Audi AG's Liquidity Risk and Corporate Governance

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Abstract

Liquidity risk management is very important to every company to mange their company's liquidity. The aim of this study attempts to investigate the firm-specific factor (internal factors), macroeconomic (external factors), and firm-specific factor, macroeconomic influence towards liquidity risk in Audi AG. The method of the study is regression analysis of Audi by using the SPSS Statistic 25 System. This study is based on annual report of 5 years, from 2014 to 2018. The liquidity risk of Audi AG show in the regression analysis has greater influence by operating ratio (firm-specific factor) in company and inflation rate (macroeconomic) in German.

Keywords: liquidity risk, firm-specific factors, macroeconomics and corporate governance.

1.0 INTRODUCTION

1.1 Overview

Audi AG is a company which manufacturing automotive in German. Audi AG known around the world as part of the big three luxury car manufactures. The AG is stands for "Aktiengesellschaft", means "incorporated" in German. Audi is a member of the Volkswagen Group and has its headquarter office is located at Ingolstadt, Bavaria, Germany.

In the early 20th century, the initial or the first enterprises named Horch and the Audiwerke was founded by engineer, August Horch with other two manufacturers named DKW and Wanderer leading to the foundation of Auto Union in 1932. In 1960, the modern era of Audi essentially when Auto Union was acquired by Volkswagen from Daimler-Benz.

Everyone wonders what's the meaning of the logo of Audi is. The Audi's logo with the four ceiling rings that represent the four manufacturers of Auto Union, Horch (August Horch), DKW and Wanderer. The company name, Audi is from the word of Latin translation of the surname of the founder, August Horch. The "Horch" means "listen" in German and becomes "audi" in Latin.

To achieve the concepts of sound corporate governance, Audi AG must strive for the 7 concepts to ensure and enable corporations to sustain in long term and enhance the value of shareholders. These are openness, honesty, transparency, independent, accountability, responsibility, fairness, reputation and social responsibility.

Firstly, the concept that play by Audi AG is openness, honesty and transparency. Audi AG willingness to provide well-founded information and background reports such as operational, strategic corporate development and financial publications on their website (www.audi.com). Audi also has maintaining the concept of independent of company. The board of the company has various and large number of independent non-executive directors, however, Bram Schot, the CEO of Audi AG and other Chairman of the board have the potential to manipulate and control the company. And they are free from the influence of other in order to minimize or avoid potential conflicts of interest.

Beside that, the board of Audi AG should be accountable to shareholders and ensure that the management also accountable to the board. Audi AG interpret integrity as acting in a responsible that embraces general ethical standards and their corporate values. With effect from January 1, 2019, the Supervisory Board appointed Hildegard Wortmann as the member of the Board of Management with responsibility for the "Marketing and Sales" division in Audi AG. The director of Audi AG should be liable for the performance of company to the stakeholders as well as shareholders.

Furthermore, Audi AG should maintain the concept of fairness. All Audi shareholders receive a compensatory payment corresponds to the dividend that is distributed in the same each year to Volkswagen AG shareholders for each Volkswagen ordinary share. This concept refers to all shareholders including minorities of the company should receive equal consideration in order to protect shareholders right. Audi AG has a long reputation for technological innovation. Based on the Consumer Reports in previous year, people associate the brand with technology and style of Audi automotive.

To establish these 7 concepts of sound corporate governance are vital for every organization or company in order to ensure and enable corporations to sustain in long term and enhance shareholder value.

There are some risks that Audi AG should manage the company performance, liquidity risks, credit risk, operation risk and market risk.

Based on the annual report of Audi from the year 2014 to 2018 show that the share price was increasing. It may due to the opportunity for Audi in the marketplace.

The credit risk of Audi increases from 2014 to 2018, the ability to collect back from account receivables or costumers predicted around 25 days to 35 days. This will affect the ability to manage the payment or debt of company.

The liquidity risk of Audi shown unstable among the year 2014 to 2018. This indicates Audi whether has strong ability of to the pay short-term debt.

1.2 Research Objective

1. To study the internal factors determine to liquidity risk.

2. To study the external factors determine to liquidity risk.

3. To study both internal factors and external factors determine to liquidity risk.

1.3 Research Questions

1. Does any relationship between the internal factors pointing to liquidity risk?

2. Does any relationship between the external factors pointing to liquidity risk?

3. Does any relationship between both internal factors and external factors pointing to liquidity risk?

1.4 Scope of Study

Audi is one of the samples to study its details about automotive industry in German. The information, data as well as financial ratio was stated from Audi AG annual report in year 2014 to 2018.

1.5 Organization of The Study

This investigation includes 5 chapters. The first chapter is the introduction of this study which includes overview, research objectives, research questions, scope of study and organization of the study. Next, second chapter explain the dependent variables and independent variables in the literature review. Third chapter discuss the research of methodology and data analysis. For forth chapter, we explain the findings and results in this study. Finally, the summary and conclusions of this study will show in the fifth or last chapter.

2.0 LITERATURE REVIEW

Corporate governance defined a structure or a system by companies are controlled and directed (Cadburry report,1992). Corporate governance is involving a set of relationships between the performance of company, board, shareholders as well as stakeholders to provide the system through which the objectives of the company are set, and the means of attending those objectives and monitoring performance are determined (OECD, 2004). Corporate governance ensures that businesses in every corporate have appropriate decision-making processes and controls so that the interests of all stakeholders (shareholders, employees, suppliers, customers and the community) are balanced. Having a good corporate governance in company, the management and the board will be more effectively with all challenges to run the company. However, lack of corporate governance of a company will impact their company's profit falling, tarnished image, even worse will influence society as well as global.

The performance of every company is important because it allows businesses within the same sector enable easily to compared and their performances measured against one another. Reporting on business performance ensures that performance over different time periods can be compared. The most relevant is the performance of firm to build the field of strategic management of company (Rumelt, R. P., et al., 1994). Measure the company performance determine and decide how great of the company is performing and active by comparing the results of initiatives to objectives and estimating and evaluating to the company targets. In addition, according to Ebrahim Mohammed Al-Matari; Abdullah Kaid Al-Swidi; Faudziah Hanim Bt Fadzil, 2014, company performance can be measured by using on investment (ROI), return on assets (ROA), debt-to-equity and so on.

The firm-specific factors, also known as internal factors, refer to anything in the company and they are under control of the company. Internal environmental factors are composed of managerial resources, core capability, organization structure and organization culture (J.-W. Noh PhD 15 February 2011). The internal factors are included Return on Asset (ROA), Quick ratio, Current ratio, Average collection period, Operation ratio, Operation margin, Corporate Governance Index and so on. Duncan (1972) defined business external environment as all the factors outside an organization that are taken into consideration by the organization in its decision making. These factors depend on the complexity and dynamism of the environment (Duncan 1972; Dess & Beard 1984). The external factors included Growth Domestic Product (GDP), Inflation rate, Interest rate, Exchange rate and so on. In general, there are 4 types of risk, they are liquidity risk, credit risk, operation risk as well as market risk will impact the performance of the company.

Liquidity risk is measuring the ability of company or bank to pay or meet short-term financial demands, or we called that the short-term debt. According to Univ. Prof. Dr. Silvia Petrescu, 2008, the liquidity measures the ability of the company to face the short-term obligations and it reflects the capacity to rapidly transform the current assets in cash. Based on Investopedia, liquidity risk is the ability of an individual, company or firm to pay its short-term debts without suffering or difficulty catastrophic losses. Liquidity risk can be measure by using the quick ratio and current ratio.

Credit risk is the default risk on a debt due to a borrower who fails to make the required payments (Hitesh Bhasin 2019). According to Investopedia, credit risk is the risk of loss that arise from a borrower's failure to repay the loan and fail to meet contractual obligations. Based

on the Central Bank of Malaysia (Bank Negara Malaysia), credit risk is the risk of a counterparty failing to perform its obligations. Credit risk can be measure by using Average Collection Period and Debt to Income.

Operational risk is defined as the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events (Bank for International Settlements 2011). Operational risk also refers to the risk of loss due failed in the internal processes, human and systems or from external events (Basel Committee on Banking Supervision, 2004). To measure the operational risk capital, financial institutions are required to use four data elements, which are internal loss data, external loss data, scenario analysis and business environmental and internal control factors.

Market risk is defined as the risk to a financial portfolio from movements in market prices such as exchange rates, interest rates, and commodity prices (Elements of Financial Risk Management Second Edition, 2012). According to Aretina-Magdalena David-Pearson, 2013, market risk is defined as the risk that a financial position changes its value resulting from the change of market risk factor such as decrease or increase of the stock price, exchange rate as well as interest rate.

3.0 METHODOLOGY

3.1 Introduction

This chapter will explain the method which used in this study and discuss the data collection method.

3.2 Population and Sampling Technique

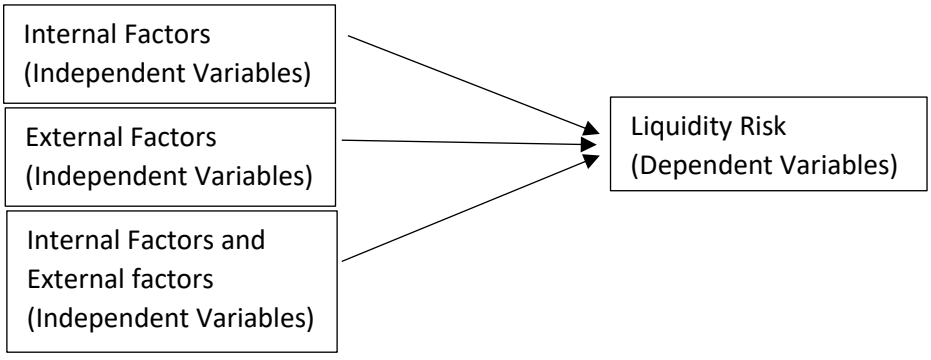
Population refer to any group of individuals who are the main subject of an investigation. To investigate the population in this study is the automotive industry or automotive sector in German. However, one of the automotive companies were chosen is Audi as a sample from the population in order to guide in this study. In this study, the data are obtaining from the annual report among the year 2014 to 2018 only in order to measure the dependent variables as liquidity risk and the independent variables (internal factors and external factors).

3.3 Statistical Technique

The data obtained from annual report of Audi from the year 2014 to 2018 to evaluate the impact or effect of internal factors of the company and external factors which is macroeconomic. The internal factors or firm-specific factors included performance of company, liquidity, operational, and credit. In addition, the CGI is measure by the information relating board of director in terms of meeting attendance, audit committee, gender diversity on board. The external factors or macroeconomic factors to liquidity risk GDP, inflation rate, interest rate and exchange rate in German from 2014 to 2018.

3.4 Data Analysis

Figure 1 is the study that will analysis the data as follow:



(Figure 1)

3.5 Statistical Package for Social Sciences (SPSS)

The combined model of multivariate regression is used to determine the impact of internal and macroeconomic factors on liquidity risk of Audi. The hypothesis was illustrated in Model 1, 2 and 3.

Model 1: Combined model of internal factors to the liquidity risk of Audi

$$\text{Liquidity risk} = a + a1ROAi + a2ACPi + a3DTIi + a4ORi + a5OMi + a6CGIi + \varepsilon it$$

Model 2: Combined model of external factors to the liquidity risk of Audi

$$\text{Liquidity risk} = a + a1GDPi + a2Inflationi + a3IRi + a4ERi + a5MRi + \varepsilon it$$

Model 3: Combined model of internal and external factors to the liquidity risk of Audi

$$\text{Liquidity risk} = a + a1ROAi + a2ACPi + a3DTIi + a4ORi + a5OMi + a6CGIi + a7GDPi + a8Inflationi + a9IRi + a10ERi + a11MRi + \varepsilon it$$

4.0 FINDING AND ANALYSIS

4.1 Descriptive Analysis

Table 1: Descriptive statistics of dependent and company specific variables.

Descriptive Statistics

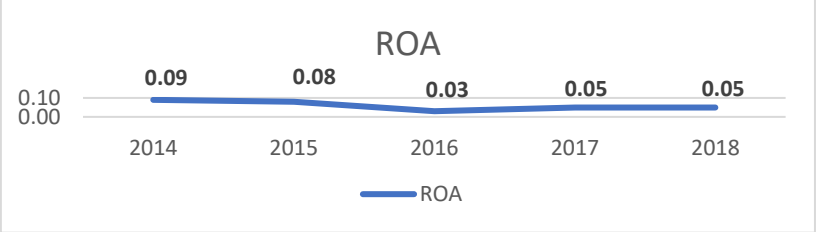
	Mean	Std. Deviation	N
Quick Ratio	1.126271542	.1129197369	5
ROA	.0606847941	.0209744466	5
Average Collection Period	29.97808633	4.847800238	5
Debt To Income	10.65140859	3.959621815	5
Operating Ratio	.0612188642	.0203545661	5
Operating Margin	.0811400625	.0220766255	5
CGI	.800	.0000	5
GDP	1.948336443	.3536019382	5
Inflasion Rate	1.100	.6595	5
Interest Rate	.4940	.40185	5
Exchange Rate	.8588000000	.0629023052	5
STDV	8.683466140	3.083769879	5

(Table 1)

The data obtained run in SPSS System by using linear regression analysis with 5 years, 2014 to 2018. Based on the above, the table 1 shown the mean and standard deviation of dependent and variables ratio.

I) Performance of Company

Graph 1 stated the Return on Asset (ROA) of Audi among the year 2014 to 2018.

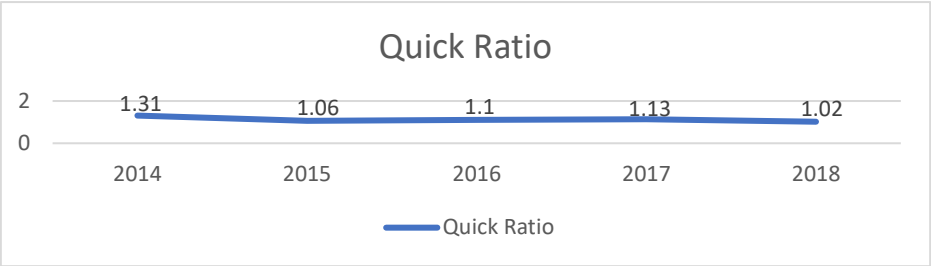


(Graph 1)

ROA refer to return on asset which mean to measure the profit that generate from asset. ROA is measure the profitable of the company. The higher the ROA, the profitable and the greater performance of company. Based on graph 1, ROA of Audi show declined from 9% to 3% in year 2014 to 2016. However, it arised to 5% and stay remained in year 2017 and 2018. The mean and standard deviation of ROA in this company was 0.0607 and 0.0210 respectively.

II) Liquidity Risk

Graph 2 stated the Quick ratio of Audi in years 2014 to 2018.

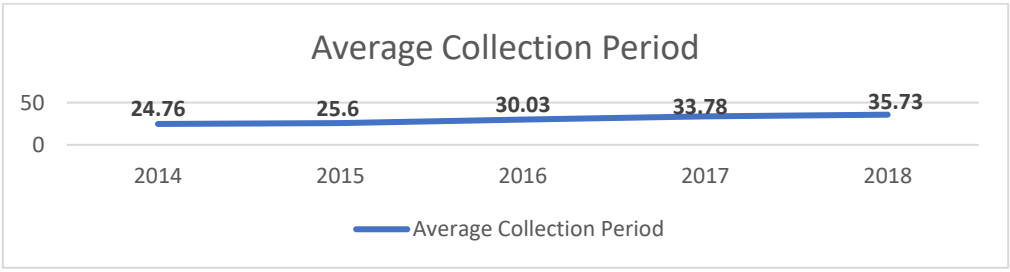


(Graph 2)

Liquidity of the company is measure by quick ratio. The higher the quick ratio, the more liquidity for the company and have ability to solve the insolvency. Based on graph 2, the highest quick ratio among the year is 2014, 1.13. After that, it declined in 2015 and raised in 2017 and fall again to 1.02 in 2018. The average or mean as well as standard deviation was 1.1263 and 0.1129 respectively in year 2014 to 2018.

III) Credit Risk

Graph 3 show the Average Collection Period of Audi among the year of 2014 to 2018.



(Graph 3)

Average collection period is used to measure the credit risk of company. It is the days or period sales outstanding of company. The period that the money was received or collected from customers or account receivables. Based on graph 3, Audi's average collection period show an increase from year 2014 (24.76 days) to 2018 (35.73 days). This mean the higher the average collection period indicated the payment that collect by Audi from account receivables is slow. It may due to the term of credit of Audi are not strict and will impact the company negatively. The average collection period's mean is 30 days and its standard deviation is 4.8478 over the year.

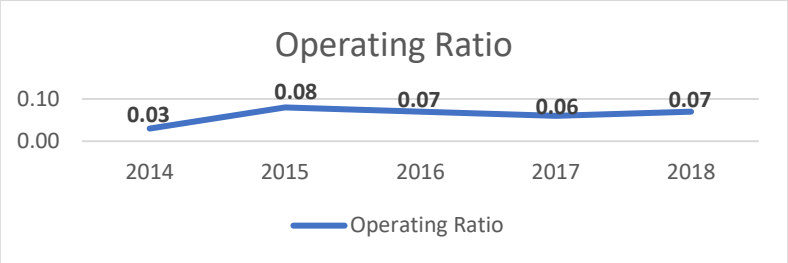
Graph 4 stated the Debt to Income of Audi in year 2014 to 2018.

(Graph 4)

Debt to income is measure the ability of a company to manage or pay back the debt or payment that borrowed from lenders. This mean that the greater the debt to income, the more the trouble for making or meet the debts. However, the lower the debt to income, the more ability to make payment or debts. In graph 4, Audi's debt to income increase from 7.13 in 2014 and reach the highest at 17.27 in 2016 and fall to 10.35 in 2017 and increase slightly at 10.37 in 2018. The debt to income's mean shows 10.6514 and standard deviation 3.9596 in year 2014 to 2018.

IV) Operational Risk

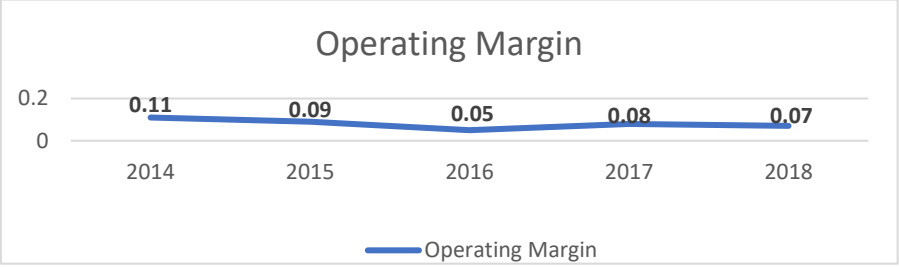
Graph 5 stated the Operating Ratio of Audi in year 2014 to 2018.



(Graph 5)

Operating efficiency of the management of company is measure by operational ratio. The lower the operating ratio, the greater the profit and performance of company. In 2014, the operating ratio reaches the least at 0.03, it may result from grater revenue in this year. Then it increases to 0.08 in year 2015 and fall to 0.06 in 2017 and decrease again to 0.07 in 2018. The mean and the standard deviation are 0.0612 and 0.0204 respectively among the year.

Graph 6 stated the Operating Margin of Audi in the year of 2014 to 2018.

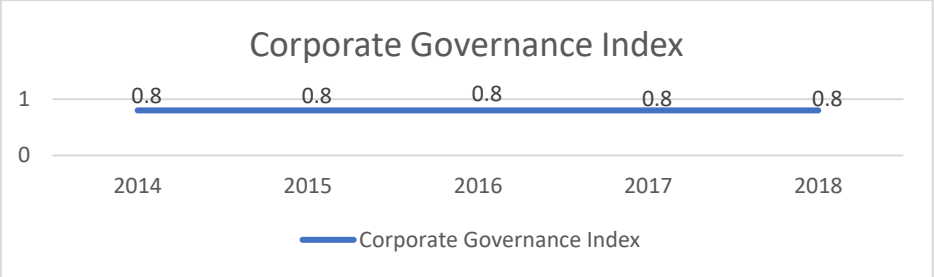


(Graph 6)

Operating margin indicate how much each of profit or revenue (operating earnings) of a company can makes after deducting cost of goods sold and before paying the tax. The higher the operating margin, the more profitable of a company's core its business is. In graph 6 show the operating margin falling from 0.11 in year 2014 to the lowest at 0.05 in year 2016 then increase to 0.08 in 2017 and decline slightly to 0.07 in 2018. The mean and the standard deviation of operating margin in 2014 to 2018 are 0.0811 and 0.0221 respectively.

V) Corporate Governance Index (CGI)

Graph 7 show the Corporate Governance Index (CGI) of Audi in year 2014 to 2018.

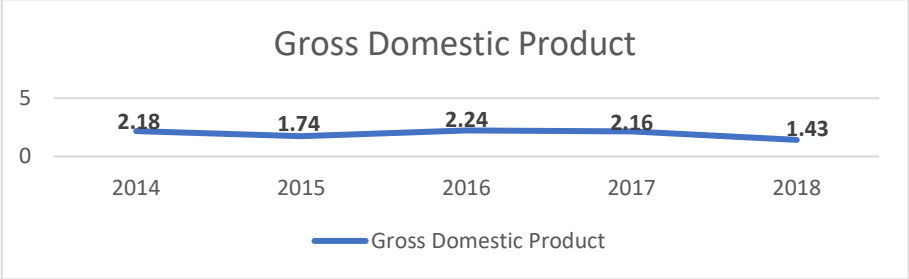


(Graph 7)

Corporate Governance index (CGI) is indicated from 5 principles of corporate governance. The 5 principles are accountability (meeting), transparency (present of audit committee), independence (more than 50 of Non-Executive Board), fairness (female executive on board) and sustainability (involvement of program CSR). Each criterion calculated as 1 score and 0 (if not reach the principle). Audi has achieved 4 criteria resulting from lack of principle of independence from the year 2014 until 2018. Thus, Audi get 4 out of 5, which is 80% or equal to 0.80 in corporate governance index among the year.

VI) Gross Domestic Product (GDP)

Graph 8 show the Gross Domestic Product (GDP) of German in 2014 to 2018.

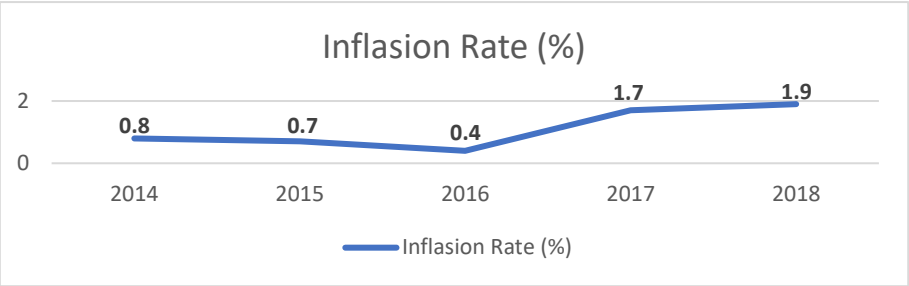


(Graph 8)

Growth Domestic Product is the total value of everything (products and services) produced within a country. GDP indicate the size of an economy growth rate in a country. Based on graph 8, the GDP of German show fall and arise among the year. It falls from 2.18 in 2014 to 1.74 in 2015 and rise to 2.24 in 2016 which is the highest among the year. However, GDP fall again to 1.43 in 2018. The mean or average and the standard deviation of GDP over the year is 1.9483 and 0.3536 respectively.

VII) Inflation Rate

Graph 9 show the Inflation Rate of German in 2014 to 2018.

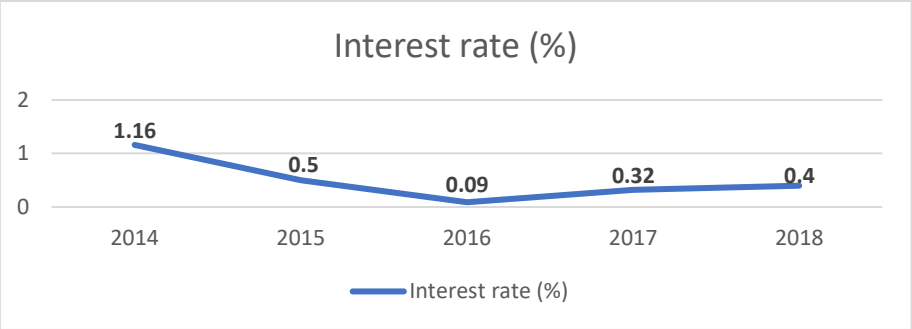


(Graph 9)

Inflation rate refers to the changing price of goods and services over the time in a country. In German, the inflation rate was declined from 0.8% in 2014 to 0.4% in 2016. However, the inflation rate has large increased to 1.9% in 2018. The mean of inflation rate among the year is 1.1 with the standard deviation 0.6595.

VIII) Interest Rate

Graph 10 show the Interest Rate of German in 2014 to 2018.

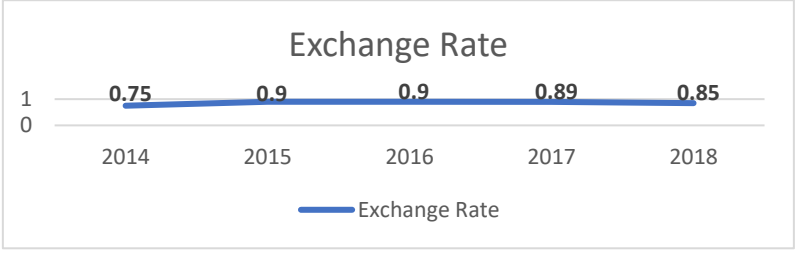


(Graph 10)

The interest rate of German showed a huge declined from 1.16% in 2014 to 0.09% in 2016. However, it has increases to 0.4% in year 2018. The mean of interest rate was 0.4940 among the year.

IX) Exchange Rate

Graph 11 show the Exchange Rate of German (EURO) in 2014 to 2018.

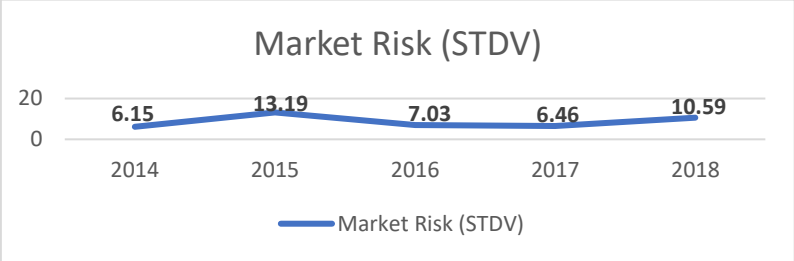


(Graph 11)

In graph 11 showed the exchange rate of USD to EURO (German). The value of EURO in 2014 to 2016 show a decrease, which mean 1 USD to 0.75 EURO to 0.9 EURO. After that, the value of EURO has slightly in or a bit increase in 2017 ,1 USD to 0.89 EURO and towards again to 1 USD to 0.85 EURO in 2018.

X) Market Risk

Graph 12 show the Market Risk (STDV) of Audi in 2014 to 2018.



(Graph 12)

The market risk of Audi in graph 12 show increase from 6.15% in 2014 to 13.19% in 2015 which is the highest among the year. Then fall to 6.46% in 2017 and arise again to 10.59% in 2018. The mean and standard deviation of market risk of Audi stated 8.6835 and 3.0838 respectively.

4.2 SPSS Analysis

The SPSS analysis of liquidity risk (Quick Ratio) on firm-specific variables will be discussed in four perspective. These perspectives are correlation, model summary, ANOVA as well as coefficient with a sample of 5 years (2014 to 2018).

Correlation

Table 2: The Correlation of dependent variable (liquidity) and company internal and external factors of Audi with sample (n) of 5 years (2014 to 2018).

Correlations

		Quick Ratio	ROA	Average Collection Period	Debt To Income	Operating Ratio	Operating Margin	CGI	GDP	Inflasion Rate	Interest Rate	Exchange Rate	STDV
Pearson Correlation	Quick Ratio	1.000	.578	-.588	-.355	-.933	.661	.	.661	-.317	.790	-.779	-.672
	ROA	.578	1.000	-.681	-.917	-.565	.981	.	-.075	-.100	.906	-.653	.174
	Average Collection Period	-.588	-.681	1.000	.351	.315	-.589	.	-.362	.795	-.607	.328	-.068
	Debt To Income	-.355	-.917	.351	1.000	.469	-.927	.	.312	-.286	-.779	.557	-.270
	Operating Ratio	-.933	-.565	.315	.469	1.000	-.693	.	-.472	-.038	-.812	.878	.689
	Operating Margin	.661	.981	-.589	-.927	-.693	1.000	.	-.009	.011	.939	-.736	.019
	CGI	.	.	.	.	.	.	1.000	.	.	.	.	.
	GDP	.661	-.075	-.362	.312	-.472	-.009	.	1.000	-.519	.081	-.087	-.797
	Inflasion Rate	-.317	-.100	.795	-.286	-.038	.011	.	-.519	1.000	-.093	-.060	.038
	Interest Rate	.790	.906	-.607	-.779	-.812	.939	.	.081	-.093	1.000	-.906	-.158
	Exchange Rate	-.779	-.653	.328	.557	.878	-.736	.	-.087	-.060	-.906	1.000	.387
	STDV	-.672	.174	-.068	-.270	.689	.019	.	-.797	.038	-.158	.387	1.000
Sig. (1-tailed)	Quick Ratio	.	.154	.149	.279	.010	.112	.000	.112	.301	.056	.060	.107
	ROA	.154	.	.103	.014	.160	.002	.000	.452	.436	.017	.116	.390
	Average Collection Period	.149	.103	.	.281	.303	.148	.000	.275	.054	.139	.295	.457
	Debt To Income	.279	.014	.281	.	.213	.012	.000	.305	.321	.060	.165	.330
	Operating Ratio	.010	.160	.303	.213	.	.097	.000	.211	.476	.048	.025	.099
	Operating Margin	.112	.002	.148	.012	.097	.	.000	.494	.493	.009	.078	.488
	CGI	.000	.000	.000	.000	.000	.000	.	.000	.000	.000	.000	.000
	GDP	.112	.452	.275	.305	.211	.494	.000	.	.185	.449	.444	.053
	Inflasion Rate	.301	.436	.054	.321	.476	.493	.000	.185	.	.441	.462	.476
	Interest Rate	.056	.017	.139	.060	.048	.009	.000	.449	.441	.	.017	.400
	Exchange Rate	.060	.116	.295	.165	.025	.078	.000	.444	.462	.017	.	.260
	STDV	.107	.390	.457	.330	.099	.488	.000	.053	.476	.400	.260	.
N	Quick Ratio	5	5	5	5	5	5	5	5	5	5	5	5
	ROA	5	5	5	5	5	5	5	5	5	5	5	5
	Average Collection Period	5	5	5	5	5	5	5	5	5	5	5	5
	Debt To Income	5	5	5	5	5	5	5	5	5	5	5	5
	Operating Ratio	5	5	5	5	5	5	5	5	5	5	5	5
	Operating Margin	5	5	5	5	5	5	5	5	5	5	5	5
	CGI	5	5	5	5	5	5	5	5	5	5	5	5
	GDP	5	5	5	5	5	5	5	5	5	5	5	5
	Inflasion Rate	5	5	5	5	5	5	5	5	5	5	5	5
	Interest Rate	5	5	5	5	5	5	5	5	5	5	5	5
	Exchange Rate	5	5	5	5	5	5	5	5	5	5	5	5
	STDV	5	5	5	5	5	5	5	5	5	5	5	5

(Table 2)

Based on correlation in table 2, shows the liquidity risk towards the internal factors and external factors. The part of pearson correlation in the table above, refer to relationship or connection between dependent variable (quick ratio) and independence variables (internal and external factors). In pearson correlation, the independence variables namely ROA, Operating Margin, GDP and Interest rate have positive relationship to dependent variable (Quick ratio). While Operating Ratio, Average Collection Period, Debt to Income, Interest rate, Exchange rate as well as STDV have the negative correlation with dependent variable (Quick ratio). However, Corporate Governance Index (CGI) has no correlation or relationship to the dependent variable.

The Significant (Sig) part in the correlation table refer to how significant correlated between dependent variable and independent variable. The lesser the p-value is, the more significant the variable towards the dependent variables. In table 2, the most significant independent variable that correlated the liquidity risk is operational ratio among the independence variable. Because the operational ratio's p-value to liquidity risk is 0.010 which considered as 2-stars significant (p value < 0.05) variable to liquidity risk. However, the least significance to liquidity risk among the independence variable is inflation rate (0.317).

MODEL 1

Internal factors determine on liquidity risk of Audi in year 2014 to 2018.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.933[a]	.870	.827	.0470205447	.807

a. Predictors: (Constant), Operating Ratio

b. Dependent Variable: Quick Ratio

Based on the table above show the model summary of internal factors to quick ratio (liquidity risk) of Audi. This mean that the operating ratio predicted and explained the liquidity risk of Audi AG with Adjusted R square 82.7%.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.044	1	.044	20.069	.021[b]
	Residual	.007	3	.002		
	Total	.051	4			

a. Dependent Variable: Quick Ratio

b. Predictors: (Constant), Operating Ratio

Based on table above, the ANOVA evaluated that the operating ratio has the great influence on dependent variable (quick ratio) among the independent variable (internal factors). Operating ratio has the least p value, 0.021, which is the most significant variable to the liquidity risk.

Coefficients[a]

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)	1.443	.074		19.561	.000	1.208	1.678		
	Operating Ratio	-5.174	1.155	-.933	-4.480	.021	-8.850	-1.499	1.000	1.000

a. Dependent Variable: Quick Ratio

Lastly, based on the coefficient table above, the operating ratio has the most significance influence (0.021) to liquidity risk, which its P value less than 0.05. This can be support by the passed study, the higher the operating ratio, the greater the part of company production that is required to cover its operating expenses, thus, the less efficient of company's profit (liquidity).

MODEL 2

External factors determine on liquidity risk of Audi in year 2014 to 2018.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.864[a]	.746	-.017	.1138821031	2.522

a. Predictors: (Constant), Exchange Rate, Inflasion Rate, Interest Rate

b. Dependent Variable: Quick Ratio

Based on table that show the model summary of external factors effect on quick ratio (liquidity risk) of Audi. The exchange rate, inflation rate and interest rate have low predicted and explained on the liquidity risk of Audi AG with Adjusted R square 1.7% only. This is because the external factors have very less influence on liquidity risk of company.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.038	3	.013	.978	.614[b]
	Residual	.013	1	.013		
	Total	.051	4			

a. Dependent Variable: Quick Ratio

b. Predictors: (Constant), Exchange Rate, Inflasion Rate, Interest Rate

Based on table above, the ANOVA table indicated that the exchange rate, inflation rate and interest rate have the low effect on dependent variable (quick ratio) resulting from the large p value, 0.614, have not significant variable to the liquidity risk of Audi.

Coefficients[a]

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)	2.124	2.156		.985	.505	-25.269	29.516		
	Inflasion Rate	-.058	.092	-.337	-.624	.645	-1.231	1.116	.874	1.144
	Interest Rate	.055	.357	.194	.153	.903	-4.485	4.594	.157	6.356
	Exchange Rate	-1.119	2.276	-.623	-.491	.709	-30.043	27.805	.158	6.324

a. Dependent Variable: Quick Ratio

Based on coefficient table above, inflation rate is more significant variable than interest rate as well as exchange rate that effect on liquidity although their p value more than 0.100. But we can say that, three of them are not significant variable that influence on liquidity of the company. Lastly, liquidity risk has negative relationship with inflation rate, exchange rate but interest rate. The higher inflation rates the more uncertainty amongst business leading to lower investment (Tejvan Pettinger, May 17, 2018).

MODEL 3

Internal factors and external factors determine on liquidity risk of Audi in year 2014 to 2018.

Model Summary[c]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.933[a]	.870	.827	.0470205447	
2	.997[b]	.995	.989	.0118060486	2.915

a. Predictors: (Constant), Operating Ratio

b. Predictors: (Constant), Operating Ratio, Inflasion Rate

c. Dependent Variable: Quick Ratio

Model summary in the table show internal factors and external factors to quick ratio.This mean that the operating ratio and Inflasion rate explain and predict the liquidity risk of Audi AG with Adjusted R square 98.9%. According to the pass study, Fang Jun, 2018, high operating ratio and inflation will negatively influece the company.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.047	1	.047	32.687	.011[b]
	Residual	.004	3	.001		
	Total	.051	4			

a. Dependent Variable: Quick Ratio

b. Predictors: (Constant), Operating Ratio

Based on table above, the ANOVA disclosed that the operating ratio has the most effect on dependent variable among the independent variable due to has the least p value, 0.011, which is the most significant variable to the liquidity risk.

Coefficients[a]

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)	1.443	.074		19.561	.000	1.208	1.678		
	Operating Ratio	-5.174	1.155	-.933	-4.480	.021	-8.850	-1.499	1.000	1.000
2	(Constant)	1.514	.021		71.069	.000	1.422	1.606		
	Operating Ratio	-5.249	.290	-.946	-18.086	.003	-6.497	-4.000	.999	1.001
	Inflasion Rate	-.060	.009	-.353	-6.752	.021	-.099	-.022	.999	1.001

a. Dependent Variable: Quick Ratio

Finally, based on table above, the coefficient table, operating ratio has the most significance and the inflation rate has the second most significant that effect on liquidity of Audi. The operating ratio and inflation have the negative relationship to quick ratio.

5.0 RECOMMANDATION AND CONCLUSION

5.1 Limitations

This study is limited only to automotive industry in German. The data used is only included in sample of five years financial statements and performance of company, Audi AG.

5.2 Recommendation

The aim of this study is indicated the determine to liquidity risk of Audi by its 3 models, internal factors (model 1), external factors (model 2) as well as both factors (model 3). In SPSS analysis, model 3, the most significant variable that influence the liquidity risk of Audi among the year 2014 to 2018 is its operating ratio. Thus, I recommended that Audi should decrease its operating cost or expenses in order to minimize its operating ratio. Because the lower the operating ratio, the more liquidity and profitable of company.

5.3 Conclusion

In conclusion, among these 5 years, the liquidity of Audi AG mostly influences by operating ratio (internal factors) and inflation rate (external factors). The operating ratio and inflation rate have negative relationship or correlation with liquidity of the company. The lower the operating ratio and inflation rate, the more liquidity and profitable of the company is. Based on this investigation, the internal factors have more effect than external factors to liquidity risk of Audi. It may result from the macroeconomic is difficult to control by company than the firm-specific factors. Thus, Audi should implement cost controls of operating expenses if the operating cost is increase over time. Inversely, if the Audi's operating cost decrease, operating ratio will fall, and the revenue of company will arise. Audi should also be aware all the time of the inflation rate although it is uncontrollable by company.

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