SRIYONO_BALI_FINAL CEK TRACKING

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TRACKING OF TRANSMISSION MECHANISM
ON INFLATION TARGETING

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ABSTRACT :The purpose of this study is would like to know the transmission mechanism of the inflation targeting, through direct or indirect mechanism. Data of research is collected since 1970 to 2013, hypothesis testing is used *Path Analysis Model*. The advantage of this analysis is we will know the relationship of direct and indirect between variables. The result of this study showed that transmission mechanism of inflation targeting occurs directly that is the interest rate directly influence to inflation

Key Word : Inflation Targeting, Transmission Mechanism

CHAPTER I
INTRODUCTION

Background

Monetary policy strategy is part of the macro policies that aim to control the stability of the currency. If the stability of economic activity disrupted, then one of the policies that can be used is to restore monetary policy with a series of stabilization measures .There are some of the causes of failure in controlling the stability of the money that is the instability of the money multiplier), the velocity of money to change the paradigm of monetary policy transmission mechanism (Miskhin,2008)

The monetary policy of a central bank or monetary authority is intended to affect real economic activity and prices through a transmission mechanism that occurs. To that end, the monetary authorities should have clear understanding of the transmission mechanism in the country. Monetary policy transmission mechanism can work through various channels, such as interest rates, monetary aggregates, credit, exchange rates, asset prices, and expectations (Warjiyo dan Agung, 2002). Thus, an understanding of the transmission of monetary policy is a key in order to steer monetary policy to influence the direction of the development of the real economy and prices in the future.

The old paradigm before the Asian financial crisis, the domestic monetary policy framework aims to achieve the dual goals (multiple objectives), which aims to achieve price stability, economic growth, employment and balance of payments (Laksmono,2001). This objective was considered ineffective because there were tradeoff between each of these goals, for example, if the government did the policy to encourage economic growth will have negative effect toward inflation control, and vice versa. The existence of these difficulties it is necessary to change the monetary policy new paradigm (Boediono, 1998) by adopting a single target controlling.

This new paradigm has been confirmed in Act No. 23 of 1999 and amendments of Act No 3 of 2004 as an application basis of frameworks targeting inflation rate in Indonesia. The framework states that the ultimate objective of monetary policy is to achieve stability in the rupiah. Inflation target set by taking into account macroeconomic conditions, forecast the direction of economic and social losses considerations (social welfare) as a result of a policy that has been done (Marshall and Swanson, 1980). Inflation targeting is a framework for monetary policy that is marked by the announcement to the public about the inflation target figure in a particular period (Warjiyo et al, 2006: 113). Inflation targeting explicitly stated that the ultimate goal of monetary policy is to achieve and maintain the low and stable inflation (Devi, 2006)

In addition, the targeting inflation framework is expected to create a low and stable inflation rates that support economic growth in the short term, while the long-term economic growth is affected by technology, the level of

productivity, labor force growth and favorable climate (Hutabarat, 2000). Inflation targeting monetary policy in many countries have able to reduce inflation and maintain price stability at a set rate, but in Indonesia its performance implementation is still not satisfied (Ismail, 2006).

Inflation targeting monetary policy using interest rate instruments, by controlling the interest, it is expected can control the targeted inflation (Clarida, 1999). Transmission mechanism that occurs there are several possibilities, whether by using the interest rate instrument can directly control inflation or there are other mechanisms that may be passed.

According Muhamadinah (2011) interest rates can affect the exchange rate; otherwise it will affect the rate of inflation (Dewayany, 2012). Meanwhile in research Prayitno (2002: 47) interest rates can affect the amount of money in circulation; the following mechanisms of the money supply can affect inflation (Goddess, 2006). Other studies also show that the interest rate directly affects inflation (Clavo, 1990).

This study aims to determine the path where the mechanism is actually happening in the inflation targeting policy framework mechanism, whether the interest rate instruments affecting directly or through other monetary variables

CHAPTER II
REVIEW OF LITERATURE

Monetary Policy

Based on the policy choices of monetary policy is one alternative macroeconomic policy options in the field of monetary whose objective influence aggregate economic activity in the economy such as the increase in Gross Domestic Product (GDP), inflation control, interest rates and balance of the International Payments Balance and increased reserves exchange in International Trade (Sicat and Amdt, 1991: 254)

In general, there is mentioned that the implementation of monetary policy consist of two expansion and contraction, expansionary monetary policy is also called easy money policy by increasing the money supply such as the addition of the M1 and the lower the interest rate while the contractive policy or tight money policy is done by reducing the money supply and raise interest rates.

Monetary policy of the central bank (Bank Indonesia) to control inflation, the amount of money supply (JUB) and the exchange rate through interest rate (Muhamadinah, 2011)

Monetary Policy Framework

Policy objectives to be achieved either by monetary policy and a macro policy in general is how to achieve macroeconomic stability, as well as price stability, economic growth and full employment. All of these goals is very difficult because of the emergence of a trade off between these variables. In order to achieve the ultimate objective of monetary policy, Bank Indonesia has adopted a monetary policy framework through

the control of interest rates (interest rate target), reflected by the determination of the interest rate (BI Rate).

Monetary policy framework has anchor (anchor) there are several transmission is through the exchange rate targeting, targeting monetary aggregates, inflation targeting, and without a firm anchor (Warjiyo, 2003)

Monetary Policy Transmission

The working mechanism of BI rate changes to affect inflation is often referred to as the transmission mechanism of monetary policy. This illustrates the mechanism of action of Bank Indonesia through changes in monetary instruments and operational targets affecting various economic and financial variables before ultimately affect inflation to its final destination. The mechanism occurs through the interaction between the Central Bank, the banking and finance sector, as well as the real sector (King,1996). BI rate changes affect inflation through various channels, including the interest rate channel, lines of credit, exchange rate channel, asset price channel, and the expectation pathways (Warjiyo, 2004).

According to Alam and Masyhuri (2000) inflation targeting is basically a framework (framework) in monetary policy that seeks to negate the inflationary bias of monetary policy implementation is based on discretion but in the transparent planning inflation target framework. With such a nature that inflation targeting is a reflection of constrained discretion in the monetary policy.

Transmission Mechanism

The transmission mechanism of monetary policy basically describes how monetary policy applied by the central bank to influence the economic and financial activities thus finally can achieve the ultimate goal (Ascarya,2000)

Transmission of monetary policy from the conventional perspective can through the interest rate channel, lines of credit, exchange rate channel, asset price channel, and track expectations. By using the interest rate instruments in the monetary regime of inflation targeting, monetary policy transmission lines through the interest rate (the interest rate pass-through) became one of the important topics (Smithin, 2003)

Model interest rate pass-through has been developed for a long time, such as the model developed by called the marginal cost pricing models which states that changes in interest rate cost of funds of banks will be forwarded in the form of changes in interest rates to their customers, because it reflects the change of marginal cost from the banks. This model is still regarded as the best model to explain the interest rate pass-through of policy rates to bank interest rates (Egert et al., 2006).

When the government decides the policy through interest rate it will be forwarded to the aggregate demand through three transmission channels. *First,* real interest rates affect consumption through substitution and income effects. *Second,* the real interest rate that determines the cost of procurement of capital goods affects the demand for investment. *Third,* the policy interest rate has effect in nominal exchange rate and then transmitted to the real exchange rate as a determinant of foreign demand for domestic goods. Which is also referred to as the monetary transmission through the pass-through effect is not directly from the exchange rate. (Warjiyo, 2004)

Model Equation

$$Y_1 = \beta_0 + \beta_1 X_1 + e$$
$$Y_2 = \alpha_0 + \alpha_1 X_1 + e$$
$$Y_3 = \mu_0 + \mu_1 X_1 + \mu_2 Y_1 + \mu_3 Y_2 + e$$

CHAPTER 3
Research Methodology
Design of Study

Based on the approach used, this study belong 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: 8) and including a role in the type of research causality (Kuncoro, 2003: 10)

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

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 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: 526).
It also performed classical assumption includes Normality test, Heteroskedastic test (Priyatno, 2010: 84)., The Auto Correlationtest (Kendall, 1971: 8) and Multicollinearity test (Winarno, 2007: 57). The analysis tool used in this study is using SPSS software version 16.

RESULTS AND DISCUSSION

4.1 Analysis of Results

4.1.2 Classical Assumptions Test Results

1. **Multicollinearity Test**

Table 4.1
RESULTS OF MULTICOLINEARITY TEST
Coefficients[a]

Model		Unstandardized Coefficients		Stad. Coeff.			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	1.909E7	1.920E7		.994	.327		
	JUB	-923494.550	1292442.207	-.085	-.715	.480	.822	1.217
	NTU	15285.390	2142.622	.777	7.134	.000	.978	1.023

a. Dependent Variable: IFL

2. **HeteroskedasticTest**

RESULTS OF HETEROSKEDASTIC TEST

Unstandardized Residual	Correlation Coefficient	1.000
	Sig. (2-tailed)	.
	N	43
JUB	Correlation Coefficient	.038
	Sig. (2-tailed)	.957
	N	43
NTU	Correlation Coefficient	.074
	Sig. (2-tailed)	.656
	N	43

. **Autocorrelation test**

Result of Autocorrelation test
Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.771[a]	.594	.559	4.868E7	1.594

a. Predictors: (Constant), NTU, JUB

b. Dependent Variable: IFL

3. **Stationary test**

A. Stationary Test

STATIONARY TEST RESULTS 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

2. Stationary Test results on Exchange Rate (NTU)

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

3. Stationary Test results on Inflation (IFL)

STATIONARY TEST RESULTS ON INFLATIONS

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

4. Stationary Test results on Money Supply (JUB)

STATIONARY TEST RESULTS OF MONEY SUPPLY

Lag	Autocorrelation	Std. error	Box-Ljung Statistic		
			Value	df	Sig
1	-0,100	0,158	0,400	1	0,527
2	0,401	0,156	7,046	2	0,030

B. Results Analysis of Research inter-Variable

1. The relationship between the Interest Rate and Exchange Rate

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	3528.717	1285.121		2.746	.009
SKB	10.398	87.580	.018	.119	.906

a. Dependent Variable: NTU

2. Rate and the Money Supply

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	288386.468	69926.113		4.124	.000
SKB	-13476.811	4765.396	-.400	-2.828	.007

a. Dependent Variable: M1

Based on the statistical analysis results, it is showed that interest rates have a significant effect on the money supply (M1). This suggests that any changes in interest rates will have an influence on the money supply (M1). There are several theories that led to the demand for money increases one is more emphasis on the Cambridge theory of money demand with the planned volume of transactions, and the demand for money is also influenced by interest rates (Darmawan, 2005: 9).

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3. The relationship between Exchange Rates, Interest and Money supply against inflation

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-.472	4.429		-.106	.916
SKB	.809	.274	.452	2.948	.005
NTU	.000	.000	.088	.604	.550
M1	-1.890E-6	.000	-.036	-.224	.824

a. Dependent Variable: IFL

Based on the results of statistical analysis, it shows that the money supply is not significant effect on inflation. These results are consistent with studies of Sriyono (2014) that the money supply is not significant effect on inflation, this is because the cause of inflation is not only coming from the money supply but also due to other factors such as structural factors , administrated inflation and cost inflation.

Exchange rate also gives the same result that effect is not significant, this result is not in accordance with the Purchasing Power Parity theory which states that any change in the exchange rate will affect the price (Yuliardi 2008: 64). As we know that during the period of the sampling rate, the exchange rate applied to the system when it is diverse, ranging from Fix Exchange rate system, Manage Floating Exchange Rate, and floating exchange rate. Allegedly with this system have no effect on inflation. The results of another analysis shows that interest rates significantly affect inflation, the results are consistent with research conducted by Erawaty (2002: 98-107)

Overall results of the analysis of the conceptual study made shows that the .

transmission mechanism that occurs in the control Inflation Targeting Frame occur directly from the interest rate.Through this system, the government is expected to have responsibility for the condition of inflation, in terms of monitoring, the Central Bank will be focused on maintaining the desired target that will facilitate the stakeholders in conducting its business activities.

CHAPTER 5
CLOSING
Conclusion

Based on the results of statistical analysis it can be seen that the interest rate is an instrument to control inflation Frame Targeting mechanism and the mechanism of Inflation Targeting Frame directly influenced by interest rates.

Suggestion

In order for the results of the prediction that inflation will be conducted by the Central Bank more accurate it is advisable approach to Inflation Targeting Frame not only use the interest rate but also use other mechanisms

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