# Snowball

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# Snowball Effect of Interest Rate as a Control Instrument On Inflation Framework Targeting in Indonesia

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The purpose ofthis study was to determine whether interest ratesonly impact on inflation or even cause greater impact on othe rmonetary variables. It is veryimportant to knowthe impact,by knowing the impactit can avoid unwanted conditions

Data of research is collected since 1970 to 2013, hypothesis testing is used econometric models. The main advantages of econometric models for being able to handle the mutual dependence (interdependence). Beside that econometric model is an invaluable tool for understanding the workings of the economic system and so to test and evaluate policy alternatives andhypothesis testing using multiple regression.

The result of this study showed that this study indicate the interest rateturns out not only as an instrument of control of Inflation Targeting Framework but cause a snowball other monetary variables that further strengthen the mechanism on Inflation Targeting Framework

Key Word: Interest Rate, Inflation Targeting Framework

## CHAPTER 1
## INTRODUCTION

Monetary policy is one of the policies that could be made by the Monetary Authority to address the issue of the economy in addition to other policy or fiscal policy. Based on the experience of Indonesia ever experienced when the monetary crisis in 1998 proved that monetary management has an important role in anticipating the impact of monetary globalization. Therefore, the understanding of monetary policy and the monetary transmission mechanism and the consequences to the economy that exists in the country becomes very important.

Monetary policy a central bank or monetary authority intended to affect real economic activity and price transmission mechanism through the case therefore, monetary authorities must have a clear understanding of the mechanism of transmission of the country. The transmission mechanism of monetary policy can work through a variety of channels, such as interest rates,

monetary aggregates, credit, asset prices, exchange rates, and expectations (Warjiyo and Agung, 2002).

The control of monetary policy isn't as easy as imagined because of the impact of these policies carry a very big impact. The trouble has been going on since the period before the crisis and negatively impact the fundamental conditions of macro economic policy, because the moment it accommodate various policy targets simultaneously and not focus on one goal; Therefore, monetary policy changes required new paradigm ( Budiono, 1998)

This new paradigm has been defined in law No. 23 of 1999 and Amendment 3 in 2004 as UUNo runway application framework of inflation targeting Frames in Indonesia. The framework States that the ultimate goal of monetary policy is the achievement of the stability of the value of the IDR. Inflation targets are set having regard to the conditions of macro economic projection, the direction of movement and the consideration of social harm (social welfare) as the result of a policy that has already been done.

The framework of inflation targeting frane is expected to create levels of low inflation and a stable support economic growth in the short term, while in the long run economic growth influenced by technology, the level of productivity, the growth of the labor force and a conducive climate (Hutabarat, 2000). Inflation targeting monetary policy in many countries has been able to lower inflation and maintain price stability at the level specified, but in Indonesia its application still not satisfying kinerjanya (Ismail, 2006).

The control of inflation targeting to use the interest rate instrument (Haryono et al., 2000), by controlling interest rates to control inflation is expected to have been targeted. The mechanism of transmission that occur there are several possibilities, whether by using the instrument of interest rates will only control inflation or there are other mechanisms that may occur, which will eventually weaken the mechanism or instead provide a snowball effect towards the mechanism. Monetary policy strategy is a part of the macro policies that aim to control the stability of the currency value. When the stability of the currency value is compromised, then it can be used to recover a monetary policy with a series of actions of stabilization.

According to a study of the literature undertaken Sriyono (2014) for 10 years after the monetary crisis that monetary policy is decided the Government using the IFT is still not quite satisfactory because the results have not been fullest. To understand the results then Sriyono

(2014)advanced research about the mechanism of the transmission mechanism of the IFT. The results of the study mentioned that the use of interest rate as instrument control IFT.

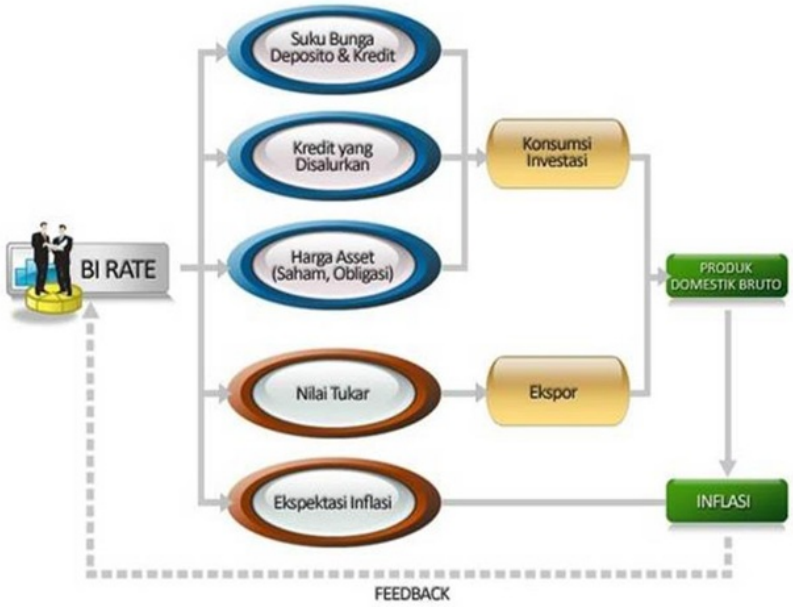
According to Muhammadinah (2011) interest rates could affect exchange rates, beside that many factors can affect the exchange rate of a currency, exchange rate can be changed if there is a change in appetite, changes in the price of imported goods and export goods, the on set of inflation, interest rate changes and the rate of return on investment as well as economic growth. In addition to that exchange rates will affect the inflation (Dewayany, 2012). Other studies also suggest that interest rates directly affect inflation (Calvo,1999).

## CHAPTER II
## STUDY LITERATURE

The goal of monetary policy is how to achieve macro-economic stability, as well as price stability, economic growth and the availability of jobs. All these targets are very difficult because the incidence of trade off between these variables. In order to achieve the final goal of monetary policy, Bank Indonesia implements monetary policy framework through control of interest rates (interest rate target), mirrored by the determination of interest rate (BI Rate).

Basically there are several policy frameworks that can be used in achieving monetary policy, each monetary policy framework has characteristics in accordance with the indicators of nominal anchor that is used as a base or target between in achieving goals. The monetary policy framework has an anchor there is some transmission through exchange rate targeting, targeting monetary quantities, targeting inflation and without any clear anchors (Warjiyo and Solikin, 2003).

The mechanism works changes the BI Rate until affect inflation is often referred to as the transmission mechanism of monetary policy. This mechanism describes the actions the Bank Indonesia through changes to its operational target and monetary instruments affecting various economic and financial variables before ultimately influential to the end goal of inflation. The mechanism takes place through interaction between central banks, the banking and financial sector, as well as the real sector. The BI Rate changes affect inflation through various channels, including the path of interest rates, credit lines, the exchange rate, the price of an asset, and line expectations (Warjiyo, 2004).




Monetary policy is based on the relationship between interest rates in the economy (which is the price of borrowing money) with the money supply to influence economic development goals, such as the control of prices (inflation and exchange rates), economic growth, and the rate of unemployment.

Meanwhile, inflation targeting regime, explicitly maintain a specific inflation rate (e.g. inflation the consumer price index) in a certain range, became popular since the early 1990s and more and more adopted by developed countries or developing countries.

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**Table 2.1**
**MONETARY REGIMES IN VARIOUS COUNTRIES**

| Negara Maju | Rezim Moneter | Negara Berkembang | Rezim Moneter |
|---|---|---|---|
| United States | Mixed Policy | Indonesia | Inflation Targeting |
| United Kingdom | Inflation Targeting+ target sekunder output & employment | Malaysia | Inflation Targeting |
| Eurozone | Inflation Targeting | Thailand | Inflation Targeting |
| Australia | Inflation Targeting | India | Inflation Targeting |
| New Zealand | Inflation Targeting | | |
| Canada | Inflation Targeting | | |
| Singapore | Exchange Rate Targeting | | |
| Maerika Latin | | | |
| Brazi | Inflation Targeting | Korea | Inflation Targeting |
| Chile | Inflation Targeting | Turkey | Inflation Targeting |

| | | | |
|---|---|---|---|
| | | China | Monetary Targeting & target basket mata uang |
| | | Hong Kong | Currency Board – fixed terhadap US$ |

Sumber :Ascarya (2012)

Inflation targeting regime is one monetary policy when the central bank tried to keep inflation within the target range is announced, usually with instruments of interest rate policy. According to Alamsyah and Masyhuri (2000) inflation targeting is primarily a framework (framework) in monetary policy that seeks to abolish the inflation bias of monetary policy implementation based on the discretion but within the framework of the planning target inflation to the transparent front. By their very nature are such that inflation targeting is a reflection of constrained discretion in monetary policy

**2.1 Transmission Mechanism**

. The transmission mechanism of monetary policy basically describes how monetary policy is a central bank to influence a wide range of financial and economic activity so that it can eventually reach the end goal.

The transmission of monetary policy from the perspective of conventional lines through lines of credit, interest rates, the exchange rate, the price of an asset, and line expectations. The use of the instrument of interest rates in monetary inflation targeting regimes, transmission of monetary policy through the interest rate (interest rate pass-through) became one of the topics of discussion is important.

Model of interest rate pass-through has been developed since a long time, such as marginal cost pricing model that States that the change in interest rates the bank's cost of funds will be forwarded in the form of a change in bank rates to its customers, since it reflects changes in the marginal cost of banks. This model is still considered the best model to explain interest-ratepass through of interest rate policy to the banking interest rates (Crespo-Cuaresma et al., 2006).

General equation is as follows:

$$BRN, t = \gamma + of\ \gamma 0\ mrn, t \quad \text{..... 2.1}$$

When the Government decided on the policy through the interest rates it will be forwarded to the aggregate demand through three channels of transmission. First, the real interest rates affect consumption through substitution and income effects. Second, the real interest rate

that determines the cost of acquiring capital goods, which affects demand for investment. Third, the policy interest rates have an effect on the nominal exchange rate and then transmitted to the real exchange rate as a determinant of foreign demand for domestic goods. These are also referred to as the monetary transmission through pass-through effects not directly from Exchange rates.(Warjiyo, 2004).

There are some models that can be used for the basis in determining the inflation target, including :

**Non Conservative Central Bank dan Conservative Central Bank**

Barro and Gordon (1983)suggested a model Non Conservative Central Bank. In the model the Barro & Gordon gives a more or less proportionate weight against the stability of inflation and output stability. Meanwhile, Rogoff (1985) suggested a model Conservative Central Bank by giving weight or more attention to stability of inflation on output stability.

Each of the models in question are:

The Non Conservative Central Bank:

$$Zt = (1/2)\ (\pi t - \pi^*) + (x/2)\ (Yt - Y^*)2 \quad \text{..... (2.2)}$$

The Conservative Central Bank:

$$Zt = ((1+e)/2)\ (\pi t - \pi^*) + (x/2)\ (Yt - Y^*)2 \quad \text{..... (2.3)}$$

Where $Yt = \pi e + \pi t - \mu\ t$ (Taylor Model)
Description:
$\pi t$ = Inflati actual,
p * = desired Inflation (target),
YT = actual output,
Y * = desired Output, x = portion of weights for output stabilization,
e = Extra weights for inflation, mt = other factors influencing output

From the explanation above, the comparison between the third model of inflation targeting in general are:

Table 2.3
Alternative Kebijakan

| | Non Conservative | Conservative | Accountabel Model |
|---|---|---|---|
| Inflation Variance | $(x/(1+x))\ \sigma_\upsilon^2 >$ | $(x/(1+x+e))\ \sigma_\upsilon^2$ | Nihil |
| Output Variance | $(1/(1+x))^2\sigma_\upsilon^2 <$ | $(1/(1+x+e))^2\sigma_\upsilon^2$ | $(1/(1+x))\ \sigma_\upsilon^2$ |

## 2.4 Relantionship between Variables

### The relationship between interest rate with GDP

According to Mishkin (2008) the stability of interest rates is highly expected, because the stability of interest rates also encourage the occurrence of financial market stability so that the ability of financial markets to channel funds from people who have investment opportunities can run smoothly and productive activities of the economy also remain stable

In General, when interest rates are low, then more and more fund flows resulting in economic growth has also increased. So also when the interest rate is high, then the little funding that flows would result in lower economic growth (Sundjaja and Barlian, 2003).

### The relationship between GDP and inflation

At the time of a fast growing economy, high employment opportunities created a high level of income and further raises the expenditure that exceeds the ability of issuing economic goods and services. This excessive spending will cause inflation. If the society still continues to add to its expenditure then aggregate demand will come back up. To meet the growing demand, companies will increase production and cause a real national income (GDP) to rise anyway. The increase in national production exceeds the full-employment opportunities will result in a faster increase in prices (causing inflation) (Sukirno, 2006).

Based on previous research, obtained that the factors that influence the formation of inflation in many countries, including Indonesia, comes from domestic and external variables are variables. These variables include gross domestic product, currency exchange rates, interest rates, money supply and economic shocks or changes in other countries (Solikin and Suseno, 2002).

Research conducted by Chetty (2006) concluded that the influence of interest rates against the investment are negative, meaning that if there is a rise in the interest rates it will decline in value of investment

### The relationship between interest rates against the Investment

Economists studying the investment to understand fluctuations in the output of goods and services the economy better. Model-the model IS based on the LM – functions of simple

investment associate investment with real interest rate: I = I (r). This function asserts that the real interest rate increase lowers the investment.

Research conducted by (Chetty, 2006) concluded that the influence of interest rates against the investment are negative, meaning that if there is a rise in the interest rates it will decline in value of investment

**Investment relationship with inflation**

Controlled inflation conditions will benefit create entrepreneurs, corporate profits will encourage the expansion of investment in future capacity additions both on the company or on the company's development and will ultimately speed up the creation of economic growth. Instead of a high inflation rate would have a negative impact on the economy can further destabilize social and political.

Inflation is a State of wherein oversubscribed (excess demand) of goods and services as a whole. In addition to inflation is a process of rising prices that apply generally within an economy (Sukirno, 1998) in addition to inflation is also an indication of improvement in the whole price level (Mankiw, 2003). According to the view of the monetaris a major cause of inflation is excess supply of money than requested by the community. Whereas the non monetaris, i.e., keynesian, excess aggregate demand can only occur if there is a rise in spending on consumption, investment, government spending or net exports (Gunawan, 1995).

**The relationship of interest rate to the exchange rate of money**

The relative interest rate changes affect investments in foreign securities, that would affect the supply and demand of foreign exchange. This will affect to currency exchange rates. The perfect relationship between the relative interest rates and the exchange rate between two countries is explained by the theory of the impact Fisher International (the international Fisher effect-IFE). (Berlianta, 2005) suggests that the theory of the International Fisher Effect indicates the movement of the value of one currency compared to other countries country caused by nominal interest rate differentials that exist in the two countries.

One of the lines that are used in the transmission of monetary exchange rate line is, argues that the monetary tightening that encourages an increase in interest rates will lead to exchange

rate appreciation due to the inflow of capital from abroad (Arifin, 1998) two factors cause changes in exchange rates

**The relationship exchange rates with Inflation**

United States Dollar exchange rate variables have a significant positive relationship against inflation in Indonesia. The weakening of the value of the IDR against foreign currencies caused by the debt of foreign Governments and the private sector which is bloated, result in a decrease in the price of our export goods outside the country, so that we become more export goods cheaper compared with goods from other countries.

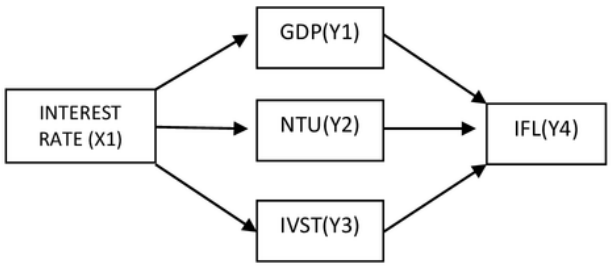
According to the theory of relative version of the PPP said that the fluctuation of the exchange rate within a certain period will be proportional or a comparable magnitude to changes in the price level prevailing in both countries during the same period. The formulation of the theory of purchasing power Parity (Purchasing Power Parity) is formulated as follows can be relative(Yuliadi, 2008).

$$R_{ab1} = \frac{(P_{a1} / P_{a0})}{(P_{b1} / P_{b0})} R_{abo} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 24$$

where:
Rab1 = exchange rate during the period 1
Rabo = exchange rate on a period basis

**2.3 Framework for Thinking**

This research analyzed using Structural Equation Modeling (SEM) to find out the truth concept of theories about the factors that approach that allows the relationship between an independent variable toward dependent variable influenced other latent variables (Ghozali and Fuad, 2005).



### 2.11 Equation Model

a. $Y_1 = \alpha_0 + \alpha_1 X_1 + e$ ..... (1)

b. $Y_2 = \beta_0 + \beta_1 X_2 + e$ ..... (2)

c. $Y_3 = ¥_0 + ¥_1 X_3 + e$ ..... (3)

d. $Y_4 = \pi 0 + \pi_1 Y_1 + \pi_2 Y_2 + \pi_3 Y_3 + e$ ..... (4)

### 2.4 Hypothesis

Based on the Foundation of theory and equations models are used then the hypothesis proposed is:

1. $H_1$ = The GDP effect significantly to Inflation
2. $H_2$ = The Exchange Rate effect significantly to the Inflation.
3. $H_3$ = The Investment effect significantly to the inflation
4. $H_4$ = The GDP, Exchange Rate and Investment effect significantly to the inflation

## CHAPTER III
## RESEARCH METHODOLOGY

### Design of Study

Based on the approach used, this study belongs to the type of quantitative research, because research departs from theory to analyze the influence between variables that are observed through a deductive approach. Therefore, this study also wants to analyze and examine the relationship between variables exogenous with endogenous variables in the regression model of structural equation so this study also classified in this type of research explanatory (Sarmanu, 2009) and including a role in the type of research causality (Kuncoro, 2007).

### Research Data

The data will be used in this study is a secondary data collected from several agencies, institutions, agencies and official institutions, such as the Central Bureau of Statistics, Bank

Indonesia and from IFS (international financial statistics. The data used are annual data, from the period of 1970 to the 2013

**Variables and measurements**

1. SBI interest rate

SBI is securities issued by Bank Indonesia, and one of the components that are used by the Government to control the amount of money in circulation. The data used in this study is the annual interest rate reported by Bank Indonesia and IFS began in January 1970 – December 2013 in units of percent (%).

2. Economic growth

Economic growth is an increase in the ability of an economy to produce goods and services. Economic growth is usually measured using data on gross domestic product (GDP) or per capita income. The data used in this study to find out the economic growth is the annual GDP data released by the Central Bureau of statistics (BPS) from January 1970 – December 2013 in units of percent (%).

3. The exchange rate of IDR

Exchange rates (exchange rate) is the exchange rate of the currency of a country with the currency of other countries. Exchange rate data in this study is the currency exchange rate Indonesia (IDR) against the United States (dollar) by using a direct quote was stated by IDR/USD (Indonesia IDR/Dollar u.s.). The data used is the Middle exchange rate (the rate that it was concluded based on the results of the data exchange buy and sell rates) in annual foreign exchange trading recorded by Bank Indonesia and the BPS as of January 1970 – December 2013 with a unit of IDR per Dollar.

4. Investment

The data used was investment sum of the investments which have been realized and PMDN Investment Foreign Direct Investment that has been realized. PMA investment modified used to be denominated in IDR after it recently added. The data used is the yearly data issued by the BPS and the Bank began a period of annual Indonesia January 1970 – December 2013 with units of the Indonesian IDR

5. Inflation rates

Inflation is the rate of increase in the price of public goods that occur on an ongoing basis. Inflation rate data used in this research is the inflation rate based on the consumer price index (CPI) issued by IFS, BPS and Bank Indonesia's yearly from January 1970 – December 2013 in units of percent (%).

**Data Analysis Techniques**

Research studies using time series data often arises the problem of the data stationary used in the study. Stationary test required for macroeconomic variables are generally non-stationary, the data time series supposedly has an average and high variant, when the stationery test was not done that it will affect the behavior of actual economic variables (Widarjono, 2007)

The purpose of this test is that the mean stationary stable and random error = 0, so that the obtained regression models with predictive power that is reliable and no spurious (Maddala, 1992).

## CHAPTER VI
## RESULT

### 4.1 Analysis of Results

4.1.1 Classical Assumptions Test Results

**1. Multicollinearity Test**

**Table 4.1**

| Model | | t | Sig. | Collinearity Statistics | |
|---|---|---|---|---|---|
| | | | | Tolerance | VIF |
| 1 | (Constant) | 4.174 | .000 | | |
| | ECON | -3.083 | .004 | .129 | 7.778 |
| | IVSTM | 2.132 | .039 | .214 | 4.672 |
| | EXCRT | 3.001 | .005 | .331 | 3.020 |

The results of the analysis in Table 4.1 shows that VIF Exchange rate and Investment less than 5 not the case multicollinearity, while for the variable Economi Growth has VIF more than 5, so then the conceptual research of the multicollinearity does not occur

### 2. Autocorrelation test

**Table 4.2**

**Model Summary[b]**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|---|---|---|---|---|---|
| 1 | .471[a] | .221 | .163 | 11.14907 | 1.748 |

a. Predictors: (Constant), EXCRT, IVSTM, ECON

b. Dependent Variable: IFLTN

Analysis of the results obtained in Table 4.2 values Durbin Watson 1622, according to Table Durbin Watson Standard that for n = 44 and k = 3 and value dl = 1.3749 and du = 1. 6647. because the value is larger than the Standard Table Durbin=Watson, so the research data used in areas not yet definitely

### 3. Heterokedasitas Test

**Table 4.3**

**Correlations**

| | | | EXCRT | IVSTM | ECON | ABS_RES |
|---|---|---|---|---|---|---|
| Spearman's rho | EXCRT | Correlation Coefficient | 1.000 | .668** | .698** | -.180 |
| | | Sig. (2-tailed) | . | .000 | .000 | .242 |
| | | N | 44 | 44 | 44 | 44 |
| | IVSTM | Correlation Coefficient | .668** | 1.000 | .946** | -.055 |
| | | Sig. (2-tailed) | .000 | . | .000 | .722 |
| | | N | 44 | 44 | 44 | 44 |
| | ECON | Correlation Coefficient | .698** | .946** | 1.000 | -.124 |
| | | Sig. (2-tailed) | .000 | .000 | . | .423 |
| | | N | 44 | 44 | 44 | 44 |
| | ABS_RES | Correlation Coefficient | -.180 | -.055 | -.124 | 1.000 |
| | | Sig. (2-tailed) | .242 | .722 | .423 | . |
| | | N | 44 | 44 | 44 | 44 |

**. Correlation is significant at the 0.01 level (2-tailed).

Based on the results of the analysis of Table 4.3, indicates that all variables have the value of sig > 0.05, this indicates that the variables examined are not going heterokedasitas

### 4. Stationary test

a. Interest Rate

**Table 4.4**

Stationary Test Rresults of Interest Rate

| Lag | Autocorrelation | Std. error | Box-Ljung Statistic | | |
|---|---|---|---|---|---|
| | | | Value | Df | Sig |
| 1 | -0,317 | 0,158 | 4,019 | 1 | 0,045 |
| 2 | -0,437 | 0,156 | 11,895 | 2 | 0,003 |

b. Economic Growth

**Table 4.5**

STATIONARY TEST RESULTS OF ECONOMIC GROWTH

| Lag | Autocorrelation | Std. error | Box-Ljung Statistic | | |
|---|---|---|---|---|---|
| | | | Value | df | Sig |
| 1 | -0,495 | 0,158 | 9,811 | 1 | 0,002 |
| 2 | 0,021 | 0,156 | 0,021 | 2 | 0,007 |

c. Exchange Rate

**Table 4.6**

STATIONARY TEST RESULTS OF EXCHANGE RATE

| Lag | Autocorrelation | Std. error | Box-Ljung Statistic | | |
|---|---|---|---|---|---|
| | | | Value | df | Sig |
| 1 | -0,595 | 0,158 | 14,173 | 1 | 0,000 |
| 2 | -0,020 | 0,156 | 14,190 | 2 | 0,001 |

d. Investment

**Table 4.7**

STATIONARY TEST RESULTS OF INVESTMENT

| Lag | Autocorrelation | Std. error | Box-Ljung Statistic | | |
|---|---|---|---|---|---|
| | | | Value | df | Sig |
| 1 | -0,549 | 0,158 | 12,103 | 1 | 0,001 |
| 2 | 0,093 | 0,156 | 12,460 | 2 | 0,002 |

e. Inflation

**Table 4.8**

STATIONARY TEST RESULTS ON INFLATIONS

| Lag | Autocorrelation | Std. error | Box-LjungStatistic | | |
|---|---|---|---|---|---|
| | | | Value | df | Sig |
| 1 | -0.549 | 0,158 | 12.103 | 1 | 0,001 |
| 2 | 0.093 | 0.156 | 12.460 | 2 | 0,002 |

Based on the results of the analysis of Stationary test for all variables, indicating that the data dapatsa stationary after the lag 2

### 4.1.2 Results Analysis of Research inter-Variable

1. The relationship between the Interest Rate and Economic Growth

**Table 4.8**

**Coefficients[a]**

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | | |
| 1 (Constant) | 1.362E6 | 275574.002 | | 4.941 | .000 |
| ITRST | -51083.377 | 18441.988 | -.393 | -2.770 | .008 |

a. Dependent Variable: ECON

Based on the results of the analysis in Table 4.8 shows that economic growth is influenced by interest rates, the results of this research supported by (Udoka and Anyingang, 2012).

2. The relationship between the Interest Rate and Exchange Rate

**Table 4.9**

**Coefficients[a]**

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | | |
| 1 (Constant) | 3441.005 | 1302.446 | | 2.642 | .012 |
| ITRST | 16.787 | 87.162 | .030 | .193 | .848 |

a. Dependent Variable: EXCRT

Based on the results of the analysis in table 4.9 shows that influential interest rates do not significantly to exchange rates, these results are in contrast to research Arifin (1998), he argues that the monetary tightening that encourages an increase in interest rates will lead to exchange rate appreciation due to the inflow of capital from abroad. These results show that there is interest in Indonesia is not interesting enough for foreign investors so that foreign investors do not invest in the financial sector or the real sector.

3. The relationship between the Interest Rate and Investment

**Table 4.10**

**Coefficients[a]**

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | | |
| 1 (Constant) | 3.490E8 | 9.321E7 | | 3.744 | .001 |
| ITRST | -1.470E7 | 6.238E6 | -.342 | -2.357 | .023 |

a. Dependent Variable: IVSTM

Analysis results in table 4. 10 shows that the relationship between interest rate and investment is a significant and negative it indicates that the greater the interest then the investment value will go down and vice versa

4. The relationship between Economic Growth, Exchange Rates, investment and Interest rate

**Table 4.11**

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 10.074 | 2.413 | | 4.174 | .000 |
| | ECON | -1.647E-5 | .000 | -1.199 | -3.083 | .004 |
| | EXCRT | .002 | .001 | .728 | 3.001 | .005 |
| | IVSTM | 2.668E-8 | .000 | .643 | 2.132 | .039 |

a. Dependent Variable: IFLTN

## Discussion.

The problem of inflation experienced by each country, because of the impact of the rise in inflation can affect to all sectors. The problem of how to reduce inflation has been a central issue among policy makers since the 1970s. Although available data show that the Nigerian economy has on the average experienced moderate inflation in the pre-SAP period; the unfavorable consequences of inflation have since assumed an intolerable dimension (Afolabi and Efunwoye, 1995).

This research is different from the researchby(B Imimole and Enoma, 2011)thatexchange rate depreciation maynot directly control inflation, but it helps to restructure the price mechanism of both import and export, such thatNaira depreciation subtly tends to moderate prices in Nigeria, especially imported price inflation. It istherefore suggested that policy makers should not totally rely on this instrument to control inflation, butshould use it to complement other macro-economic policies. More so, policies should be put in place toincrease domestic production of export commodities, which are currently short-supplied. This proves that each country had different policies depending on the characteristics of the fundamental conditions of the country

Based on previous results, best done by Sriyono (2014)suggest that the determination of the interest rate as an instrument in the inflation Targeting Frames is in compliance because of significant direct and positive effect against inflation. In this study indicated that interest rates were also significantly influential directly and positively towards the next stage of the exchange

rate, the exchange rate effect is significant and positive against inflation. On the other variables also has direct interest rates significantly and positively towards the next stage of economic growth and economic growth significant direct and positive effect.

Based on these results it turns out that the use of interest rates as inflation in the control of inflation targeting frames produce a snowball effect, other than interest rates affect directly against inflation also affect exchange rates and economic growth. And in the end Exchange rates and economic growth also direct effect against inflation. This mechanism also gives one the findings that policy bank central is using interest rate as control on the Inflation Frame Targeting have a huge significance because it give a snowball effect on mechanism Inflation Frame Targeting

This research is different from the research by Imimole ( 2011) that exchange rate depreciation may not directly control inflation, but it helps to restructure the price mechanism of both import and export, such that Nigeria depreciation subtly tends to moderate prices in Nigeria, especially imported price inflation. It is therefore suggested that policy makers should not totally rely on this instrument to control inflation, but should use it to complement other macro-economic policies. More so, policies should be put in place to increase domestic production of export commodities, which are currently short-supplied. This proves that each country had different policies depending on the characteristics of the fundamental conditions of the country

Similar studies have also been conducted by Rusdiana (2011) using the SBI interest rate as the independent variable and prove influential SBI interest rates significantly to exchange rates. According to Imimole (2011) BI rate a negative and significant effect against the movement of the exchange rate USD/IDR, which means that if the level of the BI rate increase then the direction of movement of the exchange rate USD/IDR will decrease (Dauda, 2011)

The phenomenon of inflation in Indonesia is not a short-term phenomenon and that happens by circumstantial only, but as regards its common in other developing countries, inflation in Indonesia is more on long-term inflation problem because there are still structural barriers in the economy of the country. This shows that the existing inflation in Indonesia is not absolutely fully caused by hereditary just monetary but also the non monetary.

The weakening IDR exchange rates made the price of imported goods is increasing due to the required number of dollars more to get the import of goods, as is the case with the goods with the production of the imported raw materials. It will also raise the price of domestic production

that could culminate in the onset of inflation. Depreciation of the exchange rate of IDR against foreign currencies also resulted in a rise in the value of exports. The price of domestic goods cheaper overseas parties interest to increase the number of requests going to the item so that the price will go up slowly and cause inflation. (Endri, 2008).

## CHAPTER V
## CONCLUTIONS

Based on the results of previous studies and current research then discovered that using interest rates as a policy control on Inflation Frame Targeting turns out not only has a single goal but cause a snowball effect that ultimately the more reinforcing mechanism of use interest rates as a policy controls on Inflation Frame Targeting

# Snowball

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