

## The effect of price, exchange rate, demand volume on volatility and gold investment return in Indonesia Stock Futures

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**Abstract :** The research aim to analysis effect of price, exchange rate and demand volume toward volatility, to analysis effect of price, exchange rate and demand volume toward return investment of gold, to analysis effect of volatility on gold investment returns and to analysis effect of price, exchange rate and demand volume through volatility on gold investment returns. These researches applied on Indonesian Futures Exchanges with population and samples used of gold investment data in 2011 until 2016. Data which collected to analysis with Structural Equation Model with AMOS 18 computer program statistic. The results of research to found the demand volume have negative and significant effect on volatility. The transaction which stagnant of investor individual or group to handling of gold price in market. While the demand volume have a significant toward volatility because the investment transaction to formed of market segment in variant with nominal curs to obtained of benefit. The demand volumes have a negative and insignificant effect on gold investment returns. The demand volumes have order buy and order sell attitude in everyday, so the fluctuation of gold price and exchange rate cannot to prediction in appointment of time period for return investment. The demand volumes through volatility have negative and insignificant on gold investment returns. That mean the demand volume cannot be evaluation in investment business. While the move of volatility in investment appointment of gold price and current value of foreign exchange pair for standard value of gold investment, unless cannot get significant contribution to moving of volatility and gold investment returns in Indonesian Futures Exchange

**Keywords:** price, exchange rate, demand volume, volatility, gold investment returns

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### I. Introduction

The effect of the price, the exchange rate and the volume of demand volatility and investment returns have been investigated earlier researchers, such as Mirdshan (2012); Paul G (2013); Laddy Mark (2010); Stefanus Joe (2012); Mannuel Carry (2012); Mark Gulf (2014); Hansen (2012); Dannielle (2013); Carrem Roles (2010); Marthen Stockhern (2013), the results of their study findings prove the existence of differences in analyzing the effect of prices, exchange rates and the volume of demand volatility and return on investment. Facts on the ground in Indonesia found the Futures Exchange gold investment returns in the past five years has decreased investment returns seen from the short, medium and long term. The decrease was due to a result of volatility in the market price of gold is not stable or often experienced a shift that increases and decreases, where intermediaries or speculators often seek remuneration fee and profit from the difference between the price of gold fluctuated. More specifically indicated investment returns in percentage data of Indonesia Futures Exchange

**Table 1.** Percentage of gold investment returns in Indonesia Futures Exchange

Years	gold investment returns (%)		
	Short-term	Medium-term	Long-term
2011	62.3	42.9	44.8
2012	59.7	41.8	41.9
2013	54.3	40.6	40.7
2014	52.8	35.7	39.4
2015	42.9	33.8	35.8

The above data shows that the percentage of return on investment in Indonesia Futures Exchange in the five-years investment period allotment of both short-term, medium-term and long-term decline. The decrease in investment return is not due to the level of investor confidence declined, but as a result of government policy in the field of finance and investment within five years of uncertainty caused investment instruments to be unstable and ineffective, especially with regard to commodity precious metals (gold), so a lot of investors or businesses allocate funds to gold only to the needs of the transaction, to avoid the risk and precaution. The problems that

cause investment return decreased due to the readiness of businesses to anticipate the management and stability of foreign exchange, it is necessary to the management of Indonesia Futures Exchange to apply the theories prevailing advantage of Loumendorn (2010: 54) that any benefits apply determine the rate of return on investment. The return rate is valid for long, medium and short term. The condition is caused due to low volatility influence in determining the price of gold. Volatility due to uncontrolled and tends to be controlled by speculators in investment volatility set. Gold price movements up and down the main cause of declining investment returns.

There are several phenomena that show the influence of the decrease in investment return volatility. Usually the declining gold price movements have sharp differences with the value of foreign currencies rose significantly. The price drop is certainly a psychological influence on the investment broker in investing capital markets for commodity futures gold. Otherwise there is the readiness of investors in the event of the minimization of the gold price, where different possibilities can happen and volatility determined by speculators. Therefore, to maintain volatility for stable and not too intrusive risk investment returns, because it maintains a fixed price or normal movement. The occurrence of unstable gold movements that affect interest rates higher and this is a negative effect on investment returns. On this basis it is necessary to take a policy by the Futures Exchange Indonesia on the effect of volatility on investment returns, by applying the theory of change up and down from Michelle (2010: 88) states that prices are determined by market forces that are always changing up and down in a unit time, mean change is always going up and down is a form of investment volatility ratings. The phenomenon of reality regarding the effect of the volatility of the investment return decreased; from some observations and support several previous studies have shown that the influence of prices, exchange rates and the volume of demand is what determine the direct and indirect effect on the volatility and return on investment. Several research indicates that positive and significant price volatility and return on investment (Mirdshan, 2012; Paul G., 2013). In another study, it was found that prices and no significant positive effect on volatility, but a significant negative effect on investment returns (Laddy Mark, 2010). Prices and no significant negative effect both on the volatility and return of investment (Stefanus Joe, 2012). The observations in Indonesia Futures Exchange showed that the movement of the price or value of gold that can be cashed, affect the price changes up or down which also affect the investment return. Pricing is uncertain, so the price changes (volatility) is also uncertain. It also affects the demand and supply patterns of investment brokerage and investment manager to make decisions and providing security against the increasing volatility and favorable investment returns.

As a result of the erratic price movements, it is necessary to take a strategy to determine the open price conditions for all people, set a high price in order to remove or sell, assign a low price to buy or store and set the price closed to stabilize the price of speculation. In addition to price, exchange rate considerations are also a consideration that can directly or indirectly influence on the volatility and return on investment. The findings of previous researchers proved that the exchange rate and a significant negative effect on volatility, exchange rate and a significant positive effect on investment return (Mannuel Carry, 2012). The exchange rate is a positive and significant effect on the volatility and return of investment (Mark Gulf, 2014). The exchange rate is a positive and insignificant effect on the volatility and return of investment (Hansen, 2012). The phenomenon is a fact that it can be shown that the exchange rate influences the investment return volatility and can be seen from the activity of gold transactions in the currency of a country that applies. As a result of exchange rate differences in currency exchange between the two countries led to differences in determining the supply and demand of a cycle-pricing system which affects the volatility and return on investment. The occurrence of the unstable exchange rate led to no difference in scores that can result in the depreciation of the exchange rate appreciation, devaluation and revaluation effect on the exchange rate of each currency in domestic and foreign. The difference in the exchange rate is used by speculators to earn huge profits, so that there should be measures to safeguard and avoid the risk of floating volatility and investment returns are not representative.

Other factors affecting the decrease in volatility and return of investment, namely the volume of demand. The volume of declining demand led to the assumption or consideration of investors declined because there was no guarantee of the quality of the commodity, the sale value is low, profits are uncertain and risks are not guaranteed. The findings of previous researchers proved that the sales volume of a positive influence and no significant effect on volatility and return of investment (Dannielle, 2013; Marthen Stockhern, 2013). The sales volume is a negatively and significantly related to volatility and return of investment (Carrem Roles, 2010). Volume decreased demand affect volatility and return of these investments can be seen from the low level of trust investment broker to demand for stocks by using gold as a medium of exchange to affect volatility and return on investment. Besides volume decreased demand from investors for the sale value that is not too large, so that the representation of the volatility that occurs tends to be constant and it does not provide an increase in investment returns. Investors are also not too expensive aspects of advantage, because in fact the volumes of requests for changes in the exchange rate of the domestic currency to foreign currencies do not provide the benefits prospectively. Including no guarantee of the invested capital, which led to volume demand decreases and this affects the decrease in volatility and return on investment.

## **II. Literature Reviews**

### **2.1. Gold prices**

Prices an exchange rate that can be equated with money or other items to the benefits derived from the goods or services for a person or group at a specific time and place. Term prices used to give a financial value on the goods and services. Usually the use of the word price is stated in nominal terms against the number at the exchange rate that indicates a high price or low price (Sulistyo, 2009: 57). The theory of pricing policies by Nicholsan (2002: 57) that the simultaneous supply and demand determine the price. Demand and supply together determine the price (P) and has a balance of goods quantity (Q), so as to meet the balance point in determining the appropriate pricing policy. The pricing agreed upon at current prices (Anderson, 2008: 10), the pricing is valid referring to the rules of the open price, high price, low price and close price. Being actualization in determining the price of gold, determined that the open price is the determination of the value of the purchase and sale of gold is done openly. High price that the determination of the value of purchases and sales of gold were determined by high prices or expensive. Low prices, namely the determination of the value of the purchase and sale of gold set a low price or inexpensive, closed price, namely the determination of the value of the purchase and sale of gold is done with closed. Application of the low price of gold owned by that purchasing gold when the price is cheap and sell back the gold price is expensive. It will be important to get the value of the investment on the purchase price of gold cheap and sell when the price of gold is expensive (buy low, sell high) (Sunardi, 2008: 55).

Determination of the price of gold closed in order to restore the usual price changes that are not normal. Entry price is closed usually occurs when the difference between buying and selling price of gold was no accumulation or not current trade. Pricing is closed intended for sale and purchase prices are not manipulated by the market mechanism irregular (Sulistyo, 2008: 126). Measurements price of gold refers to the pricing theory (Anderson, 2008: 10), include; (a) Price is open is the value of the gold standard that applies open on investment transactions on the exchange futures, (b) price (high price) that is the standard value of gold is pegged expensive in investment transactions in the futures market, (c) Low price is the gold standard that pegged the value of cost on investment transactions in futures, (d) Prices Close value prevailing gold standard covered on investment transactions in the futures market.

### **2.2. Exchange Rate**

The exchange rate between two countries is the price of the currency used by the inhabitants of these countries for mutual trade between each other (Mankiw, 2007: 96). The currency exchange rate as the sum of a country's currency can be exchanged per unit of currency of another country or in other words the price of one currency against another currency (Fabozzi and Modigliani, 1995: 102). Definition of the exchange rate in this study is an agreement known as the currency exchange rate on the payment of current or future, between two currencies of each country or region, so the definition of the exchange rate or foreign exchange rate among others stated Abhimanyu (2010: 36) is the price of a country's currency relative to the currencies of other countries. Because of the exchange rate include two currencies, the balance point is determined by the supply and demand of both currencies.

Exchange rate is one of the most important prices in an open economy in view of the influence of such a large for the current account balance and macro variables of the economy. There are two approaches that are used to determine the exchange rate is the monetary approach and market approach. In the monetary approach, the exchange rate is defined as the price, where the foreign currencies traded against the domestic currency and the price associated with supply and demand for money (Robert, 2008: 36). Measurement of the exchange rate refers to the theory of the depreciation value (Davidson, 2009: 71), include: (a) Depreciation is the exchange rate declining by market mechanisms of investment, (b) appreciation is the value of the exchange rate increases based on market mechanisms of investment, (c) devaluation, is the exchange rate decreased by investment policy, (d) Revaluation, is the value of the exchange rate increases based on the investment policy.

### **2.3. Demand volume**

Understanding of the concept of demand volume in question is the number of traders whose activities demand to make a purchase of a product or commodity that is happening at a time. The volume of demand in question is the number or frequency of requests that occur on a product or commodity that can be traded and provide value gains (Dominique, 2010: 82). The volume of requests is performed again and the level of demand time and repeated to give an advantage. The theory put forward requests (Douglas, 2009: 58) states that the request is the number of items requested in a particular market at a given price level, with certain income and a certain time period. This means that in determining the volume of demand is closely linked to the level of demand, demand, revenue request and the time period does demand. Volume demand and the volatility of investment returns, the business world has a close relationship. Neils (2009: 85) states that the volume of demand becomes a major contribution in increasing price volatility and increased return on investment. Demand

of volume measurements using Dominique (2010: 82), which consists of; (a) The quality of products is the gold content is expected in investment transactions in the futures market, (b) the sale value is the price of gold is expected in investment transactions in the futures market, (c) the advantages of which are gold income is expected in investment transactions in the futures market, (d) a low risk that the minimization of losses on investment transactions in the futures market.

#### **2.4. Price volatility**

Volatility at any given time can be broken down into two components that can be predictable and unpredictable. Analyses of price volatility are not only relevant in the money market and in the stock market but are also able to be applied in the commodity markets. Analysis of price volatility is increasingly necessary and important when faced with circumstances that prices tend to be unstable and increasingly irregular pattern (Sumarsono, 2009). Basically volatility or fluctuations in the market which a role in investment returns. If the result of huge profits usually have a high risk anyway. This is commonly referred to as the investment profile. Each investor has an investment profile that varies among others conservative, moderate and aggressive. This happens because the market turmoil affected by price volatility. Market turbulence occurs due to the uncertainty of the price volatility that price changes up and down to disrupt the stability of the market (Sugito, 2009: 92).

Volatility is the large distance between fluctuations / rising and falling prices. High volatility is high the price raises quickly and then suddenly drops very quickly as well. Usually in calculating the state of up and down, also taking into account the margin. There are three types of margins that initial margin, variation margin and maintenance margin. Initial margin is the amount of initial margin depends on the contract price fluctuation and volatility. Variation margin is a variation margin rate corresponding to the degree of price volatility. And maintenance margins are margins slightly below the initial margin, which serves as a safety (Wardian, 2009: 41). Constructs price volatility measurement develops construct price volatility (Michelle, 2010: 88), namely; (a) Changes ride that is the movement of gold prices to rise following the exchange rate, (b) Change in decline, namely the movement of gold prices fall on standards to follow the exchange rate, (c) Changes in fixed, namely the movement of gold prices stabilized following the exchange rate

#### **2.5. Gold investment returns**

Investment is an activity in invest funds in a particular field. Investments can be made in the form of shares. Financiers or investors can invest excess funds in the form of shares in the stock market. The main objective of investors in their funds to the stock market is to look for revenue or return on Investment in the form of dividends or income from the difference between the selling prices of stock over its capital gain. Investment as an investment for one or more assets that are owned and usually long-lasting in the hope of benefit in the future (Dolmen, 2008: 4). Return or refund is corporate profits, individuals and institutions from the investment policy carried out. Return is good investment earnings on interest or dividends. Return on investment is the acquisition of the investment that divides the result before taxes on investment income to obtain figures that reflect the relationship between investment and profit (Nissa, 2008: 75). Return is a reward for the courage of investors bear the investment risk undertaken.

Sources of investment return consisting of two major components, yield and capital gain (loss). Yield is the return that reflects the components of cash flow or revenue generated periodically from an investment. If you invest in a bond or gold, the amount of interest shown yield bonds or gold values received. While the capital gain (loss) as a second component of the return that an increase (decrease) in the price of securities (stocks or bonds) that can provide gains or losses for investors (Tandeilin, 2012: 47). Constructs measurement of investment return investment returns to develop constructs (Loumendorn, 2010: 54), namely; (a) The repayment of short term i.e. profits earned on investment of gold under the current period, (b) Return the medium term that profits on gold investments under more than one current period, (c) Returns the long term that gains on investment of gold in the top five for the period.

### **III. Methods**

This study is an study exploratory that seeks to find relationships that are relatively new and explanatory research that is done by way of explaining the symptoms caused by an object of research. The study began in February to May 2016 in Indonesia Futures Exchange. The population in this study is the data gold price, exchange rates, the volume of demand, volatility and gold investment returns of companies listed on the Stock Futures Indonesia. Based on the existing population, the selected samples by using purposive sample, a report for the last six years (2011-2016). Assessment of the effect between variables does with analysis Structural Equation Modeling (SEM).

#### IV. Results

Based on the method of Determining the value in the models, then the model of testing variable Whose value is determined by an equation or model of relationship is formed. The models is said to be good when the hypothetical theoretical development model supported by empirical data. The result of the evaluation models based on the goodness of fit indices is presented in the following table with the criteria of the models as well as critical values that have compatibility data.

**Table 2.** Evaluation criteria of Goodness of Fit Indices Overall Model

Goodness of fit index	Cut-off Value	First Model	Annotation	Final Model	Annotation
Chi_Square	Small expected	515, 439	Good	201,086	Good
Probability	$\geq 0:05$	0,000	Marginal	0,053	Good
CMIN / DF	$\leq 2:00$	2,880	Marginal	1,234	Good
RMSEA	$\leq 0:08$	0,077	Good	0,043	Good
GFI	$\geq 0.90$	0,935	Good	0,978	Good
AGFI	$\geq 0.90$	0,926	Good	0,970	Good
TLI	$\geq 0.94$	0,636	Marginal	0,971	Good
CFI	$\geq 0.94$	0,690	Marginal	0,978	Good

The table indicates the overall criteria of goodness of fit indices have met the criteria or match the criteria of a cut-off value, so that the models can be said to have been in accordance with the criteria of goodness of fit indices for analysis. Based on empirical models proposed in this study can be tested against the hypothesis put forward by testing the path coefficients in structural equation modeling.

- 1) The gold price has a positive and significant effect on volatility by  $p = 0,008 > 0.05$ . coefficient standardized for 0, 684, and a positive sign. Thus Space the research hypothesis, the reads: The gold price and significant positive effect on the volatility of the gold price in Indonesia Futures Exchange accepted. The coefficient of direct influence is quite large, because it is larger than 0, 60. This shows that the direction of change in the price of gold equal to the direction of change in price volatility. This means that changes in the price of gold big enough effect to changes in gold price volatility movements in the currency applicable. Gold prices positive and significantly effect on volatility. This coefficient shows that the determination of the value of the buy and sell gold Affect change up and down movement of gold prices in the applicable currency.

This is supported by the pricing theory of Anderson (2008) that pricing based on the value of the currency of the applicable support gold price volatility. Previous research that is relevant to the results of this study are research Mirdshan (2012); Paul, G. (2013) that the price is positive and significant effect on the volatility. Reasons that led to the gold price had a positive influence and significant volatility, Because based on the Data Showed that the price of gold from the data five years tendency no differentiation between the opening price at the closing price, but there is a differentiation in the price movements of gold every Sunday from the highest price and the Lowest Price, Reviews These differences but growing niche to give effect to the value of the rupiah currency based on the prevailing volatility. This meant that the price of gold have Increased movement in every Sunday give the effect of increasing volatility in gold investment within five years. Changes volatility raises growing niche to be more frequent than changes in volatility decreased or remained

- 2) Current exchange rate Indonesian rupiah (IDR) to us dollar (USD) has a positive and significant effect on volatility with a p-value =  $0,012 > 0, 05$ . Coefficient standardized for 0,735. In connection with these results, the hypothesis of the two studies items, namely: The rupiah against the USD (US dollar) positive and significant impact on the volatility of the gold price in Indonesia Futures Exchange can be accepted. The exchange rate is positive and significantly effect on volatility. This coefficient shows that the exchange rate of gold transactions affecting changes up and down movement of gold prices in the applicable currency. This is supported by the theory of the difference in value of Davidson (2009) that the value of a currency that is different affects price volatility.

Previous research relevant to the outcome of this research is research Mark Gulf (2014) prove that the positive effect of exchange rate and significant volatility. The exchange rate had a positive and significant influence because of the volatility of the data five years Showed no stable trend in each week and each year has increased, so cause volatility unchanged and stable ride. Exchange rate stable and increasing every year makes the investor has the desire to always invest in less risky if at any time of the exchange rate is not stable, and it is anticipated due to the exchange rate depends on market mechanisms and government policies and always Consider the movement of volatility changes.

- 3) Demand volume has a negative and significant effect on volatility. The p-value of  $0, 037 < 0.05$ . Coefficient standardized of -0,144. In connection with that, the third hypothesis research items, namely:

Volume demand and significant positive effect on the volatility of the gold price in Indonesia Futures Exchange declined. Demand volume is a negative and significant effect on volatility. This coefficient shows that the presence of traders in making the position less gold purchases affect change up and down movement of gold prices in the applicable currency. It is inversely proportional to the value judgment theory of Dominique (2010) that the increased level of demand determines the price volatility in the market.

Previous research that is relevant to the results of this study is research Carrem Roles (2010) proved that the sales volume has a negative and significant effect on the volatility. The reason being the fact that the volume of demand negatively affects the volatility of the exchange rate that transaction is stagnant in individual / specific investors who control the price of gold on the market or the market mechanism is not stable. Meanwhile, when the volume of demand seen significant effect on the volatility of the exchange rate, because the investment transactions varied market segments forming the itself order buy and sale orders using the nominal exchange rate to gain an advantage.

- 4) The gold price has a positive and significant effect on investment returns, with the p-value of  $0,000 > 0,05$ . Coefficient Standardized of 0,820 and a positive sign. In connection with that, the fourth hypothesis states roomates: The prices are a positive and significant impact on gold investment returns in Indonesia Futures Exchange can be accepted. Gold prices positive and significantly effect on investment returns. This coefficient shows that the determination of the value of the buy and sell gold Affect the level of returns on investment gold suit the prevailing value of the currency.

This is supported by the pricing theory of Anderson (2008) that the price is adjusted to the value of the currency Affect investment in gold prices in the market. Previous research that is relevant to the results of this study are research Mirdshan (2012); Paul, G. (2013) that the price is positive and significant effect on gold Investment. Reasons why gold prices have a positive influence and significant impact on investment returns of gold Because the five years of data show there gold price trend always changes every week, so the return of investment gold is also changing in the period of five years. Changes in the price increases when there is a trigger unstable gold sales, stable prices change when the controlled price policy and price changes Decreased when gold purchase is reduced, so the return of gold investment is highly dependent on the time period.

- 5) The exchange rate has a positive and significant effect on investment returns, by the p-value of  $0,000 > 0,05$ . The coefficient standardized of 0,769 and a positive sign. Thus the fifth hypothesis stated; the exchange rate is positive and significant impact on the gold investment return in Indonesia Futures Exchange can be accepted. The exchange rate is positive and significantly effect on investment returns. This coefficient shows that the exchange rate of gold transactions affecting the level of returns on investment gold suit the prevailing value of the currency. This is supported by the theory of the difference in value of Davidson (2009) that the exchange rate of the currency of each country Determine returns on investment. Previous research that is relevant to the results of this study is research Mark Gulf (2014) proved that the exchange rate is positive and significant impact on investment returns.

The reasons of exchange rate has a positive and significant effect on gold investment returns, due to the difference in exchange rates of the two currencies accumulated based on the value of the gold standard the which serve to Determine the effect of investment returns. Depreciating exchange rate, appreciation, Devaluation and revaluation impact on the activity of the market mechanism and government policies to adjust the exchange rate to the value of the gold standard was the agreed-upon, to enable the return of the investment period. Based on the data from the exchange rate stability that Occurs in every week and have Increased in every year period, the which indicates that the difference in the exchange rate has been represented on the transaction value of the gold standard, so that the advantages of investment returns in each period of stable and profitable. More specifically described respective indicator variable exchange rate against gold investment return.

- 6) The demand volume has a negative and insignificant effect on gold investment returns, with the p-value  $0,211 > 0,05$ . Coefficient standardized of -0,039 and negative sign. In connection with that, the sixth hypothesis that reads: the demand volume is a positive and significant on gold investment return in Indonesia Futures Exchange declined. The demand volume has a negative and significant effect on gold investment returns. This coefficient shows that the presence of the trader in the purchase of gold did not affect the level of returns on investment gold suit the prevailing value of the currency. It is inversely proportional to the value theory (Dominique, 2010) that the increased level of demand that affect gold investment returns.

Previous research that is relevant to the results of this study are research Carrem Roles (2010) proved that the sales volume negatively affect investment returns, while research Dannielle (2013) and Marthen Stockhern (2013) shows the volume of sales is not significant to the investment return. The reason that shows the demand volume has a negative and no significant effect on gold investment returns, due to the

volume of requests tend to be buy orders and sell orders that happen every day, so that fluctuations in the price of gold and the exchange rate is unpredictable to determine the time period of investment return. Besides the indicator variables of volume demand does not have enough bargaining power to determine the price of gold and exchange rate impact on the determination of investment returns in each period of time becomes important to consider. This is a classic assumptions used by the gold investment broker stating that the request is not related to the volume of investment return, but the assessment of the standard value of gold and foreign exchange pairs important role to determine return on investment.

- 7) The volatility has a positive and significant effect on gold investment returns, with the p-value of  $0,000 > 0,05$ . Coefficient standardized for 0,919, and this coefficient has a positive mathematical sign. In connection with it, then the seventh hypothesis that reads: Price volatility is a positive and significant impact on the gold investment return in Indonesia Futures Exchange can be accepted. The volatility is a positive and significant effect on gold investment return. This coefficient shows that changes up and down the price of gold determine the level of gold investment returns.

This is supported by the theory of change up and down from Michele (2010) that the price is based on market mechanisms will always change, so with the theoretical advantage of Loumendorn (2010) that any profits earned determine the return on investment. Previous research that is relevant to the results of this study are research Marthen Stockhern (2013) that the volatility is positive and significant impact on investment returns. Reason fundamental volatility is positive and significant impact on gold investment return, not apart from the consideration that the movement of volatility indicates the movement of the gold standard provides prospective profit. The more organized, planned and programmed movement of volatility, the price of gold tends to rise and a positive exchange rate corrected to provide benefits for the owner and investment company services investment return of gold as gold.

- 8) The gold price through volatility has a positive and significant impact on investment returns, with the p-value of  $0,000 > 0,05$ . The coefficient standardized value of 0,935. This result is the sum of the direct effect of 0,820 and the indirect effect of 0,115. In connection with that, the eighth hypothesis, namely: The gold prices are positive and significant impact on gold investment returns through the price volatility in Indonesia Futures Exchange can be accepted. In this case, the volatility as an intervening variable has a good meaning for enlarging the total effect of the gold price on return of investment. The gold price through volatility a significant and positive effect on gold investment returns.

This is supported by the theory of pricing (Anderson, 2008) that the volatility and investment is determined by the current price. Previous research that is relevant to the results of this study are research Mirdshan (2012); Paul, G. (2013) that the price is positive and significant effect on the volatility and investment returns. Underlying reason gold prices through the volatility of the positive and significant impact on the investment return of gold due to pricing gold based on transactions that occur strongly influenced by the economic dynamics and issues that are up to date on the gold business. This transaction activity directly affects the movement of volatility could be revised up, stable and declining, and the tendency of investors to maintain volatility in the change from stable to ride. Indirectly through the movement of gold price volatility stable to rising influence investment returns over a period of time. And it is common for the return of medium and long-term investment.

- 9) The exchange rate through volatility has a significant positive effect on gold investment returns, with the p-value of  $0,000 > 0,05$ . The coefficient standardized for 0,983. This result is the sum of the direct effects of 0,769 and the indirect effect of 0,214. In connection with that, the ninth hypothesis, namely: The exchange rate is a positive and significant effect on gold investment returns through the volatility price in Indonesia Futures Exchange can be accepted. Volatility as an intervening variable has a significant meaning for enlarging the influence of the Exchange Rate of the Return on Investment. Volatility of the exchange rate through is a positive and significant effect on investment returns. This is supported by the difference in value theory of Davidson (2009) that every currency has an exchange value of the currency effect on volatility and return on investment.

Previous research that is relevant to the results of this study are research Mark Gulf (2014) proved that the exchange rate has a positive effect and significant volatility and investment returns. The logical reason for exchange rate through the volatility of the positive and significant effect due to the exchange rate of each country using comparisons of currencies money but convert based on prevailing gold price, and it is encouraging volatility changes tend to be stable and increasing in each period of the transaction, which also affects the investment returns of gold, where the profit guarantee is returned as a model and set an increase in line with investment transactions running or smoothly.

- 10) Demand volume through volatility has a negative and significant impact on gold investment returns with the p-value of  $0,015 < 0,05$ . The coefficient standardized of -0,126 (negative mathematical marked). This result is the sum of the direct effect of -0,039 and the indirect effect of -0,087. In connection with the tenth hypothesis, namely: demand volume has a negative and significant effect on investment returns through

the volatility of the gold price in Jakarta (Indonesia) Futures Exchange can be accepted. In this regard volatility as intervening variables has significant meaning, because it increases the value of the effect of total demand for investment return. In addition, the state is not significant in a direct relationship to be significant through intervening variable volatility.

Demand volume through volatility has a negative and significant effect on the investment returns. It is inversely proportional to the value judgment theory of Dominique (2010) that the increased level of demand that affect volatility and gold return of investment. Previous research relevant to the outcome of this research is research Carrem Roles (2010) proved that the sales volume of a significant negative effect on the volatility and return on investment. The reason on demand volume through volatility has a negative and significant effect on investment returns due to the volume of requests is not a vote in the conduct of investment business. The volume of demand is likely to be the determination of buy orders and sell orders to fulfill the demand side and the supply side of the market mechanism. While the movement of the volatility in the investment activity is largely determined by the price of gold and foreign exchange pairs to set the standard value of gold investments, which have estimated prospective gain in the price of gold per each unit of currency values in one period to produce a favorable investment returns. In simple terms the volume of demand can still be part of the assessment to invest in volatility affect the movement and return of investment in Indonesia Futures Exchange.

## **V. Conclusion**

The gold price is a positive and significant effect on volatility. Differentiation occurs in the gold price movements every week of highs and the lowest prices, where these differences impact the value of the rupiah currency volatility based on prevailing. The exchange rate has a positive effect and significant volatility. A stable exchange rate and increased every year to make the investors have the desire to always make an investment by considering the movement of volatility that are constantly changing. Volume demand is a negative and significant effect on volatility. This means that the transaction is stagnant which control the price of gold in the market, but the volume of demand significant effect on the volatility of the exchange rate, because the investment transactions forming varied market segments that use the nominal exchange rate to gain an advantage. The gold price and significant positive effect on gold investment return. The gold price is always changing every week, so the return of investment gold is also changing depending on the time period. The exchange rate and a significant positive effect on gold investment return. Differences in exchange rates of the two currencies accumulated based on the prevailing gold standard for determining the effect of investment returns. Volume demand and no significant negative impact on the investment return of gold. The volume of requests tend to be buy orders and sell orders that happen every day, so that fluctuations in the price of gold and the exchange rate is unpredictable to determine the time period of investment return. Volatility is a positive and significant impact on gold investment return. Volatility movement indicated movement of the gold standard that provides prospective favorable to gold investment return.

The gold price through volatility is a positive and significant effect on gold investment return. Determination of gold price based on transactions affecting the movement of volatility that does not directly increase the return of medium and long-term investment. The exchange rate is a positive and significant effect on gold investment return as a mediated volatility. Exchange rates are not using a comparison unit of currency but converted based on the prevailing price of gold, and it encourages stable and increased volatility in each period transactions that affect investment returns affect gold. Demand volume through volatility is a positive and significant effect on gold return on investment. The volume of requests could be considered in the assessment conduct investment business. While the movement of the volatility in the investment activity is largely determined by the price of gold and the foreign exchange rate pairs to set the standard value of gold investments, which contribute significantly to the movement of volatility and return of investment in Indonesia Futures Exchange.

Some of the recommendations from this study, that the price of gold should be maintained by adjusting the foreign exchange pairs in order to maintain the continuity of a stable and volatility of investment capital in each unit period of time. The exchange rate should be corrected in accordance with the interest rate to affect the steady volatility of investing in gold. The volume of requests should be oriented towards strengthening the standard value of gold prices is not oriented toward order to increase the volatility of gold investment. The price of gold continues to be maintained at a price above the minimum in order to return the investment continues to increase each period. The exchange rate should consider market mechanisms and government policies that maintained the investment return in investment activity. Demand volume for capital gain must be oriented to increase the maximum investment return. Volatility movement should make a major contribution to the return of investment to increase capital investment each period. The price of gold should be tailored to the increased volatility moves, to get a profitable return of investment gold. The exchange rate adjusted for volatility moves to increase, to acquire a profitable gold investment return. The volume of demand is fixed in orientation in line with the strengthening of the gold price volatility increases, so the return of gold investment profitable.



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