## Government Financing and Foreign Exchange Reserves: An Analysis of Economic System Variations Luca Bianchi<sup>1</sup>, Giulia Rossi<sup>2</sup>, Marco Ferrari<sup>3</sup>, Elena B. Santoro<sup>4</sup>

<sup>1</sup>Department of Civil Engineering, University of Rome, Italy <sup>2</sup>Department of Architecture, University of Florence, Italy <sup>3</sup>Department of Environmental Sciences, University of Bologna, Italy <sup>4</sup>Department of Geosciences, University of Padua, Italy

Keywords: Exchange Rate, Inflation, ForeignDebt, Rate Interest, Foreign Exchange Reserves.

## Abstract

Defrayal of State very determining how a State can execute development process and intention of development of conducted economics. Defrayal of State determined by some indicator, one of them consist of foreign exchange reserve, foreign exchange is representative by defrayal of state which is very determine by indicator of macro economic.

This research is aim to analyze to macro economic indicator which determine foreign exchange reserve such as exchange rate, inflation, foreign debt and interestrate. This research try to analyze the influence with multiple linear regression, and then by different test to see condition of stock exchange reserve applying free market economic and state with governmental intervention system. Population at this research is considered to be nations with liberal economic and nation which still not yet opened (still share with governmental intervention). Results of data analysis through the classical assumption test show a model free from problem of classic assumption test. Statistical testing showed the coefficient of determination (adjusted R2) of 0.881. The exchange rate, inflation, external debt and interest rates of deposits influential the foreign exchange reserves. Individually rate influential, inflation influential, foreign debt influential and interest rates influential, all of them have influence to foreign exchange reserves

## Introduction

### Background

Globalization is a process that put people in interconnectedness in the economic, social, political, and cultural fields. This understanding is called globalization or neo-liberalism. The theory proposed by Immanuel Wallerstein, is a reaction to the theory of dependence that is considered unable to explain the phenomenon of development in the third world. In the perspective of the world system, each country or region is seen as an inseparable entity of the world system such as the global economic system. Based on this view, the phenomenon of inter-state mobility is the impact of the process of capitalist economic development in various countries. Since capitalism has grown out of its core countries in Europe, North America, Oceania and Japan, the hemisphere seems to continue to grow indefinitely and eventually create a global society. (Nasution, 1999).

Foreign exchange reserves have an important role and as an indicator that show the strong or weakness of a country's economic fundamentals, in addition to avoid a country's crisis in economy and finance(Priadi dan Sekar, 2008).

In international trade, the exchange rate is necessary in facilitating transactions. Exchange rate is an economic variable used to convert a foreign currency price into domestic currency, or vice versa. If the exchange rate increases or appreciates, then the goods abroad will be more expensive and the import will decrease.(Mustika, dkk, 2010)

The phenomenon of inflation in Indonesia is not a short-term and situational phenomenon, but as is common in other developing countries. Inflation in Indonesia is more of a long-term inflation problem because there are still structural constraints in the country's economy. Thus, the improvement of the inflation problem in Indonesia is not enough to be done by using monetary instruments which are generally short-term, but also by reforming the real sector. (Atmadja, 2000)

One of the burdens of the Indonesian economy is the continuing bloated foreign debt. This debt is already so heavy considering the repayments and huge interest rates. This cost has already passed through a reasonable capacity so that the costs of such essential and urgent interests are so minimal that they have enormous implications. The developing countries which has similar economic, political, social and cultural features and

problems with other developing countries, Indonesia itself is inseparable from foreign debt problems, over the past 25 years, foreign debt has contributed substantially to development in Indonesia.

The interest rate represents the opportunity cost of holding money in the form of a loss of opportunity to earn interest income. Low interest rates are expected to stimulate investment growth that will encourage investment by both domestic and foreign investors. Investors produce goods and services with a hope of making a profit in the future. While from the production process is a country to import factors of production, especially raw materials and capital materials that can not be produced in the country. (Septiana, 2011)

Therefore, based on the above phenomenon, researchers want to examine the factors that affect Indonesia's foreign exchange reserves. Because the researcher assumes that Indonesia's dependence on other countries will affect the foreign exchange reserves as well as the economic stability. The great influence of globalization in Indonesia's foreign exchange reserves has led to the importance of an analysis of the relationship of foreign exchange reserves to macroeconomic variables such as Exchange Rate, Inflation, Foreign Debt and Interest Rate. This research is poured in the form of thesis with the title: "Analysis of Government Financing on Foreign Exchange Reserves and Differences State Economic System".

### **Problem Definition**

Based on the above background description, the main issues to be studied are as follows

- 1. Does the exchange rate affect the Indonesia's Foreign Exchange Reserves?
- 2. Does Inflation affect Indonesia's Foreign Exchange Reserves?
- 3. Does Foreign Debt affects Indonesia's Foreign Exchange Reserves?
- 4. Does Interest Rate Influence on Indonesia's Foreign Exchange Reserves?
- 5. Are there significant differences between countries that embrace the market economy system and the countries with government intervention?

### Objective

In accordance with above problems, the objectives to be achieved from this research:

- 1. The influence of Exchange Rate to Indonesia's Foreign Exchange Reserves
- 2. The influence of Inflation to Indonesia's Foreign Exchange Reserve
- 3. The influence of Foreign Debt on Indonesia's Foreign Exchange Reserve.
- 4. The influence of Interest Rate on Indonesia's Foreign Exchange Reserve
- 5. The significant differences between countries that embrace the market economy system and the countries with government intervention

## **Exchange Rate versus Foreign Exchange Reserve**

The decrease of the exchange rate between Rupiah and USD (for example, from Rp 8000 / USD to IDR 9000 / USD) means dollar becomes more expensive in rupiah value. This reflects that the dollar value is rising because the amount of rupiah needed to buy dollars increases. In other words, the dollar appreciated against the rupiah. On the other hand, the rupiah becomes cheaper to be valued in dollars, meaning that the rupiah depreciates against the dollar. To avoid confusion, it should be remembered that the exchange rate between the domestic currency and foreign currency is defined as the amount of domestic currency required to purchase foreign currency. If the exchange rate increases, the domestic currency depreciates and the foreign currency appreciates. Conversely, the decline in exchange rate reflects the appreci ation of the domestic currency and the depreciation of foreign currency (Kuncoro, 1996).

According to Mankiw (2003), The real exchange rate is not different from the relative price. The relative price of domestic and foreign goods affects the demand for the goods. First assuming the real exchange rate is low and also means domestic goods are cheaper, the domestic population will buy only a few imported goods. For the same reason, foreigners will buy a diverse range of domestic products. As a result of both of these actions, the net exports will increase and also surplus in the trade balance which in turn will increase the foreign exchange reserves. Similarly, if the real exchange rate is high.

### Inflation versus Foreign Exchange Reserve

Inflation is a factor that affect the level of foreign exchange reserves of a country. That is, if the inflation that occurs in a country is high then the price of goods and services in the country will be high. This led to changes in currency values and the impact on the reserve deposits of commercial banks and the impact on foreign exchange reserves. In other words, the higher the rate of inflation that occurs will increase the value of a currency due to rising prices of goods and services on the market. (Son, 2011).

#### Foreign Debt versus Foreign Exchange Reserve

Foreign capital in the form of foreign loans to the government, whether grants, soft loans, or hard loans, has filled the revenue sector in the government budget which is then used to finance government spending and public development projects or public investment in the public sector. Due to the role of government is still the main driver of the economy in most developing countries, the government needs a lot of capital to build various infrastructure and facilities, unfortunately the government's financial capacity is still limited or less supportive. Thus, the government's foreign debt (debt) becomes very significant as capital to finance national economic development. It can even be said that foreign debt has become one of the most important sources of financing for national economic development for most developing countries, including Indonesia. (Atmadja, 2001)

#### **Interest Rate versus Foreign Exchange Reserve**

Mankiw (2003) states that with perfect capital mobility with evena little interest rate differential will trigger unlimited capital flows. It shows that with perfect mobility, the central bank cannot conduct independent monetary policy in a fixed exchange rate system. When a country raises its interest rate (tight monetary policy), soon the portfolio owners around the world bring their wealth to benefit from the new interest rate. The result is a large capital inflows, Indonesia's balance of payments (NPI) has a large surplus. Foreigners wanting to buy domestic assets tend to cause appreciating value and forcing the central bank to intervene to keep the exchange rate constant. The central bank buys foreign exchange with domestic currency. This intervention causes the domestic currency supply to increase. As a result monetary contraction reversed. The process will end when the domestic interest rate is pushed to the initial level.

### **Research methodology**

#### **Analysis Method**

The method of analysis used by the authors to explain the basic framework of the calculation of the relationship between dependent variables and independent variables is based on multiple regression analysis with data processing using SPSS application software. To simplify the calculation by econometric method, the dependent variable is the Foreign Exchange Reserve with the variable (Y) and the independent variable is the Exchange  $(X_1)$ , Inflation  $(X_2)$ ,

Foreign Debt (X<sub>3</sub>) and Interest Rate (X<sub>4</sub>). The next will be analyzed in the following way:

### **Multiple Regression Analysis Method**

 $LogY = b_0 + b_1LogX_1 + b_2LogX_2 + b_3LogX_3 + b_4LogX_4 + U_t$ 

- Where :
- $b_0 = Constant$
- $b_1$  = Exchange Rate Coefficient
- $b_2$  = Inflation Coefficient
- $b_3 =$ Foreign Debt Coefficient
- $b_4 =$ Interest Rate Coefficient
- Y = Foreign Exchange Reserve
- $X_1$  = Foreign Exchange
- $X_2 = Inflation$
- $X_3 = Foreign Debt$
- X<sub>4</sub> = Interest Rate
- Ut = Disturbance Variable

The next method is doing the Classic Assumption and statistical test and Paired Differences Test.

## Data analysis and discussion

### **Estimation Result of Multiple Regression Analysis**

### Classic Assumption Testing

1. Multicolinearity

2.

From the estimation results obtained that there is no symptoms of multicolinearity of the regression model under study. Since the tolerance value is greater than 0.10 and the small VIF value of 10. (See Appendix 1) Heteroscedasticity

Overall, the estimation result using glejser test can be seen from the free model of heteroscedasticity problem. It is explained that the level of significance> 0.05 which means explanatory variables are not statistically significant affect the resedual. (See Appendix 1)

3. Autocorrelation

Because DW is between  $d_{Uand}$  4-d\_U, then it can be concluded there is no autocorrelation. (See Appendix 1)

#### Pengujian Statistik

# 1. Test of $R^2$ = Determination Coefficient

From the estimation results can be seen the value of coefficients (Ajusted  $R^2$ ) is 0.951 shows that 95.1 percent of the variation in the ups and downs of the Foreign Exchange Reserve (Y) is explained by Exchange Rate (X<sub>1</sub>), Inflation (X<sub>2</sub>), Foreign Debt (X<sub>3</sub>) and Interest Rate (X<sub>4</sub>) and the rest of 4.9 percent explained by other factors (X<sub>1</sub>), Inflation (X<sub>2</sub>), Foreign Debt (X<sub>3</sub>) and Interest Rate (X<sub>4</sub>) and the rest of 4.9 percent explained by other factors (X<sub>1</sub>), Inflation (X<sub>2</sub>), Foreign Debt (X<sub>3</sub>) and Interest Rate (X<sub>4</sub>) with Foreign Exchange Reserve (Y) is strong because the value is almost close to 1. (See Appendix 1)

2. Test of F

Based on the above calculation it is found that F-hitung > F-tabel (142,824> 2,975). Thus, H<sub>a</sub>is accepted which means that the independent variables is Exchange Rate (X<sub>1</sub>), Inflation (X<sub>2</sub>), Foreign Debt (X<sub>3</sub>) and Interest Rate (X<sub>4</sub>) as a whole affect the amount of dependent variable is Foreign Exchange Reserves (Y) and can be statistically believed at a confidence level of 95%. (See Appendix 1)

### 3. Test of T

• Influence of Exchange Rate (X<sub>1</sub>) on Foreign Exchange Reserve (Y).

The result of the estimation test above is known that the exchange rate  $(X_1)$  has a positive relationship with the Foreign Exchange Reserve (Y). Thus, it can be explained that the continuous increase of Exchange Rate  $(X_1)$  will lead to an increase in the Foreign Exchange Reserve (Y).

The value of the elasticity of the independent variable Exchange rate  $(X_1)$  shown by the regression coefficient value b1 is 0.352 which means that every increase of the exchange rate  $(X_1)$  is 10 percent with the assumption that the other independent variable is fixed then the Foreign Exchange Reserve (Y) value will increase by 3,52 percent.

The result of t-test shows that the exchange rate  $(X_1)$  has an effect on foreign exchange reserve (Y) where t-hitung > t-table (3.402> 2.059), thus Ha is accepted. This means that the independent variables Exchange  $(X_1)$  individually entered into the regression equation affect the dependent variable Foreign Exchange Reserve (Y) at 95 percent confidence level.

#### • Influence of Inflation (X<sub>2</sub>) to Foreign Exchange Reserve (Y)

Further testing against Inflation  $(X_2)$  in affecting the Reserve of Foreign Exchange (Y). From the calculation of estimation obtained can be seen that the Inflation  $(X_2)$  has a negative relationship with the Reserve of Foreign Exchange (Y). This implies that an increase in Inflation  $(X_2)$  will cause a decrease in Foreign Exchange Reserves (Y).

The value of elasticity for independent variables Inflation  $(X_2)$  indicated by the value of regression coefficient b2 is equal to -0.092 which means every increase of Inflation  $(X_2)$  value of 10 percent assuming the value of other independent variables fixed then Reserves (Y) will decrease by 9.2 percent.

The result of t-test shows that Inflation  $(X_2)$  has an effect on sig. = 5% with t-hitung<t-tabel (-1,308 <2.059) thus H<sub>0</sub> is accepted, meaning independent variables Inflation  $(X_2)$  individually entered into the regression equation affect the dependent variable of the Foreign Exchange Reserve (Y) but not statistically significant at a confidence level of 95 percent.

This is due to the fluctuating rate of inflation, so the influence of inflation rate is not significant to the position of Indonesia's foreign exchange reserves. The inflation rate in Indonesia in the period of 1984-2013 is still relatively moderate, due to the flexible price increase in the long term and the prices do not change from year to year.

#### • Influence of Foreign Debt (X<sub>3</sub>) to Foreign Exchange Reserve (Y)

From testing Foreign Debt  $(X_3)$  in influencing the Reserve of Foreign Exchange (Y), have a positive relationship. This means that if an increase in Foreign Debt  $(X_3)$  will cause an increase in the Foreign Exchange Reserves (Y).

The value of the elasticity of the independent variable of Foreign Debt  $(X_3)$  shown by the value of the regression coefficient b3 obtained is 0.927 which means that every increase of the value added of Foreign Debt  $(X_3)$  is 10 percent with the assumption that the other independent variable remains, the Foreign Exchange Reserve Y) will increase by 9.27 percent.

The result of t-test shows that foreign debt  $(X_3)$  has an effect on sig. = 5% with t-hitung > t-tabel (6.204> 2.059) thus H0 is accepted, meaning independent variable overseas debt  $(X_3)$  individually included into the regression equation significantly affects the dependent variable of the Foreign Exchange Reserve (Y) percent. (See Appendix 1)

• Influence of Interest Rate (X<sub>4</sub>) to Foreign Exchange Reserve (Y)

The value of the elasticity of the independent variable of the Interest Rate  $(X_4)$  indicated by the value of the regression coefficient b3 obtained is -0.496, which means any increase of the added value of the interest rate  $(X_4)$  by 10 percent with the assumption that the other independent variable remains, the Foreign Exchange Reserve Y) will increase by -4.96 percent.

The result of t-test shows that the interest rate  $(X_4)$  has an effect on sig. = 5% with t-hitung > t-tabel (-4.96> 2.059) Thus Ha is accepted, meaning independent variable Interest Rate  $(X_4)$  individually included into the regression equation significantly affect the dependent variable Foreign Exchange Reserves (Y) 95 percent. (See Appendix 1)

### Summary

From the analysis that has been the author discussed in this thesis, it can be drawn some conclusions are:

- 1. Multiple linear regression model in this study did not have multicolinearity, heteroscedasticity and autocorrelation after tested in classical assumption test procedure.
- 2. The value of Ajusted  $R^2$  is quite high ie 0.951 which means that each independent variable Exchange Rate (X<sub>1</sub>), Inflation (X<sub>2</sub>), Foreign Debt (X<sub>3</sub>) and Interest Rate (X<sub>4</sub>) can explain the

variation of the up and down dependent variable of the Foreign Exchange Reserve ) of 95.1 percent, while the remaining 4.9 percent is influenced by other variables outside the model

- 3. The value of F-hitung using the degree of confidence 95 percent explained that the independent variables namely Exchange Rate  $(X_1)$ , Inflation  $(X_2)$ , Foreign Debt  $(X_3)$  and Interest Rate  $(X_4)$  as a whole significantly affect the amount of dependent variable that is Reserve Foreign Exchange (Y) with the value obtained that F-hitung> F-tabel (142.824> 2.975). Thus, H<sub>a</sub>is accepted.
- 4. Foreign Exchange Rate (X<sub>3</sub>) (6.204> 2.059), Interest Rate (X<sub>4</sub>) (-4398> 2.059) which means having an effect on the Foreign Exchange Reserves where the t-hitung is greater than t-table. However, Inflation (X<sub>2</sub>) (-1.308> 2.059), is not statistically significant against the Foreign Exchange Reserves where t-hitung is smaller than t-table at 95 percent confidence level.

## Suggestion

The authors analyzed the development of independent variables, namely Exchange Rate  $(X_1)$ , Inflation  $(X_2)$ , Foreign Debt  $(X_3)$  and Interest Rate  $(X_4)$  and its effect on dependent variable ie Foreign Exchange Reserves (Y)and the difference of condition of foreign exchange reserves between countries embraces the market system and the state that uses the economic system of government intervention. So the authors have a suggestion that Bank Indonesia as the controller of monetary policy and government as the controller of fiscal policy together in order to always control and maintain the stability of the Indonesian economy, especially macroeconomic variables such as Kurs, Inflation, Foreign Debt and Interest Rates are usually susceptible to influence from the outside. Any state policies and economic systems that apply must be in accordance with the conditions of our country should all side with the welfare of the people as a top priority.

For the next researcher, the results of this study are expected to be an adequate reference in adding references or materials for further research and if able to add other variables beyond this model for future research..

## References

- [1] Badan Pusat Statistik (BPS). Indikator Ekonomi. Berbagai Tahun Terbitan. Website www.bps.go.id Jakarta
- [2] Bank Indonesia. Laporan perekonomian indonesia. Berbagai Edisi Penerbitan. Website www.bi.go.id jakarta: Bank Indonesia.
- [3] Bank Indonesia. Statistik Ekonomi dan Keuangan Indonesia. Berbagai Edisi Penerbitan dan Websit www.bi.go.id jakarta: Bank Indonesia.
- [4] Atmadja, Surja Admin., 2002, Analisisi Pergerakan Nilai Tukar Rupiah Terhadap Dollar Amerika Setelah Diterapkan Kebijakan Sistem Nilai Tukar Mengambang Bebas Di Indonesia, Jurnal Akutansi dan Keuangan, Vol 4, No 1, Hal: 64-78.
- [5] Commer, Pak. J., 2011, Pakistan's Accumulation of Foreign Exchange Reserves During, 2001-2006, Dalam Jurnal, 5(1): h: 47-67.
- [6] Deliarnof., 2005, Perkembangan Pemikiran Ekonomi, Jakarta: PT. Raja Grafindo Persad
- [7] Englaparib, Rully., 2008, Faktor-faktor Yang Mempengaruhi Cadangan Devisa Pasca Krisis Ekonomi.Skripsi, Fakultas Ekonomi: Universitas Bung Hatta, Padang. (tidak dipublikasikan)
- [8] Febriyenti, Mega., Aimon, Hasdi dan Azhar, Zul., 2011, Faktor-faktor Yang Mempengaruhi Cadangan Devisa dan Net Ekspor di Indonesia, Jurnal Kajian Ekonomi, Juli 2013, vol. 11, No. 03.
- [9] Firdaus, Muhammad., 2004, Ekonometrika Suatu Pendekatan Aplikatif. Jakarta: Bumi Aksara.
- [10] Gandhi, Dyah. V., 2006, Seri Kebanksentralan, Pengolahan Cadangan Devisa di Bank Indonesia, V: 17, h: 63, PPSK BI, Jakarta.
- [11] Hamdy, Hadi., 2001, Teori dan Kebijakan Perdagangan Ekonomi Internasional, Jakarta: Ghalia Indonesia.
- [12] Halwani, Hendra, 2005. Ekonomi Internasional & Globalisasi Ekonomi. Edisi Kedua. Penerbit Ghalia Indonesia. Bogor.
- [13] Khalwaty, Tajul., 2000, Inflasi dan Solusinya, Jakarta: PT Gramedia Pustaka Utama, Undang-Undang RI No. 7 Tahun 1992 Tentang Perbankan, Penerbit Handayani, 1992
- [14] Madura, Jeff., 2006, International Corporate Finance, Keuangan Perusahaan Internasional, Edisi Ke delapan, Buku 1, Jakarta: Salemba Empat.
- [15] Mankiw, N. Gregory., 2003, Teori Makroekonomi, Edisi Kelima, Jakarta: Erlangga
- [16] Mustika, H. S Ketut dan D. Suresmiathi A.A Anak., 2010, Faktor-Faktor Yang Mepengaruhi Nilai Impor Pesawat Boing Amerika Serikat, E-Jurnal EP UNUD, 3(7): 320-328
- [17] Nanga, Muana., 2005, Makro Ekonomi, Teori Masalah dan Kebijakan, Edisi Ke dua, Jakarta: PT Raja Grafindo Persada.

- [18] Nilawati., 2000, Pengaruh Pengeluaran Pemerintah, Cadangan Devisa dan Angka Pengganda Uang Terhadap Perkembangan Jumlah Uang Beredar di Indonesia, Jurnal Bisnis dan Akutansi, Vol. 2, Agustus, h: 64-72.
- [19] Nopirin., 2000, Ekonomi Moneter, Buku II Edisi Ke I, Cetakan Kesepuluh. BPFE: Yogyakarta.
- [20] Octaviana, Ana., 2007, Analisis Pengaruh Nilai Tukar Rupiah / USD dan Tingkat Suku Bunga SBI Terhadap Indeks Harga Saham Gambungan di Bursa Efek Jakarta, Skripsi, Universitas Negri Semarang, Semarang.
- [21] Pattilo., 2002, Dalam Dini, Yuniarty., 2005, Uji Kausalitas; Utang Luar Negri dan Capital Flight di Indonesia, 1974-2002, Dalam Jurnal Ekonomi Pembangunan, 10 (3): h: 265-273, Yogyakarta: Fakultas Ekonomi, Universitas Ahmad Dahlan.
- [22] Petrus, L. Irene., 2012, Analisis Faktor-Faktor Makroekonomi yang Mempengaruhi Investasi Sektor Tranfortasi di Indonesia Periode 2001-2010. Skripsi. Jurusan Ilmu Ekonomi, Fakultas Ekonomi dan Bisnis, Universitas Hasanuddin. Makasar.
- [23] Pinem, R Juniartha., 2009, Analisis Pengaruh Ekspor, Impor, Kurs Nilai Tukar Rupiah Cadangan Devisa Indonesia. Skripsi. Fakultas Ekonomi, Universitas Sumatra Utara. Medan.
- [24] Putra, Ida B. P. P dan Indrajay, I. G. B., 2011, Jurnal Pengaruh Tingkat Inflasi, Utang Luar Negri dan Suku Bunga Kredit Terhadap Cadangan Devisa Indonesia, E-Jurnal Ep Unud, 2 (11): h: 533-538.
- [25] Priadi, Asmanto dan Sekar, Suryandari., 2008, Cadangan Devisa, Financial dan Stabilisasi Nilai Tukar Riil Rupiah. Dalam Buletin Ekonomi Moneter dan Perbankan, 11 (2) : h : 121-153.
- [26] Rachbini., Didik dan Ono, swidi., 2000, Dalam Benny, Jimmy., 2011, Ekspor dan Impor Pengaruhnya Terhadap Posisi Cadangan Devisa di Indonesia, 1985-2011, Jurnal EMBA, 1 (4): h: 1406-1415.
- [27] Septiana, Riris., 2011, Faktor-Faktor Yang Mempengaruhi Permintaan Impor Indonesia Dari China. Skripsi. Jurusan Ekonomi Fakultas Ekonomika dan Bisnis. Universitas Di Ponegoro, Semarang.
- [28] Siti, Romida H., 2011, Economic Development analisys Journal, Deteksi Dini Krisis Nilai Tukar Indonesia, 1995-2011, Edas 2 (4): h: 320, Fakultas Ekonomi, Universitas Negri Semarang.
- [29] Saleh, Sofyan. 2000," Perekonomian Indonesia dalam perspektif waktu", PT Pamator, Jakarta
- [30] Sukirno, Sadono., 2000, Makro Ekonomi Modren Perkembangan Pemikiran Dari Klasik Hingga Keynesian Baru. Edisi Kedua, Jakarta: PT Raja Gafindo Persada.
- [31] Suhaedi., 2000, Suku Bunga Sebagai Salah Satu Indikator Ekspektasi Inflasi, Buletin Ekonomi Moneter dan Perbankan, 2 (4), Bank Indonesia, Jakarta.
- [32] Stiglitz, Joseph E., 2007, Making Globalization Work. Terjemahan oleh Edijami Azwaldi. Jakarta: Mizan
- [33] Tambunan, Tulus., 2000, Krisis Ekonomi dan Masa Depan Reformasi, LPFE-UI, Jakarta.
- [34] Taufik Kurniawan. 2004. Determinan Tingkat Suku Bunga Pinjaman di Indonesia Tahun 1983-2002. Dalam Buletin Ekonomi Moneter dan Perbankan,h:437-459.