

Do Inflation, Kurs, and Interest Rates Can Affect on Public Savings?

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Abstract - The purpose of this study is to analyze empirically the relationship inflation, interest rate, and Kurs on public saving which operated in South Sulawesi Province. The analysis method used is a linear regression with 15 bank samples. The result of the study stated that inflation does not have significant effect on public saving ($0.749 > 0.05$), Kurs has a positive and significant effect on public saving ($0.017 < 0.05$), Interest rate have a significant negative effect on public saving ($0.025 < 0.05$). The R² value of the independent variable is 0.796 or the independent variable has 79.6% relation to the public saving of banking in South Sulawesi Province.

Keywords: Inflation; Kurs; Interest Rate; Public Saving; Macroeconomy

I. INTRODUCTION

In July 1997 became the forerunner of rupiah conditions in this country experiencing the pressure that impacts on the weakening of the rupiah against the US Dollar [1], [2]. On November 1, 1997, the government formally liquidated 16 private national banks that were viewed as unhealthy [3]. This is where the banking crisis that breaks down the national banking industry began. At the end of January in 1998, the Rupiah reached its peak with a break of 16,000 rupiahs per USD (Bank Indonesia, 1998). The pressure is caused by the existence of "currency-turmoil", which struck Thailand and spread to ASEAN countries including Indonesia. This caused Indonesia to experience a monetary crisis in 1998, at which time many companies went bankrupt because they were unable to pay their obligations in the form of foreign exchange [4].

The existence of inflation or rising prices and a situation where there is a decline in currency values circulating in the community will cause a public reaction to avoid and take shortcuts by converting cash into goods [5]. People tend to spend cash to buy consumer goods, even though people hold a lot of money but the money will quickly run out because the real price available in the market will also increase [6], [7]. This reality will affect the power of the community tube, so the savings rate will decrease because public funds tend to be used to consume the goods [6]. At the macro level, high inflation will reduce the value of wealth in the form of money [8]. The high price and fixed income or income increase in accordance with the amount of inflation make people do not have excess funds to be stored in the form of savings or invested. The impact of inflation is

reduced investment, encouraging interest rates, encouraging speculative investors, causing developmental failures, reducing national product competitiveness, resulting in a balance of payments deficit, the decline in the level of life and welfare of society, and the increasing number of unemployed.

The Kurs rate of one currency affects the economy when the Kurs rate appreciates or depreciates. When the rupiah Kurs rate appreciates, goods or services abroad become relatively cheaper than domestic goods or services. Conversely, if the Kurs rate of rupiahs currency depreciates, goods or services abroad are relatively more expensive than domestic goods or services. Fluctuations or exchange rate changes are the focus of the foreign currency market (foreign exchange market). With the rising dollar rate, interest rates will rise as Bank Indonesia will hold the rupiah so that inflation will increase. Second, the combination of high dollar exchange rate and high-interest rates will affect the investment sector and the real sector, where investment in the real sector such as property and small and medium enterprises (SME's) will be troubled. Inflation, Kurs rates, and interest rates together greatly affect the community to increase savings. This can be identifying and evaluation in everyday of people who are always looking the information about the interest rates in the stock exchange, if they know that higher interest rates then the community will further reduce their spending to consumption in order to increase their savings because people have hope that the money will increase in some period month or year than they have to save money at home. And conversely if the interest rate decreases then the public will reduce savings. This is similar to inflation if inflation is increasing, people will increase supply and demand law for consumer goods, so will cause the saving to reduce and conversely, if both of the above-mentioned factors are the same happens that the interest rate decreases and inflation increases then will cause the power for buying something is decrease.

The monetary crisis has rolled out but it does not mean that macroeconomic issues will not be a burden, especially for banks in Indonesia. The objective of this study is to analyze changes in the amount of public savings that are affected by inflation, interest rates and the rupiahs Kurs rate in the years following the monetary crisis was hit Indonesia. with inflation data sample, interest rate and rupiah exchange rate in South Sulawesi.

inflation is an increase in the general price level that can lower the value of a country's currency or there is a state of

excess demand for goods in the economy as a whole [9]. According to Keynes Theory of inflation occurs because a society wants to live beyond the limits of its economic capabilities. The inflationary process according to this view is nothing more than a process of seizing income among social groups who want a larger share than a part that can be solved by society[10]. These social groups, for example, self-governing people, private parties or trade unions that seek to raise salaries or wages, which can have an impact on the demand for goods and services that will eventually raise prices. While in Monetary Inflation theories argue that inflation is caused by expansive monetary and fiscal policy, so that the money supply in society will lead to excess demand for goods and services in the real sector [11].

According to monetary expertise, inflation can be reduced by suppressing and eliminating excess demand through monetary and fiscal policies that are contractive or through control of wage increases and the elimination of foreign exchange rate subsidy [9]. It can be concluded that if the rising price is only one item then not inflation, but if the increase causes the price of other goods or services also rises then called inflation. In some conditions (soft inflation conditions) inflation can encourage economic development in the country. Inflation can encourage entrepreneurs to expand production or invest [2]. Thus, there will be new opportunities to increase the income. But for people who earn a fixed inflation will cause them to lose because the fixed income that if exchanged with goods and services will be less [3]. Some research results show about the effect of the exchange rate, inflation and interest rate on third-party funds (customer funds) in foreign exchange banks in Indonesia has a significant influence [12]. While Taufiq & Batista Sufa in his study in 2014 gave a contradictory statement stating that inflation has no effect on savings [13] So that the hypothesis is built

H1 = Inflation has an effect on public saving in banking in South Sulawesi Province

The Kurs (exchange rate) is a statement of the value of a currency in one currency of another. There are 3 (three) types of exchange rates in foreign exchange sale and purchase transactions, such as Sale and Kurs Rate [14]. Selling Kurs Rate is the rate issued by the foreign exchange market to sell one unit of foreign currency [9]. The Buy Kurs Rate is the exchange rate issued by the foreign exchange market to buy one unit of foreign currency. The middle Kurs rate is the average of the selling Kurs rate and the buy Kurs rate [9]. The use of the middle rate is to analyze the ups and downs of foreign exchange prices on the exchange, such as clarifying the appreciation and depreciation of certain foreign exchange [12]. According to Sukirno in his Book titled “introduction Macro Economy” in 2012 states that the factors that affect the exchange rate is 1). moving in the taste of society. Change in the taste of the community will change the pattern of consumption on goods produced an at home and abroad [9]. Improving the quality of domestic goods causes reduced importing desire and can also increase exports [15]. While improving the quality of imported goods causes the people's desire to import bigger. These changes lead to demand and foreign exchange offer 2). Changes in the prices of export and import goods, 3) price increases 4). Changes in interest rates

and return on investment, 5). Economic growth [11]. So that the hypothesis built is:

H2 = Kurs rate have an effect to public saving in banking in South Sulawesi Province

Interest rates affect personal decisions, such as deciding whether to be consumed or saved, to buy a home or not or to decide to buy bonds or to put funds in savings. Interest rates also influence the business and household economic decisions, such as deciding to use the funds to invest in new equipment for the plant or to be kept in the bank. In the economic system, not all income received by society will be used for consumption expenditures [16]. A portion of the income will be set aside by the recipient of income as a saving. These savings are made for several purposes, such as to finance the consumption expenditure of retirement age, to collect the educational costs of children in their adult years, and to be on guard in the face of future obstacles [9]. The results of a study in 2011 states interest rates have an influence on the savings of society [17]. While and M Taufiq & Batista Sufa (2013) stated the opposite that the partial interest rate does not significantly affect the saving rate of the community. So that the hypothesis built is:

H2 = Interest rate has an effect on public saving in banking in South Sulawesi Province

II. RESEARCH METHOD

The sample of research is all banks operating in South Sulawesi Province as many as 15 banks. The sampling method used is random sampling method. The sample criteria in question are as follows:

Table. 1 Research Sample

No	Code	List of Bank
1	BMRI	Bank Mandiri (Persero)
2	BBNI	Bank Negara Indonesia
3	BBRI	Bank Rakyat Indonesia
4	BBTN	Bank Tabungan Negara
5	AGRO	Bank Rakyat Indonesia Agroniaga
6	BBKP	Bank Bukopin Tbk
7	BBCA	Bank Central Asia Tbk
8	BNGA	Bank CIMB Niaga Tbk
9	BDMN	Bank Danamon Indonesia Tbk
10	BMAS	Bank Maspion Indonesia Tbk
11	BNII	Bank Maybank Indonesia Tbk
12	MEGA	Bank Mega Tbk
13	BNLI	Bank Permata Tbk
14	BSIM	Bank Sinarmas Tbk
15	BTPN	BTPN. Tbk

The type of data uses secondary data such empirical report from Bank Indonesia years 2008-2015 operated in Makassar City South Sulawesi Province. Inflation and BI Rate are measured by the unit of measure (%), while ours (exchange rate) and public savings are measured by the nominal value of the rupiah currency (IDR). The data have been collected are as follows:

Table. 2 Data Collecting

Years	Inflation	Kurs	Rate	Public Saving
2008	11.06	10.950	8.67	564.383.745.444.936
2009	2.78	9.400	7.15	662.811.947.767.525
2010	6.96	8.991	6.50	769.037.309.358.017
2011	3.79	9.068	6.58	933.689.450.787.575
2012	4.30	9.670	5.77	1.114.724.172.596.490
2013	8.38	12.189	7.02	1.269.399.140.183.930
2014	8.36	12.440	7.54	1.415.394.026.699.240
2015	3.35	13.795	7.52	1.648.243.249.493.790

The method of data analysis with multiple linear regression analysis with the formula:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + e$$

To complete the results of data processing by regression, also analyzed the results of the study by using several assumptions namely: Test Validity, to determine the extent to which the level of validity of data. Validity levels are measured based on assumptions ($p > 0.01$) or ($p > 0.01$). Test Reliability with the aim to analyze the extent to which the reliability relationship dimension in forming independent variables, good reliability value is strived ($\theta > 0.6$). F test or simultaneous test is a form of a statistical hypothesis test. Test t or partial test, Test coefficient of determination is to analyze the extent to which the relationship of all independent variables in giving impact to the dependent variable. The classical assumption test consists of multicollinearity test by looking at the VIF value pursued ($VIF < 10$) and assaying normality test ($Asymp.sig > 0.5$). The conceptual framework in this study has been based on the results of previous research as below:

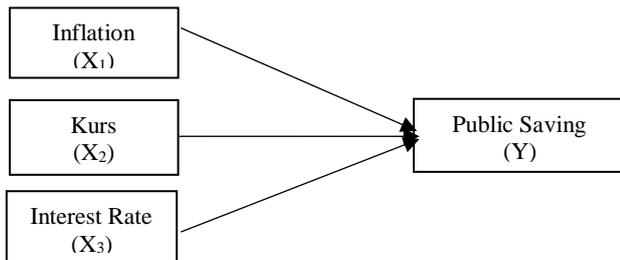


Figure 1. Conceptual Research

III. RESULT AND DISCUSSION

The Goodness of Fit Model

The table below presents the suitability of the model in constructing the prerequisite assumptions on parametric statistics. Test the suitability of the model contains the results of testing the quality of data that contains the test of validity, reliability test, f test, t-test, the coefficient of determination test (R^2), classical assumption test.

Table. 3 The Goodness of fit Model

Validity Test	Correlation	Result	Info
Inflation	0.831	0.029 < 0.05	Valid
Kurs	0.731	0.039 < 0.05	Valid
Interest Rate	0.730	0.468 < 0.05	Valid
Reliability Test	$\alpha = 0.788$	0.788 > 0.6	Reliable
$R^2 = 0.796$			
$R = 0.892^a$			
Adjusted $R^2 = 0.643$			
Standar Error Estimation = 0.09584			
F-test 5.199	Sig (0.073) < 0.05		Sig
t-Test			
Inflation			-0.343
Kurs			3.920
Interest Rate			1.792
Multicollinearity Statistics			
Inflation			1.487 < 10
Kurs			1.304 < 10
Interest Rest			1.746 < 10
Normality test = Asymp.sig (0.2 > 0.05)			
Regression	β	Sig. Level	Info
Inflation	-0.005	0.749 > 0.05	Not.sig
Kurs	1.015	0.017 < 0.05	Sig
Interest Rate	-1.099	0.025 < 0.05	Sig

Based on table 3. It can be stated that the data feasibility test shows the appropriate value and fit. In the validity test, all independent variables are valid and have a very good correlation value > 0.6. The coefficient of determination test shows the influence of the independent variable on the dependent variable (public saving) of 0.796 or it can be interpreted that inflation (X_1), rupiah exchange (X_2) and Interest Rates (X_3) have an overall influence of 79.6% to Public Saving (Y) so that 21.4% public saving is influenced by other variables besides inflation, rupiah exchange rate, and interest rate. Reliability variable on a test of R shows reliability value equal to $0.892 > 0.6$ or interpreted has a very high-reliability value. Standard error on the results of testing data shows very low value, it is stated that the data quality is very good. F-Test shows significance value < 0.05 so that the hypothesis test statistic is accepted ($H_0 = Accepted$, $H_a = Rejected$). Test t-Test showed that the variable inflation (X_1) is not significant. The classical assumption test such as multicollinearity test shows VIF value all < 10 so that all variables do not have multicollinearity. Normality test shows the value of $Asymp.sig 0.2 > 0.05$ so that it is expressed nominally distributed variable. All pre-paid test and classical assumption test have been fulfilled so it is stated that research variable is feasible to enter into linear regression test stage. The results of linear regression testing showed that the inflation variable (X_1) is not significant with the significance value of $0.749 > 0.05$, exchange variable is significant $0.017 < 0.05$. while interest rate variable (X_3) have significant and negative effect with coefficient value $\beta = -1.099$.

DISCUSSION

The result states that inflation has no significant effect on public saving for banks operating in South Sulawesi Province. It is assumed that most societies use their savings to convert to investment. This can be seen with the increase of interest rate value from year to year since 2008-2015. This statement is in line with the ever stated that inflation sometimes does not always affect the public saving because the resulting third-party funds converted into investment [18]. The results of this study also denied the results of research ever proposed by N. Ulfah in 2012 and in line with the results of research Taufiq, et.al in 2014. In the next discussion states that the exchange rate has a positive and significant effect on public saving.

In the same period, it also proved that the exchange rate has a significant effect on public saving. In addition, the exchange rate can explain the magnitude of interest rates that also move together. Interest rates, in addition, are influenced by economic conditions, the determination of interest rates is also strongly influenced by government policy in the monetary sector so that it can be recognized that the exchange rate provides an ending-effect to public savings as one indicator of economic conditions strong enough influence. In theory, Fisher-Effect states that the rise in inflation also goes hand in hand with the increase in interest rates [10], [16]. The data collected indicate an increase in interest rates in line with rising inflation. The results of this study indicate that the interest rate effect indirectly (negative-effect) on public saving. The interest rate does not necessarily increase the savings. The high-interest rates can cause people to tend to save money in the bank so that household consumption will clearly decrease. Whereas if interest rates are low most people are more inclined to invest their money into productive sectors/investments or spend money that causes savings to decrease and consumption increases. The results can be clearly demonstrated in 2008-2012 where low-interest rate causes public saving to fluctuate. The results of this study suggest for researchers further incorporate investment variables as a comparison variable.

IV. REFERENCES

- [1] C. A. Yulianti, "Analisis Kebijakan Fixed Exchange Rate System China Dalam Isu Ekonomi Politik Internasional," 2017.
- [2] R. K. Judisseno, *Sistem Moneter Dan Perbankan Di Indonesia*. Gramedia Pustaka Utama, 2002.
- [3] A. Prasetyantoko, *Bencana Finansial: Stabilitas Sebagai Barang Publik*. Penerbit Buku Kompas, 2008.
- [4] Hendra Kusuma, "Cerita Sri Mulyani Soal Penyebab Krisis 1998 Dan 2008," 2017.
- [5] Z. Waibot, "Early Warning System Krisis Keuangan Di Indonesia Pendekatan Parametrik." Program Pascasarjana Undip, 2012.
- [6] A. Pratama And A. Parminto, "Pengaruh Kualitas Layanan Terhadap Kepuasan Dan Loyalitas Nasabah Bank Bri Syariah Di Samarinda," *J. Ekon. Pembang.*, Vol. 11, No. 1, Pp. 20–34, 2013.
- [7] L. D. Karun And S. Mintarti, "Analisis Faktor-Faktor Yang Mempengaruhi Pertumbuhan Ekonomi Di Kabupaten Kutai Barat," *J. Ekon. Pembang.*, Vol. 10, No. 2, Pp. 111–120, 2012.
- [8] S. Iswati, "Memprediksi Kinerja Keuangan Dengan Modal Intelektual Pada Perusahaan Perbankan Terbuka Di Bursa Efek Jakarta," *Ekuitas (Jurnal Ekon. Dan Keuangan)*, Vol. 11, No. 2, Pp. 159–174, 2017.
- [9] S. Sukirno, "Makroekonomi Teori Pengantar," *Jakarta Pt Raja Graf. Persada*, 2004.
- [10] K. D. Miller, F. J. Jeffrey, And G. Mandelker, "The 'Fisher Effect' For Risky Assets: An Empirical Investigation," *J. Finance*, Vol. 31, No. 2, Pp. 447–458, 1976.
- [11] M. Nezky, "Pengaruh Krisis Ekonomi Amerika Serikat Terhadap Bursa Saham Dan Perdagangan Indonesia," *Bul. Ekon. Monet. Dan Perbank.*, Vol. 15, No. 3, Pp. 89–103, 2013.
- [12] N. Ulfah, "Analisis Variabel Ekonomi Makro Yang Mempengaruhi Volatilitas Nilai Tukar Rupiah Terhadap Dolar Amerika: Aplikasi Model Arch/Garch."
- [13] M. Taufiq And B. S. Kefi, "Pengaruh Dana Pihak Ketiga Terhadap Kredit Pada Bank Perkreditan Rakyat Di Indonesia," *J. Ekon. Manaj. Akunt.*, Vol. 20, No. 35, 2014.
- [14] S. S. Kewal, "Pengaruh Inflasi, Suku Bunga, Kurs, Dan Pertumbuhan Pdb Terhadap Indeks Harga Saham Gabungan," *J. Econ.*, Vol. 8, No. 1, Pp. 53–64, 2012.
- [15] T. H. Purnomo, "Pengaruh Nilai Tukar, Suku Bunga, Dan Inflasi Terhadap Return Saham Pada Perusahaan Properti," *J. Ilmu Ris. Manaj.*, Vol. 2, No. 10, 2015.
- [16] R. A. Fisher, *The Genetical Theory Of Natural Selection: A Complete Variorum Edition*. Oxford University Press, 1999.
- [17] C. M. Van Der Feltz-Cornelis *Et Al.*, "Best Practice Elements Of Multilevel Suicide Prevention Strategies," *Crisis*, 2011.
- [18] Talkingofmoney.Com, "Bagaimana Inflasi Mempengaruhi Tabungan Kas Anda - Talkingofmoney.Com - Majalah Keuangan Dan Investasi," 2016.