์แห่งประเทศไทย ซึ่งการบริหารเงินทุนหมุนเวียนเป็นตัวแปรอิสระ วัดโดยวงจรเงินสดและอัตราส่วนทุนหมุนเวียนเร็ว ตัวแปรตามประกอบด้วยความสามารถในการทำกำไรวัดโดยอัตราส่วนผลตอบแทนจากสินทรัพย์และอัตราส่วนผลตอบแทนต่อผู้ถือหุ้น มูลค่าตลาดวัดโดยอัตราส่วนราคาต่อกำไรและอัตราส่วนราคาตลาดต่อมูลค่าตามบัญชี และมีอัตราการเติบโตของยอดขายและอัตราส่วนหนี้สินเป็นตัวแปรควบคุม โดยเก็บข้อมูลรวม 25 บริษัทเป็นระยะเวลา 5 ปี ตั้งแต่ปี พ.ศ. 2557-2561 นำมาวิเคราะห์ถดถอยพหุคูณ ผลการศึกษา พบว่า วงจรเงินสดมีความสัมพันธ์ในทิศทางตรงกันข้ามกับความสามารถในการทำกำไรและมูลค่าตลาดอย่างมีนัยสำคัญทางสถิติ แสดงให้เห็นว่าวงจรเงินสดที่สั้น ส่งผลให้ความสามารถในการทำกำไรและมูลค่าตลาดเพิ่มขึ้น นอกจากนี้ ยังพบว่า อัตราส่วนทุนหมุนเวียนเร็วมีความสัมพันธ์เชิงบวกกับความสามารถในการทำกำไรอย่างมีนัยสำคัญทางสถิติ แต่ไม่พบความสัมพันธ์ทางสถิติกับมูลค่าตลาด แสดงให้เห็นว่าอัตราส่วนทุนหมุนเวียนเร็วที่เพิ่มขึ้น ส่งผลให้ความสามารถในการทำกำไรเพิ่มขึ้นตามไปด้วย

คำสำคัญ: การบริหารเงินทุนหมุนเวียน ผลการดำเนินงาน ผลกำไร มูลค่าตลาด

[1] คณะบริหารธุรกิจ มหาวิทยาลัยนานาชาติเอเชีย-แปซิฟิก

* Corresponding author. E-mail: pfangpet@apiu.edu

Introduction

Modern day business growth does not rely solely on profits. It is necessary to have effective working capital management to ensure proper liquidity in a company and sufficient cash in hand to cover general expenses without any delay. Working capital management can convert cash equivalents, marketable securities, accounts receivable, and inventories into cash within a year to meet organizational needs. On the other hand, the cash conversion cycle is a powerful indicator that determines the quality of working capital management in business activities. In order for a business to be able to operate in the long run, there should be rational handling of working capital management to create balance in current assets and current liabilities. Moreover, working capital management can reduce the risk of cash shortages in the future and help firms avoid bankruptcy (Anser & Malik, 2013).

Maintaining a good level of working capital management may result in an increase in market value (Bandara, 2015). Having good quality working capital management not only increases market value, but also increases trust among shareholders. To say this from a different perspective, capital markets will punish those companies that cannot properly manage their working capital. Therefore, a company can strengthen the trust of shareholders by reducing days in accounts receivable and inventories (Hingurala, Perera & Vijayakumaran, 2017).

Many types of research, both internal and external, have been conducted to analyze the relationship between working capital management and profitability, but the topic has not yet been covered in terms of market value. Thus, this study has attempted to assess the relationship between working capital management and firm performance (reflected in the form of profitability and market value) specifically in the SET50 Index. It is assumed that the companies in the SET50 Index are good representatives (Kabkerd, 2016) as it greatly influences the movement of the SET Index. These companies have high market values, and their shares are consistently highly liquid; these factors attract the investors to analyze their profitability and market value (Khumwongpin, 2016). Therefore, the analysis of the relationship between working capital management and market value (PE and P/BV) better reflects the sample data. It is strongly believed that the results of this specific study may help companies in the SET50 Index improve their decision-making process regarding working capital management, set clear policies on effective working capital management, evaluate the quality of company performance, and protect themselves from possible liquidity issues.

Research Objective

To study the relationship between working capital management with firm profitability and market value of the SET50 Index in Thailand.

Literature Review

Working Capital Management

Working capital management is related to the effective allocation of funds to daily business activities in an organization in order to achieve its set goals and objectives (Nwankwo & Osho, 2010). The Cash Conversion Cycle is a circle that represents the management of cash in hand and working capital by indicating cash flow in business activities, including average inventory, collection, and payment periods. It is a performance analysis of inventory management, ability to collect receivables, and capacity to make payments along with an analysis of its liquidity. When analyzing cash, the quick ratio reflects the principle of prudence in calculating liquidity because it considers only assets such as cash and cash equivalents, marketable securities, and account receivables that can quickly be converted into cash (Vichitsarawong, 2017).

Firm Performance

Business performance can be measured using several methods: customer satisfaction, employee satisfaction, social performance, environmental performance, and financial performance (Santos & Brito, 2012). However, this research is particularly focused on financial performance, which is specifically composed of financial ratios indicating profitability and market value.

Profitability

Profitability has been the most popular financial analysis indicator because it assesses a business's ability to generate income while spotlighting other expenses and costs. It is quite important not only to business owners, but also to creditors. Investors and creditors are interested in investing in businesses that provide high returns, can survive in the long run, and have comprehensive income with realistic operating expenses. For that reason, businesses must have sufficient profits to repay principal and interest to creditors, and generate adequate dividends to meet business owners' expectations (Suwannaphak, Tewongsa, Chancharat & Chancharat, 2018). The profitability of an organization can be measured using several methods: net profit per sales method, gross margin method, return on equity method, return on assets, and asset turnover

method. These methods are used to measure profitability because of their coverage ratio indication. For instance, asset turnover is a measure of the ability to make a profit by measuring how efficiently a company uses its assets to produce sales. These methods also depend on a few other factors. Firstly, they depend on the market structure in which the company operates and its competitive status. Another factor is the efficiency of asset control such as account receivables, inventory management, and proper control of plant and equipment (Wongthatsanekorn, 2010).

The Relationship of Working Capital Management with Profitability

Many research studies have been conducted on the relationship of the Cash Conversion Cycle with profitability, and have found that cash conversion cycle is inversely correlated with profitability, return on assets (ROA), and return on equity (ROE) (Anser & Malik, 2013; Pestonji & Donkwa, 2018; Suwannaphak et al., 2018). This is because if the cash conversion cycle – referring to the cash that will come into the business to be used as working capital – takes longer, the liquidity ratio decreases. Thus, a company needs to search for external funding sources at higher costs which results in decreasing profits (Alavinasab & Davoudi, 2013). Organizations that have shorter Cash Conversion Cycles (CCC) will be more profitable than organizations with longer such cycles. The problem with longer CCC periods could be the direct impact of low inventory turnover and longer days in receivables turnover (Attari & Raza, 2012). Previous studies have confirmed that businesses that have shorter CCC will lead to higher profitability. In addition, it has also been found that debt ratio is negatively related to CCC. Therefore, businesses should be thoughtful when making decisions about acquiring debt, because a large amount of debt creates a burden of interest payments that may lead to decreasing profits (Nguyen & Mohanlingam, 2018).

A study of the relationship between the quick ratio and profitability among registered companies in Thailand's agriculture and food industry was conducted. This study was divided into the pre-Hamburger Crisis period ranging from the years 2001 to 2008, and the post-Hamburger Crisis ranging from the years 2009 to 2016. When using the combined data from the years 2001 to 2016 or the years before the Hamburger crisis, it was found that the quick ratio was inversely related to ROA and ROE. However, no such relationship was found in the years after the Hamburger Crisis (Suwannaphak et al., 2018).

However, Madushanka and Jathurika (2018) in their study of registered companies in Sri Lanka found that working capital and quick ratios were positively related to ROA and ROE. This finding was similar to the findings of Alshatti (2015); Durrah, Rahman, Jamil and Ghafeer

(2016); Nimer, Warrad and Omari (2015); and Pestonji and Donkwa (2018). Based on those findings, this study developed the following hypotheses:

H_1: The Cash Conversion Cycle has a significant inverse relationship with Profitability.

H_2: The Quick Ratio has a significant positive relationship with Profitability.

Market Value

One of the objectives of any business organization is to increase the wealth of shareholders by increasing the market price of its shares. In other words, stock market performance is an indication of organizational success. Any legal business entity with an increasing market share price is considered a good bet by investors. Nonetheless, corporate profitability is a prerequisite to good performance in the stock market (Pandya & Parmar, 2011).

Market value ratio indicates the value of a stock traded in the Stock Exchange, and whether investing in it is worthwhile or not. Investors view a business according to its financial status, past performance, and future trends. The market price of a stock is a good reflection of the company's performance in terms of its profitability ratio, internal liquidity ratio, operational efficiency ratio, and debt obligations ratio. If the market value of a company is high, the market price of its ordinary shares should also be high. The popular ratios that are used to measure investment market values are the Price-Earnings Ratio (P/E ratio) and the Price to Book Value Ratio per share (P/BV ratio). These two ratios send a signal to investors whether the shares that they are thinking of buying are overpriced, or, if shares have already been purchased, whether it is worthwhile to continue holding them as an investment (Khumwongpin, 2016). Thus, the P/E ratio is used to measure a common stock's rate of return each year. A higher P/E ratio shows strong shareholder confidence in the company and future profit growth, while a low P/E ratio indicates that investors are losing confidence in the company. P/BV ratio is another ratio that states how investors value the company. A company with high P/BV ratio signals that investors are satisfied with the company's performance (Asiri & Hameed, 2014).

The Relationship of Working Capital Management with Market Value

In addition to being correlated with profitability, the cash conversion cycle is also related to a firm's market value as stated in the previous studies. According to a study in Sri Lanka which focused on the impact of capital management policies and market value increases, it was found that capital management policy had a negative relationship with market value added (Bandara,

2015). This study showed the same results as Arachchi, Perera and Vijayakumaran's (2017) findings that the cash conversion cycle behaves in the opposite direction of the market value. Due to shorter periods of purchasing raw materials, receiving payments from the sales of goods, and decreasing investments, it will be able to increase business market value. In addition, it was found that working capital management had a statistically significant relationship with P/BV ratios (Forghani, Shirazipour & Hosseini, 2013). However, some findings differed from the studies described above. A study conducted among listed companies in the food and beverage industry of Nigeria stated that the cash conversion cycle had a positive relation to market value. The researchers highlighted that the increased number of days in the cash conversion cycle increased the market value (Osundina & Osundina, 2014).

Other results indicated that the quick ratio had a statistically significant relationship with the price-earnings ratio. Nevertheless, no statistical relationship between the debt-to-equity ratio and the P/E ratio was found (Nurdiwaty, 2014). Based on these results, this study develops the following hypotheses:

H_3: The Cash Conversion Cycle has a significant inverse relationship with Market Value.

H_4: The Quick Ratio has a significant relationship with Market Value.

From the review literature, most of the studies were conducted on foreign stock exchanges, in which many factors affected the operation of the business such as economic, social, and policy conditions. In addition, the past research findings were mixed results. For these reasons, this research is interested to study in the Thai context.

Research Methodology

Data and Sampling

The population used in this study are listed companies in the Stock Exchange of Thailand that are in the SET50 Index (Stock Exchange of Thailand [SET], 2019) using panel data of annual reports for five years from 2014 to 2018. Secondary data were collected from the websites. The financial institution, banking, and insurance companies that have different accounting practices and financial structures from other industries were excluded. Moreover, companies that are newly listed securities and companies that have not traded shares in the past five years due to having less than five years of information were also not included in the study. According to the availability of data, the sample group for this study consisted of 25 companies from the 50 companies.

Research Framework

The framework of this study analyzed the relationship between working capital management and business performance. In this study, the variables used could be summarized and formulated as shown in Figure 1 as follows:

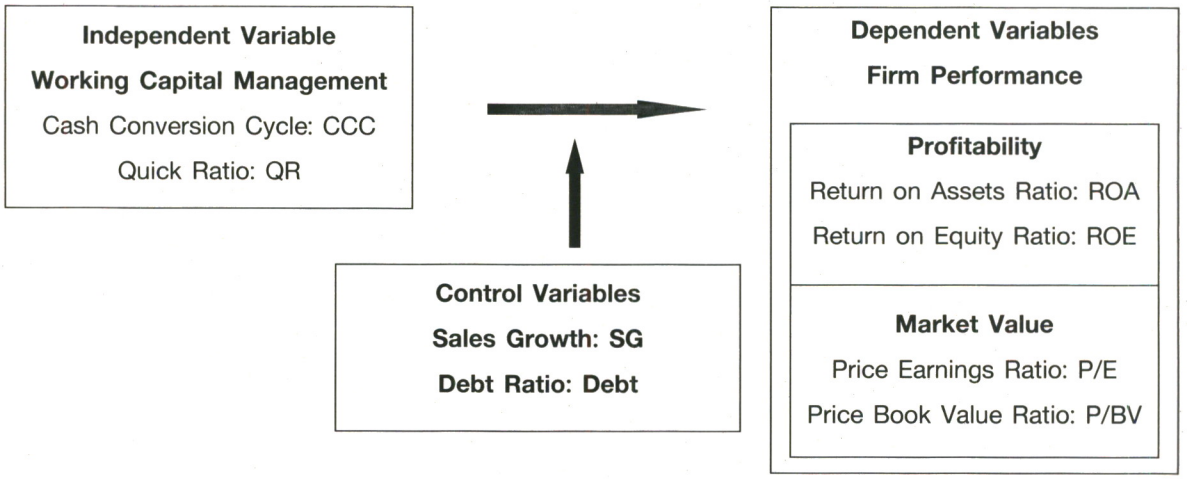

Figure 1 Independent, Dependent and Control Variables Used in this Research
Adapted from Anser & Malik (2013); Suwannaphak et al. (2018)

From the literature review, various variables for this study were found. However, this study specifically examined two independent variables which were Cash Conversion Cycle (CCC) and Quick Ratio (QR) in order to analyze their relationships with the dependent variables, which were profitability ratios such as Return on Assets (ROA) and Return on Equity (ROE). The study also analyzed the relationship between the independent variables CCC and QR and price-earnings and price to book ratios. The control variables were sales growth (expected to have a positive relationship with dependent variables) and debt ratio (expected to have an inverse relationship with dependent variables). This study did not focus on the effects of specific intervals, but only emphasized the variables that directly affect the dependent variable. Therefore, the time variable was not included in the study. The variables used in this study are shown in Table 1.

Table 1 Definitions of Variables

Variables	Acronyms	Measurement	Expected Relationship	
			Market Value	Profitability
Independent Variables				
Cash Conversion Cycle	CCC	(Inventory Conversion Period + Average Receivable Period - Average Payables Period)	-	-
Quick Ratio	QR	Cash + Temporary Investments + Accounts Receivable/ Current Liabilities	+	+
Control Variables				
Sales Growth	SG	Difference between Sales of End of Year t and End of Year t_{-1}	+	+
Debt Ratio	Debt	Total Liabilities/Total Assets	-	-
Dependent Variables				
Return on Assets	ROA	Net Income/Average Total Assets		
Return on Equity	ROE	Net Income/Average Total Equity		
Price Earnings Ratio	PE	Market Price per Share/Earnings per Share		
Price Book Value Ratio	P/BV	Market Price per Share/Book Value per Share		

A secondary data collection method was used in this study. The data were statistically analyzed by dividing the analysis into 3 parts: descriptive statistical analysis, correlation coefficient analysis, and multiple regression analysis. Before conducting the analysis, some adjustments were made to the value of the independent variables and control variables using mean centering. Eight regression models were used in the study. They were:

Model 1: $ROA_i = \alpha + \beta_1 CCC_i + \beta_2 QR_i + e_i$

Model 2: $ROA_i = \alpha + \beta_1 CCC_i + \beta_2 QR_i + \beta_3 SG_i + \beta_4 Debt_i + \beta_5 CCC_i SG_i + \beta_6 CCC_i Debt_i + \beta_7 QR_i SG_i + \beta_8 QR_i Debt_i + e_i$

Model 3: $ROE_i = \alpha + \beta_1 CCC_i + \beta_2 QR_i + e_i$

Model 4: $ROE_i = \alpha + \beta_1 CCC_i + \beta_2 QR_i + \beta_3 SG_i + \beta_4 Debt_i + \beta_5 CCC_i SG_i + \beta_6 CCC_i Debt_i + \beta_7 QR_i SG_i + \beta_8 QR_i Debt_i + e_i$

Model 5: $PEi = \alpha + \beta_1 CCC_i + \beta_2 QR_i + e_i$

Model 6: $PEi = \alpha + \beta_1 CCC_i + \beta_2 QR_i + \beta_3 SG_i + \beta_4 Debt_i + \beta_5 CCC_i SG_i + \beta_6 CCC_i Debt_i + \beta_7 QR_i SG_i + \beta_8 QR_i Debt_i + e_i$

Model 7: $P/BVi = \alpha + \beta_1 CCC_i + \beta_2 QR_i + e_i$

Model 8: $P/BVi = \alpha + \beta_1 CCC_i + \beta_2 QR_i + \beta_3 SG_i + \beta_4 Debt_i + \beta_5 CCC_i SG_i + \beta_6 CCC_i Debt_i + \beta_7 QR_i SG_i + \beta_8 QR_i Debt_i + e_i$

Where
- PE = Price Earnings Ratio
- P/BV = Price Book Value Ratio
- ROA = Return on Assets
- ROE = Return on Equity
- CCC = Cash Conversion Cycle
- QR = Quick Ratio
- SG = Sales Growth
- Debt = Debt Ratio
- α = Constant term
- e = Error
- i = Target companies

Data Analysis and Results

1. Descriptive Statistics

Table 2 shows the results of descriptive analysis for the study variables extracted from the SET50 listed companies in Thailand. It was found that the mean values for Cash Conversion Cycle, Quick Ratio, Sale Growth, Debt Ratio, Return on Assets, Return on Equity, Price Earnings Ratio, and Price Book Value Ratio were 46 days, 0.98, 7.55 %, 0.73, 10.45%, 19, 51%, 25.94, and 4.84, respectively.

Table 2 Descriptive Statistics

Variables	Mean	Median	Minimum	Maximum	Std. Deviation
CCC	45.66	6.57	-249.19	186.61	72.34
QR	0.98	-0.40	-0.98	2.69	0.91
SG	7.55	-1.47	-41.21	184.62	22.41
Debt	0.73	-0.12	-0.63	2.99	0.51
ROA	10.45	9.25	-3.35	33.18	6.40
ROE	19.51	16.74	-17.08	82.32	15.30
PE	25.94	21.52	5.54	91.87	15.69
P/BV	4.84	3.32	0.85	19.84	4.07

2. Correlation Analysis

The values of the correlation coefficient of variables used in the study, as shown in Table 3, showed that the independent variables used in the analysis had no multicollinearity problems; this is one important condition in regression analysis. From the analysis using Pearson's correlation, it was found that cash conversion cycles had an inverse relationship to price book value ratio and return on equity, as did the relationship between quick ratio and debt ratio. CCC had a positive relationship with return on assets and sale growth, and it also showed a positive relationship with price earnings ratio.

Table 3 Pearson's Correlation Matrix

	CCC	QR	SG	DEBT	PE	PBV	ROA	ROE
CCC	1							
QR	-.136	1						
SG	.034	-.052	1					
DEBT	-.017	-.299**	.153	1				
PE	-.134	-.069	.222*	.091	1			
P/BV	-.236**	-.039	.133	.154	.263**	1		
ROA	-.173	.249**	-.040	-.141	-.276**	.468**	1	
ROE	-.238**	-.051	-.017	.073	-.241**	.684**	.787**	1

** Correlation significant at the 0.01 level (2-tailed)

* Correlation significant at the 0.05 level (2-tailed)

3. Multiple Regression Analysis

Multiple regression analysis was conducted to find the relationship between working capital (CCC and QR) and profitability as measured by ROA and ROE, and the relationship between working capital (CCC and QR) and market value as measured by PE and P/BV. The control variables used were SG and Debt; the results are shown as follows in Table 4. Statistically significant relationships between several variables (CCC and QR) and working capital management were found for a number of models as shown below.

Table 4 Results of Multiple Regression Analysis of Factors Affecting Profitability and Market Value Ratio

	Model 1: ROA	Model 2: ROA	Model 3: ROE	Model 4: ROE	Model 5: PE	Model 6: PE	Model 7: P/BV	Model 8: P/BV
	β	β	β	β	β	β	β	β
Constant	10.454	10.221	19.514	19.675	25.937	25.503	4.836	4.679
CCC	-.142	-.109	-.250**	-.249*	-.146	-.138	-.246**	-.225*
QR	.230**	.122	-.085	-.083	-.089	-.028	-.072	-.083
SG		.026		-.009		.146		.197*
Debt		-.105		.078		.021		.003
CCC*SG		-.086		-.080		.229*		.000
CCC*Debt		.142		.053		-.081		-.061
QR*SG		.064		.027		-.174		.155
QR*Debt		-.152		.007		-.001		-.142
R - Square	.082	.119	.064	.074	.026	.146	.061	.116
Adjusted R - Square	.067	.058	.049	.010	.010	.087	.045	.055
F - Statistic	5.445**	1.955	4.172*	1.162	1.616	2.482*	3.953*	1.908

Note: CCC = Cash Conversion Cycle, QR = Quick Ratio, SC = Sale Growth, Debt = Debt Ratio, PE = Price Earnings Ratio, P/BV = Price Book Value Ratio, ROA = Return on assets, ROE = Return on equity, *Significant at 0.05 level, **Significant at 0.01 level.

It was found that QR had statistically significant relationships with profitability (ROA, Model 1 β = .230, p<0.01). This relationship occurred when no other variables were involved (Model 2). Therefore, the null hypothesis ($H_{2\text{-}0}$) may be rejected, and it may be concluded that QR had a positive relationship with profitability as measured by ROA and shown in the following equation.

$$ROAi = 10.454 - .142CCC_i + .230QR_i + e_i$$

The variable CCC had a statistically significant relationship with ROE (Model 3 β = -.250, p<0.05) and P/BV (Model 7 β = -.246, p<0.05) when no control variables were used. Moreover, a relationship between CCC and PE was found when the SG variable was involved (Model 6 β = .229, p<0.05). Therefore, the null hypothesis ($H_{1\text{-}0}$, $H_{3\text{-}0}$) may be rejected and it may be concluded that CCC had an inverse relationship with profitability as measured by ROE.

CCC also was inversely related to market value as measured by PE and P/BV. From the analysis, the following equations were formed.

$$ROE_i = 19.514 - .250CCC_i - .085QR_i + e_i$$

$$PE_i = 25.503 - .138CCC_i - .028QR_i + .146SG_i + .021Debt_i + .229CCC_iSG_i - .081CCC_iDebt_i - .174QR_iSG_i - .001QR_iDebt_i + e_i$$

$$P/BV_i = 4.836 - .246CCC_i - .072QR_i + e_i$$

However, the study found no relationship between QR and profitability as measured by ROE and PE and P/BV, and there was no relationship between Debt and dependent variables either.

Discussion

The study of the relationship between working capital management and profitability and market value found that the variables used to measure working capital management such as cash cycle and the quick ratio had statistical relationships with profitability and market value as follows.

The variable QR has a statistically positive significant relationship with ROA only when no other variables are involved. In other words, a business that has a high working capital ratio is also highly liquid, and this also creates an opportunity to increase its profitability as well. This finding is consistent with the study results of Alshatti (2015); Durrah et al. (2016); Madushanka and Jathurika (2018); Nimer et al. (2015); and Pestonji and Donkwa (2018), who stated that the quick ratio (QR) has a positive relationship with ROA (i.e. they move in the same direction as the ROA).

The variable CCC has a statistically significant relationship with ROE, which occurs when no other variables are involved. In other words, when the business has a short cash conversion cycle, it speeds up its working capital cycle and thus it eliminates the need to rely on external funding. This results in more opportunities to increase business profitability. This finding corresponds with the studies of Alavinasab and Davoudi (2013); Anser and Malik (2013); Attari and Raza (2012); Pestonji and Donkwa (2018); and Suwannaphak et al. (2018) who stated that the cash cycle is inversely related to ROE.

In addition, the variable CCC has a negative statistically significant relationship to P/BV ratio when no other variables are involved. Moreover, when the variable SG is involved, CCC has an inverse relationship to P/E ratio. This may explain that when a business has a shorter cash

cycle, it causes P/BV per share ratio to increase. At the same time, when sales growth increases, it causes P/E per share ratio to increase as well. This finding corresponds to the studies of Arachchi et al. (2017); Bandara (2015); and Forghani et al. (2013), who stated that the cash cycle is negatively related to market value.

Conclusion

Working capital management with a shorter cash conversion cycle will result in an opportunity to increase profitability and increase a firm's market value of the business. Reducing the cash cycle may be done by reducing the time to collect money from receivables or to receive money from debtors more quickly, shortening the time in which goods are sold in order to have a faster inventory turnover, and increasing repayment period in order to slow down cash outflows. These measures will improve liquidity without relying on the use of external funding to provide working capital. When a business does not rely heavily on external funding sources, the burdens of liabilities and cost of capital will be reduced, which in return will result in an opportunity to increase the company's market value. As the P/E ratio is used in measuring the rate of return on common stock each year, a high P/E ratio indicates strong shareholder confidence in the company and the company's future, for example, that profit growth will occur. Meanwhile, a lower P/E ratio indicates decreasing confidence from shareholders. The P/BV per share ratio is a ratio that shows how investors value the company. A high P/BV is a signal that investors are satisfied with the company (Asiri & Hameed, 2014).

Recommendations

The study recommends that a shorter cash conversion cycle will lead to higher profitability and better liquidity. Good liquidity will provide a company with good credit for its creditors, increasing the repayment period for more cash on hand to run day-to-day operations. Additionally, increasing sales growth will in turn increase market value, which will draw investors' interest in investing in the company's shares.

For further study, it is receommended to assess the relationship between working capital management and firm performance of all listed companies in the stock exchange to see if they reveal comparable results. Studies may also be conducted to observe the impacts of various periods to see the differences in each interval.

Limitations

The limitation of this study is that the sample size is small because some companies were excluded such as newly listed companies, companies that have not traded shares over five years, and the financial institutions and insurance companies resulting in small data.

Acknowledgments

The research was funded by Asia-Pacific International University.

References

Alavinasab, S. M., & Davoudi, E. (2013). Study the relationship between working capital management and profitability of listed companies in Tehran stock exchange. *Business Management Dynamics*, *2*(7), 1-8.

Alshatti, A. S. (2015). The effect of the liquidity management on profitability in the Jordanian Commercial Banks. *International Journal of Business and Management, 10*(1), 62-72.

Anser, R., & Malik, Q. A. (2013). Cash conversion cycle and firms' profitability – A study of listed manufacturing companies of Pakistan. *IOSR Journal of Business and Management, 8*(2), 83-87.

Arachchi, A. N. H., Perera, W., & Vijayakumaran, R. (2017). The impact of working capital management on firm value: Evidence from a frontier market. *Asian Journal of Finance & Accounting, 9*(2), 399-413.

Asiri, B. K., & Hameed, S. A. (2014). Financial ratios and firm's value in the Bahrain Bourse. *Research Journal of Finance and Accounting, 5*(7), 1-9.

Attari, M. A., & Raza, K. (2012). The optimal relationship of cash conversion cycle with firm size and profitability. *International Journal of Academic Research in Business and Social Sciences, 2*(4), 189-203.

Bandara, R. M. S. (2015). Impact of working capital management policy on market value addition. *Global Journal of Contemporary Research in Accounting, Auditing and Business Ethics (GJCRA)*, *1*(2), 354-373.

Durrah, O., Rahman, A. A. A., Jamil, S. A., & Ghafeer, N. A. (2016). Exploring the relationship between liquidity ratios and indicators of financial performance: An analytical study on food industrial companies listed in Amman Bursa. *International Journal of Economics and Financial, 6*(2), 435-441.

Forghani, M., Shirazipour, M., & Hosseini, A. (2013). Impact of working capital management on firms performance. *Journal of Basic and Applied Scientific Research, 3*(7), 943-947

Hingurala, A. A. N., Perera, W., & Vijayakumaran, R. (2017). The impact of working capital management on firm value: Evidence from frontier market. *Journal of Finance & Accounting, 9*(2), 399-413. https://doi.org/10.5296/ajfa.v9i2.12449

Kabkerd, P. (2016). *The effect of organization performance measurement by economic value added and financial ratio on stock price of listed companies in stock exchange of Thailand: A cash of SET50 index* (Unpublished master's thesis). Prince of Songkla University.

Khumwongpin, S. (2016). *Financial report analysis guidelines and case studies*. Bangkok: Chulalongkorn University.

Madushanka, K. H. I., & Jathurika, M. (2018). The impact of liquidity ratios on profitability (With special reference to listed manufacturing companies in Sri Lanka. *International Research Journal of Advanced Engineering and Science, 3*(4), 157-161.

Nguyen, T. P. L., & Mohanlingam, S. (2018). The effects of cash conversion cycle on profitability: An insight into the agriculture and food industries in Thailand. *Asian Journal of Business and Accounting, 11*(1), 97-117.

Nimer, M. A., Warrad, L., & Omari, R. A. (2015). The impact of liquidity on Jordanian Banks profitability through return on assets. *European Journal of Business and Management, 7*(7), 229-232.

Nurdiwaty, D. (2014). Quick ratio, debt to equity ratio, total assets turnover net profit margin dan price earnings ratio Terhadap Laba. *Equilibrium, 12*(1), 25-38.

Nwankwo, O., & Osho, G. S. (2010). An empirical analysis of corporate survival and growth: Evidence from efficient working capital management. *International Journal of Scholarly Academic Intellectual Diversity, 12*(1), 1-13.

Osundina, J. A., & Osundina, K. C. (2014). The effect of working capital management on market value of quoted food and beverages manufacturing firms in Nigeria. *International Journal of Business and Social Science, 5*(8-1), 168-177.

Pandya, H., & Parmar, C. (2011). Measuring corporate success: Statistical analysis of financial performance indicators. *International Journal of Research in Commerce, Economics & Management, 1*(3), 121-125.

Pestonji, C., & Donkwa, K. (2018). Profitability of food and beverage sector in the Thailand Stock Exchange. *Journal of Accountancy and Management, 10*(2), 42-55.

Santos, J. B., & Brito, L. A. L. (2012). Toward a subjective measurement model for firm performance. *BAR, Rio de Janeiro, 9*(6), 95-117.

Stock Exchange of Thailand. (2019). SET50 index listed companies. Retrieved February 12, 2020, from https://www.set.or.th/en/company/companylist.html

Suwannaphak, S., Tewongsa, A., Chancharat, S., & Chancharat, N. (2018). The relationship between working capital management and profitability: The case of listed companies in agro and food industry in Thailand. *Nida Business Journal, 23*, 92-113.

Vichitsarawong, T. (2017). *In-depth financial report analysis and equity valuation*. Bangkok: Chulalongkorn University.

Wongthatsanekorn, W. (October, 2010). *Study of cash-to-cash cycle management on profitability of private hospital in Thailand by regular and panel data regression analyses*. Paper presented at World Congress on Engineering and Computer Science, San Francisco, USA.