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Liquidity Risk of Pharmaniaga Berhad Under Firm Specific and Macroeconomics Factors

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ABSTRACT

This project is carried out for the purpose to determine the relationship between the firm's specific factors as well as macroeconomic factors with regard to the firm's liquidity risk. The researcher has selected Pharmaniaga Berhad for this study. There are various of independent variables which can classified into firm's specific factor and macroeconomic factors that has been used to analyze the relationship of these independent variables towards the firm's liquidity risk. To identify the relationship of the dependent variable and independent variable, the researcher used SPSS method, model of regression and many more. There is a total of four independent variables have been found related significantly and have influenced the liquidity risk.

Keywords: liquidity risk, firm's specific factors, macroeconomics factors, related significantly and influenced

1.0 INTRODUCTION

This project will be explaining the background of the firm in health industry that is placed in Malaysia. The firm is called Pharmaniaga Berhad that involved in the core business of manufacturing generic pharmaceuticals, sales and marketing, research and development (R&D), distributing medical goods and hospital equipment, logistics and distribution as well as community pharmacy. The researcher will be analysing the performance of Pharmaniaga using the firm's annual report.

1.1 Pharmaniaga Berhad Company Background

Founded in 1994, Pharmaniaga Berhad was originally named as Remedi Pharmaceutical Sdn. Bhd. and has changed their name to Pharmaniaga Berhad in 1998. They set their vision as "The preferred pharmaceutical brand in regional markets" and their mission is to "provide quality products and superior services by professional, committed and caring employees". (Pharmaniaga, 2016) In 1999, the company was introduced on the Second Board of Kuala Lumpur Stock Exchange (KLSE). Now, it has become the biggest integrated pharmaceutical group which is listed in Malaysia. (Pharmaniaga, 2016)

Pharmaniaga's philosophy is driven by their motto which is "Passion for Patients" which means that the company have commitment to deliver their high standard of excellence promise to their clients as this is their purpose to create lasting legacy for doing business with conscience. (Pharmaniaga Berhad, 2018)

1.2 Problem Statement

To make the company sustainable and to prevent them from insolvent, risk management plays an important part in the operation of the company. Thus, Pharmaniaga Berhad should be able to control the risk facing by the company to increase their productivity and gain trust from their shareholders and stakeholders. Pharmaniaga is exposed to various risks includes market risk, credit risk, operational risk and liquidity risk. Market risk faced by the firm includes foreign currency exchange risk and cash flow interest rate risk. Foreign currency exchange risk is exposed because they invested in foreign operations in United States, China and Indonesia whereas interest rate risk is exposed by the firm borrowings. Credit risk occurs because of the customer's credit exposures including receivables, deposits, cash and bank balances. The firm is facing liquidity

risk because their current liabilities are more than their current assets. This project will be measured how the independent variables will affect the liquidity risk of the company. Independent variables can be classified into firm's specific factors including credit risk, operational risk and performance of the company as well as macroeconomics factor which include market risk. Market risk comprised of gross domestic product (GDP), inflation rate, interest rate as well as foreign exchange rate.

1.3 Research Objective

There are three objectives in this project, which are:

1. To determine the connection between liquidity risk and the firm's specific factor.
2. To determine the connection between liquidity risk and macroeconomics factor.
3. To determine the most significant connection towards liquidity risk.

1.4 Research Questions

1. Is there any connection between liquidity risk and the firm's specific factor?
2. Is there any connection between liquidity risk and macroeconomic factor?
3. Are the firm's specific factor or macroeconomic factor have the most significant connection with liquidity risk?

1.5 Scope of Study

Under scope of study, it will be included the data for the most recent five years of Pharmaniaga Berhad which will be obtained from the company's annual report that is from year 2014 to year 2018. These data will be used by the researcher to determine the independent variables and dependent variable values. These independent and dependent variables will then be used by the researcher for the process to analyse the performance of the company.

1.6 Organization of Study

There is a total of five chapters throughout this project. For Chapter 1, there will be the overview about all the contents in this project. Chapter 2 will be the literature review that is related to this project. Chapter 3 will be the methodology that will be used to obtain all the information and data for analysis as well as the tools that will be used to analyse the raw data collected. Chapter 4 will be the finding and analysis where the

researcher is going to illustrate the process and result of analyse the data. Chapter 5 will be the discussion and conclusion of this project.

2.0 LITERATURE REVIEW

In this chapter, there will be the description and illustration for the terms that are relevant in this project. It will be explaining about the concept of the terms and the importance of these terms to the company. It will also explain how these terms is related to the performances of the company. These terms are categorized by the researcher into three categories namely dependent variable, internal independent variable as well as external independent variable.

2.1 Liquidity Risk

Liquidity is the possibility that the company will be having not enough money to satisfy their financial obligations when they are due without causing huge losses. (Abdul-Rahman, Said, & Sulaiman, 2017) Managing liquidity risk is important as it can change according to market and business conditions and the aftermaths can be widespread. If the company owns sufficient liquidity, there will be a possibility of better performance via lower interest expense or higher interest income and superior flexibility in negotiating enhanced terms and conditions with suppliers and financial institutions. (Ltd, CPA Australia, 2010) Two ratios can be used to measure liquidity risk namely current ratio and quick ratio. (Harper, 2019) The researcher will be using current ratio to represent the liquidity risk of the company.

$$Current\ Ratio = \frac{Current\ Asset}{Current\ Liability}$$

$$Quick\ ratio = \frac{Current\ Asset - Inventory - Prepaid\ Expenses}{Current\ Liability}$$

2.2 Firm Specific Factors

There will be three independent variables utilized by the researcher to identify the firm's specific factors that will affect the liquidity risk of Pharmaniaga Berhad in this study. The independent variables are credit risk, operational risk and performance of the firm.

2.2.1 Credit Risk

Credit risk is the probability of loss that is the result of the non-performance of the customers and counterparties because of their financial obligations to the company. (Sydbank, 2017) Credit risk is important because it is used as a factor to identify the

interest rate for the loan. The higher the credit risk, the higher the interest rate will be demanded by the lenders. (Labarre, 2019) According to Samuel Gameli, Kportorgbi, & Gatsi (2019), credit risk affects the performance negatively. There are two ways to calculate credit risk of the company including average-collection period and debt-to-income ratio.

$$Average\ Collection\ Period = \frac{Account\ Receivables}{\frac{Revenues}{360\ days}}$$

$$Debt\ to\ Income = \frac{Total\ Liability}{Total\ Income}$$

2.2.2 Operational Risk

Operational risk is a type of hazard to carry out the day-to-day business beyond from their profit-making activities. It can be a result of failure of internal process, human resource and external events. (Coleman, 2011) Every company must have operational risk management to eliminate errors because there are always some errors in running daily business activities. (Rouse, SearchCompliance, 2013) Basel Committee on Bank Supervision (2006) mentioned that the financial performance of a company is more fluctuate with the presence of operational risk that will adversely affect the company's net worth. To identify operational risk, we can use two ratios which include of operational ratio and operating margin.

$$Operational\ Ratio = \frac{Operating\ Expenses}{Net\ Sales}$$

$$Operating\ margin = \frac{EBIT}{Revenues}$$

2.2.3 Performance

Performance has a variety of meaning which is related to the company performance, operating of the company and the outcomes. The performance of the company must be taken into consideration as this is the indicators for the investors to evaluate whether the firm is worth for them to invest. (UK Essays, 2018) The researcher will be using return on assets (ROA) to evaluate the performance of the company.

$$ROA = \frac{Net\ Income}{Total\ Assets}$$

2.3 Macroeconomics Factors

Macroeconomics factor is the factor that will appear as a result for the change of the firm's external environment and it is beyond the firm control. There are a total of four macroeconomic factors under market risk that will be used by the researcher include gross domestic product (GDP), inflation rate, interest rate and foreign exchange rate to determine the effects of those factors towards liquidity risk.

2.3.1 Market Risk

Market risk is the probability that the value of an investment will fluctuate as a result of changes in market factor. (Chen, 2019) It is not in the control of the company because they are identified by the factors that will affect the entire economy. In Muriithi, Muturi, & Waweru (2016) findings, it shown that market risk has a negative relationship on the financial performance in short run and long run. This means that the higher exposure of the market risk, the lower the company profits. The researcher will be using gross domestic product (GDP), inflation rate, interest rate and foreign exchange rate to measure the influence of market risk.

GDP is referred as the overall value of all the things produced in a country regardless of it is made by local or foreigners. GDP growth rate is the quarter to quarter percentage increase in GDP. It will show that whether economy is growing or under recession. (Amadeo, 2019) According to Cucinelli (2013), by using liquidity coverage ratio, there is a significant positive relationship among GDP and liquidity risk.

Inflation is the increasing in Consumer Price Index (CPI). It is the weighted average prices of different products. Inflation rate will not only worsen the entire economy, it will also give impact to a bank liquidity. Therefore, the relationship between inflation rate and liquidity risk is negative. The higher the inflation rate will lead to rising in price and will boost the revenues of the firm, so the liquidity risk of the firm will be reduced. (Madhi, 2017)

Foreign exchange rate is the value of a country's currency in exchange for the other country's currency. The relationship between foreign exchange rate and liquidity risk shows negatively. This is because when the foreign exchange rate decline, the capital value will also decline while the debt value will be increasing. So, the firm's liquidity risk will increase. (Bichanga, 2016)

Interest rate is the percentage we must pay to the lender on top of the principal amount for using the lender's money. According to Voldova (2011), the higher interest rate of lending shows a positive relationship to the bank liquidity. If the interest rate increase, the interest pays by the firm for the loan will increase, so, the liquidity risk will become higher.

According to the above information, the researcher can conclude that inflation rate and foreign exchange rate show contradict relationship towards liquidity risk while there is an existence of positive relationship for GDP and interest rate with liquidity risk.

3.0 METHODOLOGY

Methodology is viewed as the system of basic rules or concepts from which particular technique within the context of a specific discipline can be derived to analyse and solve various problems. (WebFinance Inc, 2019) The researchers will be describing about the used techniques and tools to complete this project in this chapter.

3.1 Sampling Method

Sampling is the techniques that enables the researchers to infer the population data according to the results from the population subset by not investigating every people. Several sampling methods are available, and it can be classified into two groups which are known as probability and non-probability sampling. We will begin with entire sampling frame of all eligible people from the sample we select in probability sampling. So, every eligible people will have an opportunity to be chosen. While in non-probability sampling, we do not begin with entire sampling frame. By this way, some people may not have the opportunity of being chosen. The researcher will be utilizing one of the non-probability techniques which is called judgement sampling. This approach will be based on the researcher's decision in choosing who will be taking part. (Barratt & Shantikumar, 2018) The researcher will be choosing the most recent five years data of Pharmaniaga which is from 2014 to 2018 to assess the company's financial performance because this will enable us to know the company capabilities at present.

3.2 Regression Analysis

Regression analysis referred as the set of statistical techniques utilized to determine the relationships between variables. It also can be used to determine how strong the relationship between two variables as well as to model the future relationship between variables. In regression analysis, the factors are known as variables and it can be classified into dependent variable and independent variables. Dependent variable will change based on the value of independent variable or it can be the variable to be tested in scientific investigation. The input, hypothesis or driver that is adjusted to determine the effect on dependent variable is referred as independent variables. In the research, there will be only one dependent variable and two or more independent variables. There are many variations in regression analysis, for instance nonlinear, simple linear and

multiple linear. The models that is always used are simple and multiple linear. (CFI Education Inc., 2019) The formula for simple linear is written as:

$$Y = a + bX + \in$$

Where:

Y – Dependent Variable

X – Independent Variable

a – intercept

b – slope

$\in$ *- residual (error)*

3.3 SPSS Method

SPSS is known as Statistical Package for the Social Sciences or IBM SPSS Statistics. It is software that is used for statistical data analysis. SPSS is widely used to analyze any type of data including survey results, the databases for company customer, Google Analytics, the findings of scientific research and log files for servers. SPSS is very useful to the researcher because it enables them to analyze bivariate statistics, descriptive statistics forecasts statistical outcomes and forecast the identifying groups. It also provides tools for processing data, visualization and direct marketing. SPSS will be used by the researcher to analyze how the macroeconomics and microeconomics factor affect the credit risk of Pharmaniaga. (Rouse, Tech Target, 2018)

3.4 Ordinary Least Squares (OLS)

Ordinary Least Squares or OLS is a statistical analysis method which predicts the relationship among independent variables with dependent variable. This medium will help the researcher to predict the relationship by reducing the sum of squares because the observed and estimated values for the dependent variable where it is being configured as a straight line are different. (Jr., 2019) The formula is:

$$Liquidity\ Risk = \beta_0 + \beta_1 P + \beta_2 C + \beta_3 O + \beta_4 M + \varepsilon$$

Where,

P = Profitability

C = Credit Risk

O = Operational Risk

M = Macroeconomics Factors

$\beta 0, \beta 1, \beta 2, \beta 3, \beta 4$ = Model Coefficients

ε = Residual (Error)

4.0 FINDINGS AND ANALYSIS

Throughout this chapter, the data of the Pharmaniaga Berhad financial report will be analyzed by the researcher. SPSS method and graph analysis has been used by the researcher in measuring the relationship and determining the most significant independent variable that will influence the dependent variable. The firm's data from 2014 to 2018 is used by the researcher to access to SPSS.

4.1 Descriptive Statistics

	Mean	Std. Deviation	N
CURRENT RATIO	0.8403	0.0533	5
ROA	0.0838	0.0814	5
AVERAGE-COLLECTION PERIOD	36.7578	8.8914	5
DEBT TO INCOME	0.4378	0.0934	5
OPERATIONAL RATIO	0.6680	0.0494	5
OPERATING MARGIN	0.0524	0.0100	5
GDP	5.180	0.7727	5
Inflation	2.4140	1.0809	5
Interest Rate	2.8700	1.6515	5
Exchange Rate	4.3900	0.7811	5
STDV	0.0666	0.0234	5
CGI	0.8000	0.0000	5

Table 1: Descriptive Statistics

The mean, standard deviation and N (number of observations) are show in the table above. The number of observations used by the researcher is 5 where the researcher used the most recently 5 years annual report of Pharmaniaga Berhad to represent the company. Mean explained the average of current ratio which means that every RM1 of liability, we can cover with RM0.84 of assets. This represents that Pharmaniaga has a weak liquidity. The average of GDP from year 2014 to year 2018 is 5.18%. Standard deviation in the table will explain about the dispersion which means that volatility of the company. The higher the standard deviation means that the company is more unpredictable and unstable. Based on the standard deviation above, the researcher can conclude that the liquidity of the company is stable and predictable as the standard deviation is 0.0533.

4.2 SPSS Analysis

4.2.1 Correlations

		CR	ROA	ACP	DTI	OR	OM	GDP	Inflation	Interest Rate	Exchange Rate	STDV	CGI
Pearson Correlation	CURRENT RATIO	1.0000					.						
	ROA	-.1070	1.0000									.	
	AVERAGE-COLLECTION PERIOD	-.8390 **	.4530	1.0000									
	DEBT TO INCOME	-.7930 *	.5090	.9920	1.0000								
	OPERATIONAL RATIO	-.9570 ***	-.1370	.7510	.6810	1.0000							
	OPERATING MARGIN	.9800 ***	-.2240	-.9160	-.8710	-.9330	1.0000		.				
	GDP	.3300	-.2090	-.6950	-.7380	-.3110	.4240	1.0000					
	Inflation	.0900	-.7170	-.5650	-.6550	.0890	.2050	.7740	1.0000				
	Interest Rate	.1820	.4350	.1220	.2450	-.3730	.1720	-.5030	-.7950	1.0000			.
	Exchange Rate	-.5670	.7670	.8770	.9230	.3720	-.6630	-.6860	-.8460	.5020			
	STDV	.1520	-.4090	-.3380	-.2720	-.1860	.3050	-.0040	.0290	.5420	-.2230	1.0000	
	CGI	***.	.	.	.	.	.	.	.	.	.	.	1.0000

Table 2: Table of Correlation

Correlation reflected that how the independent variables reacted to our dependent variable. For this part, it will be more significant towards the current ratio when the p-value is smaller. This means that the p-value must be equal or lesser than 0.1 to prove that there is a significant relationship between independent variable and dependent variable. From the results, there are five independent variables that have a significant relationship with dependent variable, current ratio. Firstly, CGI with p-value of 0.000 indicates that it is the most significant independent variable to current ratio. With p-value of 0.002, operating margin is the second significant independent variable which will affect the current ratio whereas the operational ratio with p-value of 0.005 is the third most significant independent variable to current ratio. Both CGI, operating margin and operational ratio p-value is <0.01, so, it is considered as three-stars significant elements to current ratio of the firm. The fourth most significant independent variable is average-collection period which the p-value equal to 0.038. So, it is two-stars significant element to current ratio as the p-value is <0.05. The p-value which is <0.1 and is rated as one-star significant factor to the dependent variable. Therefore, debt to income is the least significant independent variable to current ratio as its p-value is 0.055.

Table 2 above indicated that there is only one significant independent variable that has a positive symbol, namely operating margin. With positive symbol, it means that operating margin with the value of 0.9800 will affect the current ratio positively where an increase in operating margin will lead to an increase in current ratio. In addition, there are three significant independent variables that have a negative symbol, namely, operational ratio with scores -0.957, average-collection period value is -0.839 while the debt to income's score -0.793. This negative symbol indicated that there is a negative relationship between current ratio with operational ratio, average-collection period and debt to income. This means that 0.957 increase in operational ratio will cause current ratio to decrease by 1, 0.839 increase in average-collection period will cause current ratio to decrease by 1 as well as 0.793 increase in debt to income will cause current ratio to decrease by 1.

4.2.2 Coefficient

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1 (Constant)	.5670	.0330		17.3810	.0000	.4630	.6710		
OPERATING MARGIN	5.216	.6130	.9800	8.5050	.0030	3.2640	7.1670	1.0000	1.0000

a. Dependent Variable: CURRENT RATIO

Table 3: Table of Coefficient

The coefficient table is retrieved from SPSS which is shown on Table 3 above. If the t-value has a higher value, it means that the independent variable has a more significant effect on the dependent variable. According to the table above, only one variable has been shown most significant to the dependent variable since stepwise method has been used by the researcher to run SPSS analysis. Therefore, with the t-value of 8.505, operating margin is the most significant independent variable to affect the dependent variable. In addition, it also indicates the operating margin's beta is rated at 0.980 which means the operating margin has a significant and positive relationship with current ratio.

4.2.3 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.980[a]	.960	.947	.012303821851485	3.178

a. Predictors: (Constant), OPERATING MARGIN
b. Dependent Variable: CURRENT RATIO

Table 4: Table of Model Summary

By using R square, we can know that how much the independent variables will explain the liquidity risk. According to the table above, the researcher can know that the R Square is 0.947 which means that the independent variable is 94.7% to illustrate the dependent variable. The higher percentage of R square in the model shows that the independent variable can explain well on the dependent variable.

4.2.4 Anova

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.011	1	.011	72.337	.003[b]
	Residual	.000	3	.000		
	Total	.011	4			

a. Dependent Variable: CURRENT RATIO
b. Predictors: (Constant), OPERATING MARGIN

Table 5: Anova Table

According to the ANOVA table above, the p-value for the model is very significant because the p-value is equal to 0.003 that is <0.05. In addition, the larger the F-value and the lower the p-value the better. The F-value of the model is 72.337. This means that there is a huge impact of the independent variable against the dependent variable.

4.3 Graph Analysis

After SPSS analysis, the researcher will be analyzed the relationship between the independent variables which is most significant, namely operating margin, operational ratio, average-collection period and debt to income with the dependent variable, namely current ratio.

4.3.1 Liquidity Risk
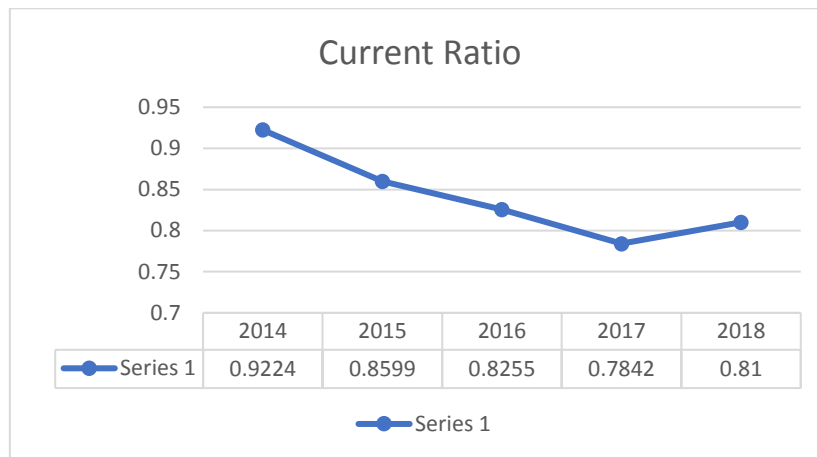
Figure 1: Pharmaniaga Berhad Current Ratio

Current ratio is the ratio that can be used to identify the liquidity risk of the firm. The higher the current ratio indicate that the firm lower risk for default, in other words, the firm has high ability to fulfil their financial obligation. So, the firm will gain more trust from the investors with higher current ratio. In figure 1, it shows that the current ratio of Pharmaniaga Berhad decrease from 2014 to 2017 and increase in 2018. This is not a good sign for Pharmaniaga Berhad as the liquidity risk of the firm has dropped from 0.9224 in 2014 to 0.81 in 2018.

4.3.2 Corporate Governance Index
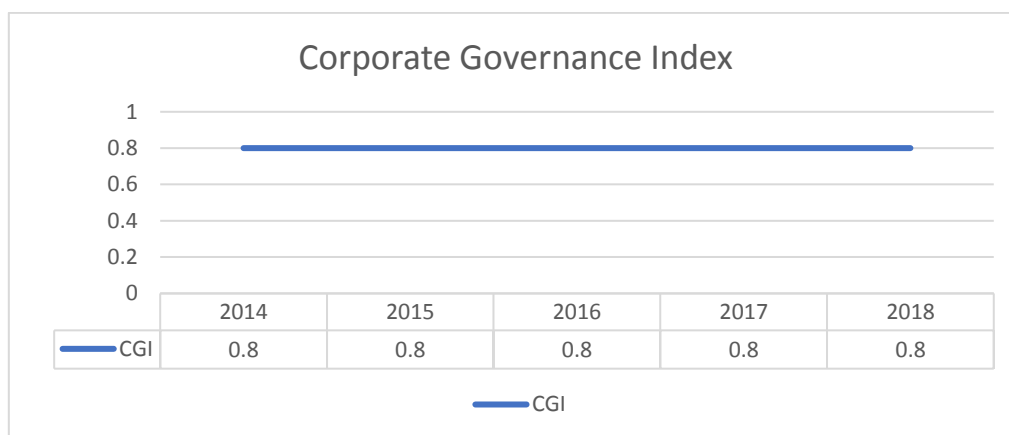
Figure 2: Pharmaniaga Berhad's CGI

The relationship between corporate governance index (CGI) and current ratio is significant since the p-value is 0.000 that is <0.001. From the graph above, it indicated that the CGI remain the same from 2014 to 2018. This is because there is a limited corporate governance indicator items which has been used for this study.

4.3.3 Correlations of Current Ratio and Operating Margin

Correlations of Current Ratio and Operating Margin

	2014	2015	2016	2017	2018
Current Ratio	0.9224	0.8599	0.8255	0.7842	0.81
Operating Margin	0.0671	0.0584	0.0483	0.0438	0.0446
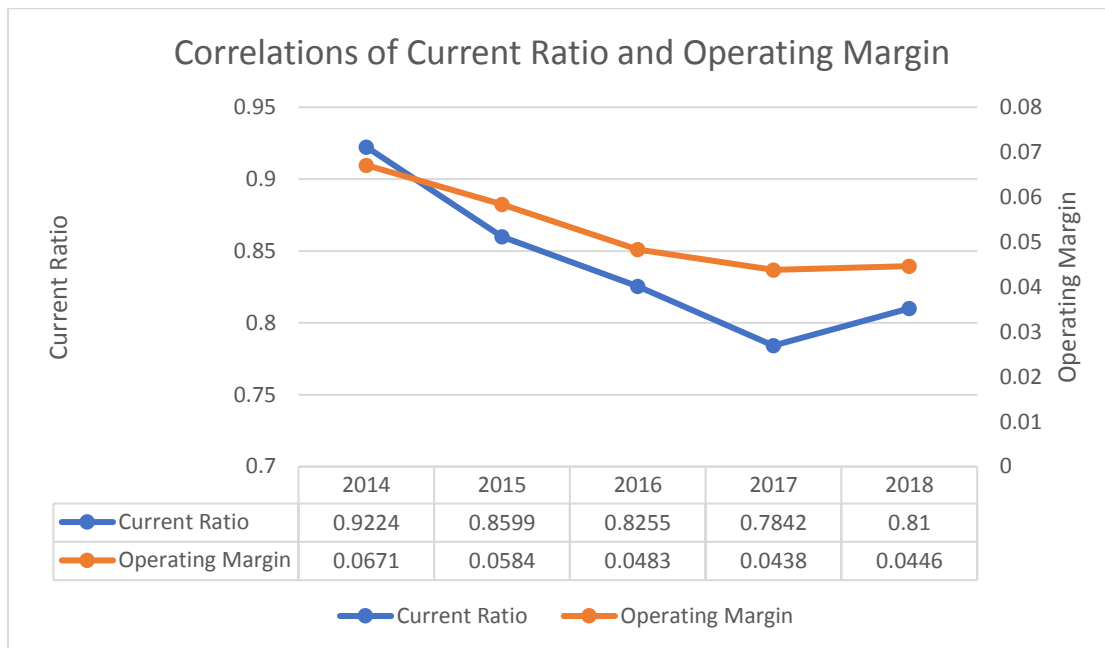
Figure 3: Correlations of Current Ratio and Operating Margin

Figure 3 above is the graph that shows the correlations between current ratio and operating margin. According to the graph, the researcher can conclude that the relationship between current ratio and operating margin is positive. When the operating margin decrease, the current ratio will also decrease, vice versa.

4.3.4 Correlations of Current Ratio and Operational Ratio

Correlations of Current Ratio and Operational Ratio

	2014	2015	2016	2017	2018
Current Ratio	0.9224	0.8599	0.8255	0.7842	0.81
Operational Ratio	0.5987	0.6416	0.6988	0.7252	0.6758
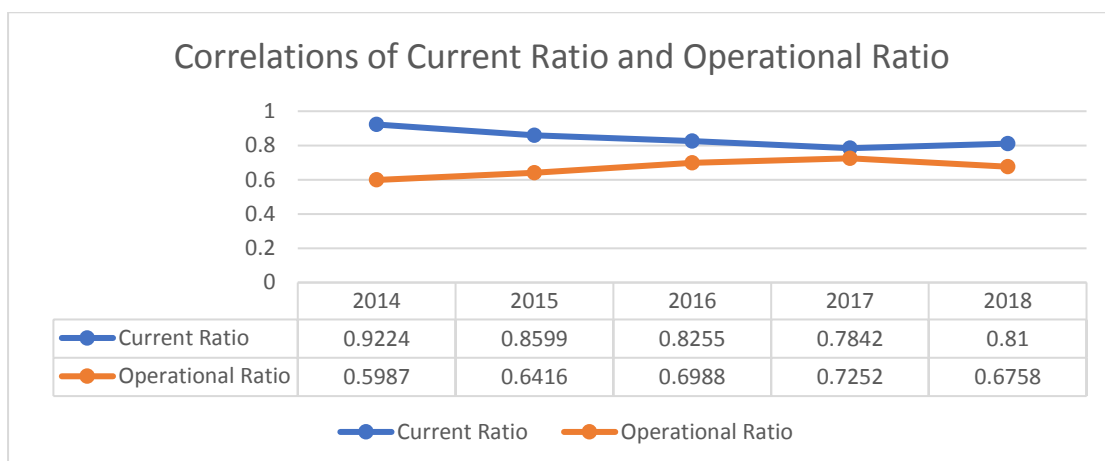
Figure 4: Correlations of Current Ratio and Operational Ratio

Figure 3 above is the graph that shows the correlations between current ratio and operational ratio. According to the graph, the researcher can conclude that the

relationship between current ratio and operational ratio is negative. When the operational ratio increases, the current ratio will decrease.

4.3.5 Correlations of Current Ratio and Average-Collection Period

Correlations of Current Ratio and Average-Collection Period

	2014	2015	2016	2017	2018
Current Ratio	0.9224	0.8599	0.8255	0.7842	0.81
Average-Collection Period	24.2352	32.1068	42.1485	38.2163	47.0825

Figure 5: Correlations of Current Ratio and Average-Collection Period

Figure 4 above is the graph that shows the correlations between current ratio and average-collection period. According to the graph, the researcher can conclude that the relationship between current ratio and average-collection period is negative. This means that the current ratio will decrease when the average-collection period increase.

4.3.6 Correlations of Current Ratio and Debt to Income

Correlations of Current Ratio and Debt to Income

	2014	2015	2016	2017	2018
Current Ratio	0.9224	0.8599	0.8255	0.7842	0.81
Debt to Income	0.3049	0.4038	0.4897	0.4372	0.5536
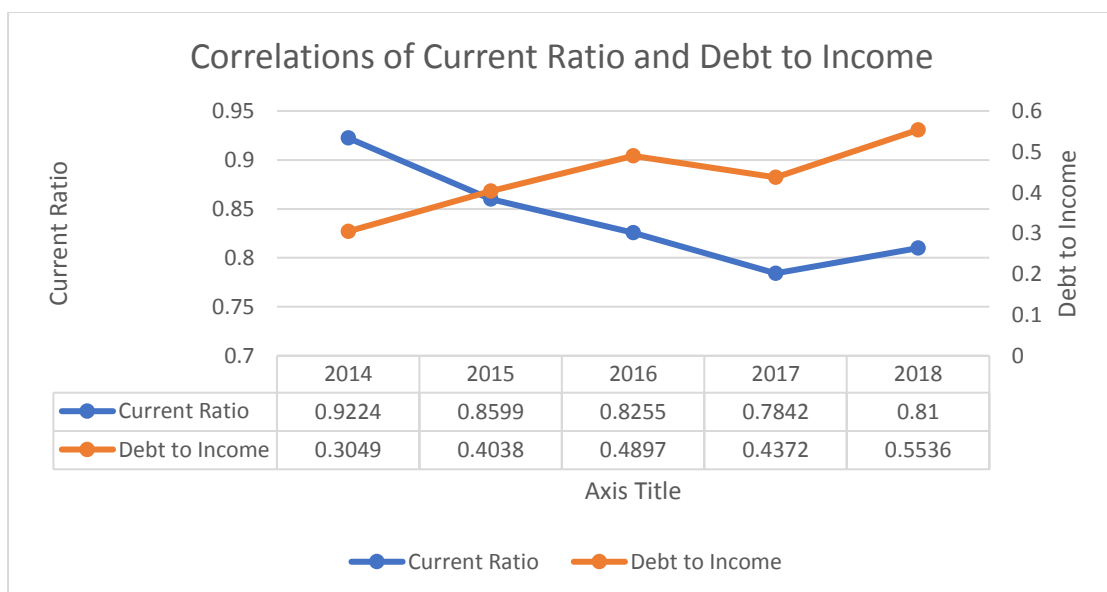
Figure 6: Correlations of Current Ratio and Debt to Income

Figure 5 above is the graph that shows the correlations between current ratio and debt to income. According to the graph, the researcher can conclude that the relationship between current ratio and debt to income is negative. This means that the current ratio will decrease when the debt to income increase.

5.0 DISCUSSION AND CONCLUSION

This research has been carried out to determine the relationship between the independent variable which can be categorized into firm's specific factors as well as macroeconomic factors and the dependent variable, namely liquidity risk of Pharmaniaga Berhad. Independent variables that are used to identify the how the firm's specific facto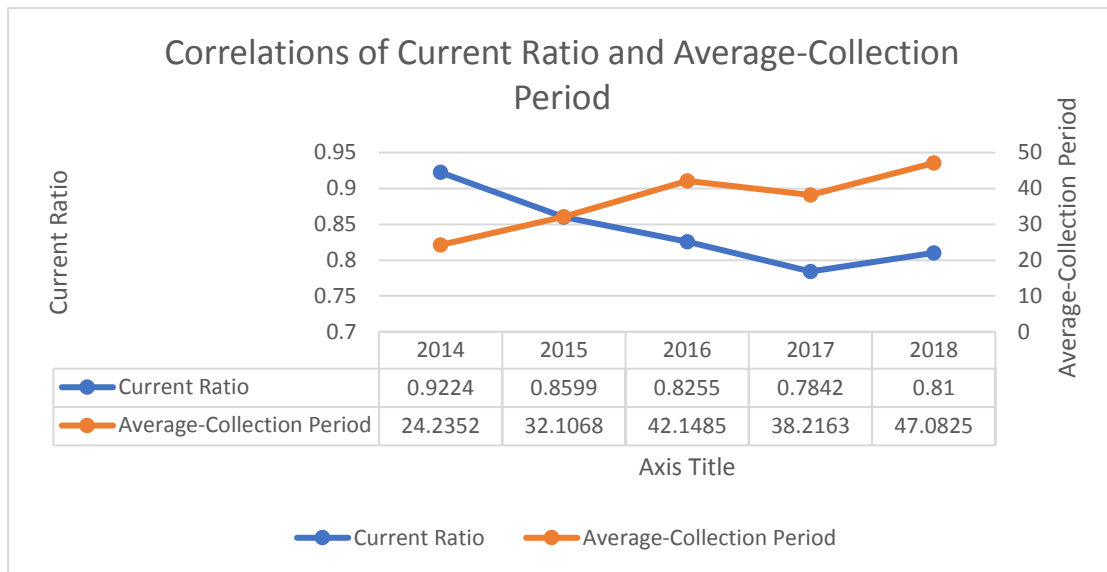rs affect the liquidity risk include credit risk, performance and operational risk of the firm while the independent variables that are used to identify how the macroeconomic factors affect the liquidity risk are exchange rate, gross domestic product (GDP), interest rate and inflation rate. All the data has been retrieved from the most recent five years annual report of Pharmaniaga Berhad. For this chapter, the researcher will discuss on the analysis result in Chapter 4 and make a conclusion for this study.

5.1 Discussion of Analysis Result

According to the result of analysis by using SPSS method, the researcher has discovered that there is a relationship between liquidity risk of Pharmaniaga Berhad and firm's specific factors as well as macroeconomic factors. The relationship between the current ratio with operating margin, operational ratio, average-collection period and debt to income are the most significant. According to the result in Chapter 4, both SPSS analysis and graph analysis indicate that the relationship between liquidity risk and operating margin is positive whereas the relationship of liquidity risk with operational ratio, average-collection period as well as debt to income are negative.

Both SPSS analysis and graph analysis have shown that there is a positive relationship between operating margin and current ratio of the firm where when the operating margin decrease from year 2014 to year 2017 will lead to a decrease in current ratio. The decreasing in current ratio will cause the liquidity risk of the firm to increase. This result has been consistent with the results of the study (Durrah, Rahman, Jamil, & Ghafeer, 2016) which shown that operating margin and current ratio have a positive relationship.

For the relationship between operational ratio and current ratio, both SPSS analysis and graph analysis have shown that they affect each other negatively. Where the operational ratio increase will cause the current ratio to decrease. This is because a high operational

ratio indicates that the company is less efficient in generating operating profit which will lead to an increase in liquidity risk of the firm.

According to Pharmaniaga Berhad annual report, the firm is facing credit risk cause by the customer's credit exposures including receivables, deposits, cash and bank balances. (Pharmaniaga Berhad, 2018) The result for both SPSS analysis and graph analysis has shown that there is a negative relationship between average-collection period and current ratio. This means that an increase in average-collection period will lead to a decrease in current ratio which will increase the liquidity risk of the firm.

The relationship of debt to income and current ratio is negative as proved by both SPSS analysis and graph analysis where an increase in debt to income will cause a reduction in current ratio. This result has proved the researcher's hypothesis according to the past study in 2.2.1 where credit risk can affect the firms negatively.

As compared to the operational risk, credit risk has a less significant relationship towards liquidity of the firm which the result has been proved by the SPSS analysis result where the most significant factor that will affect the liquidity risk of the firm is operational risk.

5.2 Recommendations

This study has indicated that operational risk is the most significant factors towards the liquidity risk of the firm. Therefore, Pharmaniaga Berhad must manage their operations more effectively and efficiently to reduce the risks. Pharmaniaga should keep strong business relationship with other business such as suppliers and shipping companies. As the firm may expose to common risks such as miscommunications, vendor disputes, accounting errors, fail to deliver and legal documents is missing or incomplete, they must be sure that they are always on the same track as their suppliers by double checking the figures as well as making sure that the supply chain is correct in terms of invoices, quantities and so on.

In addition, Pharmaniaga should manage failure in equipment as the breakdown can cause the firm incurred losses. The firm should update their programs and hardware frequently and make sure that their infrastructure is protected by the best security. The firm also need to have a regular maintenance on their machines.

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APPENDICES

Table A: Pharmaniaga Berhad Firm's Specific Factors and Macroeconomics Factors

YEAR	ROA	CURRENT RATIO	QUICK RATIO	AVERAGE-COLLECTION PERIOD	DEBT TO INCOME	OPERATIONAL RATIO	OPERATING MARGIN
2014	0.0758	0.9224	0.2407	24.2352	0.3049	0.5987	0.0671
2015	0.0566	0.8599	0.2318	32.1068	0.4038	0.6416	0.0584
2016	0.0272	0.8255	0.3097	42.1485	0.4897	0.6988	0.0483
2017	0.0343	0.7842	0.2840	38.2163	0.4372	0.7252	0.0438
2018	0.2255	0.8100	0.2680	47.0825	0.5536	0.6758	0.0446

YEAR	GDP	Inflation	Interest Rate	Exchange Rate	STDV	CGI
2014	6.00	3.10	2.07	3.50	0.0552	0.8
2015	5.10	2.10	4.97	4.29	0.1074	0.8
2016	4.20	2.10	2.54	4.49	0.0602	0.8
2017	5.90	3.80	0.76	4.05	0.0625	0.8
2018	4.70	0.97	4.01	5.62	0.0477	0.8

B. SPSS RESULTS FOR MODEL 1

Table B (1) Descriptive Statistics

	Mean	Std. Deviation	N
CURRENT RATIO	0.8403	0.0533	5
ROA	0.0838	0.0814	5
QUICK RATIO	0.2668	0.0318	5
AVERAGE-COLLECTION PERIOD	36.7578	8.8914	5
DEBT TO INCOME	0.4378	0.0934	5
OPERATIONAL RATIO	0.6680	0.0494	5
OPERATING MARGIN	0.0524	0.0100	5
CGI	0.8000	0.0000	5

Table B (2) Correlation

		CURRENT RATIO	ROA	QUICK RATIO	AVERAGE-COLLECTION PERIOD	DEBT TO INCOME	OPERATIONAL RATIO	OPERATING MARGIN	CGI
Pearson Correlation	CURRENT RATIO	1.000							.
	ROA	-.1070	1.0000						.
	QUICK RATIO	-.6580	-.1880	1.0000	.				.
	AVERAGE-COLLECTION PERIOD	-.8390	.4530	.6710	1.0000				.
	DEBT TO INCOME	-.7930	.5090	.5900	.9920	1.0000			.
	OPERATIONAL RATIO	-.9570	-.1370	.8030	.7510	.6810	1.0000		.
	OPERATING MARGIN	.9800	-.2240	-.7260	-.9160	-.8710	-.9330	1.0000	.
	CGI	.	.	.	.	.	.	.	1.0000
Sig. (1-tailed)	CURRENT RATIO	.	.4320	.1140	.0380	.0550	.0050	.0020	.0000
	ROA	.4320	.	.3810	.2220	.1910	.4130	.3580	.0000
	QUICK RATIO	.1140	.3810	.	.1080	.1470	.0510	.0830	.0000
	AVERAGE-COLLECTION PERIOD	.0380	.2220	.1080	.	.0000	.0720	.0140	.0000
	DEBT TO INCOME	.0550	.1910	.1470	.0000	.	.1030	.0270	.0000
	OPERATIONAL RATIO	.0050	.4130	.0510	.0720	.1030	.	.0100	.0000
	OPERATING MARGIN	.0020	.3580	.0830	.0140	.0270	.0100	.	.0000
	CGI	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.

Table B (3) Coefficient

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1 (Constant)	.567	.033		17.381	.000	.463	.671		
OPERATING MARGIN	5.216	.613	.980	8.505	.003	3.264	7.167	1.000	1.000

a. Dependent Variable: CURRENT RATIO

Table B (4) ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.011	1	.011	72.337	.003[b]
	Residual	.000	3	.000		
	Total	.011	4			

a. Dependent Variable: CURRENT RATIO

b. Predictors: (Constant), OPERATING MARGIN

Table B (5) Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.980[a]	.960	.947	.012303821851485	3.178

a. Predictors: (Constant), OPERATING MARGIN

b. Dependent Variable: CURRENT RATIO

Charts

Histogram

Dependent Variable: CURRENT RATIO

Mean = 5.41E-15
Std. Dev. = 0.866
N = 5

Frequency

Regression Standardized Residual

Normal P-P Plot of Regression Standardized Residual

Dependent Variable: CURRENT RATIO

Expected Cum Prob

Observed Cum Prob
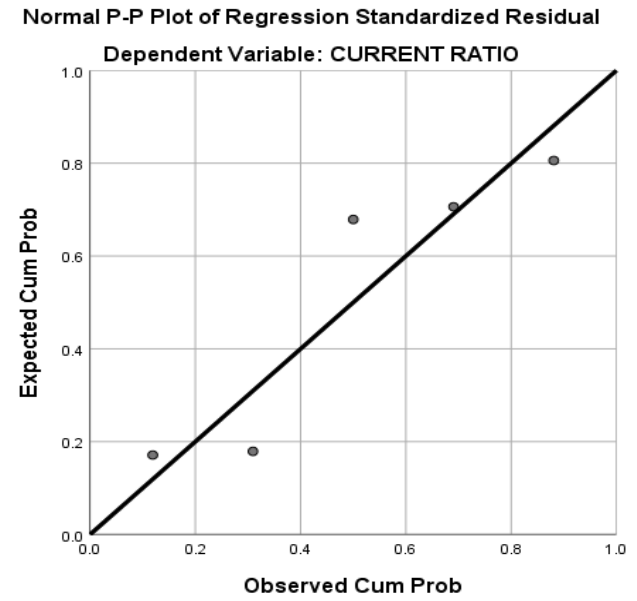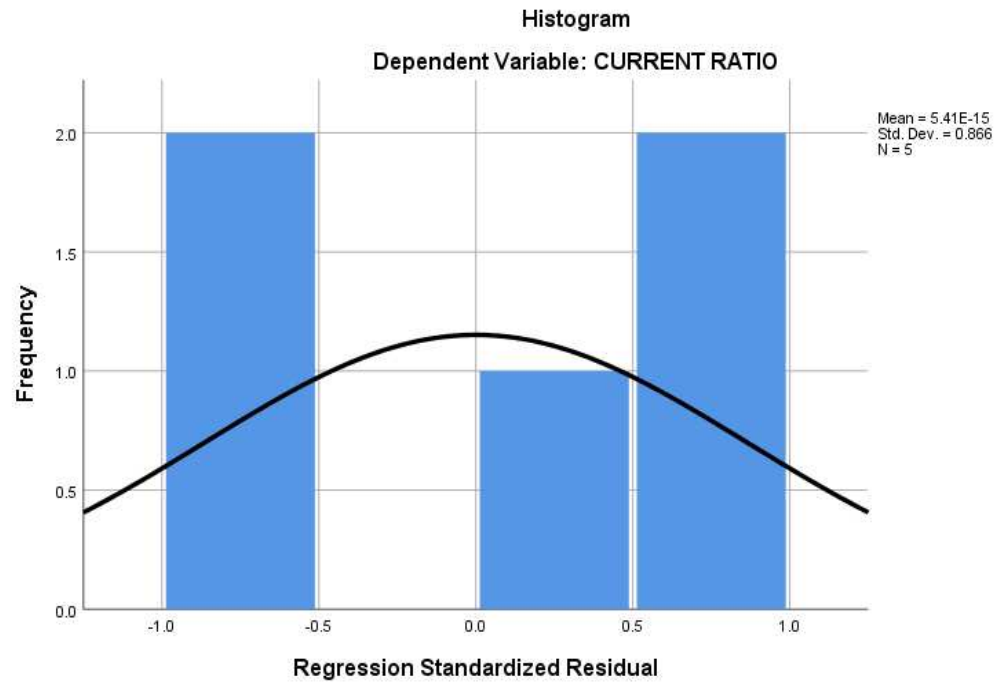
C SPSS Results for Model 2

Table C (1) Descriptive Statistics

	Mean	Std. Deviation	N
CURRENT RATIO	0.8403	0.0533	5
GDP	5.1800	0.7727	5
Inflation	2.4140	1.0809	5
Interest Rate	2.8700	1.6515	5
Exchange Rate	4.3900	0.7811	5
STDV	0.0666	0.0234	5

Table C (2) Correlation

		CURRENT RATIO	GDP	Inflation	Interest Rate	Exchange Rate	STDV
Pearson Correlation	CURRENT RATIO	1.0000		.		.	
	GDP	.3300	1.0000	.			
	Inflation	.0900	.7740	1.0000			
	Interest Rate	.1820	-.5030	-.7950	1.0000		
	Exchange Rate	-.5670	-.6860	-.8460	.5020	1.0000	
	STDV	.1520	-.0040	.0290	.5420	-.2230	1.0000
Sig. (1-tailed)	CURRENT RATIO	.	.2940	.4430	.3850	.1590	.4040
	GDP	.2940	.	.0620	.1940	.1010	.4980
	Inflation	.4430	.0620	.	.0540	.0350	.4820
	Interest Rate	.3850	.1940	.0540	.	.1950	.1730
	Exchange Rate	.1590	.1010	.0350	.1950	.	.3590
	STDV	.4040	.4980	.4820	.1730	.3590	.

Table D SPSS Results for Model 3

Table D (1) Descriptive Statistics

	Mean	Std. Deviation	N
CURRENT RATIO	0.8403	0.0533	5
ROA	0.0838	0.0814	5
AVERAGE-COLLECTION PERIOD	36.7578	8.8914	5
DEBT TO INCOME	0.4378	0.0934	5
OPERATIONAL RATIO	0.6680	0.0494	5
OPERATING MARGIN	0.0524	0.0100	5
GDP	5.1800	0.7727	5
Inflation	2.4140	1.0809	5
Interest Rate	2.8700	1.6515	5
Exchange Rate	4.3900	0.7811	5
STDV	0.0666	0.02349	5
CGI	0.8000	0.0000	5

Table D (2) Correlation

		CR	ROA	ACP	DTI	OR	OM	GDP	Inflation	Interest Rate	Exchange Rate	STDV	CGI
Pearson Correlation	CURRENT RATIO	1.000	-.107	-.839	-.793	-.957	.980	.330	.090	.182	-.567	.152	.
	ROA	-.107	1.000	.453	.509	-.137	-.224	-.209	-.717	.435	.767	-.409	.
	AVERAGE-COLLECTION PERIOD	-.839	.453	1.000	.992	.751	-.916	-.695	-.565	.122	.877	-.338	.
	DEBT TO INCOME	-.793	.509	.992	1.000	.681	-.871	-.738	-.655	.245	.923	-.272	.
	OPERATIONAL RATIO	-.957	-.137	.751	.681	1.000	-.933	-.311	.089	-.373	.372	-.186	.
	OPERATING MARGIN	.980	-.224	-.916	-.871	-.933	1.000	.424	.205	.172	-.663	.305	.
	GDP	.330	-.209	-.695	-.738	-.311	.424	1.000	.774	-.503	-.686	-.004	.
	Inflation	.090	-.717	-.565	-.655	.089	.205	.774	1.000	-.795	-.846	.029	.
	Interest Rate	.182	.435	.122	.245	-.373	.172	-.503	-.795	1.000	.502	.542	.
	Exchange Rate	-.567	.767	.877	.923	.372	-.663	-.686	-.846	.502	1.000	-.223	.
	STDV	.152	-.409	-.338	-.272	-.186	.305	-.004	.029	.542	-.223	1.000	.
	CGI	.	.	.	.	.	.	.	.	.	.	.	1.000
Sig. (1-tailed)	CURRENT RATIO	.	.432	.038	.055	.005	.002	.294	.443	.385	.159	.404	.000
	ROA	.432	.	.222	.191	.413	.358	.368	.087	.232	.065	.247	.000
	AVERAGE-COLLECTION PERIOD	.038	.222	.	.000	.072	.014	.097	.161	.423	.026	.289	.000

DEBT TO INCOME	.055	.191	.000	.	.103	.027	.077	.115	.346	.013	.329	.000
OPERATIONAL RATIO	.005	.413	.072	.103	.	.010	.305	.443	.268	.269	.382	.000
OPERATING MARGIN	.002	.358	.014	.027	.010	.	.239	.371	.391	.111	.309	.000
GDP	.294	.368	.097	.077	.305	.239	.	.062	.194	.101	.498	.000
Inflation	.443	.087	.161	.115	.443	.371	.062	.	.054	.035	.482	.000
Interest Rate	.385	.232	.423	.346	.268	.391	.194	.054	.	.195	.173	.000
Exchange Rate	.159	.065	.026	.013	.269	.111	.101	.035	.195	.	.359	.000
STDV	.404	.247	.289	.329	.382	.309	.498	.482	.173	.359	.	.000
CGI	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.

Table D (3) Coefficient

	Model	Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Tolerance	VIF
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	Model	Sum of Squares	df	Mean Square	F	Sig.
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	Residual	.000	3	.000		
	Total	.011	4			

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b. Predictors: (Constant), OPERATING MARGIN

Table D (5) Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
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a. Predictors: (Constant), OPERATING MARGIN

b. Dependent Variable: CURRENT RATIO

Charts

Histogram

Dependent Variable: CURRENT RATIO

Mean = 5.41E-15
Std. Dev. = 0.866
N = 5

Normal P-P Plot of Regression Standardized Residual

Dependent Variable: CURRENT RATIO