THE INFLUENCE OF RUPIAH TO USD EXCHANGE RATE,
BANK INDONESIA CERTIFICATES (SBI) RATES,
AND INFLATION OF CUSTOMER PRICE INDEX
ON THE STOCK PRICE OF PROPERTY SECTORS COMPANIES
IN INDONESIAN STOCK EXCHANGE

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ABSTRACT
The global financial crisis was started when the loss of investments of US financial institutions in sub-prime mortgage increase dramatically. Their investments that aim to give profits has given them the opposite result. The rise of interest rates while housing prices started to drop moderately in the US, has increase the rate of default of subprime mortgage. Financial institutions that has vast amount of subprime mortgage investment suffered unprecedented heavy loss that leading to foreclosure of several financial giants and drop of the stock prices. This events become a financial crisis to the world economy including Indonesia. Several factors that influence stock price are profitability, interest rate, inflation and exchange rate. This study is conducted to determine the influence of Rupiah to USD exchange rate, Bank Indonesia Certificates (SBI) rates, and inflation of Customer Price Index to the stock price of property sectors companies in Indonesian Stock Exchange, both simultaneously and partial. This study using monthly data in the period of August 2007 – November 2008. The exchange rate, SBI rate and CPI is treated as independent variables dan changes of property sector stock prices as dependent variable. To determine the influence of independent variables to dependent variable we used double linear regression analysis, double and partial correlation analysis to find determination coefficient. Hypothesis is test using F-statistic and t-statistic tests in 5% significance level. The result of F-test showed that together, Rupiah to USD exchange rate, Bank Indonesia Certificates (SBI) rates, and inflation of Customer Price Index has significant influence to stock prices of property sector during period of study. Further partial analysis show that only Rupiah to USD exchange rate has the significant influence.

Keyword: financial crisis, stock price, exchange rate, interest rate, inflation

INTRODUCTION
The global financial crisis was started when the loss of investments of US financial institutions in sub-prime mortgage increase dramatically. Their investments that aim to give profits has given them the opposite result. The rise of interest rates while housing prices started to drop moderately in the US, has increase the rate of default of subprime mortgage. Financial institutions that has vast amount of subprime mortgage investment suffered unprecedented heavy loss that leading to foreclosure of several financial giants and drop of the stock prices. Lehman Brothers, Bear Stearns, Merrill Lynch, Freddie Mac, Fannie Mae and American International
Group (AIG) fell, and the U.S. government must step in to provide subsidies. Company Stocks are sold to foreign investors.

As a result of these financial institutions' collapses, their stock performance in the stock market suffered a free fall, which in turn impacted the Dow Jones Industrial Average (DJIA), because financial institutions have a market capitalization significantly. Finally, investors began to withdraw cash from the stock exchange, so the stock indexes fall more severe. Withdrawal of funds also done in the global stock market. This is why the fall on American exchanges also impact exchanges around the world. The American economy turmoil expanding and uncontrollable. Recession threatening the world. The economy of the world, including Indonesia was threatened again.

In Indonesia, the inflation rate started trending up from July 2007 until September 2008, although have a decrease in November and December 2007. The inflation rate in September 2008 reached 12.14%, the highest value from early 2007 until October 2008. While the BI rate in October 2008 set at 9.50% which is a 25 basispoint increase from the previous month of 9.25%. The rupiah against the USD began depreciating in early October 2008, starting from Rp. 9.555/USD trending up and continued to increase until mid-November 2008. The rupiah against the USD on 19 November 2008 reached Rp.11.957-/USD (BI: 2008). This is the highest value since of the global crisis occurred in America of July 2007. The weakening of the rupiah against the USD is due to the high demand for USDs by speculators seeking profit.

However, in 2007 the global crisis had not yet impact in Indonesia, especially to the property sector. Property sector still grow as increase demand of consumption of office buildings, shopping centers and housing. Authority Indonesia Stock Exchange (IDX) noted the property sector as the highest of new listed companies in 2007 than banking through Initial Public Offering (IPO) (detikFinance: 2007). But at the end of 2008 the global crisis began to impact to Indonesia. Fears of the emergence of the economic turmoil in form of weakening rupiah and increase of inflation has raised the BI rate and influence purchasing power. On the money market, SBI rate hike is expected to reduce inflation and encourage rise in interest rates of deposits and loans. The increase rate SBI also affect the rate of investment and working capital interest rates significantly as well. The industry that is very concerned about this is the property sector because its sales need financial support. Mortgage interest rates rise is one of the main factors driving the decline in the performance of the property sector and also affect its stock prices in the capital market. Property sector bring dual effect (multiplier effect) on employment creation and increased national income. If the property industry experienced a decline or have collapsed it will certainly affect the employment absorption.

Condition of Indonesia's economic situation affected by the global crisis which is depreciation of rupiah per dollar, higher interest rates and inflation. These external factors affecting the stock price index especially the property sector. This study focused on the Rupiah to USD Exchange Rate, SBI rate, and inflation (CPI), and its impact on stock price indices of listed property sector companies in Indonesia Stock Exchange on the period of August 2007 - November 2008.

**RESEARCH QUESTION**

1. What is the influence of the Rupiah to USD exchange rates, SBI rates and inflation rates (Consumer Price Index -CPI) simultaneously to stock price index of properties sector companies listed in Indonesia Stock Exchange?
2. What is the influence of the Rupiah to USD exchange rates, SBI rates and inflation rates (Consumer Price Index -CPI) partially to stock price index of properties sector companies listed in Indonesia Stock Exchange?

HYPOTHESIS
1. Exchange rate of Rupiah to USD, SBI Rates and inflation rate (CPI) affects simultaneously the stock price index of properties sector companies significantly.
2. Exchange rate of Rupiah to USD affects the stock price index of properties sector companies significantly.
3. SBI Rates affects the stock price index of properties sector companies significantly.
4. Inflation rate (CPI) affects the stock price index of properties sector companies significantly.

RESEARCH METHODS
Research methods used in this study is descriptive method with verificative approach. Descriptive method is a method for studying the status of a group of people, an object, a set of conditions, a system of thought, or a class of events in the present. The purpose of descriptive study method is to create descriptive, drawing or painting in a systematic, factual and accurate statement of the facts, properties and relationships between the phenomena investigated (Nazir 2003:54).

Descriptive analysis is used to interpret the data obtained on the basis of the facts that appear in the observation period to get a clear picture of the object under investigation. Meanwhile, the meaning of verificative approach according to Marzuki (2002:7) is a method that aims to test the hypothesis, the influence of variable X on variable Y, which aims to test the knowledge.

This study was conducted at the Indonesia stock exchange, through its website http://www.idx.co.id, Bank Indonesia through site http://www.bi.go.id, other Indonesian print and electronic national.

LITERATURE REVIEW
Financial Markets
Gitman (2003:22) expressed his ideas about the financial markets as follows:
"Financial markets are forums in which suppliers of funds and demanders of funds can transact business directly. The two key financial markets are the money market and the capital market."

While Block (2005:652) defines the financial markets as follows:
"Financial markets, the place of interaction for people, corporation, and institutions that either need or Lend money to invest."

Money Market
According to Block (2005:657) the financial markets:
"Money markets are competitive markets for securities with maturities of one year or less. The best examples of money market instruments would be treasury bills, commercial paper, and negotiable certificates of deposit."

Capital Market
Capital markets (capital market) according to Kashmir (2003:193) is:
"The capital market in general is a place of meeting of buyers and sellers to conduct transactions in order to raise capital."

Meanwhile, the Gitman and Joehnk (2005:36) understanding of capital markets is: "Market in which long term securities with maturities greater than one year such as stocks, the bonds are bought and sold."

Stock
Fabozzi (2003:339) defines stock as follows:
"It represents an ownership interest in a corporation. Holders of equity securities are entitled to the earnings of the corporation when those earnings are distributed in the form of dividends; they are also entitled to a pro rata Stock of remaining equity in case of Liquidation."

Type of Stock Value
1. Par Value
   "Par value is the nominal value established by the issuer of security, as contrasted with the market value of the security."
   For stocks that have no nominal value, the board of directors generally set their own values (sorted value) per Stock, and if no value has been set it is considered as capital is all net revenues (proceeds) are deemed by the issuer at the time the relevant Stocks issued.

2. Book Value
   "Book value per Stock of common stock are Stockholders equity total assets minus total liabilities and preferred stock as listed in the balance sheet, divided by the number of Stocks outstanding."

3. Market Value
   "The market value price per Stock is currently trading in Stocks, for Stocks that are not actively traded, the market price quotes are available."

Stock Price
Stock price changes are influenced by investor perceptions of fair value (intrinsic value) of a company to its market value (market value). If the calculated fair value differs from market value means there are opportunities for investment, namely:
1. If the fair value > market value (undervalued), then the investors who already have Stocks should hold the stock, while for investors who do not have the stock purchase transaction can be done.
2. If the fair value < market value (overvalue), then the investors who already have Stocks should sell the stock to obtain capital gains.

Stock price is influenced by many factors that are qualitatively and quantitatively, among others, the influence of stock trading rules, whether or not tight control over the perpetrators of violations of exchange, the mass psychology of investors shifting between pessimistic and optimistic, and others.

Foreign Exchange Market
Foreign exchange (forex) is a currency that is not a legal tender in a country, for example US dollar currency in Indonesia. To be able to make transactions in the country it had to be redeem in foreign exchange markets. Foreign exchange useful for multinational companies, because the currency is used as a means of international payment. Foreign exchange occurs in the foreign exchange market Hill (2004:286), namely:

“The foreign exchange market is market for converting the currency of one country into that another country.”

Samuelson (2005:604) suggests:

“The foreign exchange rate is determined in the foreign exchange market, which is market where different currencies are traded.”

Sri Handaru (2005:82) suggests the function of the foreign exchange markets, among others:

1. Transfer of purchasing power
   Transfer of purchasing power is necessary because of international trade generally involve two parties live in different countries with different currencies as well.

2. Provision of credit
   Credit functions needed to finance goods in transit.

3. Minimizing the risk
   Foreign currency risks arising from fluctuations in currency exchange rates. To minimize the risk (or even eliminate them altogether), security needs to be done (hedging). Foreign exchange market has a mechanism for hedging, among others through the forward market.

**Exchange Rate**

The exchange rate to be especially important at this time because the economy and business have taken place in cross country, because each state has a different currency then the need to exchange currency units increasingly important. Understanding exchange rates put forward by Sri Handaru (2005:23) as follows:

"Exchange rate of foreign currency is the price of a currency unit of the State in commodities (like gold and silver) or other countries currency."

According to Bodie, Kane, Mark (2002:983) that:

"An equilibrium exchange rates the price that just balances currency supply and demand in the foreign exchange market."

Which means the value of a currency exchange where the demand and supply balance in the market through foreign exchange.

In other words the exchange rate is used as a tool to measure the price of a currency on the basis of other currencies. If the demand for a currency rise or a decline in the supply of a currency, the exchange rate will be higher.

Currency exchange rate a country will vary with the value of other currencies was caused by a condition of parity (purchasing power differences) or in economic theory, changes in exchange rates, price levels, and interest rates associated with the macro economic situation this country is international parity conditions.

**Interest rates**

Interest rates in a country is usually determined by government aimed at maintaining the economy of a country. According to Tajul Khalwaty (2000:143) is as follows:

"Interest rates are conventional instruments to control or suppress the growth rate of inflation."
One of the functions of financial instruments to manage interest rate in Indonesia is the Certificate of Bank Indonesia (SBI) which serves similar as the instrument T-Bills of United States. This has resulted in the rise and fall SBI interest rate may affect economic activities in Indonesia. This no exception in capital market activities. Bank Indonesia Certificates (SBI) is a bearer securities issued in the rupiah as Bank Indonesia's recognition of short-term debt with a discount system. SBI is serves as tool for Indonesia monetary authorities in maintaining stability of the Rupiah. In this paradigm adopted, Bank Indonesia Certificates (SBI) issued and sold to reduce the excess primary money.

Through the use of SBI, Bank Indonesia can indirectly affect the interest rates on financial markets by announcing step out rate (SOR) is the interest rate received by the Bank on interest rate offers from bidders daily, or weekly auction. Next step out rate (SOR) will be used as an indicator for interest rates in the money market transactions in general.

Inflation
Inflation is a measure of economic activity is also often used to describe the condition of the national economy. More clearly defined inflation as an economic measure that gives an overview about the increase in average prices of goods and services produced by an economic system.

While some experts suggested the definition of inflation include the following:
Baily, et al (2000:18) defines inflation as follows:
"Inflation is an increase in the over-all level of price."
Samuelson (2005:576) suggests the consumer price index, as follows:
"The most widely used measure of inflation is the consumer price index (CPI)"
While the definition of the consumer price index (CPI) which stated Baily, et al (2000:19) is as follows:
"Consumer price index (CPI) is constructed by looking at changes in the prices of the things that typical household buy."

The rate of CPI (core inflation) is the rate of inflation caused by increasing pressure on the demand for goods and services (aggregate demand) in the economy, several factors that can cause changes in the inflation rate is a permanent interaction between the public's expectations of the rate of inflation, money supply, business cycle factors (e.g. level of production capacity and inventory), and seasonal demand pressures.

Inflation component that is temporary in nature (inflation noise) is part of the inflation rate caused by occasional disturbances (one-time shock) at the rate of inflation factors leading to temporary shocks is an increase in input costs of production and distribution, increase in energy and transportation costs, and non-factor and economic such as riots, natural disasters and others. Inflation does not mean that the price of various items that rise in the same percentage, which obviously happens a general price increase of goods is continuously in a certain time period. The increase in prices or inflation is measured using the price index of about 300 commodities in 45 major cities across Indonesia.

Stock Price Index
One indicator of stock price movement is the stock price index. Index is a combination of stock price in the market. According to M. Fakhuruddin, M. Sopian (2001:201) of the index traded on the JSX is now called IDX there are four types, namely:
1. Individual Index
   Individual indices using the price index of each Stock of the basic price.
2. Sectoral stock price indices

Stock price index is a sub-sectoral index of the JCI. All the Stocks are listed on the IDX classified into nine industry sectors according to the classification established, which is agricultural, mining, basic industry and chemicals, various industrial, consumer goods industries, property and real estate, transportation and infrastructure, finance, investment and trade in services.

3. LQ 45 Index

using the 45 stocks selected based on trading liquidity and adjusted every six months (each beginning in February and August).

3. Composite Stock Price Index

Composite Stock Price Index as an indicator of stock price movements in the IDX listed both common stock and preferred stock.

**Influence of External Factors Economic Against Stock Price.**

**The influence of Rupiah Exchange Rate to Stock Price**

The rupiah exchange rate has an impact particularly on companies that rely on imported raw materials. Rupiah depreciation will cause an increase in production costs that will impact the decline in corporate profitability. Companies that rely on exports are also highly vulnerable to exchange rates.

Stock price may be affected by fluctuations in exchange rates through the actions of foreign investors which investment decisions are influenced by exchange rate conditions. Foreign investors will be attracted to invest when the exchange rate of rupiah against the dollar weakened and there is a tendency to rise.

If it is considered that more profitable to speculate on the fluctuations of foreign currency exchange rates then it will result in stock price index will fall. Conversely, if foreign exchange rates stable which makes speculation on foreign exchange less profitable, investor will continue to trade in capital market and stock price index to be stable.

According Mudji and Mudjilah Rahayu Utami (2003):

"The rupiah exchange rate against the USD is partially a significant influence on corporate stock prices during the economic crisis in Indonesia."

**Interest Rate Influence On Stock Price**

In addition to buying Stocks on the stock of real capital owners have an alternative to invest their capital by saving money in the bank. Companies that go public to obtain funds through the sale of Stocks, while banks obtain funds from savers. The funds obtained from the public to be well run and beneficial to increase the quantity and quality of products, with the purpose of profit.

Investors expect the return \( (\text{return}) \) of capital invested by the funds in the form of deposits in the banks or the purchase of Stocks. Investors expect returns \( (\text{return}) \) of interest, in other words they expect the interest rate \( (\text{interest rate}) \) is high and or high stock return as well. Therefore as the sharp competition between investment in the stock exchange floor or in the form of deposits. If the stock return equal to or lower than the deposit interest rate investors will surely infuse capital in the form of deposits because the risk is lower than the purchase of Stocks. If the high interest rates, investors will get big results from the return rate from the return of Stocks that they will sell Stocks to be exchanged in the form of deposits. Exchange is in response to rising interest rates, one result is a decline in stock prices, so if the situation was otherwise.
Besides an increase in interest rates will also increase the interest burden of debt incurred by the company to reduce its profit margin and lower stock prices.

According Mudji and Mudjilah Rahayu Utami (2003):

"Interest rates are partially a significant influence on corporate stock prices during the economic crisis in Indonesia".

Their study results showed that, SBI interest rate has a negative impact on stock prices.

**Influence Inflation Consumer Price Index (CPI) Against Stock Price**

Inflation marked by a trend increase in the general price level. Increased commodity prices will cause companies to increase capital costs, the cost of raw materials, and labor costs (because employees demanding salary adjustment for inflation). In other words, the increase in prices of goods will make the company's production costs increased. In this condition the public's purchasing power tends to fall, so the price should be lowered to maintain sales volume. Makes company's financial condition has two problems i.e. increase of production costs and lower sales value at the same time. If the sales price is relatively fixed, the increase in production costs would have an impact on the profit decline. The fall in profits will eventually lead to stock price to go down, because the inability of the company paying the dividends.

**VARIABLE OPERATIONALIZATION**

Research variables consist of:
1. Stock Price is expressed as Dependent variable (Y).
2. Rupiah per USD is expressed as an Independent Variable (X₁)
3. SBI Rates expressed as Independent variable (X₂)
4. Inflation Consumer Price Index (CPI) is expressed as Independent variable (X₃)

<table>
<thead>
<tr>
<th>Research Variable</th>
<th>Concept Research</th>
<th>Indicators</th>
<th>Size</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong> Rupiah Exchange Rate per USD (X₁)</td>
<td>The price of a currency unit of the State in commodities (like gold and silver) or other countries currency. (Sri Handaru 2005:23)</td>
<td>Average Exchange Rates = Rp. / USD</td>
<td>Rupiah</td>
<td>Ratio</td>
</tr>
<tr>
<td><strong>2</strong> SBI Rates (X₂)</td>
<td>“The interest rate received by the Bank on interest rate offers from bidders daily or weekly bidders.” (The development UREM Bank Indonesia 2005)</td>
<td>( SBI=\sum_{i} M_i \cdot W_i )</td>
<td>Percent (%)</td>
<td>Ratio</td>
</tr>
<tr>
<td><strong>3</strong> Consumer price index inflation (CPI) (X₃)</td>
<td>“The rate of permanent CPI (core inflation) is the rate of inflation caused by increased pressure the demand for goods and services (aggregate demand) in the economy.” (Economic statistics, financial, vol VII Indonesia in June 2005)</td>
<td>( IHK=\frac{\sum Wn Hn}{\sum Wo Ho} )</td>
<td>Percent (%)</td>
<td>Ratio</td>
</tr>
<tr>
<td><strong>4</strong> Stock price index of property sector * (Y)</td>
<td>Describes the market value of all property sectors in the stock exchange. (Indonesian Stock Exchange)</td>
<td>End of month Stock price index of property sector</td>
<td>Index numbers</td>
<td>Ratio</td>
</tr>
</tbody>
</table>

Source: Author

* For stock price index variable property sector, researchers using data already available on the Indonesian Stock Exchange. Researchers do not do calculations.
RESEARCH POPULATION AND SAMPLE

Population (population) is a group of people, events or anything that has certain characteristics. Where this study using the company's population - that real estate companies on the Stock Exchange listing.

Sample collection techniques used in this study was purposive sampling, the technique of determining the sample by using certain criteria. This purposive sampling technique is a form of non-probability sampling. According Riduwan (2006:63) purposive sampling is the sampling technique used by researchers when researchers have specific considerations in making the determination of the sample or samples based on the criteria or specific purpose (intentional). The criteria used are:

1. The companies listed on the Indonesia Stock Exchange (IDX).
2. The companies that belong to the property sector.
3. The companies that publish quarterly financial reports periodically during the period from 2004 to 2007.
4. The companies that publish annual financial reports periodically during the period from 2002 to 2007.

From 39 companies listed in the property sector only 16 match the criteria and listed in Table 2 below:

Table 2
Research Sample of Company listed in IDX in the Property Sector

<table>
<thead>
<tr>
<th>No</th>
<th>Code</th>
<th>No</th>
<th>Code</th>
<th>No</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>JAKA</td>
<td>7</td>
<td>LPKR</td>
<td>13</td>
<td>RODA</td>
</tr>
<tr>
<td>2</td>
<td>JIHD</td>
<td>8</td>
<td>MDLN</td>
<td>14</td>
<td>SIIP</td>
</tr>
<tr>
<td>3</td>
<td>JRPT</td>
<td>9</td>
<td>MORE</td>
<td>15</td>
<td>SMDM</td>
</tr>
<tr>
<td>4</td>
<td>KIJA</td>
<td>10</td>
<td>PUDP</td>
<td>16</td>
<td>SMRA</td>
</tr>
<tr>
<td>5</td>
<td>KPIG</td>
<td>11</td>
<td>PWON</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>LPCK</td>
<td>12</td>
<td>RBMS</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Bisnis Indonesia

HYPOTHESIS AND ALTERNATIVE HYPOTHESIS

To obtain the hypothesis set forth above, then testing the hypothesis by using statistical test methods. Hypothesis testing is testing conducted null hypothesis ($H_0$) that states there is no influence between the independent variables on the dependent variable, and the alternative hypothesis ($H_a$), to the contrary.

Hypothesis Simultaneous

$H_{0:_{yx_1x_2x_3}} = 0$, Rupiah Exchange Rate per USD ($X_1$), SBI rates ($X_2$), Inflation Consumer Price Index (CPI) ($X_3$), did not significantly affect the Stock Price ($Y$).

$H_{a:_{yx_1x_2x_3}} \neq 0$, Rupiah Exchange Rate per USD ($X_1$), SBI rates ($X_2$), Inflation Consumer Price Index (CPI) ($X_3$), significantly affect the Stock Price ($Y$).

Hypothesis Partial

a. $H_{0:_{yx_1}} = 0$, Rupiah Exchange Rate per USD ($X_1$), does not affect significantly Stock Price ($Y$).

$b. H_{a:_{yx_1}} \neq 0$, Rupiah Exchange Rate per USD ($X_1$), significantly affect the Stock Price ($Y$).

b. $H_{0:_{yx_2}} = 0$, SBI rate ($X_2$), did not affect significantly the Stock Price ($Y$).

$b. H_{a:_{yx_2}} \neq 0$, SBI rate ($X_2$), significantly affect the Stock Price ($Y$).
The hypotheses are based on parametric statistical analysis of data obtained. Parametric statistical analysis used the analysis of Linear Regression and Correlation of Multiple (Multiple Linear Regression and Correlation Analysis). The procedures used to answer hypotheses are:

1. State the research hypothesis
2. State significance level of \( \alpha = 0.05 \)
3. Conduct Regression analysis

Regression analysis used to determine how the dependent variable can be predicted by independent variables. In this study used Multiple Regression analysis to predict how the situation (rising or falling) the dependent variable, if two or more independent variables as predictors of manipulated factors (raised lower) value. The equation for the population models is as follows:

\[
Y = b_0 + b_1 X_1 + b_2 X_2 + b_3 X_3 + \varepsilon
\]

Description:
- \( Y \) = Stock price
- \( X_1 \) = Exchange Rate (Rupiah per USD)
- \( X_2 \) = SBI rate
- \( X_3 \) = Inflation Consumer Price Index (CPI)
- \( b_0 \) = Intercept
- \( b_{1,2,3} \) = Coefficient of regression of each variable independent
- \( \varepsilon \) = Error term

Some problems that can occur in a regression analysis is the possible emergence of problems and autocorrelation according multicolinearity (Dominick Salvatore 2005:178)

Multicolinearity

Standard error of the coefficient for the various independent variables large enough in relation with the size of the coefficient, so only a little confidence can be placed on the estimated relationship between each independent variable with the dependent variable. This issue is related to multicolinearity, defined as a condition in which the variables - independent variables not truly independent of each other but have a value - set together. According to Santoso (2001) which says that the results of the Multicolinearity tests is the value of Variance Inflation Factor (VIF) were <5, and tolerance values > 0.0001 .

The formula used to obtain VIF values are: \( \text{VIF} = 1 / \text{Tolerance} \)
**Autocorrelation**

In describing the value of the residual *time series*, expected residual values obtained at value of zero randomly distributed around average. Conditions in which residual values are not independent of one another and are not randomly distributed within a time series is called **autocorrelation** conditions. To measure the extent where there is serial correlation (autocorrelation) in the residue, used statistical Durbin - Watson. Statistics Durbin - Watson (d) calculated with the equation:

$$d = \frac{\sum_{i=1}^{n} (u_i - u_{i-1})^2}{\sum_{i=1}^{n} u_i^2}$$

According to Wahid Sulaiman (2004:16) figures Durbin - Watson who showed between 1.65 to 2.35 indicate no autocorrelation. If there are between 1.21 to 1.65 or 2.35 to 2.79 so cannot be inferred, whereas if below 1.21 and above 2.79 then there autocorrelation show.

**Correlation Analysis**

Used to explain the strength and direction of the relationship between the independent variables with the dependent variable. In this study, the authors use a simple correlation analysis and analysis of multiple correlation to measure the strength of relationship between the independent variables and the dependent variable.

The size of the correlation coefficient (r) i.e. -1 < r < 1

a. When r approaches +1, then shows the relationships of independent and dependent variables are perfect and in line

b. When r approaches -1, it shows the relationships of independent and dependent variables is perfect but the opposite direction.

c. When r approaches 0, then shows the relationship of independent and dependent variables that have weak or no relationship at all.

To check on the correlation used the following criteria:

<table>
<thead>
<tr>
<th>Interval Coefficient</th>
<th>Level Relation</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00 - 0.199</td>
<td>Very Low</td>
</tr>
<tr>
<td>0.20 - 0.399</td>
<td>Low</td>
</tr>
<tr>
<td>0.40 - 0.599</td>
<td>Medium</td>
</tr>
<tr>
<td>0.60 - 0.799</td>
<td>Strong</td>
</tr>
<tr>
<td>0.80 - 1.00</td>
<td>Very strong</td>
</tr>
</tbody>
</table>

Source: Riduwan (2006:136)

**Simple correlation**

This correlation is used to measure the degree of relationship and the relationship of independent variables (X₁, X₂, X₃) with the dependent variable (Y). The formula simple correlation (*product moment*):

$$r = \frac{\sum (x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum (x_i - \bar{x})^2 \sum (y_i - \bar{y})^2}}$$
\[ r_{xy} = \frac{n \sum x_i y_i - (\sum x_i)(\sum y_i)}{\sqrt{\left( n \sum x_i^2 - (\sum x_i)^2 \right) \left( n \sum y_i^2 - (\sum y_i)^2 \right)}} \]

**Description:**
- \( r \) = Coefficient of correlation
- \( X_i \) = Independent variable \( (X_1, X_2, X_n) \)
- \( Y \) = Dependent variable
- \( n \) = Number of data

As for the correlation between the independent variables \( (X_1, X_2, X_n) \) with the dependent variable \( Y \) can be calculated using the formula:

\[ R_{YX|X_1X_2X_3} = b_1 \sum YX_1 + b_2 \sum YX_2 + b_3 \sum YX_3 \sum Y^2 \]

**Coefficient of Determination**

To determine the amount of the contribution of an independent variable \( (X_1, X_2, X_n) \) on the dependent variable \( Y \) can be used coefficient of determination, which is calculated by using the formula:

\[ KD = r_i^2 \times 100\% \]

**Significance Test**

For *product moment* correlations using the formula \( t \) calculated:

\[ t = \frac{r \sqrt{n-2}}{\sqrt{1-r^2}} \]

T-test was conducted to see the significance of the influence of individual independent variables on the dependent variable. To find the \( t_{\text{table}} \) degrees of freedom (df) for the simple correlation is \( \text{df} = n - 2 \). As for the multiple correlation using the \( F \) calculated with the formula:

\[ F = \frac{R^2}{k} \left/ \frac{(1-R^2)/(n-k-1)} \right/ \]

F-test was conducted to see the influence of independent variables on the dependent variables simultaneously. Multiple correlation of degrees of freedom is the numerator \( \text{df} = k \) and \( \text{df} \) denominator = \( n - k - 1 \).

Where:
- \( k \) = Number of independent variables
- \( n \) = Number of data

**Hypothesis Decision Making**

Inference is based on hypothesis testing with the criteria that have been set. The criteria used for acceptance and rejection of null hypothesis is as follows:

**Calculation:**
H₀ accepted when \( -T_{\text{table}} < t_{\text{calculated}} < t_{\text{table}} \)
H₀ is rejected if \( T \geq t_{\text{count tables}} \) and \( t_{\text{calculated}} \leq t - t_{\text{table}} \)
H₀ accepted when \( F_{\text{calculated}} > F_{\text{table}} \)
H₀ is rejected if \( F_{\text{calculated}} < F_{\text{table}} \)

Calculation using SPSS software:
H₀ is rejected or if a significant influence:
\[ \text{Significance } F \text{ Change } < \alpha = 0.05 \]
H₀ accepted or not significant impact if:
\[ \text{Significance } F \text{ Change } > \alpha = 0.05 \]

RESEARCH RESULT
Growth Analysis of Exchange Rate USD Rupiah
The values of the Rupiah per USD during period of research of July 2007 - November 2008 shown in Figure 1

From the picture above we can see that in the middle of July 2007 the exchange rate is at its Rp. 9067.14/USD, this is the smallest value of the period July 2007 until November 2008. But in the middle of August 2007 the exchange rate depreciates to the point of Rp. 9366.68/USD. In the middle of September 2007 had strengthened the exchange rate until October 2007. In November 2007 until January 2008 the exchange rate was experiencing weakening trend until the level of Rp. 9394.29/USD. Until February 2008 to September 2008 with the exchange rate has fluctuated between Rp. 9149.25/USD up to Rp. 9340.65/USD. Then exchange rate weakened significantly from September 2008 to only Rp. 9340.65/USD and continued to weaken until the November
2008 up to the point of Rp. 11711.15/USD. Weakening Rupiah, has caused the government to raise domestic interest rates to prevent currency speculation and maintain stability in the rupiah against foreign currencies as a whole.
The rupiah completely determined by the forces of demand and supply of the market place, which can be done by the government is solely to keep the rupiah value does not fluctuate too sharply through monetary policy. The cause of Rupiah fluctuation, more due to the non-economic factors such as socio-political conditions in domestic and global economic conditions.

Growth Analysis SBI Rates
SBI rate set by Bank Indonesia through an auction mechanism for Certificates of Bank Indonesia. As for knowing SBI rate can use the following formula:

\[ \text{SBI Rates} = \Sigma M_i \cdot W_i \]

Where:
- \( M_i \) = SBI nominally sold to the participants \( i \)
- \( W_i \) = Discount levels are offered participants

From the picture above we can see that the overall rate of SBI in July 2007 to November 2008 show the trend of gradual increase. In July 2007 SBI interest rate was at 8.25% and remain unchanged until November 2007 but at the end of December 2007, exactly, SBI rate fell to 8%.
In early January 2008, exactly, SBI interest rate fixed at 8% and decreased to 7.93% in February 2008. Starting from February 2008 SBI interest rates continue to rise up to the highest point of 11:24% in November 2008. This caused them increasing foreign interest, which has raised expectations of higher interest rates among banks in the country which in turn encourages them tend to increase offering interest rates at every auction SBI.
Bank Indonesia to monetary tightening policy and also trying to absorb the excess liquidity of the banking sector, which
potentially put pressure on exchange rates and inflation that can interfere with the process of economic recovery.

**Growth Analysis Inflation Consumer Price Index (CPI)**
The increase in prices or inflation is measured using the price index of about 300 commodities in 45 major cities throughout Indonesia. Consumer price index inflation (CPI) can be calculated by using the following formula:

\[
CPI = \frac{\sum W_n \cdot H_n}{\sum W_o \cdot H_o}
\]

Where:
- CPI = consumer price index
- \( W_n \) = value relative importance (Weights) of goods on the day \( n \)
- \( W_o \) = value of the relative importance (Weights) of goods on the basis of time
- \( H_n \) = market price of goods on the day \( n \)
- \( H_o \) = market price of goods on the basis of time

![Figure 3](image)

**Development of the Consumer Price Index (CPI)**
The period July 2007 - November 2008

Source: [www.bi.go.id](http://www.bi.go.id), and the data have been processed

From the picture above we can see that overall consumer price index inflation (CPI) from July 2007 until November 2008 showed the gradual upward trend.

In July 2007 the consumer price index inflation (CPI) of 6.06%, this value is the lowest point of the consumer price index inflation (CPI) from the period July 2007 until November 2008. In 2007 the consumer price index inflation (CPI) in September is the highest of 6.95%.

In early January 2008, exactly the consumer price index inflation (CPI) for 7.36%, continued to rise until reaching double digits in May 2008 in the amount of 10.38% and reached the highest point of September 2008 at 12.14%. The increase in the consumer price index inflation (CPI) is
caused by rising inflation from imported goods to increase prices in line with the influence of increasing world commodity prices. In addition, the still high public expectations of future inflation will also put pressure on core inflation.

**Stock Price Development Analysis**

Stock price changes are influenced by investor perceptions of the fair value (*intrinsic value*) of a company to its market value (*market value*).

\[
\text{Growth} = \frac{P_t - P_{t-1}}{P_{t-1}}
\]

**Description:**

- **Growth** = Growth stock prices
- **P** = Stock price t periods
- **P** = Stock price period t-1

Here is the growth of the company's stock price on the property sector over the study period from August 2007 - November 2008:

<table>
<thead>
<tr>
<th>Year</th>
<th>Month</th>
<th>JAKA</th>
<th>JIH</th>
<th>JRP</th>
<th>JUA</th>
<th>KPG</th>
<th>LPK</th>
<th>LPKR</th>
<th>MDLN</th>
<th>OMRE</th>
<th>PUDP</th>
<th>PW</th>
<th>ON</th>
<th>RBMS</th>
<th>RODA</th>
<th>SIP</th>
<th>SMIDM</th>
<th>SMRA</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>Agustus</td>
<td>0.0000</td>
<td>(0.0541)</td>
<td>(0.0595)</td>
<td>(0.1090)</td>
<td>0.5172</td>
<td>0.1296</td>
<td>0.0027</td>
<td>0.1400</td>
<td>0.0649</td>
<td>0.2014</td>
<td>0.0545</td>
<td>0.1809</td>
<td>0.0453</td>
<td>0.0455</td>
<td>(0.1087)</td>
<td>0.0684</td>
<td>(0.0024)</td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>September</td>
<td>0.0000</td>
<td>0.0183</td>
<td>(0.0133)</td>
<td>0.2955</td>
<td>0.0909</td>
<td>0.0028</td>
<td>(0.0054)</td>
<td>0.1453</td>
<td>0.3540</td>
<td>0.3864</td>
<td>0.8333</td>
<td>0.3178</td>
<td>0.0942</td>
<td>0.0942</td>
<td>0.2883</td>
<td>0.0940</td>
<td>0.0303</td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>Oktober</td>
<td>0.0000</td>
<td>(0.0067)</td>
<td>0.0035</td>
<td>0.1379</td>
<td>0.1079</td>
<td>0.0018</td>
<td>(0.0018)</td>
<td>0.0952</td>
<td>0.0000</td>
<td>0.0025</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0199</td>
<td>0.0199</td>
<td>0.0082</td>
<td>0.0025</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>November</td>
<td>0.0000</td>
<td>(0.0076)</td>
<td>0.0133</td>
<td>0.1417</td>
<td>0.1058</td>
<td>0.0054</td>
<td>0.0054</td>
<td>0.1225</td>
<td>0.1091</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0115</td>
<td>0.2597</td>
<td>0.2597</td>
<td>0.1373</td>
<td>0.2000</td>
<td>0.0508</td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>Desember</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0066</td>
<td>0.0014</td>
<td>0.0000</td>
<td>0.0072</td>
<td>0.0393</td>
<td>0.0206</td>
<td>0.0674</td>
<td>0.2076</td>
<td>0.0309</td>
<td>0.0359</td>
<td>0.0359</td>
<td>0.0359</td>
<td>0.0883</td>
<td>0.0297</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>Januari</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.1242</td>
<td>0.7208</td>
<td>0.2530</td>
<td>0.0156</td>
<td>0.0670</td>
<td>0.0443</td>
<td>0.1100</td>
<td>0.0761</td>
<td>0.0700</td>
<td>0.0700</td>
<td>0.1259</td>
<td>0.0813</td>
<td>0.1142</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>Februari</td>
<td>0.0000</td>
<td>(0.0278)</td>
<td>0.0196</td>
<td>0.1079</td>
<td>0.0615</td>
<td>0.1587</td>
<td>0.1017</td>
<td>0.0741</td>
<td>0.0612</td>
<td>0.2314</td>
<td>0.2314</td>
<td>0.2314</td>
<td>0.1802</td>
<td>0.0105</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>Maret</td>
<td>0.0000</td>
<td>(0.0592)</td>
<td>0.0374</td>
<td>0.2048</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>April</td>
<td>0.0000</td>
<td>(0.0774)</td>
<td>0.0787</td>
<td>0.2072</td>
<td>0.0052</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
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<td>0.0000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>Mei</td>
<td>0.0000</td>
<td>(0.0724)</td>
<td>0.1995</td>
<td>0.3656</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
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<td>0.0000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>Juni</td>
<td>0.0000</td>
<td>(0.0956)</td>
<td>0.235</td>
<td>0.0140</td>
<td>0.0200</td>
<td>0.0300</td>
<td>0.0029</td>
<td>0.0010</td>
<td>0.0162</td>
<td>0.0162</td>
<td>0.0162</td>
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<td>0.0162</td>
<td>0.0162</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>Juli</td>
<td>0.0000</td>
<td>(0.1406)</td>
<td>0.0105</td>
<td>0.0060</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
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<td>0.0000</td>
<td>0.0000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>Agustus</td>
<td>0.0000</td>
<td>(0.0754)</td>
<td>0.0380</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>September</td>
<td>0.0000</td>
<td>(0.0546)</td>
<td>0.0182</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>Oktober</td>
<td>0.0000</td>
<td>(0.0596)</td>
<td>0.0455</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>November</td>
<td>0.0000</td>
<td>(0.2137)</td>
<td>0.0174</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Average** = 0.0000 (0.0684) 0.0786 0.0262 0.0066 0.0317 0.1386 0.0057 0.0573 0.0748 0.0242 0.0574 0.0837 0.0473 0.0868 0.0142 0.0521

Source: Corner Exchange ITB, the data have been processed.

From the table above can be seen that that has an average growth rate was the highest stock price of RBMS with values of 2.4% and has an average growth rate is the lowest stock price of MDLN -13.66% value. While the average stock price growth period August 2007 - November 2008 amounted to -5.22%.
If seen from the growth of the company's stock price of the property sector in August 2007 - November 2008, then in August 2007 the average stock price decreased by -0.0224%, but increased in September 2007 to 3.39%. In October 2007 the average stock price declined by returning -3.21% and back up the next month November 2007 precisely to the size of -3.08%. The average stock price of the property sector in December 2007 until November 2008 trending down and reached the lowest point in October 2008 of -21.96%. But in November 2008 again increased to -4.77%.

**SIMULTANEOUS INFLUENCE OF RUPIAH EXCHANGE RATE PER USD, SBI RATES AND CPI TO STOCK PRICE ON PROPERTY SECTOR IN INDONESIA STOCK EXCHANGE PERIOD AUGUST 2007 - NOVEMBER 2008.**

**Test Results of Regression Model**

Based on the classical assumptions that states that in the form of a regression equation, where the parameters and conditions assessment coefficients and unbiased approach condition, it is necessary to test the normality of data and test the existence of violations of classical assumptions underlying the regression equation model.

1. Data normality test

   Data for normality test performed to test the normality of data distribution, where data are normally or normally distributed will converge on average and median. Normality test aims to determine how much data is normally distributed in the variables used in this study. Good data that can be used in a study is data that has been normally distributed.
Normality test can be done by looking at the graph of the normal distribution. Data considered normal if the form has a slope of the curve tends to balance, both on the left side and right side and resembles a bell-shaped curve is almost perfect.

![Normality Test](image)

**Figure 5**

*Output Normal Curve*

*Dependent Variable: Stock Price*

Figure histogram with normal curve has a slope above the left side and right side or not leaning to the left or right, but to the middle with a shape like a bell, then we may conclude that the data in this study are normally distributed.

2 Autocorrelation Test Result

The results of the test in this study autocorrelation can be seen in the following table:

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Squared</th>
<th>Adjusted R Squared</th>
<th>Std. Error of the Estimate</th>
<th>R Squared Change</th>
<th>F Change</th>
<th>df1</th>
<th>df2</th>
<th>Sig. F Change</th>
<th>Durb-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.274</td>
<td>.073</td>
<td>.061</td>
<td>.152747</td>
<td>.073</td>
<td>6.100</td>
<td>3</td>
<td>231</td>
<td>.001</td>
<td>2.035</td>
</tr>
</tbody>
</table>

*a.* Predictors: (Constant), Inflation, SBI, Exchange Rate

*b.* Dependent Variable: Stock Price

From Durbin Watson of the numbers for 2035 it can be concluded that there is no autocorrelation because the numbers autocorrelation Durbin Watson processed data is between 1.65 <DW <2:35.
3 Multicolinearity Test Result

Test results of the study sample can be seen in the following table:

Table 6
Multicolinearity Test Results

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
<th>Tolerance</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(.041)</td>
<td>.014</td>
<td>-.165</td>
<td>-2.933</td>
<td>.004</td>
<td></td>
</tr>
<tr>
<td>Nilai_tukar</td>
<td>-1.098</td>
<td>.550</td>
<td>-.165</td>
<td>-1.995</td>
<td>.047</td>
<td>589</td>
</tr>
<tr>
<td>SBI</td>
<td>-0.483</td>
<td>.333</td>
<td>-.118</td>
<td>-1.452</td>
<td>.148</td>
<td>609</td>
</tr>
<tr>
<td>Inflasi</td>
<td>0.168</td>
<td>.178</td>
<td>.061</td>
<td>.946</td>
<td>.345</td>
<td>.957</td>
</tr>
</tbody>
</table>

Source: Data Processing Results

Of the VIF values that have been obtained in the table above, show that the data on the independent variable does not contain any symptoms of a strong correlation among independent variables, because all the calculated VIF values smaller than 5 and it can be concluded there are no free variables among multicollinearity.

Based on the results of tests on the classical assumptions, it can be concluded that the model of regression analysis above has met all the assumptions of classical or meet validity test. After doing the test the validity of *ordinary least squares* (OLS) to the entire research sample, it will further influence the regression equation determined rupiah per USD, SBI interest rate, inflation, consumer price index (CPI) for the stock price.

**Analysis of Regression Equations**

After testing the validity of the data and the classical assumptions, then the research variables analyzed by using multiple linear regression analysis.

By using SPSS 15.0 *for Windows* is obtained as follows:

Table 7
Regression Calculation Results

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
<th>Tolerance</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(.041)</td>
<td>.014</td>
<td>-.165</td>
<td>-2.933</td>
<td>.004</td>
<td></td>
</tr>
<tr>
<td>Nilai_tukar</td>
<td>-1.098</td>
<td>.550</td>
<td>-.165</td>
<td>-1.995</td>
<td>.047</td>
<td>589</td>
</tr>
<tr>
<td>SBI</td>
<td>-0.483</td>
<td>.333</td>
<td>-.118</td>
<td>-1.452</td>
<td>.148</td>
<td>609</td>
</tr>
<tr>
<td>Inflasi</td>
<td>0.168</td>
<td>.178</td>
<td>.061</td>
<td>.946</td>
<td>.345</td>
<td>.957</td>
</tr>
</tbody>
</table>

Source: Data Processing Results

Based on the results of the calculations obtained a regression equation as follows:

\[
Y = -0.041 - 1.098 X_1 - 0.483 X_2 + 0.618 X_3
\]
Description:

\[ Y = \text{Stock price} \]
\[ X_1 = \text{Exchange Rate per USD Rupiah} \]
\[ X_2 = \text{Interest Rates} \]
\[ X_3 = \text{Inflation Consumer Price Index (CPI)} \]

The explanation of the above regression model can be described as follows:

1. The constant obtained for -0041. This shows if the variable \( X_1 \) (Rupiah Exchange Rate per USD), \( X_2 \) (SBI rate), \( X_3 \) (consumer price index inflation (CPI)), is zero, then the company's Stock price would value -0041.

2. The coefficient of regression of \( X_1 \) (Rupiah Exchange Rate per USD) are obtained for -1098. This indicates when the Exchange Rate of Rupiah per USD rose by 1% with the assumption that other variables fixed value, then it will be followed by a decrease in the ratio of stock prices 109.8% of the company.

3. The coefficient of regression of \( X_2 \) (SBI rate) obtained registration -0483. This shows if the SBI rate rose by 1% with the assumption that other variables fixed value, it will be followed by an increase in the ratio of stock prices for 48.3%.

4. The coefficient of regression of \( X_3 \) (consumer price index inflation (CPI)) obtained for 0618. This shows if the consumer price index inflation (CPI) rose by 1% with the assumption that other variables fixed value, it will be followed by a decrease in the ratio of stock prices for 61.8%.

Coefficient Determination

To determine the amount of the contribution of an independent variable (\( X_1, X_2, X_3 \)) on the dependent variable (\( Y \)) can be used coefficient of determination. Coefficient of determination can be seen simultaneously in the model summary table as follows:

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Squa</th>
<th>Adjusted R Squa</th>
<th>Std. Error of the Estimate</th>
<th>R Square</th>
<th>Change</th>
<th>F Change</th>
<th>df1</th>
<th>df2</th>
<th>Sig. F Change</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.272</td>
<td>.073</td>
<td>.061</td>
<td>.152747</td>
<td>.073</td>
<td>6.100</td>
<td>3</td>
<td>231</td>
<td>.001</td>
<td>2.035</td>
<td></td>
</tr>
</tbody>
</table>

\[ \text{a. Predictors: (Constant), Inflation, SBI, Exchange Rate} \]
\[ \text{b. Dependent Variable: Stock Price} \]

Source: Data Processing Results

From table 8 above it can be concluded that the value of the coefficient of determination \( (R^2) \) were simultaneously for 0073, this means 7.3% variable stock prices are influenced by the rupiah per USD, SBI rate, and CPI, while the other 92.7% influenced by other variables not examined in this study. And the \text{adjusted R-square} value of the result is this 0061 means that the results of the regression variables rupiah per USD, SBI rate, and CPI can explain the stock price by 6.1%.

Simultaneous Hypothesis Test Result
Simultaneous hypothesis test can be seen from the ANOVA table. By using the SPSS calculations in the hypothesis tests is as follows:

H0 is rejected or if a significant influence if: \( \text{Significance F Change} < \alpha = 0.05 \)

H0 is accepted or not significant impact if: \( \text{Significance F Change} > \alpha = 0.05 \)

The simultaneous hypothesis as follows:

\[ H_0: y_{x_1x_2x_3} = 0, \quad \text{Rupiah per USD (X}_1\text{), SBI rate (X}_2\text{), CPI (X}_3\text{) did not significantly affect the Stock Price (Y)}. \]

\[ H_a: y_{x_1x_2x_3} \neq 0, \quad \text{Rupiah per USD (X}_1\text{), SBI rate (X}_2\text{), CPI (X}_3\text{) significantly affect stock prices (Y)}. \]

**Table 9**

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>-427</td>
<td>3</td>
<td>-0.142</td>
<td>6.100</td>
<td>0.001</td>
</tr>
<tr>
<td>Residual</td>
<td>5.990</td>
<td>231</td>
<td>0.023</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>5.817</td>
<td>234</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Inflation, SBI, Exchange Rate
b. Dependent Variable: Stock Price

From the ANOVA table 9 above, information obtained as follows:

<table>
<thead>
<tr>
<th>Sig.</th>
<th>Hypothesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 0.05</td>
<td>Ho accepted</td>
</tr>
<tr>
<td>&lt; 0.05</td>
<td>Ho rejected</td>
</tr>
</tbody>
</table>

From Table 9 obtained that value of Sig. for 0.001 this means that Ho is rejected because the value of Sig <0.05. Then concluded that simultaneously Rupiah Exchange Rate per USD (X \(_1\)), Interest Rates (X \(_2\)), CPI (X \(_3\)) significantly affect the Stock Price (Y).

**PARTIAL INFLUENCE OF RUPIAH EXCHANGE RATE PER USD, SBI RATES AND CPI TO STOCK PRICE ON PROPERTY SECTOR IN INDONESIA STOCK EXCHANGE PERIOD AUGUST 2007 - NOVEMBER 2008.**

To determine influence of each variable X to the stock price (Y), then we need to analyze partially. *Pearson Correlations* of the table and the table where the table *coefficient* which may explain the relationship, influence and significance level of Rupiah per USD, SBI rates and CPI to stock price.

**Coefficient of Correlation and Determination**

Correlation and determination coefficients are presented in table *Pearson Correlations* as follows:
From table 10 above it can be known how much the relationship and influence of independent variables on the dependent variable as summarized as follows:

<table>
<thead>
<tr>
<th>Correlations</th>
<th>Harga_saham</th>
<th>Nilai_tukar</th>
<th>SBI</th>
<th>Inflasi</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>Stock Price</td>
<td>1.000</td>
<td>-249</td>
<td>-223</td>
</tr>
<tr>
<td>Exchange Rate</td>
<td>-.249</td>
<td>1.000</td>
<td>.622</td>
<td>-.188</td>
</tr>
<tr>
<td>SBI</td>
<td>-.223</td>
<td>.622</td>
<td>1.000</td>
<td>-.049</td>
</tr>
<tr>
<td>Inflation</td>
<td>.098</td>
<td>-.188</td>
<td>-.049</td>
<td>1.000</td>
</tr>
<tr>
<td>Sigg. (1-tailed)</td>
<td>Stock Price</td>
<td>.</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>Exchange Rate</td>
<td>.000</td>
<td>.</td>
<td>.000</td>
<td>.002</td>
</tr>
<tr>
<td>SBI</td>
<td>.000</td>
<td>.000</td>
<td>.</td>
<td>.226</td>
</tr>
<tr>
<td>Inflation</td>
<td>.067</td>
<td>.002</td>
<td>.226</td>
<td>.</td>
</tr>
<tr>
<td>N</td>
<td>Stock Price</td>
<td>235</td>
<td>235</td>
<td>235</td>
</tr>
<tr>
<td>Exchange Rate</td>
<td>235</td>
<td>235</td>
<td>235</td>
<td>235</td>
</tr>
<tr>
<td>SBI</td>
<td>235</td>
<td>235</td>
<td>235</td>
<td>235</td>
</tr>
<tr>
<td>Inflation</td>
<td>235</td>
<td>235</td>
<td>235</td>
<td>235</td>
</tr>
</tbody>
</table>

Based on the above table it can be concluded that:
1. The exchange rate has a relationship in the opposite direction (negative) stock price for 0249 and could have an impact of 6.20%.
2. SBI rate has a relationship in the opposite direction (negative) stock price for 0223 and could have an impact of 4.97%.
3. Inflation consumer price index (CPI) has a direction relationship (positive) stock price for 0098 and could have an impact of 0.96%.

From the result it is concluded that the independent variables which has the most impact on the company's stock price on the property sector is the exchange rate, while the smallest impact on the company's stock price is the consumer price index (CPI).

**Partial Hypothesis Test**

Partial hypothesis testing can be seen from the ANOVA table. By using SPSS software calculations, a partial hypothesis as follows:

<table>
<thead>
<tr>
<th>Correlation</th>
<th>Exchange rate</th>
<th>SBI Rates</th>
<th>Inflation (CPI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Determination</td>
<td>0.249</td>
<td>0.223</td>
<td>0.098</td>
</tr>
<tr>
<td>6.20%</td>
<td>4.97%</td>
<td>0.96%</td>
<td></td>
</tr>
</tbody>
</table>

a. H₀ : yₓ₁ = 0,   Exchange Rate (X₁) does not affect significantly to the Stock Price (Y).
   Hₐ : yₓ₁ ≠ 0,   Exchange Rate (X₁) significantly affect the Stock Price (Y).
b. H₀ : yₓ₂ = 0,   SBI rate (X₂) did not affect significantly to the Stock Price (Y).
   Hₐ : yₓ₂ ≠ 0,   SBI rate (X₂) significantly affect the Stock Price (Y).
c. H₀ : yₓ₃ = 0,   Consumer Price Index (CPI) (X₃) has no effect on stock prices (Y).
   Hₐ : yₓ₃ ≠ 0,   Consumer Price Index (CPI) (X₃) significantly affect the Stock Price (Y).
Table 11
The Partial Test of Hypothesis

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
<td>Tolerance</td>
</tr>
<tr>
<td>(Constant)</td>
<td>-.041</td>
<td>.014</td>
<td></td>
<td>-2.933</td>
<td>.004</td>
</tr>
<tr>
<td>Exchange Rate</td>
<td>-1.998</td>
<td>.550</td>
<td>-.165</td>
<td>-1.995</td>
<td>.047</td>
</tr>
<tr>
<td>SBI</td>
<td>-.483</td>
<td>.333</td>
<td>-.118</td>
<td>-1.452</td>
<td>.148</td>
</tr>
<tr>
<td>Inflation</td>
<td>.168</td>
<td>.178</td>
<td>.061</td>
<td>.946</td>
<td>.345</td>
</tr>
</tbody>
</table>

Calculations using SPSS software to test the hypothesis if:
- Sig > 0.05: Ho accepted
- Sig <0.05: Ho rejected

Based on table 11 above it can be concluded that:
1. Rupiah Exchange Rate per USD significantly influence stock prices, because the sig <0.05 i.e. 0.0047 <0.05.
2. Interest Rates not significantly affect the stock price, because the value of sig > 0.05 i.e. 0.0148 > 0.05.
3. Inflation Consumer Price Index (CPI) did not significantly affect the stock price, because the value of sig > 0.05 i.e. 0.0345 > 0.05.

RESEARCH DISCUSSION
From the results shows that simultaneously all variable have a significant impact on stock prices. While the results of the analysis the hypothesis is partially there is only one variable that have a significant effect on stock prices, the Rupiah per USD. Other variables do not have a significant impact on property company Stock prices. Changes in SBI Rates have a negative relationship to stock price while Consumer Price Index (CPI) have a positive relation with stock price but both does not able to influence stock prices.

CONCLUSIONS
From the research that has been conducted and the results of the analysis described in previous chapters, the conclusion can be taken as follows:
1. The average change of Rupiah to USD Exchange Rate on period August 2007 - November 2008 is stable with a tendency to increase. The highest change occurred in November 2008 with a value 0.16548, and the lowest occurred in February 2008 with a value of -0.02269. The average change rupiah per USD during the study period of 0.01704.
2. The change of SBI Rates on the highest took place in October 2008 with a value of 13.08%, and the lowest occurred in December 2007 with a value of -3.03%. The average change in SBI Rates during the study period by 2.02%.
3. The highest change in Consumer Price Index (CPI) occurred in May 2008 with a value of 15.85%, and the lowest occurred in October 2008 with a value of -3.05%. The average change over the study period of 4.34%.
4. On average the highest stock price changes occur in September 2007 with a value of 3.39%, and the lowest occurred in October 2008 with a value of -21.87%. The average stock price changes in property sector over the study period of 5.22%.

5. Simultaneous Influence Test result:
   Based on the results of testing the correlation seen Adjusted R Square (coefficient of determination) for 0.073, or by 7.3%. This could mean that 7.3% of the stock price in this study can be affected by changes in Rupiah per USD, SBI Rates, and Consumer Price Index. As for the remaining 92.7% is explained by other factors not included in the study model. Meanwhile, in the result of ANOVA test, the level of significance of 0.001 (Significance F = 0, 001 <α = 0.05). This mean that the hypothesis that changes in Rupiah per USD, SBI Rates, Consumer Price Index simultaneously affect stock price is acceptable.

6. Partial Influence Test result
   Variable that partially has a significant impact on the property stock price is Rupiah per USD with a significance level of 0.047 (sig F = 0.047 <α = 0.05) and have influence for 1.06%. The other variable of SBI Rates and Consumer Price Index did not have a significant impact on the company's stock price of the property sector period August 2007 - November 2008.

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