Deposit Determinant Analysis in Bank Sumut

Mangaradot Saur A Sinaga
Postgraduate School
State University of Medan
Medan, Indonesia
mangaradot@gmail.com

Fitrawaty
Postgraduate School
State University of Medan
Medan, Indonesia

Arwansyah
Postgraduate School
State University of Medan
Medan, Indonesia

Abstract— **The purpose of this study is to analyze the effect of Gross Regional Domestic Product (GRDP), Consumer Price Index and Medan City Deposit Interest Rate on Deposit Amounts at PT Bank Sumut Medan Coordinating Branch. The scope of this research is to focus on analyzing the factors that affect the Deposit Amount in PT Bank Sumut Medan Coordinator for the period 1998 to 2016. The analysis model used in this study is the basic model of multiple linear regression equations using the VAR method, in estimate the short-term and long-term relationship between the variables Gross Regional Domestic Product (GRDP), Consumer Price Index (CPI) and the Interest Rate of Medan City Deposit with Total Deposit at PT Bank Sumut Medan Coordinating Branch. The result of the interpretation of the VAR model, in general, obtained the most substantial VAR value is the Economic Growth variable while the smallest VAR value is the variable Growth of Deposits. Based on the results of the Impulse Response Function (IRF) test the most significant influence on deposit growth both in the short term and in the long term is the Consumer Price Index variable. Then the results of the Forecast Error Decomposition of Variance (FEDV) test showed that the most significant impact of error variance in both the short and long term which had the most impact was the Economic Growth variable.**

Keywords— Gross Regional Domestic Product; Consumer Price Index; Deposit Interest Rate.

I. INTRODUCTION

Good economic growth is the goal of every country, where everyone will live more comfortably, a decent standard of living and certainty of getting welfare (Pinchawawee, 2011). Therefore, to achieve this, each country will carry out various policies such as increasing savings, spurring investment and production. Accelerating the rate of increase in domestic resources is very important to create independence, especially in the financial sector. Romer (1986) revealed that economic growth would depend heavily on changes in technology, capital, and aggregate savings. With the increase in savings, it will increase capital formation and production activities so that employment will be created and foreign debt is reduced. Therefore, the form of public savings is one of the priorities as a source of investment in dealing with international economic fluctuations.

Indonesia as one of the developing countries still has a relatively low level of population welfare compared to other countries, both on an international and regional scale. Therefore, the need for national development is vital to catch up in various fields such as technology, education, industry, and economics from developed countries. To catch up with this lagging, Indonesia needs substantial capital, where one alternative source of national development funding is derived from bank loans from the public, in addition foreign loans.

Al Arif and Hanifah (2017) state that in general, banks collect funds with various forms of services offered by banks, such as savings services, deposits, and demand deposits. In Indonesia, there are two types of banking, namely Islamic banking and conventional banking. In Islamic banking, the most solid composition in fund collection was obtained from deposits which reached 61.06% of the total fund collection, while in the conventional banking the composition of the largest funds was in cheap funding sources, namely demand deposits and savings. Deposits are banking savings products that are widely used by the public, which can be used as an alternative means of investing. The large amount of deposits collected by banks is influenced by the large deposit rates offered by banks as the attraction of people to save their funds in banks.

The development of deposits is influenced by an increase in national income or income per capita. Increased income makes people able to set aside part of their income as wealth in the form of deposits. In comparison relative to regional income, if the proportion of wealth in the form of deposits increases, there is a tendency for the proportion of public consumption to increase. Likewise, if the proportion of wealth decreases, there is a tendency for the proportion of public consumption to decline.

This shows a unidirectional relationship between consumption and wealth, meaning consumption will increase if there is an increase in wealth. In a more advanced economy, recipients of income will set aside a portion of their income to save. These savings will be lent to firms, and they will use the savings for investment in the form of purchasing capital goods and increasing the ability of the economy to produce goods needed by the households. As a reward for the willingness of

recipients of income to save a portion of their income, firms will pay interest on all the savings provided by the household sector (Sukirno, 2010: 72).

In this study, the factors studied were external factors to the collection of bank funds. One of the external factors that influence is income, and in the macroeconomic analysis the term national income is used. Thus, in such use, the term national income represents the meaning of Gross Domestic Product (GDP) or Gross National Product (Sukirno, 1998). However, in this study, what is seen is the provincial regional income level, which is calculated in the Gross Regional Domestic Income (GRDP) of Medan, North Sumatra.
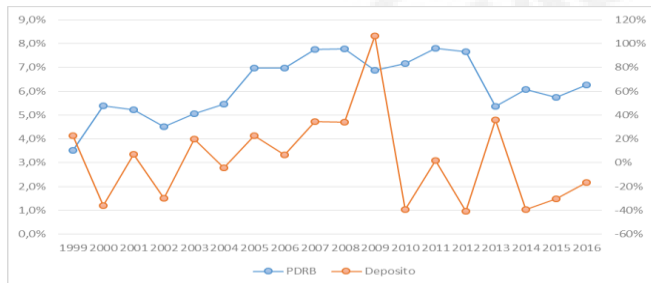

Fig. 1. The growth rate of the amount of deposits at PT Bank SUMUT Medan Coordinating Branch and the Gross Regional Domestic Product (GRDP) of Medan in 1998 - 2016.

Based on Figure 1, a graph of the growth rate of deposits in PT Bank SUMUT is obtained from the Medan Coordinating Branch which has a declining trend each year. The lowest rate of growth in deposit occurred in 2012, which decreased by 41% from the previous year. While the highest rate of growth in deposit occurred in 2009 at 106.4% which increased to double of the previous year and then continued to decline for the following years. The decline in the value of these deposits can be caused by the presence of several depositors' customers withdrawing their deposit funds and transferring these funds to competing banks due to the more attractive deposit rates offered by PT Bank Sumut. The graph of the GRDP growth rate of Medan City always increases every year, this shows that there is an increase in the income of the people of Medan City which is calculated in GRDP. However, in 2013 it decreased by 5.4% and then increased again in 2016. This increase in GRDP should be able to indicate the influence of the people of Medan City to save money so that the value of savings and deposits in financial institutions will increase. However, this is also closely related to the increase in public consumption calculated in the Consumer Price Index of Medan City.
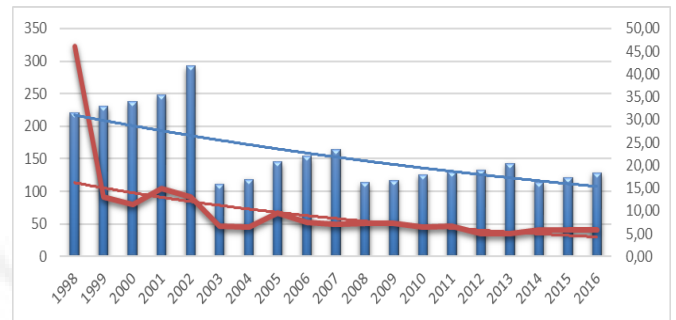

Fig. 2. Deposit interest rates at PT Bank SUMUT Medan Coordinator Branch and Consumer Price Index in Medan City from 1998 - 2016.

From Figure 2, it can be seen that the value of interest rates at PT Bank SUMUT has a declining trend every year. The lowest interest rate was in 2012 - 2013 which then rises in the following year to 5, 75% until 2016 has not changed. The highest interest rate was found in 1998, which was 46%. This condition is because in 1998 was the year of the economic crisis where all prices soared so that people tended to withdraw their funds from banks. At that time all banks experienced a decline in assets so that a very high-interest rate increase was needed so that depositors' customers did not withdraw their money. The determination of this PT Bank Sumut interest rate is based on a range of interest rates set by Bank Indonesia each month which is then averaged to the annual interest rate in this study.

In Figure 1 related to the number of deposits in 2014-2016 the number of deposits declined while the interest rate increased in 2014 and experienced flats up to 2016. This phenomenon is interesting because the research conducted by Helvira (2014) revealed that the interest rate has a positive effect on the number of customer deposits. According to classical economists in Sukirno (2010: 73) that interest rates determine the amount of savings and investments that will be made in the economy. Every change in interest rates will cause a change in patterns in household savings and the demand for funds for corporate investment. Changes in interest rates will continue before the similarity between the amount of savings and the total demand for investment funds is reached.

II. LITERATURE REVIEW

The economic theory defines investment as government expenditure to buy capital goods and production equipment with the aim of replacing and especially adding capital goods that will be used to produce goods and services in the future. Investment is an investment for one or more assets that are owned and usually long-term in the hope of obtaining profits in the future (Sunariyah, 2003). Two important factors that determine investment are the expected level of net profit from investment expenditures and the interest rates offered.

A. Investment Theory by Keynes

In his book The General Theory of Employment of Interest and Money in 1936, John Maynard Keynes is a fundamental theory of investment demand or the Marginal Efficiency of

Capital (MEC). As a working definition, MEC can be defined as the expected net rate of return for additional capital expenditure. To be precise, MEC is a discount rate that equates the expected flow of income in the future with the present cost of additional capital. Mathematically, MEC can be expressed in the form of a formula as follows:

$$C_k = \frac{R_1}{(1+MEC)^1} + \frac{R_2}{(1+MEC)^2} + \cdots + \frac{R_n}{(1+MEC)^n} \qquad (1)$$

Where R is the expected return of a project, and Ck is the current cost of additional capital. Sub-script or supercrip describes year 1.2.k-n. While the relationship between investment demand and interest rate (r) with certain MEC, by Keynes is expressed in the form of functions as follows: I = f (i) (given MEC).

B. Doma Theory

The basic model of Domar focuses on the question that investment, on the one hand, generates income and on the other increases production capacity, investment must increase so that the increase in income is equal to the increase in production capacity so that the full employment situation can be maintained. He answers this question through an approach by strengthening the link between aggregate supply and aggregate demand through investment. Domar explained that the increase in supply-side production capacity was considered as the annual growth rate of investment.

The newly invested production capacity on average is the same as savings. However, some new investments will describe the old investment. Therefore new investments will compete with long-term investments in the labor market and other production factors. The output of the old factory output will develop, and the increase in annual output from the economy is slightly smaller than the newly invested production capacity. The increase needed in aggregate demand on the side of demand in the Domar model explains that Keynesian multiple will occur. For example, the increase in average income (Y), while the increase in investment equals the multiplicator {1 / σ} 1-time increase in investment. {ΔY = 1 / σ}. To obtain equilibrium income in full employment, aggregate demand must equal the aggregate supply. Thus the equation will change to ΔI 1 / σ = Iσ. This equation shows that in order to maintain full employment, the rate of net autonomous investment growth ΔI / I must equal marginal propensity to saving productivity (αxσ) capital This is the speed limit of investment required to ensure the use of potential capacity in order to maintain the rate of economic growth steady on the state of full employment.

C. Deposit

Deposits according to Law Number 10 of 1998 are deposits whose withdrawals can only be made at certain times based on the agreement of depositors with banks. Deposits are often known as savings futures which have properties similar to savings account, but with higher interest rates. As the

compensation of the high-interest rate, in that period the deposit owner agrees not to withdraw or access the deposited money (Rini, 2003). Likewise with interest rates that are relatively higher than the two previous types. According to Kasmir (2014) To attract the interest of depositors, banks usually provide various incentives or bonuses. Incentives are given for a certain nominal amount usually in large amounts. Incentives can be in the form of particular interest or like gifts or other souvenirs.

The purpose of saving money in a deposit account is to expect income from greater interest. This is due to the interest on deposits given to the highest depositors from other deposits. Thus for bank deposit deposits are expensive funds because the interest is highest and demand deposits are low-cost funds, this is due to the interest issued by the bank is the lowest interest.

Interest rates are the cost of a loan or the price paid for the loan (usually expressed as a percentage) (Mishkin, 2008). The size of deposit and loan rate of interest is strongly influenced by both, meaning that both saving and loan interest affect each other (Kasmir, 2015). Interest rates affect public consumption expenditure through savings. The higher the interest rate, the greater the amount of saving so that the smaller the amount of savings spent on consumption. Conversely, the lower the interest rate, the lower the amount of savings saved, the higher the amount of savings used for consumption. So that the relationship between consumption and interest rates has a contradictory direction where an increase in interest rates will reduce the pattern of consumption of the household (Parsaulian et al, 2013).

Changes in interest rates create an effect on household consumption. These effects are substitution effects and income effects. The substitution effect for the increase in the interest rate is if there is an increase in interest rates, the household tends to reduce consumption expenditure and increase savings, while the effect of income for the increase in interest rates is if the interest rate decreases, households tend to increase consumption expenditure and reduce savings. The interest rate can also be seen as income that can be obtained from making deposits. Individuals will allocate more income into savings and deposits (quasi-money) if interest rates are high because the interest earned will be even greater. Conversely, at low-interest rates, individuals will reduce their income allocation for savings and deposits (quasi-money) because individuals prefer to consume rather than save.
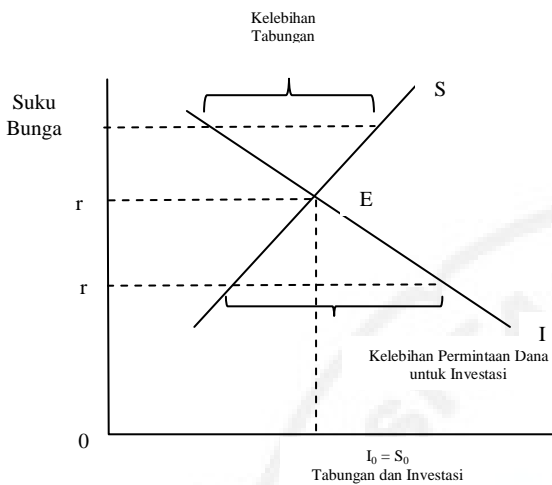
Fig. 3. Graph

The horizontal axis in the figure 3. shows the amount of fund demand for investment and savings, and the vertical axis shows the interest rate. Curve I shows employers' demand for household savings or the desire of firms to invest in various interest rates. Firms will reduce demand for household savings if interest rates are high; on the contrary, will increase their demand if interest rates are low. Likewise, households will offer more savings if interest rates increase and vice versa (Sukirno, 2010: 74).

Samuelson (1999) states that the main factors that influence and determine the amount of expenditure for consumption are disposable income as the primary factor; permanent income and income according to the life cycle; wealth and other permanent factors, such as social factors and expectations about future economic conditions. The permanent income approach and the life cycle approach assume that households share their consumption between the present and the future based on long-term estimates of consumption capacity. Households try to maintain consumption by saving the part of their income for retirement. Income set aside in the form of savings or time deposits is reflected in the amount of quasi-money in the banking sector. Besides, households choose the level of consumption based on their wealth. The interest rates of government bank deposits in North Sumatra fluctuate and tend to decline.

III. RESEARCH METHOD

The scope of this research is to focus on analyzing the factors that affect the Deposit Amount in PT Bank Sumut Medan Coordinator for the period 1998 to 2016. In this study, we will see the short-term and long-term effects of Gross Regional Domestic Product, Price Index Consumer and Interest Rate on Deposit Amount at PT Bank Sumut Medan Coordinating Branch.

The analysis model used in this study refers to the basic model of multiple linear regression equations with the VAR method in estimating short-term and long-term relationships, between variables Gross Regional Domestic Product (GRDP), Consumer Price Index (CPI) and City Deposit Interest Rates Medan with Deposit Amount at PT Bank Sumut Medan Coordinating Branch.

IV. RESULTS AND DISCUSSION

A. Tests of Stationarity

Test of stationarity must be done to avoid a tedious or biased (inefficient) model. To do the stationarity test, the unit root test and degree of integration are used by looking at the Augmented Dickey-Fuller (ADF) test at the level and first level and the second difference. Data is said to be stationary if the ADF statistical value is higher than McKinnon Critical Value. If the ADF statistical value is smaller than the McKinnon Critical Value, the data is stationary. Unit root testing is carried out at the level followed by performing the unit root test at the Difference level.

TABLE 1. RESULTS OF UNIT ROOT TEST

No.	Variable	ADF Value	Critical Value		Probability	Conclusion
1.	DT	-4.308071	1%	-3.886751	0.0044	Stationary
			5%	-3.052169		
			10%	-2.666593		
2.	PE	-2.634002	1%	-3.886751	0.1058	Non-stationary
			5%	-3.052169		
			10%	-2.666593		
3.	IHK	-2.173759	1%	-3.886751	0.2216	Non-stationary
			5%	-3.052169		
			10%	-2.666593		
4.	RATE	-4.271032	1%	-3.959148	0.0056	Stationary
			5%	-3.081002		
			10%	-2.681330		

TABLE II. UNIT ROOT TEST AT FIRST DIFFERENCE LEVEL

No.	Variable	ADF Value	Critical Value		Probability	Conclusion
1.	DT	-9.308669	1%	-3.920350	0.0000	Stationary
			5%	-3.065585		
			10%	-2.673459		
2.	PE	-4.784124	1%	-3.920350	0.0019	Stationary
			5%	-3.065585		
			10%	-2.673459		
3.	IHK	-5.842027	1%	-4.057910	0.0005	Stationary
			5%	-3.119910		
			10%	-2.701103		
4.	RATE	-6.359033	1%	-3.959148	0.0001	Stationary
			5%	-3.081002		
			10%	-2.681330		

Under stationarity, the variable growth of deposits (DT) and variable interest rates (RATE) are stationary, meaning that the movement of the data naturally does not have a particular trend and can be directly processed into the next stage. However, this is not the case with other variables, although the tolerance level of α is increased to 10 percent, the variable data does not meet the data stationarity criteria so that the unit

root test is continued at first Difference. From the results of the unit root test the level of first difference or from the results of the integration degree test, it is seen that all data used with the ADF model both intercept, using intercept and trend and those who do not use intercepts and trends in this study are stationary, because the probability values of all variables value below 1 percent or the value of the ADF on these variables is higher than McKinnon's critical value.

B. Cointegration Test Results

TABLE III. COINTEGRATION TEST RESULTS

Unrestricted Cointegration Rank Test (Trace)				
Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.875286	55.96675	47.85613	0.0072
At most 1	0.661042	22.65901	29.79707	0.2632
At most 2	0.210205	5.348928	15.49471	0.7707
At most 3	0.093646	1.573211	3.841466	0.2097
Unrestricted Cointegration Rank Test (Maximum Eigenvalue)				
Hypothesized		Max-Eigen	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.875286	33.30774	27.58434	0.0082
At most 1	0.661042	17.31008	21.13162	0.1579
At most 2	0.210205	3.775717	14.26460	0.8822
At most 3	0.093646	1.573211	3.841466	0.2097
Max-eigenvalue test indicates 1 cointegrating eqn(s) at the 0.05 level				

Table III shows that in equation I with a probability value of 0.0072, equation II with a probability value of 0.2632, equation III with a probability value of 0.7707 and equation IV with a probability value of 0.2097, where only 1 equation (which is marked *), namely in equation I it is cointegrated at the level of 5 percent.

C. Lag Length Test

Lag length test is useful to eliminate the problem of autocorrelation in the VAR system. With the use of this Lag length test, the problem of autocorrelation and heteroskedasticity is not expected (Enders, 1989). To determine the length of Lagoptimal values are used from Akaike Information Criterion (AIC), Schwarz Criteria (SC) and Hannan-Quinn information criterion (HQ), the lag size chosen is based on the smallest value between the optimal lags between the AIC and SIC values.

TABLE IV. RESULTS OF LAG LENGTH TEST

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-226.9989	NA	7462311.	27.17634	27.37239*	27.19583
1	-208.2454	26.47548*	5794946.*	26.85240*	27.83265	26.94984*

From the results of calculations presented in Table 4, the Akaike Information Criterion (AIC) criteria for the smallest value in lag 1 are 26.85240, for the Schwarz Criteria (SC) criteria, the smallest value in lag 1 with 27.83265 and for Hannan-Quinn Information Criterion criteria (HQ) the smallest value also in lag 1 with a value of 26.94984.

D. Vector Autoregression (VAR) Test

In the VAR analysis model, there are no exogenous variables, where the observed variable is the variable interdependence relationship which includes variable growth in deposits (DT), economic growth (PE), Consumer Price Index (CPI) and interest rates (RATE). The results of the VAR model estimation are presented in Table 5 below.

TABLE V. RESULTS OF VAR TEST

Vector Autoregression Estimates

Date: 01/15/19   Time: 22:24

Sample (adjusted): 2001 2016

Included observations: 16 after adjustments

Standard errors in ( ) & t-statistics in [ ]

	DT	IHK	PE	RATE
DT(-1)	-0.111885	-0.257492	0.009203	0.013996
	(0.41880)	(0.42967)	(0.00723)	(0.02154)
	[-0.26716]	[-0.59928]	[1.27283]	[0.64987]
DT(-2)	0.249286	-0.180015	0.002546	0.012168
	(0.37057)	(0.38019)	(0.00640)	(0.01906)
	[0.67271]	[-0.47348]	[0.39797]	[0.63850]
IHK(-1)	0.028656	-0.339852	-0.000481	0.013195
	(0.64536)	(0.66212)	(0.01114)	(0.03319)
	[0.04440]	[-0.51328]	[-0.04317]	[0.39759]
IHK(-2)	0.200519	-0.032641	-0.016683	0.004658
	(0.54032)	(0.55435)	(0.00933)	(0.02779)
	[0.37111]	[-0.05888]	[-1.78833]	[0.16763]
PE(-1)	17.46836	4.792574	0.473629	0.365508
	(17.4228)	(17.8752)	(0.30080)	(0.89597)
	[1.00261]	[0.26811]	[1.57455]	[0.40795]
PE(-2)	2.430312	-5.261747	-0.224770	-1.324506
	(17.4051)	(17.8571)	(0.30050)	(0.89506)
	[0.13963]	[-0.29466]	[-0.74799]	[-1.47980]
RATE(-1)	-1.731176	19.95635	-0.127330	0.430303
	(11.2366)	(11.5283)	(0.19400)	(0.57784)
	[-0.15407]	[1.73107]	[-0.65635]	[0.74467]

44

RATE(-2)	3.021062	-3.083054	0.243937	-0.318127
	(11.8722)	(12.1805)	(0.20497)	(0.61053)
	[0.25446]	[-0.25311]	[1.19009]	[-0.52107]
C	-171.4933	78.05937	6.492230	9.784884
	(134.823)	(138.324)	(2.32772)	(6.93330)
	[-1.27198]	[0.56432]	[2.78910]	[1.41129]
R-squared	0.332692	0.595115	0.752839	0.656875
Adj. R-squared	-0.429946	0.132390	0.470368	0.264732
Sum sq. resids	15009.79	15799.45	4.474094	39.69395
S.E. equation	46.30612	47.50857	0.799472	2.381295
F-statistic	0.436238	1.286109	2.665196	1.675090
Log likelihood	-77.45397	-77.86415	-12.50874	-29.97190
Akaike AIC	10.80675	10.85802	2.688592	4.871487
Schwarz SC	11.24133	11.29260	3.123173	5.306068
Mean dependent	4.312786	147.5956	6.417392	7.515625
S.D. dependent	38.72385	51.00463	1.098542	2.777092

Determinant resid covariance (dof adj.)	1735186.
Determinant resid covariance	63570.89
Log likelihood	-179.2914
Akaike information criterion	26.91142
Schwarz criterion	28.64974

1) Deposit Growth Variable (DT): From the estimation results obtained variables that affect DT with the most significant coefficient value is the PE_{t-1} variable of 1.00261, while the variables that affect DT with the smallest coefficient value are IHK_{t-1} variable with a coefficient of 0.04440.

With R^2 of 0.332692, it shows that the instrument used has an effect of 33.27% on the Growth of Deposits in North Sumatra. The AIC value of 10.80675 and SC of 11.24133 is the second highest value after the CPI variable..

This result also explains that the instruments used, namely DT_{t-1}, IHK_{t-1}, PE_{t-1} dan $RATE_{t-1}$ affect the variable Growth of Deposits (DT) of 33.27% with a confidence level of 95%, while the remainder is 66.73 % is influenced by other instruments, apart from the models used.

2) Consumer Price Index Variable (IHK): From the estimation results obtained variables that affect CPI with the most significant coefficient value is the $RATE_{t-1}$ variable of 1.73197, while the variables that affect the CPI with the smallest coefficient value are PE_{t-1} variable with a coefficient of 0.26811.

With R^2 of 0.595115, it shows that the instruments used have an effect of 59.52% on the Consumer Price Index in North Sumatra. The AIC value of 10.85802 and SC of 11.29260 is the lowest value of all variables.

These results also explain that the instruments used, namely DT_{t-1}, IHK_{t-1}, PE_{t-1} dan $RATE_{t-1}$ affect the Consumer Price Index (CPI) variable of 59.51% with a confidence level of 95%, while the remainder is 40, 49% is influenced by other instruments, apart from the models used. Partially, that all instruments used do not significantly affect the Consumer Price Index (CPI) with a confidence level of 95%..

3) Economic Growt Variable (PE): From the estimation results obtained variables that affect PE with the most significant coefficient value is the PE_{t-1} variable of 1.57455, while the variables that affect PE with the smallest coefficient are IHKt-1 variable with a coefficient of 0.04317.

With R^2 of 0.752839, it shows that the instrument used has an effect of 75.28% on Economic Growth in North Sumatra. The AIC value of 2.688592 and SC of 3.123173 is the second lowest value of all variables.

These results also explain that the instruments used, namely MDK_{t-1}, TSB_{t-1}, GWM_{t-1}, IHU_{t-1} dan HPM_{t-1} affect the variable Economic Growth (PE) of 75.28% with a confidence level of 95%, while the remainder is 24.72% is influenced by other instruments outside the model used. Partially, DT instruments and CPI significantly affect Economic Growth (PE) with a confidence level of 95%.

4) Interest Rate Variable (RATE): From the estimation results, obtained the variable that influences RATE with the most significant coefficient value is the $RATE_{t-1}$ variable of 0.74467, while the variable that influences RATE with the smallest coefficient is IHK_{t-1} variable with a coefficient of 0,39759.

With R^2 of 0.656875, it indicates that the instrument used has an effect of 65.69% on interest rates in North Sumatra. The AIC value is 4.871487 and SC is 5.306068.

These results also explain that the instruments used, namely MDK_{t-1}, TSB_{t-1}, GWM_{t-1}, IHU_{t-1} dan HPM_{t-1} affect the interest rate variable (RATE) of 65.69% with a confidence level of 95%, while the rest 34.31% is influenced by other instruments, apart from the models used. Partially, the DT_{t-1} instrument and IHK_{t-1} instrument are the most significant ones affecting the interest rate (RATE) positively with a confidence level of 95%. That is, when the DT_{t-1} instrument and the IHK_{t-1} instrument increase by 1% each will increase the interest rate (RATE) by 64.99% and 39.76%, on the contrary when DT_{t-1} dan IHK_{t-1} decrease by 1% then each will reduce the interest rate (RATE) by 64.99% and 39.76%

E. Impulse Response Function (IRF) Test

The results of the Impulse Response Function (IRF) test

Fig.4. Results of Impulse Response Function
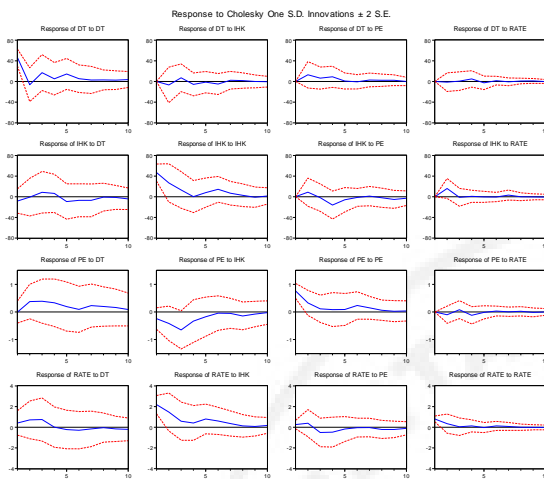
are presented in Figure 6 below.

In the Short Term, by giving shock one standard deviation on the DT variable, causing an increase in the CPI, PE and RATE variables; the CPI variable causes an increase in DT, PE and RATE variables; the PE variable causes an increase in the DT, CPI and RATE variables; and the RATE variable causes an increase in the variables DT, CPI and PE.

In the Long Term, by giving shock one standard deviation on the DT variable, will cause an increase in the variables CPI, PE and RATE; the CPI variable causes an increase in DT, PE and RATE variables; the PE variable causes an increase in the DT, CPI and RATE variables; and the RATE variable causes an increase in the variables DT, CPI and PE.

F. Forecast Error Decomposition Variance (FEDV) Test

The results of the Forecast Error Decomposition Variance (FEDV) test are presented in Figure 5 below:
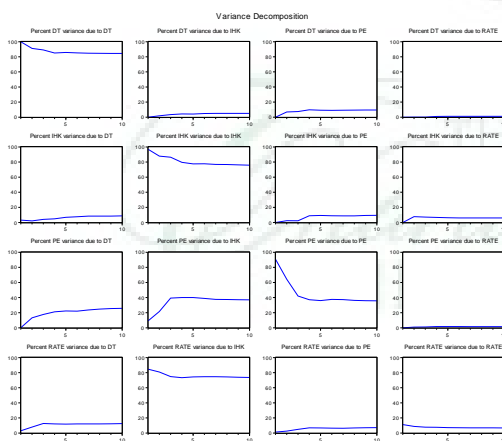

Fig.5. Result of Forecast Error Decomposition Variance (FEDV) Test

Estimated results using the Forecast Error Decomposition Variance (FEDV) model also explain that with the provision of variance error shock on each variable are:

In the Short Term with the provision of variance error shock on the DT variable, the most significant impact is the DT variable, and the lowest impact is on the RATE variable; in the CPI variable the most significant impact is on the CPI variable, while the lowest impact is on the RATE variable; the PE variable has the most significant impact on the CPI variable, and the lowest impact is on the RATE variable; in the RATE variable the most significant impact is on the CPI variable and the lowest impact on the PE variable.

In the long run, the provision of variant shock on the DT variable has the most significant impact on the DT variable and the lowest impact on the RATE variable; in the CPI variable the most significant impact is on the CPI variable and the lowest impact on the RATE variable; in the PE variable the most significant impact is on the CPI variable and the lowest impact on the RATE variable; in the RATE variable the most significant impact is on the CPI variable and the lowest impact on the RATE variable.

V. CONCLUSIONS

Based on the results of the VAR model interpretation, in general, the most substantial VAR value is obtained from the Economic Growth variable, while the smallest VAR value is the Deposit Growth variable.

Based on the results of the Impulse Response Function (IRF) test, the most significant influence on the growth of deposits in both the short and long term is the Consumer Price Index variable.

Based on the results of Forecast Error Decomposition of Variance (FEDV), the most significant impact of error variance in both the short and long term is the Economic Growth variable.

REFERENCES

[1] Ajija, dkk. 2011. *Cara Cerdas Menguasai Eviews*. Penerbit Salemba Empat. Jakarta.

[2] Al Arif dan Hanifah. 2017. *Determinan Deposito Pada bank Umum Syariah: Model regresi Panel.* Jurnal Ekonomi Kuantitatif Terapan, 10(2): 39-45.

[3] Basuki, Agus Tri. 2014. *Regresi Model PAM, ECM dan Data Panel dengan Eviews 7*. Buku 1. Katalok Dalam Terbitan (KDT). Yogyakarta.

[4] Cahyono, Ari. 2009. *Pengaruh Indikator Makroekonomi Terhadap Dana Pihak Ketiga Dan Pembiayaan Bank Syariah Mandiri*. Tesis tidak diterbitkan. Universitas Indonesia.

[5] Domowitz, I and L. Elbadawi. 1987. *An Error Correction Approach to Money Demand: The Case of the Sudan. Journal of Development Economics*, 26. 27-175.

[6] Ekananda, M. 2016. *Analisis Ekonometrika Time Series*. Edisi 2. Mitra Wacana Media. Jakarta: 133-146

[7] Farizi, F.A. Dan Akhmad Riduwan. 2016. *Pengaruh Inflasi, Suku Bunga, Likuiditas, Dan Bagi Hasil Terhadap Deposito Mudharabah*. Jurnal Ilmu dan Riset Akuntansi, 5(4): 1-16.

[8] Gujarati, N, Damodar. 2012. *Dasar-dasar Ekonometrika (Terjemahan)*. Buku 2. Edisi 5. Penerbit Salemba. Jakarta

[9] Gujarati, N, Damodar. 2010. *Dasar-dasar Ekonometrika (Terjemahan)*. Buku 1. Edisi 5. Penerbit Salemba Empat. Jakarta.

[10] Gultom, A.R Dan Raina Linda Sari. 2014. *Analisis Permintaan Deposito Berjangka Rupiah Pada Bank Umum Di Sumatera Utara Tahun 2001-2010*. Jurnal Ekonomi dan Keuangan, 2(11): 645-655.

[11] Hidayat, S.N. 2014. *Analisi Faktor-Faktor Yang Mempengaruhi Jumlah Deposito Mudharabah Pada Bank Syariah Mandiri*. Jurnal FEB. Unila.Lampung.

[12] Helvira, R. 2014. *Pengaruh PDRB Perkapita, Tingkat Suku Bunga Tabungan Bank Umum Dan Inflasi Terhadap Simpanan Masyarakat Pada Bank Syariah Di Kalimantan Barat*. Hal 1-14.

[13] Ismail. 2011. *Perbankan Syariah. Edisi Pertama*. Kencana Prenada Media Group. Jakarta.

[14] Kasmir, 2014. *Dasar Dasar Perbankan Edisi Revisi 2015*. Cetakan ke 13.PT Rajagrafindo Persada. Jakarta : 104-156.

[15] Maryanto, Supriyono. 2011 *Buku Pintar Perbankan*. Edisi 1. Penerbit ANDI. Yogyakarta.

[16] Panggabean, M.S. 2016. *Analisis Determinan Tabungan Di Indonesia*. Tesis tidak diterbitkan. Medan. Program Pascasarjana Universitas Negeri Medan.

[17] Pinchawawee Rasmidatta. 2011. *"The relationship between domestic saving and Economic Growth and Convergence Hypothesis: Case Study of Thailand. Sodertorn University College, School of Social Sciences.*

[18] Sukirno, Sadono. 1998. *Pengantar Teori Makroekonomi*. Edisi Kedua. PT RajaGrafindo Persada. Jakarta.

[19] Sunariyah.2004. *Pengantar Pengetahuan Pasar Modal*. Edisi Kelima. Alfabeta. Bandung.

[20] Sukirno, Sadono. 2015. *Pengantar Teori Makroekonomi. Edisi Ketiga*. PT RajaGrafindo Persada. Jakarta.

[21] Sukirno, Sadono. 2010. *Makroekonomi Teori Pengantar*. Cetakan 19. Edisi 1. RajaGrafindo Persada. Jakarta : 7

[22] Sukirno, Sadono. 2015. *Mikro ekonomi Teori Pengantar*. Edisi Ketiga. Cetakan 30. PT Rajagrafindo Persada. Jakarta: 377-383

[23] Sukirno, Sadono. 2006. *Ekonomi Pembangunan, Proses, Masalah dan Dasar Kebijakan*. Edisi Kedua. Kencana PrenadamediaGroup. Jakarta.

[24] Sitanggang, H. 2014. *Analisis Faktor-Faktor Yang Mempengaruhi Konsumsi Di Provinsi Sumatera Utara*. Jurnal Tabularasa PPS UNIMED, 11(2):145-164.

[25] Winarno, Wahyu Wing. 2011. *Analisis Ekonometrika dan Statistika dengan Eviews*. Edisi 3. UPP STIM YKPN. Yogyakarta.

[26] Widarjono, Agus. 2016. *Ekonometrika Pengantar dan Aplikasinya*. Edisi 4. UPP STIM YKPN. Yogyakarta.