ISSN: 2005-4238 IJAST

LINK JOURNAL

http://sersc.org/journals/index.php/IJAST

LINK JOURNAL

https://www.researchgate.net/profile/Soeharjoto-Soekapdjo/publication/342048914_Macro_Economics_Effect_to_Gold_Price_Change_in_Indonesia/links/5edfa99845851516e6628873/Macro-Economics-Effect-to-Gold-Price-Change-in-Indonesia.pdf

INDEX

International Journal of Advanced Science and...

Not yet assigned quartile

SJR 2021

0

powered by scimagojr.com

Make a Submission

ELSEVIER

Indexed by Scopus

Editorial Team

Macro Economics Effect to Gold Price Change in Indonesia

Soeharjoto, Debbie Aryani Tribudhi, Dini Hariyanti , Erny Tajib

Faculty of Economic and Business, Trisakti University, West Jakarta, Indonesia

Abstract

Gold is an investment that can provide a sense of security and it is still in demand from the past until now. This happens because it has a stable value and attractive color. Aims of this study is to determine effect of macroeconomics to gold price change in Indonesia. Gold price is the dependent variable and the macroeconomic variable is an independent variable, which is proxied by exchange rates, interest rates and inflation. Using quarterly data, from 2011.1 – 2018.4 and regression methods, originating from OJK, BI, BPS, Antam. Results obtained that exchange rate have a positive effect on the price of gold and interest rates have a negative effect on the price of gold. But, inflation is not significant to the price of gold. Government needs to maintain a stable exchange rate and inflation to make the price of gold stable, while interest rates will follow the development of the exchange rate. In addition, gold craftsmen need to innovate their products, so that investors not only save the gold, but also use it as jewelry, so that gold craftsmen will be able to gain added value, and wider their market share.

Keywords: gold prices, exchange rates, interest rates, inflation

1. Introduction

Since ancient times, gold has been used as a collection of valuable items. The choice of community to invest in gold at the time, began with scarcity and beautiful colors. Uniquely, gold has special properties, which cannot change with any chemical, even to detect its authenticity easily, because gold can be detected without damage and can even use only fresh water, besides that, gold is not easy to rust like other metals and soften [1]. Gold is known as the heaviest precious metal, because one cubic of gold can weigh more than half a ton [2]. Throughout human history, impact of gold mining increased from year to year only by two percent, so that in a year the gold mining in the world is around 2,000 tons. This shows that gold is indeed a rare metal but also has a stable value.

The biggest innovation in the world civilization is due to the discovery of money as a means of payment. The position of money is very strategic in the economic system and even difficult to be replaced by another. Money is using as a payment form, a result of the community's difficulties in barter system [3]. In the beginning, gold was used as money because it was liked by the people and its value was stable [4]. The first gold coins were made during the Croesus period of Lydia, which originated from an ancient kingdom in Western Anatolia in 560 BC, which later developed into gold coins during the Roman empire, which Emperor Julius Caesar introduced aures (gold) as the exchange standard in his kingdom. Before World War I, some regions began to stop gold as a money, which eventually made the use of gold coins increasingly recede. Especially now that developing fiat money instead.

At XIV-XVII century, is a period that makes the gold increasing popular. In that era, which was the glory of Laissez-Faire, Mercantilism emerged but economic and political conditions did not develop, so the impact on the community's concentration was to focus on how to achieve prosperity in an impartial market [5]. This, led to an economic transformation in Europe, which caused a shift from feudalism to a market economy, with a profit orientation. These conditions, giving a wider opportunity to traders to be able to expand abroad, which has an impact on competition between traders and invaders. The mercantilism is synonymous with merchant capitalists, assume that the state has a role to make regulation and control, to improve society welfare. Their well-being indicators many are assessed using the gold standard. Thus, many economic activities related to gold. Towards the XVIII century this school of thought faded and was replaced by the Physiocrat in 1756.

The role of gold in the economy has been replaced with fiat money [6]. This type has constraints due to different intrinsic and extrinsic values, so that the value has the potential quite large to change [7]. Overcome this situation is by investing. This activity, will increase the society income so that it can maintain the stability of its welfare, also increase the country's economic growth. The investment that still felt safe enough to maintain the stability of the real value of money is to carry out gold investment [8]. This, cannot be separated from the historical development of gold, which from time to time because of its superiority, gold still preferred by the society.

Until now, gold still has an attraction for investment. Because gold have the stability value. This, as evidenced by the rise of research factors that affect the price of gold. There are several studies of gold prices in various countries that are influenced by macroeconomic factors. For the exchange rate in America it was revealed that the exchange rate was significant to the price of gold [9]. However, at the same country there is also a negative effect on the exchange rate of gold price [10]. Research in India, revealed that the exchange rate has a positive effect on the price of gold [11]. In fact, for Malaysia, it was revealed that the exchange rate was not significant to the price of gold [12]. The influence of interest rates in Malaysia revealed that interest rates affect the price of gold [13]. For America and Britain there is a positive influence between interest rates and the price of gold [14]. There are results of studies that reveal that interest rates negatively affect the price of gold [15]. India it was revealed that interest rates were not significant to the price of gold [16]. Inflation factors in America revealed that there is an influence of inflation with the price of gold [17]. Pakistan found that inflation has a positive effect on the price of gold [18]. For Malaysia, with the finding that inflation has a negative effect on the price of gold [19]. Malaysia there were also research results which revealed that inflation was not significant to the price of gold [20].

Indonesia is located at Southeast Asia region with good economic prospects. All of these, are inseparable from the potential of natural and human resources they have [21]. Now, the government is intensively conducting economic development by developing infrastructure and human resources. To improve the economy is by sustainable development [22]. This situation, makes the economy grow rapidly but the environment is maintained [23]. This condition will further increase investment attractiveness. So macro economy will impact to fluctuations towards an increasingly conducive trend. For this reason, investment instruments are growing more rapidly and one of them is a classic investment in the form of gold. This happens because there are many people who feel more secure in maintaining the real value of their money in the form of gold.

People have a transactions using money in this era. It is necessary to maintain a purchasing power that can be eroded by inflation [24]. Gold is often used by society as a tool to maintain the stability of its purchasing power. Thus, people assume there are indications of a link between inflation and the price of gold [25]. For that, it is necessary to pay attention to the growth of inflation and the price of gold. During the 2011-2018 period, the average inflation in Indonesia was 4.97 percent with a gold price growth of 1.34 percent. The highest inflation occurred in 2013 of 7.15 percent and the lowest in 2018 of 3.13 percent. The highest gold price growth of 6.18 percent in 2011 and the lowest of minus 2.33 percent in 2013. Conditions in 2011-2013, the trend of gold prices isirregular to the trend of gold price growth, but after 2013 has the same trend. Inflation average is still higher than changes in gold prices, with the exception of 2011 which is theopposite.

Figure 1. Gold price growth and inflation from 2011-2018

Investment is the choice of the society, in maintaining the real value of its money, canbe in the form of savings and foreign exchange. In fact, both have links to each other [26].Interest rate is an attraction for people to invest their funds in banks. However, movements of interest rate trends follow the pattern of exchange rate trends. The purpose is, people do not move investment in banks into foreign exchange, so banks can still maintain their liquidity [27]. In 2011-2018, the average exchange rate growth was 1.65 percent, which had the highest growth in 2015 of 3.02 percent and the lowest in 2016 of minus 0.74 percent. For interest rate with an average of 6.2 percent, has a highest interest rate of 7.54 percent in 2014 and the lowest is 4.56 percent in 2017. At 2011-2012, the trend of interest rates is opposite to the exchange rate, but after 2012 it has the same trend, except in 2015 the trend was the opposite even though it was not significant. However, overall the exchange rate trend is still below interest rates. This condition reflects that the banking sector has maintained to stable its financial.

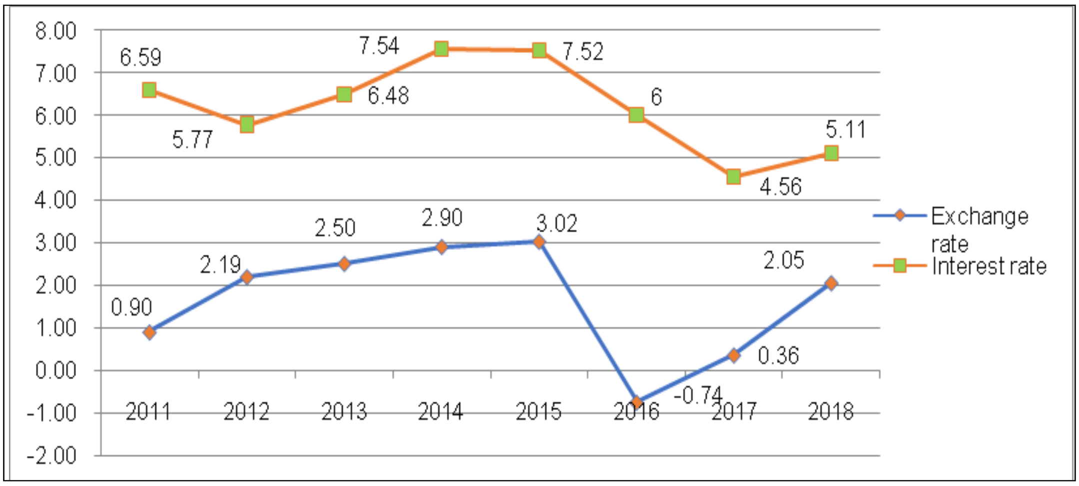

Figure 2. Exchange Rate and Interest Growth at 2011-2018

Indonesian economic conditions still have investment attractiveness, because the macro economy is relatively stable and has an upward trend. This is an impact of Indonesia's experience in dealing with the monetary crisis in 1998, so government can overcome to facing the economic problems. In the digital era, the development of investment is increasing rapidly, so there are several alternatives in investing. Gold is one investment that is still trusted by the public in maintaining the purchasing power of money. A country's macroeconomic is influencing the price of gold. It is necessary to research intomacroeconomics effect to gold price change in Indonesia.

2. Methodology

Research into macroeconomics effect to gold price change in Indonesia, using quarterly time series data from 2011-2018. Data came from Bank Indonesia (BI), the Financial Services Authority (OJK), the Central Statistics Agency (BPS), and Antam. Method used is multiple regression with price of gold as a dependent variable, and exchange rates, interest rate and inflation as a independent variable. In this method the R-square, F- statistic, and t-statistic tests are performed. R-square is used to explain how much the proportion of gold price variations that can be explained by exchange rates, interest rates, and inflation together. The F test is used to test whether there is at least one regression coefficient of exchange rates, interest rates, and inflation that affects the price of gold. A t-statistic test is performed to see the significance of the individual effect of the exchange rate, interest rates, and inflation in the model on the price of gold. This study uses a model:

$$Gold_t = \beta_1 + \beta_2 ERt + \beta_3 IR_t + \beta_3 INF_t + \varepsilon_t$$

Information:

Gold = Price of gold per gram (rupiah).
ER = Rupiah exchange rate against the dollar (rupiah).IR =
interest rate (percent).
INF = Inflation (percent).

Fluctuation in exchange rates changes, interest rates, and inflation will affect changes in gold prices. Effect, can be positive or negative, which is in accordance with some previous studies. For this reason, several hypotheses can be made.

The depreciation of the rupiah will have an impact on increasing public investment in gold in order to maintain the real value of the money, which will have an impact on increasing the demand for gold. As for the impact the price of gold will increase. Depreciation means decrease in the rupiah against the dollar, so to get the same dollar, needed more rupiah. If there is an appreciation at exchange rate of rupiah will have an impact on the decline in public investment in gold in order to maintain the real value of the money, which will have an impact on the declining in gold demand. The impact is gold prices will decline. Appreciation means an increase in the rupiah against the dollar,so to get the same dollar, you need a smaller rupiah. Thus, 1st hypothesis, assumed that the rupiah exchange rate has a positive effect on the price of gold.

Declining interest rates, will have an impact on society to divert their money into gold so that the real value remains, resulting in an increase in demand for gold. The impact, the price of gold will rise. The existence of increasing interest rates, will have an impact on the community will divert gold into money, and is used to save money so that the real value remains, thereby reducing the demand for gold. The impact the price of gold will go down. Therefore, in 2nd hypothesis, its assumed that interest rates have a negative effect on the price of gold.

Increased inflation will increase production costs so entrepreneurs need efficiency and increase the price of their goods to gain profits. In addition, the society to maintain the real value of their money, will divert to gold, so that it will have an impact on increasing demand for gold, while the impact of gold prices will increase. Low inflation, will reduce production costs to obtain profits, entrepreneurs need to make efficiency and do not need to increase the price of goods. Besides that, people who maintain the real value of their money, do not need to divert to gold, it will have an impact on the gold declining demand

and price. Thus, 3rd hypothesis, inflation is assumed to have a positive effect on the priceof gold.

3. Results and Discussion

Price of gold at 2011.1-2018.4 have a trend that increases smoothly. The average gold price in Indonesia is Rp. 572,012.5, with a standard deviation of Rp. 38,391.2. The maximum value is Rp. 645,000 in 2018.4 and a minimum in 2011.1 of Rp. 467,000. Inthis period, the price of gold has two rather extreme fluctuations, namely in 2011.1- 2013.2 it has irregular price fluctuations and in 2013.3-2018.4 it has rather mild fluctuations. However, in irregular price fluctuations there is a tendency for the price of gold to be far above the value of the trend, and after that it tends to be below and close to the trend line.

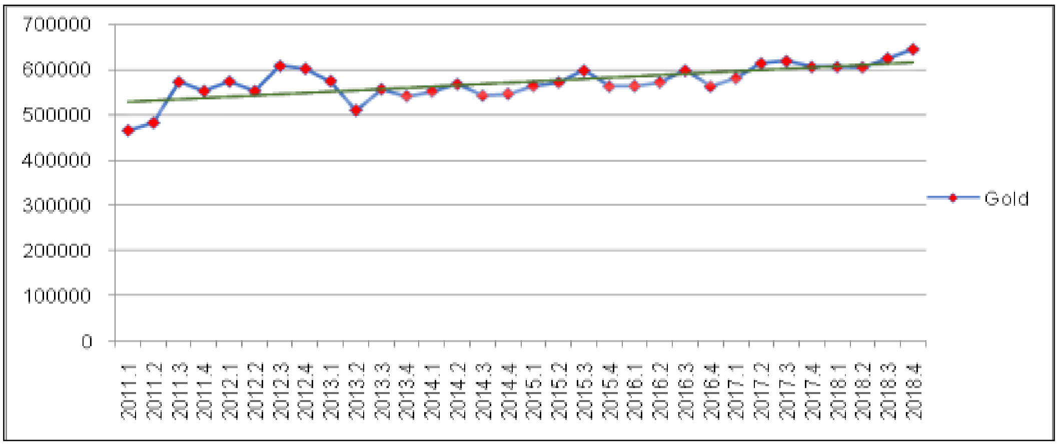

Figure 3. Indonesia Gold Price 2011.1-2018.4 (Rp. per grams)

The exchange rate of the dollar against the rupiah, has a tendency to strengthen with an increasing trend, an average of Rp. 11,941.47 per dollar with a standard deviation of Rp. 1,910.4 per dollar. The highest dollar value in 2018.3 is Rp. 14,684.33 per dollar and the lowest is Rp. 8,657.74 per dollar in 2011.3. The trend of the exchange rate has risen to the extreme. In this era, three major fluctuations occurred in the exchange rate, in 2011.1- 2014.2 and 2016.4-2018.4 there was a trend that was smooth and was below the trendline, but in 2014.3-2016.3 had a tendency far above the trend line.

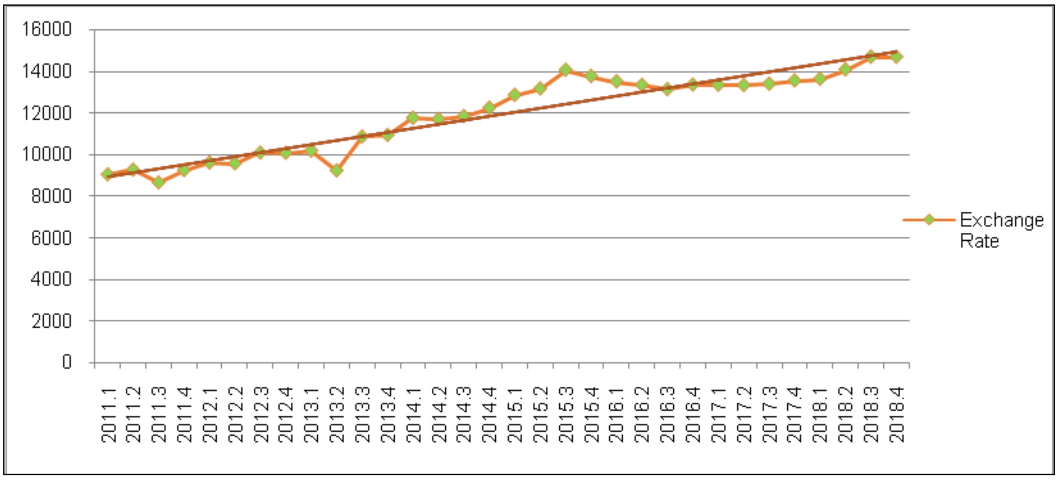

Figure 4. Dollar to Rupiah Exchange Rate at 2011.1-2018.4

Interest rates in Indonesia in 2011.1-2018.4, have a declining trend with an average value of 6.19 percent, with a standard deviation of 1.12 percent. The highest interest rate occurred in 2014.1 of 7.67 percent and the lowest of 4.25 percent in 2017.4-2018.1. Fluctuations in interest rates experienced three major waves, in 2011.1-2012.4 and 2015.4-2018.4 with interest rates that tend to be below the trend line, and in 2013.1- 2015.3 have interest rates that are above the trend value.

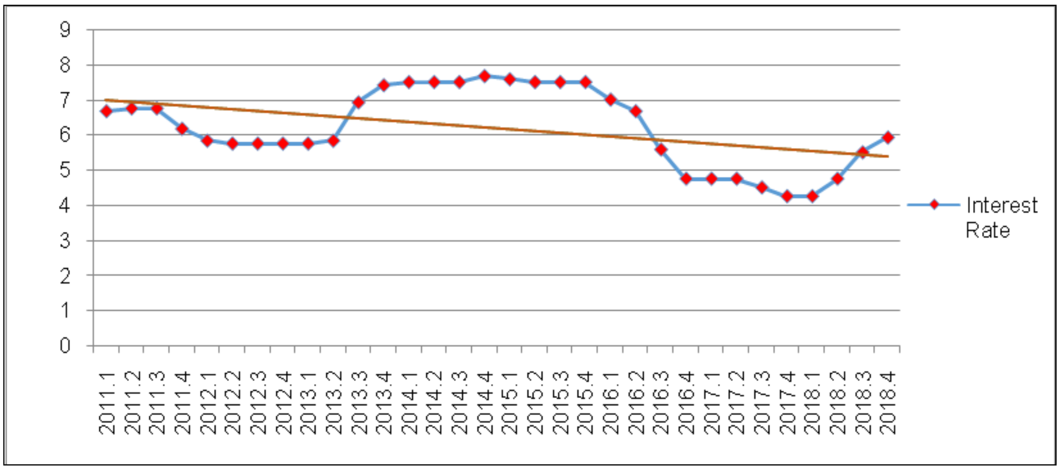

Figure 5. Indonesia interest rate at 2011.1-2018.4 (Percent)

Indonesia fluctuations inflation at 2011.1- 2018.4 are very extreme with a downward trend, but can still be controlled because inflation is below 2 digits. The average inflation was 4.96 percent with the lowest value of 2.88 percent in 2018.3 and the highest in 2013.3of 8.4 percent with a standard deviation of 1.75 percent. Fluctuations in inflation experienced three major waves at pre-2013.3 and post-2016.2 had a tendency below the trend line and in 2013.3-2016.2 had a value above the trend line. This condition showsthat in the wave of the period 2013.3-2016.2 economic conditions are unstable because the fluctuations of the price increase are very extreme.

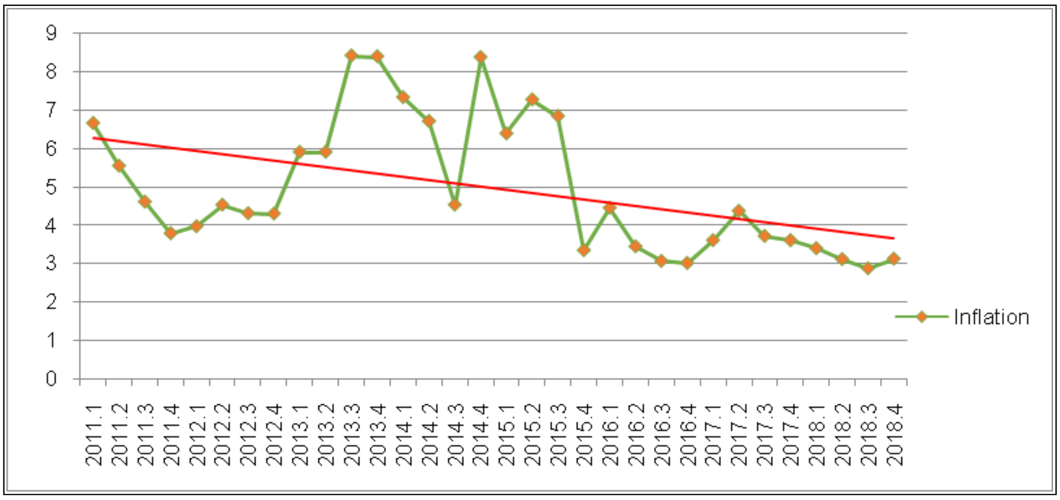

Figure 6. Indonesia inflation in Indonesia at 2011.1-2018.4 (Percent)

Using fit model testing with coefficient of determination (R2), results of data processing, the value of the determination coefficient is 0.531, which means the variation or behavior of the independent variables, exchange rate, interest rates, and inflation are able to explain the variation or behavior of the dependent variable namely the price of gold in Indonesia of 53.1 percent, while the remaining 46.9 percent is a variation or behavior of other independent variables that affect the price of gold in Indonesia, but is not included in the model. The result that R2 value of 0.531 is given that the factors that affect the price of gold in Indonesia are not only influenced by the exchange rate, interest rates and exchange rate. So, the fluctuation of price gold in Indonesia is also influencedby other variables.

Results for simultaneous processing shown with a probability value of F statistic of 0,000 <0.05, which means that Ho is rejected (Ha accepted). The meaning is that its proven that there are at least 1 independent variable which is proven to have a significant effect on the dependent variable. The results of t-statistic testing are carried out to test the effect of each independent variable on the dependent variable. The purpose is to know of each variable in the form of exchange rates, interest rates, and inflation that can affect the price of gold.

Table 1. Result Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	523011,910	46693,224		11,201	,000
ER	10,427	2,758	,519	3,780	,001*
IR	-9648,792	6046,822	-,281	-1,596	,122**
INF	-3171,080	4023,987	-,144	-,788	,437*

a Dependent Variable GoldSig:
* 0,05
**0,1

Hypothesis 1, conducted to examine the positive effect of the exchange rate variable on the gold price in Indonesia. Results obtained an estimated coefficient value of 10.427, means depreciation of the rupiah exchange rate will increase the gold price in Indonesia and vice versa, appreciation of the rupiah exchange rate will reduce the gold price in Indonesia. These findings indicate that proven the proposed theoretical hypothesis. With a statistical value of 3,780, a p-value of 0.001 / 2 = 0,000 <0.05 is obtained, which means that Ho is rejected (Ha accepted), so it can be concluded that the positive effect of the exchange rate on the gold price in Indonesia is significant.

Hypothesis 2, carried out with the aim to examine the negative influence of interest rates on the gold price in Indonesia. Results obtained an estimated coefficient value of minus 9648,792, which means an increase in interest rates will reduce the gold price in Indonesia, and conversely a decrease in interest rates will raise the gold price in Indonesia. Results proven the theoretical hypothesis which states the negative influence ofinterest rates on the gold price in Indonesia. With a statistical value of minus 1.596, a p- value of 0.122 / 2 = 0.061 <0.1, which means Ho is rejected (Ha accepted), so it can be concluded that the negative effect of interest rates on the gold price in Indonesia significant.

Hypothesis 3, carried out with the aim of testing the positive effect of the inflation variable on the gold price in Indonesia. Results show the estimated coefficient value is minus 3171,080, means that increasing domestic inflation will decrease gold price in Indonesia. The opposite condition will occur deflation that occurred in Indonesia will raise the gold price in Indonesia. With a statistical value of minus 0.788 obtained a probability of 0.437 / 2 = 0.2185> 0.05 means that Ho is accepted, so that it is not statistically proven, that inflation has a significant positive effect on the gold price in Indonesia.

In theory, Macroeconomic variables are proxied by exchange rates, interest rates and inflation and previous research can indeed affect the gold price. However, for Indonesia condition in 2011-2018, of the three macro variables that were only two significant namely the exchange rate and interest rates, while inflation was not significant. Exchange rates have a positive and significant impact in accordance with research into the gold price in the world (India, China, United State, Turkey, and Saudi Arabia) [28]. according to research in India, interest rates have a negative influence on the gold price [29]. In Malaysia it was also found that inflation and gold were not significant [30]. That means, gold cannot be used as a hedge against inflation but there are many other alternatives suchas property. Gold can be used as an alternative investment to support investment theory, which reveals that do not put eggs in one basket. Exchange rates and interest rates are interrelated, so the government needs to maintain the value of the rupiah exchange rate or by increasing gold production, so, gold prices do not experience large fluctuations, so with stable gold prices can be exported abroad, which can bring in foreign exchange, asfor the impact Rupiah exchange rate will strengthen and interest rates will fall, which will cause investment to increase, which will lead to an increase in the country's economic growth. However, for inflation it also needs to be maintained, so that inflation does not occur above double digits, which will have an impact on the public's lack of confidence inthe rupiah exchange rate, so that they will look for other investment alternatives to maintain the real value of their money which can be in the form of property, foreign exchange or gold. A stable gold price is needed, in order to preserve the environmentfrom the threat of exploitation of gold.

4. Conclusion

Fluctuations in the price of gold in Indonesia, not much different from the results of research conducted in several countries in the world, especially those in the Asian region. The dominant factor is still the macroeconomic influence, namely the exchange rate, interest rates and inflation. Results of this research of the three proxies, there are two influential, namely the exchange rate has a positive effect on the gold price and interest rates have a negative effect on the gold price. However, inflation is not significant to the gold price. For this reason, in maintaining the stability of the price of gold, the government needs to maintain the stability of the exchange rate and inflation, while interest rates will follow the development of the exchange rate. In order for gold to remainan alternative investment, it is necessary to innovate in making gold products, so that investors not only store gold but also use it as jewelry, so that gold craftsmen will be able to gain added value and be able to expand their markets for domestic and export.

Acknowledgments

Thank you very much to Trisakti University for providing moral and material assistancein completing this article.

References

[1] F A. O'Connor, B. M. Lucey, J. A. Batten, D. G. Baur, " The financial economics of gold-A survey", International Review of Financial Analysis, vol. 41, (2015), pp. 186-205.

[2] M. Skonieczny, "Gold Production from Beginning to End: What Gold Companies Do to Get the Shiny Metal into Our Hands", Investment Publishing, Indiana, (2015).

[3] M. Jenkins and S. Kitamura, "The History of Money: From Bartering to Banking", Candlewick Publisher, Massachusetts, (2015).

[4] Lewis E. Lehrman, "Money, Gold, and History", Lehrman Institute, New York, (2013).

[5] J. W. Horrocks, "A Short History of Mercantilism", Routledge, England, (2018).

[6] J. Weatherford, "The History of Money", Three Rivers Press, New York, (1998).

[7] R. T. Foster, "Fiat Paper Money; the History and Evolution of Our Currency", Foster Publishing, California, (2010).
[8] J. Dee, L. Li, & Z. Zheng, "Is gold a hedge or a safe haven? Evidence from inflation and stock market", International Journal of Development and Sustainability, vol. 2, no. 1, (2013), pp. 12-27.
[9] A. Erdoğdu, "The Most Significant Factors Influencing the Price of Gold: An Empirical Analysis of the US Market", Economics World, vol. 5, no. 5, (2017), pp. 399-406.
[10] C. Toraman, C. Basarir & M. Bayramoglu, M, "Determinant of Factors Affecting the Price of Gold: A Study of MGARCH Model", Business and Economics Research Journal, vol. 2, no. 4, (2011), pp. 37-50.
[11] S. Sharma," Determinants of Gold Prices in India", International Journal of Research and Analytical Reviews, vol. 5, no. 4, (2018), pp. 909-921.
[12] I. Bapna, V. Sood, N. K. Totala, H. S. Saluja, "Dynamics of Macroeconomics Variables Affecting Price Innovation in Gold: A Relationship Analysis", Pacific Business Review International, vol. 5, no. 1, (2012), pp. 1-9.
[13] H. Zakaria, N. A. Shukur, S. Afandi & W. W. Mahmood, "Factors Affecting the Price of Gold in Malaysia", Journal of Basic and Applied Scientific Research, vol. 5, no. 7, (2015), pp. 41-46.
[14] A. Abdullah, "The Gibson Paradox: Real Gold, Interest Rate, and Prices", International Business, vol. 6, no. 4, (2013), pp. 32-44.
[15] A. Adullah & M. A. Bakar, "The Application of Gold Prices, Interest Rates and Inflation Expections in Capital Market", International Journal Economics and Finance, vol. 7, no. 2, (2015), pp. 293-302.
[16] P. Trivedi, S. Ranjan, "The Macroeconomic Determinants Gold Prices in India: An ARDL Approach", Journal of International Economics, vol. 3, no. 2, (2012), pp. 4-26.
[17] A. Seemuang & S. Romprsert, "Gold Value Movement and Macroeconomics", Journal of Business and Economics, vol. 4, no. 8, (2013), pp. 752-760.
[18] W. Nadeem, M. Zakaria, K. F. Nawaz, "Impact of Macroeconomic Factors Upon Gold Prices in Pakistan", Pakistan Journal of Social Sciences, vol. 34, no. 1, (2014), pp. 383-395.
[19] S. N. Ibrahim, N. I. Kamaruddin and R. Hasan, "The Determinants of Gold Prices in Malaysia", Journal of Advanced Management Service, vol. 2, no. 1, (2014), pp. 38-41.
[20] K. A. Sukri, H. N. M. Zain & N. S. Z. Abidin, "The Relationship Between Selected Macroeconomic Factors and Gold Price in Malaysia", International Journal of Business, Economics and Law, vol. 8, no. 10, (2015), pp. 88-96.
[21] Soeharjoto, D. Hariyanti, "Influence of Macroeconomic and Corporate Fundamentals on the Performance of Islamic Banking in Indonesia", Jurnal Akuntansi Keuangan dan Manajemen, vol. 1, no. 1, (2019), pp. 1-8.
[22] P. Narayan, S. Narayan and X. Zheng,"Gold and oil futures markets: Are markets efficient?", Applied Energy, vol. 87, no. 10, (2010), pp. 3299-3303.
[23] S. Soekapdjo, A. M. Esther, "Sustainable economic growth determination in Asean 3", Jurnal Ilmiah Ekonomi dan Bisnis, vol. 16, no. 2, (2019), pp. 176-182.
[24] W. Arafah, L. Nugroho, R. Takaya, S. Soekapdjo, "Marketing Strategy for Renewable Energy Development in Indonesia Context Today", International Journal of Energy Economics and Policy, vol. 8, no. 5, (2018), pp. 181-186.
[25] D. Ghosh, E. Levin, P. Macmillan and R. Wright, "Gold as an Inflation Hedge?, Studies in Economics and Finance", vol. 22, no. 1, (2004), pp. 1-25.
[26] A. I. Nurhasanah, Soeharjoto, "Determination of the Rupiah Exchange Rate Volatility to US Dollar", Jurnal Akuntansi, Ekonomi dan Manajemen Bisnis, vol. 7, no. 1, (2019), pp. 1-8.

[27] S. Soekapdjo, L. Nugroho, A. Badawi, W. Utami, “Bad debt issues in Islamic bank: Macro and micro influencing (Indonesia cases)”, International Journal of Commerce and Finance, vol. 4, no. 1, (2018), pp. 10-26.
[28] S. L. M. Hashim, H. Ramlan, N.H.A. Razali, N. Z. M. Nordin, “Macroeconomic Variables Affecting the Volatility of Gold Price”, Journal of Global Business and Social Entrepreneurship, vol. 3, no. 5, (2017), pp. 97-106.
[29] M. Gnanendra, S. N. Shri “Impact of macroeconomic factors on the price of gold”, International Journal of Advanced Reseach and Development, vol. 3, no. 1, (2018), pp. 894-897.
[30] M. F. Ghazali, H. H. Lean and Z. Bahari, “Is Gold a Good Hedge Against Inflation? Empirical Evidence in Malaysia”, Kajian Malaysia, vol 33, no. 1, (2015), pp. 69–84.