LIQUIDITY RISK OF FOOTWEAR INDUSTRY IN AMERICA UNDER FIRM SPECIFIC AND MACROECONOMIC FACTORS

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Abstract
This study has conducted in purpose to identify the relationship of firm specific factors and macroeconomic factors towards the liquidity risk of the footwear industry in America. The companies which have been chosen by the researchers are Puma SE, Skechers, Crocs, Adidas and Nike from footwear industry in America. There are many independent variables has been used to determine the relationship of firm specific factors and macroeconomic factors to liquidity risk of the company. Researchers have used such method to determine the relationship of liquidity risk with independent risk which include SPSS, regression model and others. There are one of the independent variables have been identified as the most significant related and influenced to the liquidity risk for the footwear industry.

Keywords: relationship, firm specific factors, macroeconomic factors, liquidity risk, significant related and influenced

CHAPTER 1
INTRODUCTION

1.1 Introduction
At the first of this chapter, it will start with an overview of the footwear industry which listed in the United States market. This chapter contain a lot of discussion about footwear industry in United States which are the problem statement, scope of study, research objectives and so on.

1.2 Overview of United States Footwear Industry
United States of America, a federal republican constitutional state consisting of 50 states with a population of 3.28 million and the capital known as Washington D. C. which having the largest footwear market in the world. Based on item compose, athletic and non-athletic are the fragments into which the footwear advertise is separated.
Between the athletic and non-athletic, non-athletic footwear contributes a bigger, yet imperceptibly high, income commitment to the general market. In the year of 2017, footwear industry has contributed approximately 79.86 billion U.S. dollars as the revenue to the United States market. However, athletic footwear has created roughly 19.6 billion U.S. dollars for the U.S. economy which is the largest percentage among all the variation of footwear. Even though the normal offering cost of a couple of athletic footwear was 58.16 U.S. dollars. (Christof Baron, 2018) Beside from the year of 2017, footwear industry in US represent 34 billion U.S. dollars and it has a yearly development rate of 3.1% from 2010-2015. There are about 23.8 million pairs of shoes produced in the United States, accounting for about 30% of the total. In 2002, the total import of footwear reached 1.4 billion pairs, with an estimated value of 15.4 billion US dollars. In 2010, the market value of sports shoes was about one million US dollars, and the compound annual growth rate (CAGR) of the past five years was increasing of 0.8%. To the growth of footwear industry, it provides job opportunities to 213,433 people in United States. The reason of significant growth in footwear industry is because footwear has additionally turned into a critical type of articulation for some individuals from all kinds of different backgrounds, not just filling a reasonable need for the wearer, yet in addition assuming a job in depicting their self-character through the footwear they pick. (Footwear Industry In the US, 2018)

1.3 Problem statement
Liquidity risk for every companies are required to manage efficiently to reduce or prevent indebtedness. Liquidity is erratic, hard to gauge, and regularly misty. In an emergency, showcase members will probably depend on media and talk manufacturing plants as opposed to income discharges to survey the danger of liquidity to exchanging accomplices. (Shyam Venkat, 2016) Exchanges liquidity in particular markets has all of a sudden turned out to be not simply debilitated but rather has basically vanished for times of a couple of minutes to a couple of days. These scenes are approximately alluded to as "fits of rage" and "glimmer crashes," and have happened in a scope of business sectors and market composes. An early such scene occurred on May 6, 2010, in the U.S. equity market. (Malz, 2018) On June 9 of 2008, Lehman declared a second-quarter loss of $2.8 billion, its first misfortune since being spun off by American Express and announced that it had raised another $6 billion from speculators. The firm likewise said that it had helped its liquidity pool to an expected $45 billion, diminished gross resources by $147 billion, lessened its
introduction to private and business contracts by 20%, and chop down use from a factor of 32 to around 25. The overload of liquidity pool has led Lehman Brother to the bankruptcy as their do not have enough cash flow to pay the debt. (Lioudis, 2017) Nonfinancial business interest for liquidity likewise expanded amid the emergency to meet high preparatory requests for money. Numerous organizations drew assets from existing credit lines just because they dreaded proceeded with unsettling influences in the credit markets. To refer to one precedent, American Electric Power drew down $2 billion from a current credit line provided by JP Morgan Chase and Barclays as lead arrangers. (Strahan, 2012) It’s important to recognize factors that contribute towards liquidity risk among organizations in footwear industry in United States. This is because the liquidity risk that facing by a company will directly impact the GDP of the country and the economy as well. Lehman Brother company is the best reference that can be seen. By recognizing the factors that affecting the liquidity risk, the essential moves can be made to decrease liquidity probability with the alternatives that recommended by United States government.

1.4 Research Objective
This study aims to determine the factors that influence and related to the liquidity risk which include firm specific factors and macroeconomic factors among the companies in footwear industry in United States. The objective of this study is mentioned below:

a) To identify the relationship between liquidity risk and firm specific factors.
b) To identify the relationship between liquidity risk and macroeconomic factors.
c) To identify the significant relationship towards the liquidity risk.

1.5 Research Questions
a) Does any relationship between liquidity risk and firm specific factors?
b) Does any relationship between liquidity risk and macroeconomic factors?
c) Do the firm specific factors have a more significant relationship with liquidity risk?

1.6 Scope of study
The scope of the study of this project is about the footwear industry in United States. The sample of study consists of five companies of footwear industry in United States which is Puma SE, Skechers, Crocs, Adidas, and Nike. The financial data, ratio, and information of the company are based
on each company annual report for 5 years which is from the year 2013 to 2017.

1.7 Organization of the study
This study consists of five chapters. The first chapter has stated the overview of footwear industry in United States and problems about what main concerned through this study. Moreover, chapter one has stated the research objectives, research question, and scope of the study. Then, chapter two is the review of the literature with the further explanation of financial risk, liquidity risk, and macroeconomic factor.

Chapter three is the methodology which it covered about the approaches and methods that used to make the analysis of the financial performance. In this chapter, it covered about the research approaches, data collection method, and data analysis technique. In addition, chapter four is data analysis and findings which is to make the analysis and explanation of the financial data that gathered for the study. Lastly, chapter five is the conclusion of this project which includes the summary and the implication of the study.

CHAPTER 2
LITERATURE REVIEW
2.1 Introduction
In this chapter, researchers are going to illustrate the literature which are going to use in completing this project. Researchers are also will explain further about the macroeconomic factors those influence the liquidity risk for the footwear industry in USA.

2.2 Liquidity Risk
Liquidity risk occur when the company unable to fulfil their debt due to the inability of the company to convert their asset in to cash form without any loss during the process. This is difficult for the company when it needs immediate cash in running their business but the valuable asset which they hold cannot sell in the actual market value and caused the financial loss to the company (Investing, 2018).

Liquidity risk could be evaluated by calculating current ratio and quick ratio of the company. Current ratio used to measure the capability of the company to repay their debt in short time where the higher current ratio ensures the company is able to repay their debt easily. Quick ratio has the similar function as current ratio except the quick ratio exclude the inventory and the prepaid expenses in calculating. This is because there are many financial analysts observed that the inventory takes a lot of time in order to change into cash form. Therefore, here is the quick ratio exist to calculate the ability of company to repay their debt in a very short time (CFA, 2018). In this study,
researchers have used quick ratio as dependent variable to run SPSS system.

\[
\text{Quick Ratio} = \frac{\text{Current Asset} - \text{Inventory} - \text{Prepaid Expenses}}{\text{Current Liability}}
\]

2.3 Firm Specific Factors
In this study, there are 3 independent variables those used by researcher to determine the firm specific factors which influence the liquidity risk of the Crocs. Inc which are profitability of the company, credit risk of the company and operational risk of the company.

Profitability of the company means that the ability of company to generate profit from their business. Profit is the amount of the net income for the company after all the expenses which are related in the process of generating revenue have been paid. There are 2 ratios used by researcher to determine profitability of company which are return on asset (ROA) and return on equity (ROE) (Study, 2018).

\[
\text{ROA} = \frac{\text{Net Income}}{\text{Total Asset}} \\
\text{ROE} = \frac{\text{Net Income}}{\text{Common Equity}}
\]

Credit risk occur when the company suffer a loss due to the debtor’s default. Credit risk have been used as the factor to determine the interest rate of the loan where the interest will be higher if the credit risk is high vice versa (WebFinance Inc, 2018). There are 2 methods in calculating the credit risk of the company which are average-collection period (AVP) and debt to income (DTI).

\[
\text{AVP} = \frac{\text{Account Receivable}}{\text{Revenues/360days}} \\
\text{DTI} = \frac{\text{Total Liability}}{\text{Total Income}}
\]

Operational risk is the possibility of loss result of the failure in company procedures, policies and systems. There are usual in incurring errors during the processes therefore the operational risk management of a company should always present in order to mitigate the effect of errors (Rouse, 2013). There are also 2 ratios to determine operational risk which are operational ratio (OR) and operating margin (OM).

\[
\text{OR} = \frac{\text{Operating Expenses}}{\text{Net Sales}} \\
\text{OM} = \frac{\text{Earning Before Income Taxes}}{\text{Revenues}}
\]

Corporate Governance is the basic framework of the rules where the accountability, transparency, independently and fairness of the company should be provided for the stakeholders of the company (Web Finance, 2018). The researchers have use index score to evaluate the corporate governance of each company to identify the influence of the corporate governance towards the liquidity risk of the company.

2.4 Macroeconomic Factors
Macroeconomic factors are the factor which occur due to the change in the company’s external environment. These factors should be considered by the company to ensure the sustainability of the
company and prevent the situation of insufficient capital during the business operating. There are four macroeconomic factors used by researcher as independent variables to measure the influence of the macroeconomic factors to liquidity risk which include beta, gross domestic product, inflation rate, exchange rate and interest rate.

Gross domestic product growth rate show that the economy condition of a country and the opportunity of business in the country. When the GDP grow show that the economy condition of the country is stable and the overall production from the business in the country increase. This show that the revenue of the more business in the country increase and the liquidity risk will decrease simultaneously (Aspachs, 2005).

Inflation rate is the rate that show the fall of purchasing value of money due to the rise in price of the products continuously. Horváth et al., 2014 stated that there is a negative relationship between the inflation rate and liquidity of the company. When the inflation rate is high, the overall price of the goods will increase, and this caused the revenues of the company increased. The increasing in revenue of the company leads to the reduction in liquidity risk of the company (Horváth, 2014).

Exchange rate is the currency rate of a country in order to change to the currency of another country. The exchange rate has a negative relationship with the liquidity of the company since the exchange rate is decrease which make the value of capital in company decrease and the value of debt in the company increase. Therefore, the liquidity risk of the company increases subsequently (Bichanga, 2016).

Interest rate represent to the interest interbank rate and the interest rate of the loan. When the interest rate decrease, the interest of the debt in company will decrease and the liquidity risk will fall subsequently. Therefore, there is a positive relationship between the liquidity risk and the interest rate (Baldan, 2012).

Based on the information above from the previous study, researcher have made the hypothesis where inflation rate and exchange rate have a negative relationship with liquidity risk. Meanwhile, the positive relationship does exist from GDP and interest rate towards liquidity risk.

CHAPTER 3
METHODOLOGY

3.1 Introduction
The methodology is a system that describes action must be taken to analysis or investigate annual report or research for the application of particular procedures or
techniques used to identify the process, select and analyse the information for finding the problem for allowing the reader to evaluate the study of project. The main purpose the methodology used for to fulfil the objective of the study. This research regarding how liquidity risk and its macroeconomic factor effect the footwear companies. This research conduct five footwear companies from United States country. The method used for analysis those five companies’ data by applying (SPSS) Statistical Package for the Social Sciences.

3.2 Sampling Technique

The population or sampling technique is used for discrete particular of group that can be identified the characteristic for the purpose of analysis and data collection. The sampling technique for this research is footwear companies in United States. There have five companies for sampling technique which is Adidas, Nike, Puma SE, Skechers and Crocs. The sample of this study is five years for each company which is from the year 2013 until 2017 chosen from population. The data sample taken from the annual report for each company from the year 2013 until 2016 for the purpose to measure the dependent variables as liquidity risk and the independent variables as the macroeconomic factors.

3.3 Statistical Technique

The statistical technique basically mathematical concepts it’s used to be analysis the statistical of the random data. To measure the statistical technique to identify the firm specific factors from various aspect which is profitability, liquidity, operational and credit by using the data collect from each and every five company’s income statement and balance sheet. Furthermore, to identify macroeconomic factor used historical price from the year 2013 until 2017 from United States to calculate the beta. To identify the trend of economic condition for the year 2013 until 2017 by using GDP, interest rate, inflation rate, exchange rate for those years.

3.3 Data Analysis

In accordance to the conceptual framework of research in the future, there are one dependent variable and two independent variables in this study. The dependent variable is footwear industry Liquidity risk and other two independent variables is footwear industry specific factors and Macroeconomic factors. The research framework is as follow:
3.4 SPSS method
In this study, IBM SPSS version 25 was used to compute the data to obtain a result. SPSS, which also known as Statistical Package for Social Sciences are known to be a powerful software that help researchers in conducting a statistical data analysis. However, in 2014, SPSS was renamed and known as IBM SPSS Statistic after being acquired by IBM in 2009. As much this software were commonly used for social sciences, it now become popular in data mining, research on market and also for marketing. This is due to the capability of IBM SPSS Statistic in conducting descriptive statistics, bivariate statistics, numeral outcome prediction and also prediction for identifying groups (Techopedia, n.d). It normally used in social science and market research. Furthermore, we use IBM SPSS to compute the linear regression and also correlation between the variables based on the quantitative data from 2013 to 2017 annual report from five company of footwear industry.

CHAPTER 4
FINDINGS AND ANALYSIS
4.1 Introduction
In this chapter, researchers are going to use graph analysis to identify the trend of each independent variables in the footwear industry. Researchers have calculated the average data among the 5 samples which has been used as representative of the data for footwear industry in America. After that, researchers have used SPSS system to evaluate which independent variables is the most significant related and most important to dependent variable.

4.2 Analysis Result in SPSS
After the analysis by SPSS, the researcher has analysed the relationship between the most significant independent variables which are average-collection period and debt to income with the dependent variable, quick ratio. Researchers have calculated the average value among the samples which are
the 5 companies for recent 5 years to represent the data for footwear industry in America.

4.2.1 Average ROA of the footwear industry

![Figure 1: Average ROA of the footwear industry](image)

Figure 1 shows that the average of the return on asset (ROA) of the sample which has represented the ROA of the whole footwear industry. In the graph, researchers have observed that the ROA has grown from 2013 to 2015 about 0.0608 and undergone a reverse trend from 2015 to 2017 which has recorded a fall of 0.0335. Among these 5 companies, the Nike has recorded the highest ROA with 0.1591 in the average of each company along these 5 years. In reverse, Puma SE has scored the lowest average ROA within these 5 years with 0.0314 where the used of 1 asset in the company will only produce the 0.0314 of the profit.

4.2.2 Average Quick Ratio of the Footwear Industry

![Figure 2: Average Quick Ratio of the Footwear Industry](image)
The figure 2 shows that the average of quick ratio of 5 company which have been chosen in recent 5 years. The average of the quick ratio used as sample to represent the quick ratio of the footwear industry in American. The figure show that the quick ratio of the footwear industry has fall from 2013 to 2015 and undergone a reverse trend from 2015 to 2017. Out from this graph, the company that has scored the average quick ratio of each company along recent 5 years is Crocs, Inc with 1.9698. This has proven that the Crocs company has advantage in dealing with the debt compared to other companies. On the other hand, the Adidas has only recorded with 0.5416 of the quick ratio where the Adidas has a low capability to repay their obligation.

4.2.3 Average Debt to Income of the footwear industry

![Figure 3: Average Debt to Income of the footwear industry](image)

Figure 3 shows that the average of debt to income of the footwear industry. There is a slight rise in 2014 about 2.4263 and a great fall in 2015 about 12.5033. After that, there is a significant rise consequently from 2015 to 2017 about 15.2679. In debt to income ratio, the average of each company along these 5 years, Adidas has the highest debt to income ratio which has scored about 41.3733 where the Adidas need to use about 41.3733 of the income to cover 1 of their company debts. This has proven that Adidas has low capability in fulfil their obligation and the credit risk will increase simultaneously. However, the lowest average debt to income ratio for each company has won by Skechers with only 0.4680.

4.2.4 Average Operational Ratio of the footwear industry
The average operational ratio of the footwear industry has been shown as a line graph as show in the figure 4. There is a rise in 2015 about 0.0068 from 0.3852 in 2014 to 0.3920 in 2015. However, there are downtrends have been recorded in other years which drop of 0.0027 in 2014, 0.0076 in 2016 and 0.0002 in 2017. Apart from the graph, the average of operational ratio for each company along these recent 5 years are low where each of the company have not exceed 0.5 of the operational ratios. The highest operational is belong to Crocs, Inc where the operating cost of the company is the highest compared to other 4 companies. Nike has recorded the lowest average of operational ratio along these 5 years with 0.2112 where the operational risk for the company is the lowest compare to other companies.

4.2.5 Average Index Score of the footwear industry

![Figure 5: Average Index Score of the footwear industry](image)
For the index score of the footwear industry in America has undergone uptrend along 5 years as shown in figure 5. There is a rise of 0.07 from 2013 until 2017. This has shown that the corporate governance of the footwear industry has improved in a right track. In the average index score of each company in 5 years, the Cros, Inc has scored the lowest point which is 0.4180. However, the Adidas has scored about 0.8 in their average index score which means the corporate governance of the Adidas is very well in the 4 components which are accountability, transparency, independently and fairness.

4.2.6 Average Beta of the footwear industry

![Figure 6: Average Beta of the footwear industry](image)

Figure 6 shows the average beta financial of the 5 companies from the footwear industry in America. The graph has shown that the beta financial of the footwear industry has grown in 2014 about 0.3143 and fall 0.1442 in 2015. However, the beta of the footwear industry has recorded a rise of 0.2107 from 2015 to 2017. Apart from the graph, the average for each company along these 5 years, Puma SE has recorded the highest average beta with 1.0317. Inversely, Crocs company has recorded the lowest average beta which is 0.2456. There are moderate scored by other companies where Skechers company is 0.4568, Adidas is 0.9411 and Nike is 0.5516.

4.2.7 Market Risk in the footwear industry
Figure 7 shows that market risk in the footwear industry which has included GDP, inflation rate, exchange rate and interest rate. GDP of the America has recorded an uptrend generally although there is a fall in 2016 about 1.4. The inflation rate of the America has a significant drop in 2015 which drop of 1.5 from 1.6 in 2014 to 0.1 in 2015. However, it has rise again in a greater spread of 2.0 to 2.1 in 2017. The exchange rate of the America has fall along the 5 years from 1.66 in 2013, drop of 0.31 to 1.35 in 2017. The interest rate of the America has shown a totally different trend with exchange rate which increase along 5 years. The interest rate has increase from 0.25 in 2013 to 1.5 in 2017 which has recorded a rise of 1.25.

4.3 Analysis of SPSS method

4.3.1 Coefficient Table

In the very first part, researchers have identified which of the independent variables is the most important to the dependent variable.

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>95.0% Confidence Interval for B</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Std. Error</td>
<td>Beta</td>
<td>t</td>
<td>Sig.</td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>.492</td>
<td>1.906</td>
<td>.258</td>
<td>.800</td>
</tr>
<tr>
<td>ROA</td>
<td>17.336</td>
<td>8.890</td>
<td>1.682</td>
<td>1.950</td>
</tr>
<tr>
<td>ROE</td>
<td>-5.275</td>
<td>2.362</td>
<td>-.982</td>
<td>-2.233</td>
</tr>
</tbody>
</table>
The coefficient table explain the how much of the independent variables are influence of dependent variable. The smaller the number in the significant column, the more important of the independent variable towards dependent variable. The table above show that the beta of the 5 companies is the most important independent variable that influence the dependent variable which is the quick ratio of the 5 companies which has scored 0.037 and reached 2-star significant. Besides, the T-value of the beta in the table is also the highest one among all of the independent variables which has scored 2.325. This observation could be considered as the beta of the footwear industry is the most significant independent variable to influence the quick ratio of the industry.

4.3.2 Correlation Table
After the researchers have find out that the beta is the most important independent variables to the dependent variable, the researchers have identified the significant correlation of the beta to dependent variable, quick ratio. The significant part in the correlation table show the beta have significant correlated to the quick ratio which the p-value has scored 0.001 and reached 3-star significant correlated to the dependent variable.

<table>
<thead>
<tr>
<th>QUICK RATIO</th>
<th>QUICK RATIO</th>
<th>1.000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>ROA</td>
<td>.210</td>
</tr>
<tr>
<td></td>
<td>ROE</td>
<td>-.044</td>
</tr>
<tr>
<td></td>
<td>AVERAGE-COLLECTION</td>
<td>-.519</td>
</tr>
<tr>
<td></td>
<td>PERIOD</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DEBT TO INCOME</td>
<td>-.418</td>
</tr>
<tr>
<td></td>
<td>OPERATIONAL RATIO</td>
<td>-.221</td>
</tr>
<tr>
<td></td>
<td>OPERATING MARGIN</td>
<td>.017</td>
</tr>
<tr>
<td></td>
<td>Beta</td>
<td>-.613</td>
</tr>
<tr>
<td></td>
<td>GDP</td>
<td>-.099</td>
</tr>
<tr>
<td></td>
<td>INFLATION</td>
<td>.165</td>
</tr>
<tr>
<td></td>
<td>EXCHANGE RATE</td>
<td>.243</td>
</tr>
<tr>
<td></td>
<td>INTEREST</td>
<td>-.139</td>
</tr>
</tbody>
</table>

Table 3: Pearson Correlation part in Correlation Table

<table>
<thead>
<tr>
<th>Size of correlation</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.90 to 1.00 (-0.90 to -1.00)</td>
<td>Very high positive (negative) correlation</td>
</tr>
<tr>
<td>0.70 to 0.90 (-0.70 to -0.90)</td>
<td>High positive (negative) correlation</td>
</tr>
<tr>
<td>0.50 to 0.70 (-0.50 to -0.70)</td>
<td>Moderate positive (negative) correlation</td>
</tr>
<tr>
<td>0.30 to 0.50 (-0.30 to -0.50)</td>
<td>Low positive (negative) correlation</td>
</tr>
<tr>
<td>0.00 to 0.30 (0.00 to -0.30)</td>
<td>Negligible correlation</td>
</tr>
</tbody>
</table>

Table 4: Interpretation of size of correlation

Source: Hinkle, Wiersma, & Jurs as cited in Mukaka (2012)

In the Pearson Correlation part, researchers are going to use the table 4 which is interpretation of size of correlation to express the correlation of beta to the quick ratio.
ratio. The table has explained that beta have moderate negative correlation with the dependent variable where both of the values is between -0.50 to -0.70. Besides, beta has also scored the highest among all of the independent variables.

4.3.3 Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.885&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.783</td>
<td>.599</td>
<td>.3813355470977</td>
<td>2.860</td>
</tr>
</tbody>
</table>

<sup>a</sup> Predictors: (Constant), INTEREST, OPERATIONAL RATIO, GDP, AVERAGE-COLLECTION PERIOD, DEBT TO INCOME, Beta, INFLATION, ROE, EXCHANGE RATE, OPERATING MARGIN, ROA

Table 5: Model Summary

In this model summary, the R square of the study is 0.599 which means 59.9% of these independent variables to explain the dependent variable, quick ratio. The Durbin-Watson in the table is also acceptable as its rules which should not more than 3 and should not less than 1.

4.3.4 ANOVA Table

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>6.805</td>
<td>11</td>
<td>.619</td>
<td>4.254</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>1.890</td>
<td>13</td>
<td>.145</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>8.695</td>
<td>24</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup> Dependent Variable: QUICK RATIO

<sup>b</sup> Predictors: (Constant), INTEREST, OPERATIONAL RATIO, GDP, AVERAGE-COLLECTION PERIOD, DEBT TO INCOME, Beta, INFLATION, ROE, EXCHANGE RATE, OPERATING MARGIN, ROA

Table 6: ANOVA Table

The ANOVA table show that the significant of the study is 0.008 which is 2-star significant. This value show that the study is significant and referable for the industry. However, the F column number is 4.254 which means that this study has not a huge impact.

CHAPTER 5
DISCUSSION AND CONCLUSION

5.1 Introduction

The aim of this study to investigate the liquidity risk and its macroeconomic factors among five companies which is Puma SE, Skechers, Crocs, Adidas and Nike for five year of each companies. To achieve this
study objective, need to apply the companies’ specific factors and macroeconomic factors. In this chapter five conduct the discussion of the result, limitation of the study and recommendation.

5.2 Discussion of result

These objectives of this study is to analysis the footwear industry’s liquidity risk as dependent variable and independent variables in The US, objectives of this study are:

a) To identify the relationship between liquidity risk and firm specific factors.

b) To identify the relationship between liquidity risk and macroeconomic factors.

c) To identify the significant relationship towards the liquidity risk.

Based on SPSS analysis, the table of correlation and coefficient show the evidence that beta and average collection period effect liquidity risk. The correlation table shows that beta has strongly negative relationship with quick ratio, which p-value of beta <0.001, reached 3-star. It means that when beta increases, the liquidity ratio will increase. According to coefficient table, only beta is most significant variables and negative relationship with dependent variable with t-value = -2.325, p < 0.05. it shows that changing beta will influence the level of liquidity risk. Besides, beta is from market risk which is macroeconomic factor. So, it indicates that increasing in market risk will result into an increase in firm’s liquidity risk.

For average collection period, it has moderately negative and significant relationship with liquidity risk in correlation table, with p-value < 0.05. it means that average collection period increase, the quick ratio will decrease. Coefficient table shows that average collection period has negative but not significant relationship with quick ratio, with t-value = -0.165, (p= n.s). To sum up, the most significant variable is beta, which only macroeconomic factors influence significantly liquidity risk of footwear industry in the US. Based on the model summary table, it shows that the value of R square is 0.783, which means that 78.3 % of the total internal and external variance has been explained. And the ANOVA result table indicates that the significant of the study is 0.008 which is 2-star significant. It can be used to specify the model 2 of study.

5.3 Limitation

The limitation of this study is these five footwear companies are all from the US, and for the whole footwear industry, we only analysis five companies, and only cover five years annual reports from 2013-
2017 for each company. This information is limited our study to analysis the footwear industry, so the result could not suitable for every footwear company.

5.4 Recommendation

Based on the study clear shows that those five companies failed to manage their liquidity risk. So that these five companies should take an appropriate action to overcome the liquidity risk. First of all, those five companies should take the primary action to manage their account receivable efficiently in order to avoid or reduce the liquidity risk. Moreover, they also establish credit policy to their account receivable its will assist those five companies manage their account receivable well and also its keep track on account receivable in a consistently that can reduce the collection period. This policy will be very helpful to those companies and its will be reduce the counterparty risk of those companies.

References


Baldan, C., Zen, F., & Rebonato. (2012). Liquidity risk and interest rate risk on bank: are they related? University of Padova, Department of Economic and Managerial Sciences, CEFIN.

Bichanga, E. (2016). EFFECT OF MACROECONOMIC VARIABLES ON CORPORATE LIQUIDITY RISK AMONG MICROFINANCE BANKS IN KENYA. UNIVERSITY OF NAIROBI.


Footwear Industry In the US. (2018, September). Retrieved from Wikibizpedia: https://wikibizpedia.com/Footwear_Industry_In_the_US


Malz, A. M. (2018). Liquidity Risk after the Crisis. CATO.

Mukaka, M. M. (2012). A guide to appropriate use of correlation coefficient in medical


