

CHAPTER V

RESULT & ANALYSIS

In this chapter, there are several tests of factors affecting Indonesia's foreign debt. Factors are analyzed in the form of two variables, namely the foreign debt of the Indonesian government as the dependent variable. While the rupiah exchange rate against the dollar, government spending, economic growth, and government revenue as factors that affect foreign debt or called independent variables. Data from these variables are data taken from 2005 to 2017 in quarter form data and will be analyzed using Multiple Linear Regression which aims to determine the direction of the relationship between independent variable and dependent variable. The tests performed here use E-views 9.

A. Classical Assumption Test

1. Autocorrelation test.

According Basuki (2015) explained that the autocorrelation indicates a correlation between members of a series of observations. If the model has a correlation, the estimated parameter becomes biased and the variation is no longer the minimum and the model becomes inefficient. In this study, to determine whether there is autocorrelation in the model used Lagrange Multiplier test (LM). LM testing procedure is if the value of $Obs * R\text{-Squared}$ is smaller than the value of the table then the model can be said to contain no autocorrelation. It can also be seen from the probability value of chi-square, if

the probability value is greater than the value of α selected then it means there is no autocorrelation problem.

Table 5.1
The Lagrange Multiplier Test (LM) Result

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	22.63215	Probability	0,0000
Obs*R-squared	26.07613	Probability	0,0000
R-squared	0.501464	Durbin Watson Stat	1.855976

Source: data processed

Based on the LM test results above, the probability value of chi-squares is 0,000. Since the probability value of chi-square is less than $\alpha = 5\%$, then in this model detected an autocorrelation problem. According to Widarjono (2017) if the coefficient of determination R-squared is greater than Durbin Watson's statistical value (d) then we can overcome the problem of autocorrelation by first difference method. From the above results, it is known that R-squared 0,581015 is smaller than the Durbin Watson statistical value 1,779166. So in this study, the problem of autocorrelation cannot be overcome by changing to the first difference form but the authors solve the problem of autocorrelation by using the transformation of the known as Generalized Difference Equation method by entering the coefficient of model AR (1) into the equation model detected autocorrelation problem (Widarjono, 2017).

Table 5.2
The Result of Solving Autocorrelation Problem by Generalized
Difference Equation Method

ARMA Maximum Likelihood (OPG-BHHH)	
R-squared	0,989100
Durbin-Watson Stat	1,745912

Source: data processed

The above table is the result of the correction to overcome the problem of autocorrelation by using Generalized Difference Equation method by doing AR process that is by entering AR coefficient (1) into the regression equation to eliminate the correlation between error. Durbin-Watson statistic is 1.745912. From this model, it is known that $k=4$; $n=52$. Then we can determine the value of d_U and d_L from Durbin Watson table which is known that the value of d_U is 1,724 and d_L is 1,414, and $4-d_U$ is 2,276. Since the value of Durbin-Watson statistic is between d_U and $4-d_U$, then in this multiple linear regression is no longer detected autocorrelation problem.

2. Normality test.

Normality test is used to determine whether the residual is normally distributed or not. To test whether the data distribution is normal or not can be done using Jarque-Berra (J-B test). If the probability value of J-B is more than α is selected, then the data is normally distributed. However, if the probability value of J-B is less than the α selected, then the data is not normally distributed.

Table 5.3
The Jarque-Berra Test (J-B Test) Result

Jarque-Berra Test:	
Jarque-Berra	1,532554
Probability	0,46470

Source: data processed

Based on the result in table 4.3 above, the jarque-Berra probability value is 0,46470. The result states that the Jarque-Berra probability value is more than $\alpha = 5\%$, it can be interpreted that the data in multiple linear regression of this model is normally distributed.

3. Heteroskedasticity test.

In Basuki (2015), it is explained that heteroscedasticity is a regression problem whose interference factors do not have the same variant or variant is not constant. This will bring up a variety of problems: the biased OLS estimator, the variant of the OLS coefficients will be wrong. In this study will use the method with the White test to detect the presence or absence of heteroscedasticity in the regression model. If the probability of Obs*R-squared is smaller than the selected α , then in the error correction model there is a problem of heteroscedasticity. However, if the probability of Obs*R-squared is greater than the selected α , then there is no heteroscedasticity problem in the multiple linear regression model.

Table 5.4
The Breusch-Pagan-Godfrey Heteroskedasticity Test Result

Breusch-Pagan-Godfrey Heteroskedasticity Test:			
F-statistic	1,887332	Probability	0,1259
Obs*R-squared	7,196514	Probability	0,4688

Source: data processed

The probability value of Obs*R-squared can be seen from the probability of Chi-Square. From the test results using this Breusch-Pagan-Godfrey probability value is 0.4688 or greater than $\alpha = 5\%$ which means there is no heteroskedasticity in multiple linear regression model.

4. Multicollinearity test.

Ajija at al (2011) stated that Multicollinearity is a linear relationship between independent variables in the regression model. To examine the presence or absence of multicollinearity in the model, the researchers used partial methods among independent variables. Rule of thumb of this method is if the correlation coefficient is high enough above 0,85 then it is assumed there is multicollinearity in the model. Conversely, if the correlation coefficient is relatively low then it is assumed that the model does not contain multicollinearity in (Basuki, 2015).

Table 5.5
Coefficient Covariance Matrix Multicollinearity Test

	C	ER	GOVEXP	GOVREV	GDPGROWTH
C	47118543	-6536.56365	67.41887161	-0.001267977	25.64718181
ER	-6536.56	1.163768025	0.038960207	-0,000000378	-0.005266159
GOVEXP	67.41887	0.038960207	0.014934186	-0,000000171	-0.000304285
GOVREV	-0.00127	-0,000000378	-0,000000171	0,00000000000199	0,00000000260
GROWTH	25.64718	-0.00526616	-0.000304285	0,00000000260	0,0000378

Source: data processed

Based on Table 4.6 above, not all values between two independent variables are less than 0,85. This means that the regression model in the multiple linear regression has the multicollinearity problem. According to Widarjono (2017), the multicollinearity problem can be solved by using variabel transformation. The transformation in this case means the variables are transformed into first difference form. This form will reduce the multicollinearity problem, because if the multicollinearity problem is detected in the level of X1 and X2 then it can be possible that in the level of first difference, high correlation will not be detected.

Table 5.6
Coefficient Covariance Matrix First Difference Multicollinearity Test

	C	D(ER)	D(GOVEXP)	D(GOVREV)	D(GDPGROWTH)
C	652918.9413	-57.31898583	-117	0.000878598	-3.72491379
D(ER)	-57.31898583	0.648737727	0,0215	-0,000000192	-0.001296341
D(GOVEXP)	-117	0,0215	0,0533	-0,000000506	0.00052005
D(GOVREV)	0.000878598	0,000000192	-0,000000506	-0,00000000000522	-0,00000000555
D(GROWTH)	-3.72491379	-0.001296341	0.00052005	-0,00000000555	0.000101241

Source: data processed

After being transformed into first difference form, then it can be seen from the result table that all values between two independent variables are less than 0,85. This means the multicollinearity problem in this model has been solved.

B. Research Result (Hypothesis Test)

This research is using multiple linear regression analysis ordinary least square method. The model of this research is:

$$\text{Debt}_t = a + \beta_1 \text{ER}_t + \beta_2 \text{Growth}_t + \beta_3 \text{Govexp}_t + \beta_4 \text{Govrev}_t + e \quad (4.7)$$

Information:

Debt = Government foreign debt

a = Constanta

$\beta_1 - \beta_4$ = Regression coefficients of each variables

ER = Rupiah exchange rate toward US dollar

Growth = Economic growth denoted by GDP

Govexp = Government expenditure

Govrev = Government revenue

1. Descriptive Statistic of Variables.

Table 5.7
Descriptive Statistic of Variables

	Debt	ER	Growth	Govexp	Govrev
Mean	110035,6	10662,62	1487220	341400,4	30000000000
Median	112464,5	9697,000	1267731	329930,3	29200000000
Maximum	177318,0	14657,00	2552216	524466,4	44700000000
Minimum	74126,00	8597,000	875082,7	124286,0	11900000000
Std. Dev.	28230,41	1819,360	551367,0	133723,1	11100000000
Skewness	0,694096	0,664318	0,731668	-0,001461	-0,000703
Kurtosis	2,592962	1,854327	1,982911	1,53743	1,504676
Jarque-Bera	4,534302	6,668656	6,880953	4,634758	4,84466
Probability	0,103607	0,35639	0,032049	0,098531	0,088715
Observations	52	52	52	52	52

Source: Data Processed

Table 4.7 shows the entire variables used in this study with quarterly periods. It displays the descriptive variables of the data. The dependent variable is government foreign debt and the independent variables consist of rupiah

exchange rate against US dollar, economic growth denoted by GDP, government expenditure, and government revenue.

From the table, it shows the following results:

Firstly, the value of Government foreign debt's Mean is 110035,6, Median value is 112464,5, Maximum value is 177318,0 and Minimum value is 74126,00. Secondly, it is known that rupiah exchange rate against US dollar's Mean value is 10662,62, Median value is 9697,000, Maximum value is 14657,00, and Minimum is 8597,000. Thirdly, from the variable of economic growth's, the value of Mean is 1487220, the value of Median is 1267731, Maximum is 2552216, and the value of Minimum is 875082,7. Fourthly, government expenditure's Mean value is 341400,4, Median value is 329930,3, Maximum value is 524466,4, and Minimum value is 124286,0. The last one is government revenue's Mean value is 30000000000, Median value is 29200000000, Maximum value is 44700000000, and Minimum values is 11900000000.

The results indicate that all variables show positive mean, median, maximum and minimum. The values of Skewness for government foreign debt, rupiah exchange rate against US dollar, and economic growth are positive, respectively, 0,694096; 0,664318; 0,731668, while the value of Skewness for government expenditure and government revenue are negative, those are -0,001461 and -0,000703. Also, the values of Kurtosis for all variables government foreign debt, rupiah exchange rate against US dollar, economic growth, government expenditure, and government revenue are positive, they

are, respectively, 2,592962; 1,854327, 1,982911; 1,537434; and 1,504676. While the probability of Jarque-Bera for all variables is more than 0.05, but economic growth. It means that all the variables are normally distributed except economic growth. The regression will be conducted with the data from the data that described in the table.

2. The Result of regression estimation.

Table 5.8
The Result of Regression Estimation

Variables	Regression		
	Coefficient	T-Test	Prob
Constanta	88681,58	6864,295	0.0000
ER	-5,5871107	1,078781	0.0000
Growth	0,054239	0,122206	0.0000
Govexp	0,726138	0,00000141	0.0000
Govrev	-0,00000815	0.006148	
R-Squared	0.969667		
F-Statistic	375.6149		
Prob F-stat	0.000000		

Dependent variable: Debt

Source: Data Processed

Based on estimation of regression, the dependent variable in this study is government foreign debt (Debt), and the independent variables are rupiah exchange rate toward US dollar (ER), economic growth denoted by GDP (Growth), government expenditure (Govexp), and government revenue (Govrev). In table 4.2, it can be seen that all independent variables in this model

are significantly affecting the government foreign debt in Indonesia period 2005:Q1-2017:Q4.

a. t-Test.

1) Constant.

Based on the regression results in table 4.8, the value of the constant coefficient is 88681,58. It means that when all the independent variables rupiah exchange rate toward US dollar (ER), economic growth denoted by GDP (Growth), government expenditure (govexp), and government revenue (govrev) are considered to be constant, so the amount of government foreign debt is 88681,58.

2) Rupiah exchange rate toward US dollar (ER).

The null hypothesis (H_0) states that exchange rate has a significant effect on government foreign debt in Indonesia. The alternative hypothesis (H_1) states that exchange rate does not affect the government foreign debt in Indonesia.

Degrees of freedom (df) is $52-1 = 51$ and a significance level of 5 percent ($\alpha = 0.05$), the values obtained t-table $\pm 1,67528$. Here are the criteria for decision-making:

H_0 is accepted if t-test $>$ t-table or probability levels of variable < 0.05

H_1 is accepted if t-test $<$ t-table or probability levels of variable > 0.05

Based on table 4.8, the value of t-test obtained by exchange rate (ER) is 1,078781 less than t-table (1,67528) and probability level of

ER is 0,0000 is less than 0.05. So, it can be concluded that the null hypothesis (H_0) is accepted. It means the exchange rate variable affects government foreign debt. Here is the effect of exchange rate variable graphically:

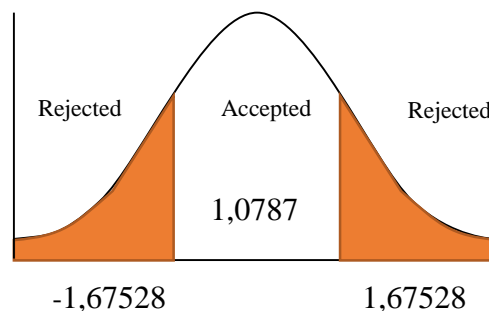


Figure 5.1
T-Test ER to Debt

The table also shows that the value of the coefficient (β_1) variable of exchange rate (ER) that is equal to -5,5871107. The value of coefficient is negative. It means that rupiah exchange rate against US dollar and government foreign debt have a negative correlation in this research. If the value of exchange rate increased (appreciation) by 1 percent, so the amount of government foreign debt will decrease by -5,5871107%, it can be assumed that other factors are considered fixed or *ceteris paribus*.

3) Economic growth denoted by GDP (Growth).

The null hypothesis (H_0) states that economic growth has a significant effect on government foreign debt in Indonesia. The alternative hypothesis (H_1) states that exchange rate does not affect the government foreign debt in Indonesia.

Degrees of freedom (df) is $52-1 = 51$ and a significance level of 5 percent ($\alpha = 0.05$), the values obtained t-table $\pm 1,67528$. Here are the criteria for decision-making:

H_0 is accepted if t-test $>$ t-table or probability levels of variable < 0.05

H_1 is accepted if t-test $<$ t-table or probability levels of variable > 0.05

Based on table 4.8, the value of t-test obtained by economic growth is 0,122206 less than t-table (1,67528) and probability level of economic growth is 0,0000 which is less than 0.05. So, it can be concluded that the null hypothesis (H_0) is accepted. It means the economic variable affects government foreign debt. Here is the effect of exchange rate variable graphically:

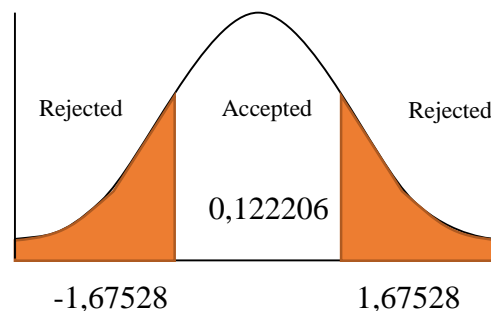


Figure 5.2

T-Test Economic Growth to Debt

The table also shows that the value of the coefficient (β_1) variable of economic growth (Growth) that is equal to 0,054239. The value of coefficient is positive. It means that economic growth and government foreign debt have a positive correlation in this research. If the economic growth increased by 1 percent, so the amount of government

foreign debt will increase by 0,054239%, it can be assumed that other factors are considered fixed or *ceteris paribus*.

4) Government expenditure.

The null hypothesis (H_0) states that government expenditure has a significant effect on government foreign debt in Indonesia. The alternative hypothesis (H_1) states that government expenditure does not affect the government foreign debt in Indonesia.

Degrees of freedom (df) is $52-1 = 51$ and a significance level of 5 percent ($\alpha = 0.05$), the values obtained t-table $\pm 1,67528$. Here are the criteria for decision-making:

H_0 is accepted if t-test $>$ t-table or probability levels of variable < 0.05

H_1 is accepted if t-test $<$ t-table or probability levels of variable > 0.05

Based on the table 4.8, the value of t-test obtained by government expenditure is 0,00000144 which is less than t-table (1,67528) and probability level of government expenditure is 0,0000 which is less than 0.05. So, it can be concluded that the null hypothesis (H_0) is accepted. It means the government expenditure variable affects government foreign debt. Here is the effect of exchange rate variable graphically:

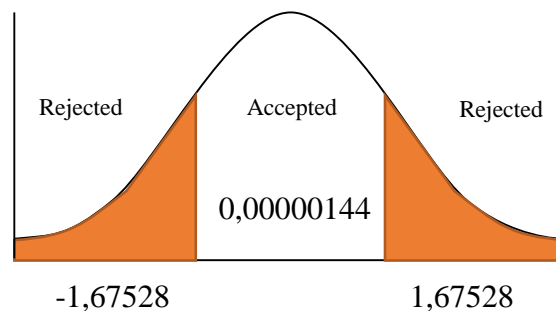


Figure 5.3

T-Test Government Expenditure to Debt

The table also shows that the value of the coefficient (β_1) variable of government expenditure that is equal to 0,726138. The value of coefficient is positive. It means that government expenditure and government foreign debt have a positive correlation in this research. If the government expenditure increased by 1 percent, so the amount of government foreign debt will increase by 0,00000144 %, it can be assumed that other factors are considered fixed or *ceteris paribus*.

5) Government revenue.

The null hypothesis (H_0) states that government revenue has a significant effect on government foreign debt in Indonesia. The alternative hypothesis (H_1) states that government revenue does not affect the government foreign debt in Indonesia.

Degrees of freedom (df) is $52-1 = 51$ and a significance level of 5 percent ($\alpha = 0.05$), the values obtained t-table $\pm 1,67528$. Here are the criteria for decision-making:

H_0 is accepted if $t\text{-test} > t\text{-table}$ or probability levels of variable < 0.05

H1 is accepted if $t\text{-test} < t\text{-table}$ or probability levels of variable > 0.05

Based on the table 4.8, the value of t-test obtained by government revenue is 0,006148 which is less than t-table (1,67528) and probability level of government revenue is 0,0000 which is less than 0.05. So, it can be concluded that the null hypothesis (H0) is accepted. It means the government revenue variable affects government foreign debt. Here is the effect of exchange rate variable graphically:

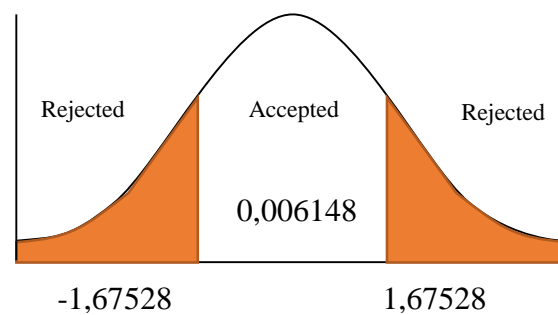


Figure 5.4
T-Test Government revenue to Debt

The table also shows that the value of the coefficient (β_1) variable of government revenue that is equal to 0,726138. The value of coefficient is positive. It means that government expenditure and government foreign debt have a positive correlation in this research. If the government expenditure increased by 1 percent, so the amount of government foreign debt will increase by -0,00000815 %, it can be assumed that other factors are considered fixed or *ceteris paribus*.

b. F-Test.

The statistic of F-test is basically to determine the influence of independent variables on the dependent variable simultaneously. The null hypothesis states that simultaneously all independent variables those are exchange rate, economic growth, government expenditure, and government revenue affect the government foreign debt in Indonesia. Degrees of freedom ($df = k = 4$, $n-k-1 = 52 - 4 - 1 = 47$) and significance level of 5 percent ($\alpha = 0,05$), the values obtained F-table by $\pm 2,57$. Decision-making criteria are as follows:

H_0 is accepted if $F\text{-test} > F\text{-table}$ or probability of F-statistic $< 0,05$

H_a is accepted if $F\text{-test} < F\text{-table}$ or probability of F-statistic $> 0,05$

The effect of variable exchange rate, economic growth, government expenditure, and government revenue affect the government foreign debt in Indonesia in the following graph:

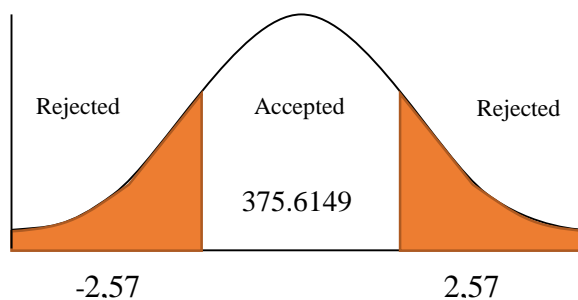


Figure 5.5
F-Test :ER, growth, Govexp, Govrev to Debt

Based on the table 4.8 shows that the value of F-test by 375.614937, where the number is greater than F table (2.61) and the level of probability of F-statistic is 0.000000, which is smaller than 0.05. So, it can be concluded that the null hypothesis (Ho) is accepted. It means variable exchange rate, economic growth, government expenditure, and government revenue simultaneously affect the government foreign debt in Indonesia.

c. Coefficient determination (R^2).

According to table 4.8, it can be concluded the regression model in this research is

$$\text{Debt} = 88681,58 - 5,5871107 \text{ ER} + 0,054239\text{GDPgrowth} + 0,726138\text{govexp} - 0,00000815\text{govrev} + e.$$

Based on the table 4.8 also, the R square value of government foreign debt regression with all independent variables is 0,969667. It means that the value of independent variables explain the government foreign debt variable is 96,9667%, while the 3,0333 % is explained by other factors that are not in the model.

C. Analysis Result

The findings that already done in this research aim to determine some correlations between independent variables toward dependent variable, the variables used here are Indonesian rupiah exchange rate against US dollar (ER),

economic growth which is denoted by GDP (Growth), government expenditure, government revenue, and government foreign debt (Debt). So, here is the further discussion relates to the findings in this research and hopefully, it can fulfill the excitement to reveal the research. All the independent variables that influence government foreign debt (Debt) will be discussed one by one.

Table 5.9
The Correlation Result Accumulation of Independent Variables on
Dependent Variable

Variables	Coefficient	Probability
Constanta	88681,58	0.0000
ER	-5,871107	0.0000
Growth	0,054239	0.0000
Govexp	0,726136	0.0000
Govrev	-0,00000815	0.0000

1. The influence of Indonesian rupiah exchange rate against US dollar on government foreign debt.

The coefficient value of the exchange rate variable is -5,871107 and the probability of its coefficient is 0,0000, from this result it can be concluded that the relationship between exchange rate variable and government foreign debt variable is negative and significant. This result indicates that when the exchange rate of Indonesian rupiah against the US dollar rises (appreciation) about 1% then the government's foreign debt will decrease by 5,871107 % with the assumption that another variables are constant. The relationship between them is stated to be significant since the probability of exchange rate coefficient

is higher than significance level of 5% (0,05). The analysis of regression results in the influence of exchange rate on government foreign debt in accordance with the hypothesis in this study.

The results of this analysis have similarities with previous research conducted by Saleh (2008), the rupiah exchange rate variable against the US dollar had a significant effect on the Indonesian government's foreign debt in 1970-2008. The influence of Indonesian rupiah exchange rate against US dollar is significant in this research because the exchange rate is a variable which is basically difficult to be controlled by the government. Because the exchange rate itself fluctuates making it difficult for businesses to make long-term plans. Such conditions will also affect the efforts of other economic actors to excessive speculation on the condition of the forex market in Indonesia. When the condition of foreign exchange in Indonesia is not stable it will greatly affect the economic actors in managing the liquidity of dollars and rupiah, so this will directly affect the exchange rate of rupiah against the US dollar. That is why ultimately the foreign debt in payments using the dollar, of course, the amount will be significantly affected by the condition of the rupiah against the US dollar itself.

Another study that also has similar results with the research conducted is research conducted by Awan (2015) that the exchange rate of the currency of Pakistan has a significant effect on Pakistan's foreign debt. When Pakistan's exchange rate rises it will affect the rise in Pakistan's foreign debt itself.

The same results were also conducted by Widharma (2013) but with different analyzes method. The dollar exchange rate has a significant effect on the government's external debt, besides the budget deficit has a significant effect on foreign debt through the dollar exchange rate, and the repayment of the debt affects the government's external debt through the dollar exchange rate.

Another study with similar results was also done by Yuliadi (2006), the results of the study showed that in his research all variables used did not significantly affect the government's foreign debt variable except exchange rate variables. The coefficient of exchange rate variable in the research shows that the depreciation of the rupiah against the US dollar at 1 rupiah / US dollar will increase the total amount of the government's external debt. This condition is understandable given that Indonesia's foreign debt is mostly expressed in US dollars so that when there is a rise in US dollar currency, the burden of the government's foreign debt increases.

In addition, long-term estimates are also in accordance with Bank Indonesia Regulation Number 17/3/PBI/2015 concerning Rupiah Obligation Liability in the Territory of the Unitary State of the Republic of Indonesia Article 6 concerning certain Transactions in the implementation of the State budget of revenues includes: country, domestic debt payment in foreign currency, foreign goods expenditures, foreign capital expenditures, Government revenues arising from the sale of State securities in foreign currency, and other transactions in the context of execution of government

revenues and expenditures. By understanding further for the foundation of law from Bank Indonesia, so it can be concluded that the exchange rate of rupiah against the dollar significantly affects the government's foreign debt. Because in doing international transaction or trading, US dollar as the basic tool for transaction as well for government foreign debt payment itself.

Seeing from another view point that is the exchange rate system adopted by Indonesia at this time is a free-floating exchange rate system (pure) wherein this exchange rate system is determined by the market mechanism. It means that the demand and supply for US dollar and also another economic activities using US dollar will influence the value of exchange rate itself. Market mechanism which also includes the use of dollars in government external debt payments, as set forth in the rule of law applied, greatly affected by exchange rate fluctuations and vice versa. Because of its system, the repayment for foreign debt will follow the fluctuation of Indonesian rupiah exchange rate against dollar which is affected by market mechanism (which mostly the debt in the form of dollar).

2. The influence of government expenditure on government foreign debt.

The coefficient value of the government expenditure variable is 0,726136 and the probability of its coefficient is 0,0000, from this result it can be concluded that the relationship between government expenditure variable and government foreign debt variable is positive and significant. This result indicates that when the accumulation of government expenditure increases about 1% then the government's foreign debt will increase by 0,726136 % with

the assumption that another variables are constant. The relationship between them is stated to be significant since the probability of government expenditure coefficient is higher than significance level of 5% (0,05). The analysis of regression results in the influence of government expenditure on government foreign debt in accordance with the hypothesis in this study.

The results of the estimation in this study have similarities with previous research conducted by Harahap (2008) ie domestic expenditure has a positive relationship and significantly influence the level of foreign debt of Indonesia, with the increase of domestic expenditure followed by the increase of debt level overseas Indonesia, *ceteris paribus*.

Another study was also conducted by Widharma that development expenditure has a positive and significant impact on the government's external debt. A large amount of external debt taken by the government is not much absorbed into development expenditure which is actually the most important component of the state budget in pushing the economy.

Other studies that also have similar results are also conducted by (Mah, 2013) that government spending significantly affects foreign debt in Greece. There is a positive relationship between government spending and government foreign debt, which means that rising government spending will cause foreign debt to increase. In his research, the expenditures of the Greek government gave the greatest influence on the foreign debt of the Greek government. In addition, the results indicate that the causality of government expenditures to

the government's foreign debt means that government expenditure causes the government's external debt while not vice versa.

In addition, the estimation results in this study are in accordance with RI Law NUMBER 27 YEAR 2014 About State Budget Article 1 which reads central government expenditure by function is the central government expenditure used to perform the functions of public services, defense functions, order functions and security functions, economic functions, environmental functions, functions of housing and public facilities, health functions, and social protection functions. Central government expenditure by the program is central government expenditure allocated to achieve certain outcomes at State/Institution ministries. The subsidy management program is the provision of support in the form of budget allocation to State enterprises, government agencies or third parties based on applicable laws and regulations to provide goods or services that are strategic or controlling the livelihood of the people according to the financial capacity of the State. Moreover, Minister of Finance Sri Mulyani once said that the improvement of the quality of the State's revenue and expenditure budget is more focused on increasing economic growth. The focus is on allocating more for education, infrastructure, health, some energy subsidies. Based on the above legislation and added by Sri Mulyani's statement, it strongly supports the results of research that recently government is trying to make better the economy by adding the quantity and quality of the state expenditure. This condition is already adding the accumulation of

Indonesia government foreign debt. That is why government expenditure has a significant effect on the amount of foreign debt government itself.

The estimation results are also in line with the government's foreign debt theory, the theory is the theory of 3 gap models derived from the equality of State income from government expenditure, stated as below (2008):

$$Y = C + I + G + (X - M) \dots\dots\dots (1)$$

$$Y = C + S + T \dots\dots\dots(2)$$

$$(M-X) = (I-S) + (G - T) \dots\dots\dots(3)$$

$$Dt = (M-X)t + Dst - NFLt + Rt - NOLT \dots\dots\dots (4)$$

$$Dt = (I-s)t + (G-T)t + DSt + NFLt + Rt - NOLT \dots\dots(5)$$

The explanation of each variable is in chapter II of the government's foreign debt theory. From the 5th equation, it can be seen that Dt is the payment of debt burden which is influenced by the right side one of which is G-T as budget deficit due to the swelling of government expenditure. The positive and significant relationship in this study is very likely to occur because as the number of G increases, it will affect Dt to increase as well.

This analysis result shows that the government spending has a positive and significant effect as when government spending increased during the first quarter of 2005 until the fourth quarter of 2017 the amount of government foreign debt rose.

3. The influence of GDP (Economic Growth) on Government Foreign Debt.

The coefficient value of the GDP as the denotation of economic growth variable is 0,054239 and the probability of its coefficient is 0,0000, from this

result it can be concluded that the relationship between GDP (economic growth) variable and government foreign debt variable is positive and significant. This result indicates that when the GDP (economic growth) increases about 1% then the government's foreign debt will increase by 0,054239% with the assumption that another variables are constant. The relationship between them is stated to be significant since the probability of exchange rate coefficient is higher than significance level of 5% (0,05). The analysis of regression results in the influence of GDP (economic growth) on government foreign debt in accordance with the hypothesis in this study.

The results of the estimation in this study have similarities with previous research conducted by Zulham (2017) that the results of this study suggest that there is a positive and significant influence of GDP on external debt, the estimate illustrates that foreign debt forecasts have increased in line with the increase in GDP.

In addition, another study was also conducted by Devi (2017) that GDP has a positive and significant impact on foreign debt in Indonesia. This is because the increase in GDP revenue can increase Indonesia's foreign debt. With the increase in GDP, the government is increasingly doing development and other policies for the welfare of society. The increase in GDP was also followed by an increase in foreign debt. The government is also increasingly in need of funds on the investment of other countries to Indonesia.

The same result is also conducted by Yogi (2017) which stated that gross domestic product variable has positive and significant influence on

government foreign debt in Indonesia. It means that if there is increasing in gross domestic product, it will lead to the increasing of government foreign debt in Indonesia.

According to Hatemi-j And Irandoust (2005) stated that case study in lower-income and developing country in Africa shows that foreign debt assistance has significant influence on the increasing of society income (Prawoto, 2009). As the average, the foreign debt assistance has contribution up to 12,5% from its GDP. Beside that, Pallage and Robe (2011) said foreign debt assistance plays key role to rise the economic growth in developing country. There are 2 references of study result on foreign debt toward economic growth. First, foreign debt assistance and foreign capital are very important in running the economic growth for a lower-income and developing country. They state that there is positive relationship between foreign debt and economic growth, because foreign debt completes domestic resource and also as supplement from national saving. Thus foreign debt is able to close the foreign exchange gap. Another point is providing access for modern technology, skill managerial, and also followed by international market access. The same result also conducted by Prawoto (2009) that foreign debt can encourage as well discourage economic growth of a country. Uncertainty effect is revealed since another factor such as economic structure, political economic, wrong economic policy, wrong direction in implementing foreign debt fund, bad debt management, donor country interest, country intervention, business cycle, borrower country fund stability, etc.

This result also supported by the economic motivation in taking foreign debt assistance which has been stated in Pasaribu (2012), this argument is based on two gap model where donored country especially for developing country experiencing lack of domestic saving accumulation. Thus the fund from saving cannot fulfill the needs of investment that is used in encouraging economic growth. Another view pint is the lack which experienced by those countries in fulfilling foreign exchange to finance import needs. Thus to close the lacks, foreign debt assistance is used as the main role.

The results in this study are in line with the Keynesian theory of economic growth which states that economic growth has a significant effect because the policy of increasing the budget financed by foreign debt will increase the accumulation of capital that increases the aggregate demand. This has resulted in the current tax burden being relatively mild, which will lead to an increase in the revenue that is ready to be spent. In conclusion, the policy to close the budget deficit with foreign debt in the short term will benefit the economy with economic growth.

Harrod-Domar theory supports the analysis result. This theory is talking about the use of foreign debt assistance in financing development. This theory is developed by Hollis Chenery, Alan Strout, etc in 60s and the beginning of 70s. their thought is grouped into 4 basic thought: first, foreign capital can be utilized to encourage the increasing of investment and economic growth. Second, the changing of substantial in production and trading is needed to keep the level of growth stable. Third, foreign capital can be an important

role to mobilize source of fund and structural transformation. Fourth, the need of foreign capital will decline after the changing of structural occurs.

The results of estimates in this study indicate that GDP as an indicator of economic growth has a positive and significant effect on government external debt. During the first quarter of 2005 to the fourth quarter of 2017, a lot of economic events occurred in Indonesia that caused the fluctuating economic condition, starting from the increasing amount of government debt, both government and private sector, the increasing of economic growth, fluctuation of rupiah exchange rate and indicator other economies. Based on Kemenkeu RI (2017), the current development needs in Indonesia are very large and urgent. The Human Development Index in Indonesia is still lower than in other countries. Therefore, the fulfillment of education, health, and basic facilities are the main priorities to create a productive and competitive quality of human resources in Indonesia. In addition, the lagging of infrastructure and connectivity issues has resulted in high economic costs to be borne by the community and low national competitiveness. This is the basis for the government to accelerate the development of infrastructure in order to catch up and increase economic growth. While, the capital and saving which owned by government has not been enough to fulfill those all needs to achieve economic growth target. Thus, foreign debt assistance is encouraged to close the lack of fund. This is the reason why economic growth and government foreign debt have significant and positive relationship.

This study shows that periods of the observation, the first quarter of 2005 to the fourth quarter of 2017, GDP as an indicator of economic growth significantly and positively affects the amount of government external debt.

4. The influence of government revenue on government foreign debt.

The coefficient value of the government revenue variable is - 0,00000815 and the probability of its coefficient is 0,0000, from this result it can be concluded that the relationship between government revenue variable and government foreign debt variable is negative and significant. This result indicates that when the accumulation of government revenue increases about 1% then the government's foreign debt will decrease by 0,00000815% with the assumption that another variables are constant. The relationship between them is stated to be significant since the probability of government revenue coefficient is higher than significance level of 5% (0,05). The analysis of regression results in the influence of government revenue on government foreign debt in accordance with the hypothesis in this study.

The results of the estimation in this study have similarities with previous research conducted by Harahap (2008), the results of this study suggest that there is a negative and significant influence of government revenue on external debt. The revenue which is used in this research is gross domestic product. If there is an increasing of the accumulation government revenue then the accumulation of foreign debt will decrease.

Another previous research with the similar result also conducted by Mah (2013), the analysis result indicates that gross national income has

significant and negative influence on government foreign debt. Increasing in gross government revenue will cause decreasing of government foreign debt.

The estimation results are also in line with the government's foreign debt theory, the theory is the theory of 3 gap models derived from the equality of State income from government expenditure, stated as below (Harahap, 2008):

$$Y = C + I + G + (X - M) \dots\dots\dots (1)$$

$$Y = C + S + T \dots\dots\dots(2)$$

$$(M-X) = (I-S) + (G - T) \dots\dots\dots(3)$$

$$Dt = (M-X)t + Dst - NFLt + Rt - NOLT \dots\dots\dots (4)$$

$$Dt = (I-s)t + (G-T)t + DSt + NFLt + Rt - NOLT \dots\dots(5)$$

From the 5th equation, Dt (debt in year 1) is influenced by several economic sectors. (G-T) as the government budget deficit consists of G (Government spending) and T (Government tax revenue). From the explanation of government revenue, tax is included into source of government or state revenue. In 5th equation, T is negative means that Dt (debt in year 1) significantly influence the tax revenue, if tax revenue is high exceeding government spending then current account will not be deficit. It means that the higher accumulation of T will lead to the lower debt in that year, it happens since T as one of capital source which tends to decrease the total of debt. While, if tax lower, the government spending exceeds the revenue which leads to the deficit of current account as one of factor in increasing the number of foreign debt.

This study shows that periods of the observation, the first quarter of 2005 to the fourth quarter of 2017, GDP as an indicator of economic growth has significant and positive affects the amount of government external debt.

