

**THE INFLUENCE OF MACROECONOMIES ON INDONESIAN
STOCK MARKET INDEX WITH EXCHANGE RATE AS
INTERMEDIATE VARIABLE**

THESIS

**Submitted to Faculty of Administrative Science in Partial Fulfillment
The Requirement for The Degree Master of Business Administration**



**Written by :
ROHMAT HIDAYAT
NIM. 126030212111001**

**BUSINESS ADMINISTRATION DEPARTMENT
FACULTY OF ADMINISTRATIVE SCIENCE
UNIVERSITY BRAWIJAYA
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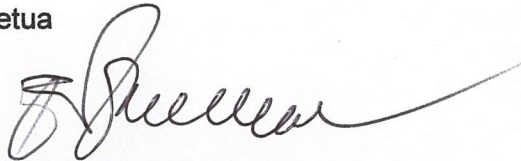
**THE INFLUENCE OF MACROECONOMIES ON INDONESIAN STOCK
MARKET INDEX WITH EXCHANGE RATE AS INTERMEDIATE VARIABLE**

Oleh:
Rohmat Hidayat
126030212111001

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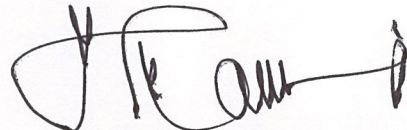
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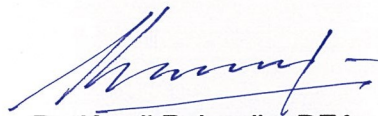
Prof. Eko G Sukoharsono, SE, Mcom-Hons, Ph. D
NIP. 196412032003121001

Anggota



Dr. Siti R Handayani, M.Si.
NIP. 196309231988022001

Kepala Program Studi Magister Administrasi Bisnis



Dr. Kusdi Rahardjo, DEA
NIP. 195701271984031001

Mengetahui,
Dekan Fakultas Ilmu Administrasi
Universitas Brawijaya



Prof. Dr. Bambang Supriyono, MS
NIP. 196109051986011002

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Nama : ..ROHMAT HIDAYAT
NIM : ..126030212111001
PS : ..Magister Administrasi Bisnis
PPSUB

ABSTRACT

Rohmat Hidayat, Postgraduate Program, University of Brawijaya, Malang, "The Influence of Macroeconomics on Indonesian Stock Market Index with Exchange Rate as Intermediate Variable". Supervisor: Prof. Eko Ganis Sukoharsono, SE, Mcom-Hons, Ph.D, Co-supervisor: Dr. Siti Ragil Handayani, M.Si, National Pingtung University of Science and Technology supervisor: Rern Jay Hung, Ph.D.

Background of this research is that Indonesia has an improvement in economy at last previous years. Indonesia gets any achievement in economy performance, such as include in G20. Many economic factors as gross domestic product (GDP), interest rate, world oil price and world gold price influence on exchange rate and stock market price. The indicators of increasing economy can be looked at the stock market price and also the stability of the exchange rate.

The data was taken from 2005 to 2013 periods quarterly. The data analysis uses path analysis and the exchange rate become intermediate variable. The analysis using AMOS software and Sobel calculator to figure out the result.

The result of the study is the variables of economic growth have positive significant effect to exchange rate with estimate value of 0.554. The interest rate has no significant value of 0.382 and estimate value of 0.03 on the exchange rate. The world oil price and world gold price have negative significant value to the exchange rate, with estimate value of -0.43 and -0.088. This foreign factor has negative effect because both of them are the commodity from Indonesia. If their price goes up, the revenue for Indonesia also increase and make the exchange rate appreciate.

The variables of economic growth and world oil price have positive significant effect to the stock market price. They have estimate value of 1.107 and 0.448, it means when the GDP and world oil price increase then the stock market price also increase at that period. Interest rate has negative significant value to stock market price with estimate value -0.414. The variable of world gold price has no significant effect to stock market price and has negative relationship, because the gold is the other investment object beside stock market. Exchange rate has negative significant effect to stock price with estimate value of -1.06.

Keywords: *macroeconomy, stock price, gross domestic product, exchange rate, interest rate, world oil price, world gold price.*

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I hope this research can be useful for further research.

Taiwan, June 17th, 2014

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CHAPTER I

INTRODUCTION

1.1 Background of Research

In the last decade, Indonesia has experienced a variety of economic exposure. Starting from the European crisis to the state of the American economy. Although affected by the global economy, but the Indonesian economy conditions showed a good stability. In the midst of the threat of a global recession, and the Government of Indonesia's financial market participants remain optimistic that Indonesia's economy will grow positively.

Local investors are expected to take advantage of this momentum to continue to invest in the domestic capital market (*IDX Newsletter*, 2011:2). This is indicated by the strengthening of the stock market price. By using Jakarta Composite Index to look the reflection of economic condition as figure 1.1 below. It can be seen that the Indonesian economy still has good performance.

Stock market can be reflecting the economy condition of the country. All of the industries include in it. Many factors can effect to the stock price, as macroeconomic factor such as economic growth, interest rate, exchange rate, world gold price and also worl oil price. Graphic bellow tell about the fluctuation of stock price index. Based on the figure 1.1, the average stock index during 2005 to December 2013 amounted to 2.744 basis points. The stock market price has highest level in 2013 at 4.941 and the lowest level of stock market price occurred in 2005, which amounted to 1.079 basis points.

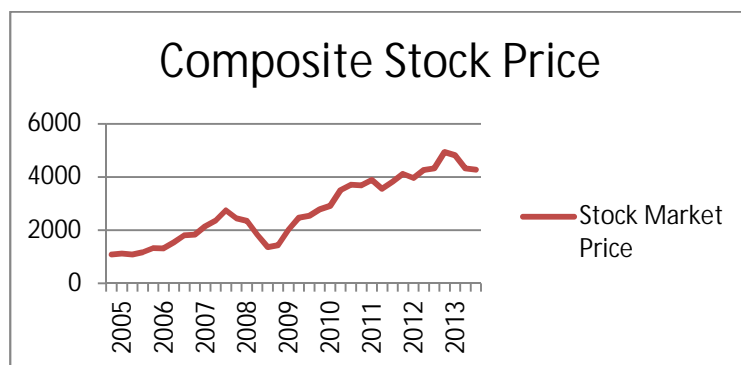


Figure 1.1 The Increasing Indonesian Stock Market Price during 2005-2013 period

(source: www.idx.co.id, data proceed)

Indonesian stock market price increasing year by year. Indonesia as emerging market from Asia, now be one of the country which interesting to investor. Indonesia has good increasing economy, that is signal of prospect investments in the future of Indonesia.

Economics can not be separated from political activity. Correlation is seen not only from government policies, but seen from the stock market price movement rate. From the existing data, the correlation between the election and stock market price seen in 2009. Currently election held five years ago, stock market price jumped 38.4 percent. Along with that, quite heavy flow of foreign capital into Indonesia. Value reached Rp 14-51 trillion.

Economic growth is also due to the positive movement in the development of certain sectors domestic industry. Gross Domestic Product (GDP) as indicator of economic growth, the economic growth for Indonesia can be seen from the figure 1.2 below.

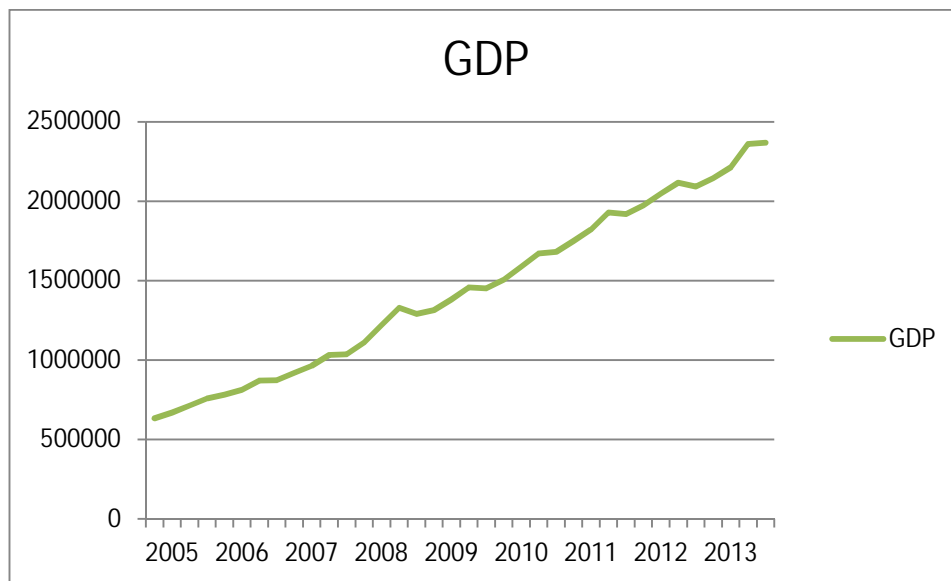


Figure 1.2 Indonesian Gross Domestic Product during 2005-2013

Source: Indonesian Statistical Bureau, data proccessed (2014)

According to the figure 1.2, average of the GDP during 2005 to 2013 is 1,438,854. The highest GDP at 2013 is 2,367,929 and the lowest GDP at 2005 is 632,331. The GDP increasing year by year. It can be conclude that the economic condition of Indonesia so far still good. The global economy brought on by the global financial crisis in the late 2000s had a relatively small impact on the Indonesian economy as compared to its impact on other countries.

In 2009 Indonesia's GDP growth dropped to 4.6 percent, which mean that the country was one of the top GDP growth performers worldwide (and the third-highest among the G-20 group of major economies). Despite sharply falling commodity prices, a falling stock market, higher domestic and international bond yields and a depreciating exchange rate, Indonesia was still able to grow significantly. This success was mainly due to relatively limited importance of Indonesian exports towards the national economy, maintained high market confidence, and sustained robust domestic consumption.

Domestic consumption in Indonesia (in particular private consumption) contributes around two-thirds to the country's national economic growth. With annually around seven million people being added to its middle class, Indonesia contains a consumer force that drives the economy and has triggered significantly increased domestic and foreign investments from 2010 (www.indonesia-investments.com).

The exchange rate also to be the reflection of the economic conditions in Indonesia. The exchange rate be a reflection of strength or weakness of a country's economy. If the exchange rate of a country is stronger than the other countries, it indicates the economic conditions of the country economy is stabil and running well. The currency which used to compare the other international currency is US Dollar (USD). Currency of the Indonesian country as call as Indonesian Rupiah (IDR) have been compare to with USD as international currency.



Figure 1.3 Exchange rate between Indonesian rupiah and US Dollar
Source: Bank Indonesia (2013)

According to the figure 1.3 it can be seen that the average value of the rupiah against the U.S. dollar from 2005 to December 2013 was Rp 9.584,-. The

rupiah strengthened by Rp 8.597,-/dolar. The rupiah weakened against the U.S. dollar at a rate of Rp.12.189,-/dolar the U.S. Indonesia's currency has strengthened in recent months after plunging by more than 20 per cent and inflation is easing after almost doubling in 2013 from the previous year (gulfnews.com).

The circulations of the money regulated by federal bank, in Indonesia called Bank Indonesia which also has policy to conduct and make decision about interest rate. Based on Alam and Uddin (2009) interest rate is one of the important macroeconomic variables, which is directly related to economic growth. Generally, interest rate is considered as the cost of capital, means the price paid for the use of money for a period of time. From the point of view of a borrower, interest rate is the cost of borrowing money (borrowing rate). From a lender's point of view, interest rate is the fee charged for lending money (lending rate). Interest rate issued adjust to field conditions. In the event of weakening exchange rate, the government will increase the interest rate to stabilize the economy.

The interest rates and the stock price have a negative correlation. This is because a rise in the interest rate reduces the present value of future dividend's income, which should depress stock prices. Conversely, low interest rates result in a lower opportunity cost of borrowing. Lower interest rates stimulate investments and economic activities, which would cause prices to rise. On the other hand, according to the parity conditions, the interest rates and the exchange prices should be related with a negative coefficient. Hence, we would expect a relationship between exchange price and stock price with a positive coefficient (Hamrita and Triffi, 2011).

In general it seems that the interest rate and exchange rate series are generally quite independent at the period of studies and at all scales. There was, however a possible unidirectional causality running from interest rate to the stock price but not vice versa at highest scales. Therefore, the paper results of Hamrita and Triffi (2011) show that a possible bidirectional causality running between exchange rate and stock index only at longer horizons.

The foreign factors that affect the exchange rate and stock price is world oil prices. Basher et al. (2010) said that the results in their research support to some extent that oil prices respond to movements in exchange rates. Further, the results reported in this paper offer some support for higher oil prices affecting exchange rates in the short run. In particular, a positive oil price shock leads to an immediate drop in the trade-weighted exchange rate. This result has a statistically significant impact for about 3 months.

The results in the study of Basher et al. (2010) show that oil prices respond negatively to an unexpected increase in oil supply and oil prices respond positively to an unexpected increase in demand. These results are consistent with the predictions from a demand and supply model for the oil market. Oil prices respond positively to a positive shock to emerging stock markets, while oil prices respond negatively to a positive shock to the TED spread. These results are important in establishing, that in addition to global supply and demand conditions for oil, oil prices also respond to emerging market equity markets and global financial capital markets.

Beside the influence of all factors above, Hamrita and Triffi (2011) said that the stock markets are becoming an integral part of the economies of many countries. With the introduction of free and open economic policies and advanced

technologies, investors are finding easy access to stock markets around the world. The fact that stock market indices have become an indication of the health of the economy of a country indicates the importance of stock markets. This increasing importance of the stock market has motivated the formulation of many theories to describe the working of the stock markets.

Good investors always look for investing in an efficient market. In an inefficient market few people are able to generate extra ordinary profit causes of confidence losses of general people about the market. In such cases, if the rate of interest paid by banks to depositors increases, people switch their capital from share market to bank. This will lead to decrease the demand of share and to decrease the price of share and vice versa. On the other way, when rate of interest paid by banks to depositors increases, the lending interest rate also increases lead to decrease the investments in the economy which is also another reason of decreasing share price and vice versa. So, theoretically there is inverse relationship between share price and interest rate (Alam and Uddin, 2009).

Le and Chang (2011) said that due to its critical role in the economy, movements in oil prices receive a special attention in daily media. Nevertheless, studies on oil price-and-stock price relationship are not only few in number, but most of which has been concentrating on developed economies. Thus, it is worth our efforts to carry out studies on emerging economies which have become increasingly attractive destinations for huge amounts of capital movement from major economies. The studies would enhance our understandings of the interaction between oil price volatilities and emerging stock market performances. Further, they would enable foreign investors to understand the conditional relationship between risk and returns across countries.

Find a strong systematic relation for the other foreign factor, between gold prices and the exchange rate. In other words, conjecture that the mechanism leading to these results is the fact that, for an open economy exporting gold, the exchange rate should reflect fluctuations in gold prices (Obstfeld & Rogoff, 1996). The empirical work is closely related to the literature on using commodity prices to predict exchange rates. Chen, Rogoff, and Rossi (2010) provide evidence in favor of the fact that the out-of-sample predictive ability of commodity prices for nominal exchange rates is minimal, while Chen and Rogoff (2003) consider commodity price indices and find in-sample empirical evidence for predicting real exchange rates.

Based on the explanation above, it suggests that the results of research on the effects of economic growth, interest rates, oil prices, gold prices, exchange rate, and the stock market price tends to be inconsistent or different from one researcher to another researcher. Inconsistency with the results of this study, as well as the influence of the world economy that have an impact on the Indonesian economy. Many macroeconomic which effect on stock market, the exchange rate be the reflection of domestic macroeconomy, will effect on stock market price by domestic investor. Although, the foreign investor look it too as factor that should be determined.

1.2 Research Problem Formulation

Based on the description in the background, the issues to be investigated are as follows:

- a. How do the economic growth, interest rate, oil prices and gold prices have influence on the exchange rate?

- b. How do the economic growth, interest rate, oil prices and gold prices effect on Indonesian Composite Stock Price Index?
- c. How do the exchange rate has negative significant effect on stock market price?

1.3 Research Objectives

Based formulation of the problems outlined, this research has the following objectives:

- a. To analyze and explain that the rate of economic growth, interest rate, oil prices and gold prices have influence on the exchange rate.
- b. To analyze and explain that the rate of economic growth, interest rate, oil prices and gold prices effect on Indonesian Composite Stock Price Index.
- c. To analyze and explain that the exchange rate has negative significant effect on stock market price.

1.4 Research Contribution

a. Theoretical Aspects

The result is expected to contribute to the development of science in business administration, especially financial management. Also the future research about macroeconomic, especially by using the economic growth, interest rate, world oil price and world gold price.

b. Practical Aspects

1) For Investors

For the investor, it can be used as consideration in investing capital to be invested in the Indonesian capital markets are associated with macroeconomic variables in Indonesia and the other foreign factor as oil price and gold price.

2) For Issuers

For investment managers as managers share is expected through this research can better understand the factors that proved to be a real effect on stock performance in Indonesia, and an input to assess the performance of stocks under management. Especially the effect of macroeconomy factor.

3) For Further Research

The result is expected to add insight and can be used as reference material to conduct a more in-depth research on macroeconomy that can affect the exchange rate and the Composite Stock Price Index.

CHAPTER II

LITERATURE REVIEW

2.1 Previous research

Some previous research will be summarized for this study refers to several previous studies. The scope of this study and previous research is basically almost the same, but because the object and different time periods are used, then there are many things that are not the same. Results of several studies of previous researchers that can be used as a reference for complementarity. Here's a summary of some previous studies:

Table 2.1 Result of previous research the effect of economic growth, interest rate, world oil price and world gold price positive significant effect to exchange rate

No	Researcher name	Year	Research title	Variable	Findings
1.	Basher, Haug, Sadosky	2010	Oil Prices, Exchange Rates and Emerging Stock Markets	Oil Prices, Exchange Rates	for higher oil prices affecting exchange rates in the short run. In particular, a positive oil price shock leads to an immediate drop in the trade-weighted exchange rate

Base on the table above, the paper of Basher, Haug and Sadosrsky take the oil prices, exchange rate and emerging stock market. The the results reported in this paper offer some support for higher oil prices affecting exchange rates in the short run. In particular, a positive oil price shock leads to an immediate drop in the trade-weighted exchange rate.

**Table 2.2 Result of previous research the effect of economic growth,
interest rate, world oil price and world gold price negative significant effect
to exchange rate**

No	Researcher name	Year	Research title	Variable	Findings
1.	Ito, Isard, and Symansky,	1999	Changes in Exchange Rates in Rapidly Development Countries: Theory, Practice, and Policy	Exchange rate,	relationship between interest rate and exchange rate is not significantly different from zero at all leads and lags and at all scales
2.	Hamrita and Trifi.	2011	The Relationship between Interest Rate, Exchange Rate and Stock Price: A Wavelet Analysis	Interest rate, exchange rate, stock price	The relationship between interest rate and stock index is significantly different from zero only at the coarsest scales, i.e. 4–5, which correspond to longer horizons. The analysis provides evidence about the finding that interest rate returns are leading stock index returns

The research above use the wavelet cross-correlation analysis and the results shows that the relationship between interest rate and exchange rate is not significantly different from zero at all leads and lags and at all scales. The relationship between interest rate and stock index is significantly different from zero only at the coarsest scales, i.e. 4–5, which correspond to longer horizons. The analysis provides evidence about the finding that interest rate returns are leading stock index returns. Only at low frequencies (longer horizons), the author

remark a significant relationship between exchange rate and stock index at this period.

Table 2.3 Result of previous research the effect of economic growth, interest rate, world oil price and world gold price with positive significant effect to stock market price

No	Researcher name	Year	Research title	Variable	Findings
1.	Tabak	2006	The dynamic relationship between stock price and exchange rates: evidence for Brazil	Exchange rate, stock prices	the empirical evidence presented in this papaer suggests that there are significant relationship between exchange rates and stock prices in the Brazilian economy
2.	Aghaei, Shirkavand, and Mirzamohhammadi	2013	Analyzing impact of foreign Exchange rate and global crude oil and gold prices on Tehran stock exchange price Index using the Estimated Uncertainties by generalized Autoregressive conditional heterokedasticity variance Model (GARCH)	Gold price, exchange rate, crude oil price, stock exchange	The research has negative and significant correlation between the price index of Tehran stock exchange and global gold price. Significant and positive correlations between the price index of Tehran stock exchange rate and crude oil price fluctuations

The research above show the empirical evidence presented in this paper suggests that there are significant relationship between exchange rates and stock prices in the Brazilian economy. The other research has negative and

significant correlation between the price index of Tehran stock exchange and global gold price. Significant and positive correlations between the price index of Tehran stock exchange rate and crude oil price fluctuations.

Table 2.4 Result of previous research the effect of economic growth, interest rate, world oil price and world gold price with negative significant effect to stock market price

No	Researcher name	Year	Research title	Variable	Findings
1.	Humpe and Macmillan	2007	Can macroeconomic variables explain long term stock market movements? A comparison of the US and Japan	Inflation, interest rate, stock market	the coefficients from the cointegrating vector, normalised on the stock price, suggested US stock prices were influenced, as expected, positively by industrial production and negatively by inflation and the long interest rate.
2.	Hsing	2013	The Stock Market and Macroeconomic Factors in Japan and Policy Implications	GDP ratio, interest rate, inflation rate, stock market index.	The Japanese stock market index and the nominal effective exchange rate also show a nonlinear relationship, being positive when the nominal exchange rate is relatively low and being negative when the nominal effective exchange rate is relatively high
3.	Alam and Uddin	2009	Relationship between Interest Rate and Stock Price: Empirical	Interest Rate and Stock Price	The theoretical argument of negative relationship between stock price and prevailing interest

			Evidence from Developed and Developing Countries		rate is not rejected.
--	--	--	--	--	-----------------------

The result from the research above is the coefficients from the cointegrating vector, normalised on the stock price, suggested US stock prices were influenced, as expected, positively by industrial production and negatively by inflation and the long interest rate. A lower government deficit/GDP ratio, a higher industrial production, or a lower domestic real interest rate or expected inflation rate would increase the Japanese stock market index. The Japanese stock market index and the nominal effective exchange rate also show a nonlinear relationship, being positive when the nominal exchange rate is relatively low and being negative when the nominal effective exchange rate is relatively high. The theoretical argument of negative relationship between stock price and prevailing interest rate is not rejected.

2.2 Investment

Consumption and investment are two closely related activities. The delay consumption can now be interpreted as an investment for future consumption. Although sacrifice consumption today for consumption can be interpreted as an investment for the future, however, requires a broad understanding of investment opportunities for the efficient production of one unit change in consumption resulting into delayed for more than one unit of future consumption.

2.2.1 Indonesian Capital Market

Article I of Capital Market Law No. 8/1995 concerning with general provisions defining the common market and the effect of the following is the stock

exchanges that organizes and provides the system and offer a means to bring together buying and selling securities other parties in order trade effects between them. While the effects are securities that promissory notes, commercial paper, stocks, bonds, evidence of debt, collective investment fund units, futures contracts on securities and derivatives of any securities.

The capital market is the market participants, the individual or business entity that has excess funds, investing in securities offered by the issuer. Companies in need of funds can offer by way of listing securities of issuers in the body as in the capital market authority (Sunariyah, 2006). The capital market is also an alternative other than banking association funds. "The capital market is a market where long-term funds both debt and equity trading (Martono and Harjito, 2003: 359)". Long-term funds that are embodied in traded securities. Types of securities have a maturity of more than SATUI years and there is no maturity. Another definition, the Republic of Indonesia Act 8 of 1995 on capital market chapter 1 verse 13 as follows: "The capital market is the activity concerned with the public offering and trading of securities, public companies relating to the issuance of securities, as well as institutions and professions related to the effects. "capital market is basically a market that brings concrete and abstract the owner of the funds or investors with funds or issuers users (companies that went public). Individual investors or institutional use of capital market instruments for investment purposes, thus obtaining income (returns) and issuer for additional funds to increase their business activities.

Capital markets in general can be defined as a meeting place for those who have surplus funds, namely investors, with those in need of funds, the issuer, within the framework of long-term securities trading. Through these meetings, the

investor expects to earn a return (rate of return) in the future, while issuers may utilize funds from investors for the benefit of the development of the company, so that the capital market is a reciprocal relationship that is mutually beneficial.

The capital market in Indonesia has actually exist long before the Independence of Indonesia. The first stock exchange in Indonesia was established on 1912 in Batavia during the Dutch colonial era. At that time, the Exchange was established for the interest of the Dutch East Indies (VOC).

During those era, the capital market grew gradually, and even became inactive for a period of time due to various conditions, such as the World War I and II, power transition from the Dutch government to Indonesian government, etc.

Indonesian government reactivated its capital market in 1977, and it grew rapidly ever since, along with the support of incentives and regulations issued by the government.

Below is the brief history of Indonesia Stock Exchange:

[Desember 1912]	The first Stock Exchange in Indonesia was built in Batavia (currently known as Jakarta) by the Dutch East Indies
[1914 – 1918]	The Batavia Stock Exchange was closed during the World War I
[1925 – 1942]	The Batavia Stock Exchange was re-opened, and new stock exchanges were established in Semarang and Surabaya
[Awal tahun 1939]	Due to political issues (World War II) the Stock Exchange in Semarang and Surabaya closed
[1942 – 1952]	Jakarta Stock Exchange (JSX) was re-closed during the World War II
[1956]	SX was re-activated by the issue of the Capital Market Emergency Regulations 1952 by the Minister of Justice of Indonesia (Prof. Dr. Sumitro Djojohadikusumo). The only product traded in the Exchange at that time was the Indonesian Government bond (1950)
[1956 – 1977]	Due to the nationalism programs on Dutch's companies by the

	<p>Indonesian Government, JSX became stagnant.</p> <p>During this period, JSX became inactive</p>
[10 Agustus 1977]	The Exchange was re-activated by the President Soeharto. It was supervised under the management of the Capital Market Supervisory Agency (Badan Pengawas Pasar Modal, or BAPEPAM). The re-activation of the capital market was also marked by the go public of PT Semen Cibinong as the first issuer listed in the JSX. July 10th is celebrated as the anniversary of the Capital Market in Indonesia
[1977 – 1987]	The activity of stock trading in JSX was dull. There were only 24 listed companies in JSX. Most people preferred to invest their money in Banks rather than the Capital Market
[1987]	PAKDES 87 (December Package 1987) was issued to give ways for companies to go public and foreign investors to invest their money in Indonesia
[1988 – 1990]	Deregulations packages in Banking and Capital Market were made. JSX welcomed foreign investors. The activities of JSX were improving.
[2 Juni 1988]	Indonesia Pararel Bourse started to operate and managed by the Securities and Money Trading Organization. It consisted of brokers and dealers
[Desember 1988]	The government issued PAKDES 88 to give ways for companies to go public, and some other regulations that brought positive impacts on the capital market growth were made
[16 Juni 1989]	Surabaya Stock Exchange started to operate and was managed by the Surabaya Stock Exchange Inc
[13 Juli 1992]	JSX was privatized, and as a result, the functions of BAPEPAM changed to become the Capital Market Supervisory Agency (BAPEPAM-LK). This date is celebrated as the anniversary of Jakarta Stock Exchange
[22 Mei 1995]	JSX introduced its computerized Jakarta Automatic Trading System (JATS).
[10 November 1995]	The Government of Indonesia issued Regulations No. 8 year 1995 on capital market. This regulation was effective on January 1996
[1995]	Indonesia Pararel Bourse was merged into Surabaya Stock Exchange
[2000]	Scripless trading system was introduced for the first time in

	Indonesia's Capital Market
[2002]	JSX started to implement the remote trading system
[2007]	Surabaya Stock Exchange was merged into Jakarta Stock Exchange. As a result, JSX changed its name into the Indonesia Stock Exchange
[02 Maret 2009]	The Launching of JATS Next-G, IDX New Trading System

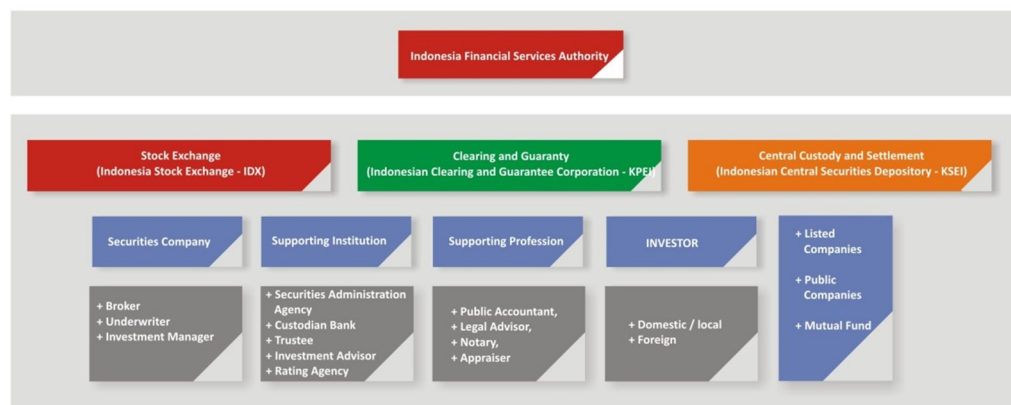


Figure 2.1 Indonesia Capital Market Structure

(source:idx.co.id)

2.2.2 Capital Market Participants

The parties involved in the Indonesian capital market activities in accordance with the Law on Capital Markets 8 of 1995, namely :

1. Capital Market Supervisory Agency (Bapepam)

BAPEPAM is a government agency that has the task, first to keep track of and regulate the capital market so that stock (securities) can be offered and traded in an orderly, fair and efficient and to protect the interests of investors and the general public. Second, to provide guidance and supervision of institutions

and professions involved in supporting capital market. Third, to give opinions to the minister of finance on the capital markets and their operational policy.

Based on Law No. 8 of 1995 on Capital Markets, guidance, regulation, and daily supervision of the Capital Market conducted by Bapepam which aims to achieve capital market activities are orderly, fair and efficient and to protect the interests of investors and the public(www.bapepam.go.id).

In performing these functions, Bapepam has the authority to grant permission, approval, and registration to the perpetrators of the Capital Market, the registration process in the Public Offering, issuing regulations on the implementation of legislation in the Capital Market, and enforce any violations of rules legislation in the field of Capital Market.

2. Stock Market Exchange

The stock exchange is a party that organizes and provides the system and offer a means to bring together buying and selling securities other parties with the aim of trading in securities among them. In Indonesia, the stock market call Indonesian Stock Exchange (IDX). All of companies which already issued the stock have been here.

3. Companies that go public (Issuer)

Issuer is the company that is offering its securities to the public through the Public Offering. Public Offering is the activity when an issuer sells its securities to the public according to the procedures stated in the Capital Market Law. It is offered through an ad on the mass media or directly sold to more than 50 (fifty) shareholders at a certain price and in a certain time limit. The Company Issuers are parties to emissions or that have been public offering of securities. This party requires funds to finance operations and investment plans.

Every closed company has the chance to go public, which means that they can sell half of their shares to the public and list them in the Bourse. The decision of going public is a business decision taken after considering the benefits and consequences of going public. There are so many benefits a company can get by going public, but there are also some consequences that must be considered.

The company has a variety of alternative sources of funding, both from within and outside the company. Alternative financing of the company generally by using retained earnings of the company. While alternative sources of funding from outside the company may come from creditors in the form of debt, other forms of financing or the issuance of debentures, as well as the inclusion of funding is in the form of stock (equity). Funding through the mechanism of inclusion is generally done by selling shares to the public or known to the Public Offering or often referred to go public (www.idx.co.id).

Offering an activity or other securities offering conducted by the Prospective Listed Company to sell shares or securities to the public based system cata regulated by the Capital Market Law and the Implementation Regulations. In the Public Offering, Prospective Listed Company needs to do an internal preparation and documents in accordance with the requirements of the Public Offering, as well as meet the requirements set by the OJK.

4. Securities Companies

Securities company is a company that has gained business license for some of the activities as an underwriter, stockbroker, investment manager or investment adviser. A Securities Company is a Person that engages in the business of Underwriter, Broker-Dealer and/or Investment Manager (Art 1 item 21. Of the Capital Market Law). An Underwriter is a Person who makes an

agreement with an Issuer to conduct a Public Offering, with or without the obligation to purchase Securities that are not sold (Art 1 item 17. of the Capital Market Law). A Broker-dealer is a Person who engages in the business of buying and selling securities for the account of others or for his own account (Art 1 item 18. of Capital Market Law). An Investment Manager is a Person other than an insurance Company, pension fund or bank with respect to its own lawful activities, that, as a business, manages Securities Portfolios or collective investment Portfolios for clients who are account holders. (Art. 1 item 11. Of the Capital Market Law) (www.bapepam.go.id)

5. Clearing House

Clearing house is an institution that organizes the clearing and settlement of transactions in the stock exchange, as well as the effect of storage as well as the custodian for the other party. Clearing house is forms of cooperation of banks in the city by establishing a billing center which aims to facilitate the exchange of checks, drafts, notes, or other forms(www.mediapbr.com). Institutions that govern the procedures and conduct clearing on checks and securities of clearing members. This institution also. formulate policies and regulations for the benefit of its members. Indonesia's current clearing agency made by Bank Indonesia. The regulation about this institution is in Government law number 45 of 1995 about activity in Capital Market.

6. Mutual Funds

Mutual fund is a container used to collect funds from the public investment in a portfolio securities by the investment manager. So the mutual fund company is parties whose main activity is to invest, investment return (reinvestment) or securities trading. Mutual Fund is an investment alternative for investors,

especially for small investors and those who have less time and skill to count the risks of their investments. Mutual Fund is designed as tool to gather fund from public that have the capital, will to invest, but only have limited time and knowledge. Beside that, through Mutual Fund, it is expected that the number of local investors in the Indonesia's Capital Market can increase(www.idx.co.id).

Generally, Mutual Fund is defined as a mean to collect fund from the investment society to be invested in portfolios by the fund manager. This definition is also written in the Capital Market Law No.8/1995 section 1 clause (27) regarding Mutual Fund. There are three points shown on this statement. First, Mutual Fund collects fund from the society. Second, the fund is then invested in the securities portfolio. Third, the fund is managed by an Investment manager.

7. Capital Market Supporting Institutions

Supporting institutions are supporting an institution that participate and support the operation of the capital market and in charge and responsible for performing service to the employees and the general public. Supporting Institutions consists of Custodian Banks, Securities Administration Bureau, Trustees, and the Securities Rating (www.ojk.go.id).

Custodian bank is a bank that received approval from the Financial Services Authority to act as the party providing custody services Securities and other assets related to securities and other services, including receiving dividends, interest, and other rights, settlement of Securities transactions, as well as representing the holders into account customers. Requirements and procedures for granting approval for commercial bank as custodian set of government regulations.

Securities Administration Agency is a company that can carry on business under a contract with the Issuer to effect recording and sharing ownership rights with respect to the Securities as Securities Administration Bureau and has received permission from the Financial Services Authority. Trustee is a party that represents the interests of holders of debt securities or sukuk to prosecute both inside and outside the court, with regard to the interests of holders of debt securities or sukuk without a special power of attorney.

The activities carried out by the Commercial Bank Trustee and Others established by government regulation to be able to carry on business as a trustee. Commercial Bank or Other Party must be registered in the Financial Services Authority. The requirements and procedures for the registration of Trustees shall be further regulated by government regulation. Trustee service users use the services specified in the regulations by the Issuer Trustee in the issuance of debt securities or sukuk long term, such as bonds.

Securities Rating Company is an Investment Advisor Limited Liability Company which conducts the rating and rank. In its work the Securities Rating Company must first obtain a business license from the Financial Services Authority. Securities Rating Company shall conduct the rating independently, free from the influence of those who utilize the services of Securities Rating Company, objective and accountable in providing rating. Securities Rating Company can do a rating on the object ranking as follows: Debt securities, Sukuk, Asset Backed Securities or other securities that may be rated; Party as an entity (company rating), including Mutual Funds and Real Estate Investment Trust Collective Investment Contracts.

In conducting its business, the Company Securities Rating must be domiciled and conducting operations in Indonesia. In addition, the Securities Rating Company is also required to have a rating procedures and methodologies that can be accounted for, systematic, and have been through the stages of testing and be consistent and be transparent. Furthermore, the Securities Rating Company doing the rating at the request of certain parties, shall make arrangements with the parties intended the rating.

8. Capital Market

Capital Market serves as an alternative for a company's capital resources and public investment. It also facilitates the infrastructures needed for the selling and buying process and other related activities. Financial instruments traded in the Capital Market are long term securities (a period of more than 1 year). They consists of stocks, bonds, warrants, rights, mutual funds, and other derivative instruments (options, futures, etc.).(www.idx.co.id)

Capital Market Law Number 8 Year 1995 defines Capital Market as “the activity of trading and offering securities to the public, the activity of a public company with respect to securities it has issued, and the activities of securities-related institutions and professions.” Capital Market plays an important role in the economy of a country because it serves two functions all at once. First, Capital Market serves as an alternative for a company's capital resources. The capital gained from the public offering can be used for the company's business development, expansion, and so on. Second, Capital Market serves as an alternative for public investment. People could invest their money according to

their preferred returns and risk characteristics of each instrument. Consists of accountant, notary, appraisal company (appraisal), and legal counsel.

a) Accountant

Accountants are those who have expertise in the field of examination of accounting and accountants (auditing). Functions accountant is give an opinion on the fairness of the issuer's financial statements or prospective issuers.

b) Notary

Notary, is authorized officer makes an authentic deed. Role of the notary is to make an agreement, basic budgeting and amendments, changes in the capital and others.

c) Appraisal

Appraisal is the issuing party and Assessor sign. Report includes opinions on assets, which is based on the examination according to expertise appraiser.

d) Legal Counsel

Legal counsel are lawyers who give and signed a legal opinion regarding the issuance or issuer. function The main legal counsel is to protect investors or prospective investors in terms of the law. Duties include researching deed, business licenses and others.

9. Investors

Are the individuals and institutions that embed invest in securities that are traded in the capital market.

2.2.3 Capital Market Instruments

Capital Market is the market in which long term financial instruments, such as bonds, equities, mutual funds and derivative instruments, are traded. The

main stock exchange is a centralized institution bring together the forces of demand and supply of securities. Here process transaction arranged neatly by using rules systematic issued by managers. Each instrument effects be traded on an exchange must meet recording policy (listing policy) issued by the organizer.

1) Stock

Stock is proof that the company has owner is also known as shareholder (or shareholder stockholder). Evidence that a person or a party may be considered as shareholders are recorded as if they had shareholders in a book called the Register of Shareholders (DPS). DPS generally presented a few days before the Meeting Shareholders held and each party can see the DPS . Evidence that a person is a shareholder can also seen in the backyard of shares, whether his name is registered by the company (issuer) or not.

2) Bond

A proof of debt the company has run length to the community over a period of 3 years. Bond is a certificate that contains the contract between the investor and the company, which states that the investor/ bondholders have lend money to the company. Companies that bonds have an obligation to pay interest regular basis in accordance with a predetermined time and principal at maturity.

Value of a bond moves in the opposite direction with changes in general interest rates. If interest rates in general tends to fall, then the value or price of bonds will increase, because investors tend to invest in bonds. Meanwhile, if interest rates in general tend to increase, the value or price of bonds will fall, as investors tend to saving money in the bank. Bonds issued by the company is the corporate bonds , while bonds issued by the government is called government

bonds . The municipal bond is a bond issued by the government to fund specific projects in the area.

3) Derivatives

Derivatives consist of the effects derived from instrument effects Another so-called "underlying". There are several kinds of instruments derivatives in Indonesia, such as the right evidence, warrants, and contracts futures. Derivatives are instruments whose very risky if not used carefully.

4) Asset-Backed Securities

Asset -backed securities are debt securities that are guaranteed sign with a particular group of securities, such as credit card bills, rent lease, mortgage, and so on. Securities and Exchange Commission has issued a decision concerning Backed Securities Assets, but until now there is no product of Asset Backed Securities available in Indonesian Capital Market.

5) Mutual Funds

A collection of stocks, bonds, and other securities purchased by a group of investors and managed by a company investment professionals. By purchasing most of Unit Participation, individual investor with limited funds can enjoy the rewards of a wide range of effects. In addition, investors are also free from difficulty analyze effects.

2.2.4 Role of Capital Market

The role of capital market in a country's economy is as follows (Robert Ang, 1997):

1) Investment Function

Money saved in the bank will certainly experience shrinkage. Value of the currency is likely to fall in the future come because of inflation, changes in exchange rates, economic slowdown, etc.

If the money is invested in the stock market, investors in addition to can protect the value of their investments, because the money invested in capital markets tend not to experience losses due to activity economy made by the issuer.

2) Function of Wealth

The capital market is a way to store wealth in the long term and short term till the wealth It can be used again. This way is better because The property does not depreciate like other assets . more and more old value of assets such as cars, buildings, ships, etc., then the value depreciation will be greater. However, stocks bonds instruments of deposit and other securities will not have depreciation. Securities representing purchasing power in the future come.

3) Liquidity Function

Saving wealth in securities , can liquidated through the capital market with a very minimal risk compared with other assets. Securities liquidation process can done quickly and cheaply. Although the value liquidity more lower than money, but money has the ability to store lower wealth than securities. This occurs because value for money easily distracted by inflation over time.

4) Function Loans

Capital markets for a country's economy is sources of development financing loans collected from society . The government encourages the growth of capital markets to get funds easier and cheaper. It happens for loans from commercial

banks in general have high interest rates. Meanwhile, companies that selling bonds in the money market can obtain funds at a cost The lower interest rate than the bank.

2.3 Macroeconomic Theory

Macroeconomic science is a branch of economics. Macroeconomic policies focused on economic behavior and can affect the level of consumption and investment, the trade balance and payments of a country, important factors that influence the changes in prices and wages, fiscal and monetary policy, the amount of money outstanding, the interest rate and the amount of state debt. When the macro-economic conditions in a country experiencing change either positive or negative, investors will calculate the impact on corporate performance in the future, then make a decision buy or sell shares of the company concerned. The sell and This purchase will result in changes in stock prices, which in ultimately will affect the stock market index in the country.

Changes in macroeconomic factors above will not immediately affect company, but slowly over the long term. Conversely price shares will be affected immediately by macro factors change the economy as investors react faster. when the changes macroeconomic factors that happens, investors will calculate its impact both positive and negative on the performance of the company a few years to the front, then make a decision to buy or sell shares concerned. Therefore, stock prices adjust faster than the performance of the company to change the macro variables.

2.3.1 Economic Growth (Gross Domestic Product)

Gross Domestic Product, or GDP is the measure of economy's total production of goods and services. Rapidly growing GDP indicates an expanding economy with ample opportunity for a firm to increase sales. Another popular measure of the economy's output is industrial production. This statistic provides a measure of economic activity more narrowly focused on the manufacturing side of the economy (Bodie et al, 2009:556).

In the narrow sense of national income is direct translation of the national income. While in a broad sense, national income can refer to the Gross Domestic Product (GDP), refer to the Gross National Product (GNP), Net National Product (NNP), or National Income (NI). The fourth concept of national income (GDP, GNP, NNP, and NI) are different from each other. Macroeconomic theory explained with detailed understanding of each concept was so apparent difference.

GDP in contrast to the Gross National Product (GNP) as include factor income from abroad who work in the country, so that GDP only number of total production of a state regardless of whether the production was done by use of factors of production in the country or not . Instead , Products GNP (GNI) pay attention to the origin of the factors of production is used.

Gross Domestic Product (GDP) or Gross Domestic Product divided into two:

- 1) Real GDP is the value of production of all final goods and services at constant prices.
- 2) Nominal GDP is the value of the whole production goods and services based on prices prevailing middle .

Real GDP is better than the Nominal GDP in measure a country's economic welfare. This is due to the real bruto income is not affected by changes in prices, the real GDP is the right size to determine the level of production goods and services of an economy. One of the problems arise when using real GDP is a constant price level which serve as the base year prices. In 1995, the Bureau Economic Analysis announced a new policy related to change in the base year. The policy emphasizes the size of weighted average real GDP.

Economists try to determine the composition of GDP among some type of expenditure. From their review, the formula appears that GDP a positive accumulation of consumption, investment, purchase government, and net exports. This equation is an identity of an equation that must remain valid or proven to be true although the order is inverted.

The components of GDP include: C, I, G, N and X (*belajarforex.com*). Private Consumption C is also called the consumer spending in the economy. Expenditures included in the Private Consumption for households are food, rent, medical expenses, etc. I is defined as a business that includes a capital investment. Examples are included in Investments for business is the mining, purchase of software, or purchase of machinery and equipment for industry. G, or Government is the sum of the value of goods and services purchased by the government. The amount includes employee salaries, purchase of weapons for the military, etc. Components that are not included in the component G is transfer payments, social security and welfare money to people who do not work. X or Gross Export. Export here includes products of a country, including goods and services for consumption abroad. M or Gross Import. Import is the sum of the value of foreign goods and services consumed by the population in the country.

NX is also referred to as Net Exports gained from reduced Gross Export by Gross Import. The formula that applies is $NX = X - M$.

2.3.2 Interest Rate

Interest rate is one of the important macroeconomic variables, which is directly related to economic growth. Generally, interest rate is considered as the cost of capital, means the price paid for the use of money for a period of time. From the point of view of a borrower, interest rate is the cost of borrowing money (borrowing rate). From a lender's point of view, interest rate is the fee charged for lending money (lending rate).

Good investors always look for investing in an efficient market. In an inefficient market few people are able to generate extra ordinary profit causes of confidence losses of general people about the market. In such cases, if the rate of interest paid by banks to depositors increases, people switch their capital from share market to bank. This will lead to decrease the demand of share and to decrease the price of share and vice versa. On the other way, when rate of interest paid by banks to depositors increases, the lending interest rate also increases lead to decrease the investments in the economy which is also another reason of decreasing share price and vice versa. So, theoretically there is inverse relationship between share price and interest rate. (Alam and Uddin, 2009)

1. Definition of Interest Rate

BI Rate is the interest rate policies that reflect the attitude or stance of monetary policy is set by Bank Indonesia and announced to the public (<http://www.bi.go.id/>). An interest rate is a promised rate of return denominated in

some unit of account (dollars, yen, euros, or even purchasing power units) over some time period a month, a year, 20 years or longer (Bodie et al: 2009).

2. Factors that effect to Interest Rate

High interest rate reduce the present value of future cash flows, thereby reducing attractiveness of investments opportunities. For this reason, rel interest rates are key determinants of business investments expenditures. Demand for housing and high priced consumer durables such as automobiles, which are commonly financed, also is highly sensitive to interest rates because interest rates affect interest payments (Bodie et al, 2009).

2.3.3 World Oil Price

Crude oil prices are measured from the world oil market spot price, which is generally used to be standard is West Texas Intermediate or Brent. Crude oil traded West Texas Intermediate (WTI) crude oil is of high quality. The crude oil manifold light-weight and has a low sulfur content. This type of oil is suitable to be used as fuel, it causes the price of oil is used as a benchmark for oil trading in the world. WTI crude oil prices, in general, higher than the five to six dollars and the OPEC oil price is higher than the one to two dollar price of Brent oil (<http://useconomy.about.com>).

Brent oil price is a blend of 15 types of crude oil produced by 15 different oil fields in the North Sea. Brent crude oil quality is not as good as WTI crude oil, although that is still good to be refined into fuel. Brent crude oil prices to be the benchmark in Europe and Africa. Brent oil prices lower by about one to two dollars of the price of WTI oil, but about four dollars higher than the price of OPEC oil (en.wikipedia.org). OPEC oil prices price of oil is a mixture of the

countries who are members of OPEC, such as: Algeria, Indonesia, Nigeria, Saudi Arabia, Dubai, Venezuela, and Mexico. OPEC uses the price to monitor world oil market conditions. OPEC oil prices lower as oil from OPEC member countries have a fairly high sulfur content , making it more difficult to be used as fuel (www.opec.org).

Some things that affect world oil prices, among others (useconomy.about.com):

- a. World of oil supply, especially supply quotas set by OPEC.
- b. U.S. oil reserves, particularly those found in oil refineries and the United States are stored in strategic oil reserves.
- c. World oil demand, when the summer,oil demand is expected from the estimated amount of demand by airlines for tourist trips, while during the winter, the weather forecast predicted from that used to estimate the potential demand for heating oil.

Current stock trading in Indonesia Stock Exchange stock trading is dominated by the mining sector. World oil prices are basically influenced by demand and supply, including the supply quota set by OPEC, U.S. oil reserves, and seasonal changes in some parts of the world. Rising oil prices alone will generally push up the stock price of the mining sector, is due to the increase in oil prices will trigger a rise in mineral prices in general. It certainly has the potential to lead to mining companies to increase profits. The increase in stock price would push up mining index.

2.3.4 World Gold Price

Gold is a prime candidate for a study of the effects on commodity prices of fluctuations in major currency exchange rates. A highly homogeneous commodity, gold is traded almost continuously in well organized spot and future markets. Moreover, as annual production and consumption of gold is minuscule compared with the global stock, the gold producing countries, not all of whose currencies are traded in organized markets, are unlikely to dominate the world gold market (Sjaastad).

Gold or precious metal is a shiny yellow metal. Gold is obtained from underground excavations. Land which has chunks of large stones containing gold particles is a gold mine. As a commodity, gold traded among countries of the world. Gold first became a standard bank-issued money in the bank, that the bank has the cash reserves to ensure the circulation of money.

Gold to be one kind of investment because gold can bring the benefits of the price difference and the purchase price, or some sort of capital gains from stock investments. Investing in gold is also a highly liquid investments in any country because gold remains acceptable, but rarely people actually want to invest in gold. Most people still see gold as a savings only, meaning that there is more money they just want to buy the money in the hope of a time when not having money, gold can be sold again. These savings are in the form of gold jewelry. They think that gold gives high yields if used for investment, therefore, when gold is sold it will not benefit because they cut costs from the sale of gold making.

Gold investment is very effective and gives a positive result if the economy is experiencing imbalance situation. Some time ago when the financial crisis was at its peak, gold prices soared high as the dollar, so some analysts argue that gold

is identical to the dollar. Simple calculation, when the value of the dollar rose against the rupiah, the price of the goods become cheaper when measured in dollars, because of the low price products are oversubscribed. This is demand that drives the price up.

The price of gold is used as a benchmark throughout the world is the price of gold based on the gold standard London market since 1968 (en.wikipedia.org). This system is called the London Gold Fixing. London Gold Fixing is a procedure in which the price of gold is determined twice a day every day working in the London market by the five members of the London Gold Market Fixing Ltd (www.goldfixing.com). The fifth member is the Bank of Nova Scotia, Barclays Capital, Deutsche Bank, HSBC, Societe Generale.

Pricing process is through an auction among the five members. Every beginning of each trading period, President of the London Gold Fixing Ltd will announce a certain price, then the five members will preach the price to the dealer. Dealer is directly related to the actual buyers of gold are traded. Position the end of the price offered by each dealer to members of the London Gold Fixing a net position of the accumulated results their clients demand and supply. Based on this price of gold will be formed. If more demand than supply, the price will go up automatically, and vice versa. The process of determining the price of gold is done twice a day, at 10.30 (the price of gold Gold AM) and at 15.00 (the price of gold Gold PM). Gold prices are determined in U.S. Dollar, British Pound, and Euro. AM Gold is considered as the closing price on the trading day and is often used as a benchmark value of gold contracts in the world (www.goldfixing.com). Gold is one form of investment that tend to be free of risk. Gold was chosen as one form of investment because its value tends to be stable

and rising. The price of gold is rarely down. Gold is a tool that can be used to ward off inflation that often occurs each year. Investors will choose an investment that has a high level of reciprocity with certain risk or rate of return for certain low-risk when going to invest. Investing in the stock market is certainly more risky than investing in gold, it's because the returns are generally relatively higher than that of gold (www.investopedia.com).

Gold price increase will encourage investors to choose to invest in gold rather than in the capital market, because the risk is relatively low, gold can give good returns results with the price hike. If more investors shift their portfolios into gold bullion investment, this will lead to decline in the stock price index in the country in question as an investor selloff.

2.3.5 Exchange Rate

Understanding exchange rate according to FASB is the ratio between a unit of currency with a number of other currencies can be exchanged at any given time. Difference in the real exchange rate with the nominal exchange rate is important to understand because they have a different effect on the exchange rate risk (Sartono, 2001). Changes in the nominal exchange rate will be followed by changes in the same price that makes these changes do not affect the relative competitive position of the domestic companies with foreign competitors and no effect on cash flow. While the changes in the real exchange rate would lead to relative price changes (i.e. changes in the ratio between the price of domestic goods at a price of foreign goods). Thus the change affects the competitiveness of domestic goods.

There are two approaches used to determine the exchange rate that the monetary approach and the asset market approach. In the monetary approach, exchange rate defined as the price at which a foreign currency (foreign currency/foreign money) resale of the domestic currency (domestic currency/domestic money) and the price associated with the supply and demand for money. Contribution of exchange rate changes on the balance of supply and demand relationship of money used absolute purchasing power parity (PPP) which is a balance between the domestic price P and the conversion of foreign exchange into domestic currency eP^* by the formula $P = eP^*$ or $E = P / P^*$ (Batiz and Batiz, 1985 in Hardiningsih, et. al., 2002).

In foreign exchange transactions can be divided into two types, namely exchange rate spot rate (spot rate) and foreign exchange futures (forward rate). Of these two types of transactions, foreign exchange transactions are the most known transaction immediately (on the spot). Spot transactions are commonly used in making payments and foreign exchange revenue was within two working days after the approval of the transaction. While forward transaction is an agreement reached today but only apply some later time (e.g. 3 months).

Exchange rate can also be defined as the price of one unit of domestic currency in units of foreign currency. This is the opposite definition or formula reciprocal of the above definition, so the unit price in U.S. \$ defined as: $1/R_p = 1/9500 = 0.000105263$. This means U.S. \$ 0.000105263 is equal to Rp. 1 (Salvatore, 1997). Used in this study is the second formula ($1/R$), due to the reciprocal formula can be calculated amount of appreciation or depreciation of the rupiah against the U.S. dollar, in other words it can be seen the weakness of the rupiah against the U.S. dollar. Depreciation of the domestic to foreign

currencies (such as the rupiah against the dollar) gives a negative influence on equity markets as equity markets have become an attraction.

2.4 The Relationship Between Macroeconomy Factors With Exchange Rate And Stock Price

2.4.1 The Relationship Between World Oil Price with Exchange Rate

The idea that there is a relationship between oil prices and exchange rates has been around for some time provide a good description, based on the law of one price, of how exchange rate movements can affect oil prices. Commodities like oil are fairly homogeneous and internationally traded. The law of one price asserts that as the US dollar weakens relative to other currencies, *ceteris paribus*, international buyers of oil are willing to pay more US dollars for oil.

The relationship between oil prices and exchange rates highlights that there are strong theoretical arguments for why exchange rates should affect oil prices and there are strong theoretical arguments for why oil prices should affect exchange rates. Ultimately, the relationship between these two variables can only be resolved through empirical analysis (Basher, 2010).

2.4.2 The Relationship Between Interest Rate with Stock Price

The rationale for a relationship between interest rates and stock market return is that stock prices and interest rates are negatively correlated. A higher interest rate ensuing from contractionary monetary policy usually affects stock market return negatively. This is because higher interest rates reduce the value of equity as stipulated by the dividend discount model; make fixed income securities more attractive as an alternative to holding stocks; may reduce the

propensity of investors to borrow and invest in stocks; and raise the cost of doing business, hence affecting profit margins. On the other hand, lower interest rates resulting from expansionary monetary policy tend to boost the stock market (Banerjee and Adhikary).

2.4.3 The Relationship Between World Oil Price with Stock Price

Theoretically, oil prices can affect stock prices in several ways. The price of a share in a company at any point in time is equal to the expected present value of discounted future cash flows (Huang, Masulis and Stoll, 1996). Oil prices can affect stock prices directly by impacting future cash flows or indirectly through an impact on the interest rate used to discount the future cash flows. In the absence of complete substitution effects between the factors of production, rising oil prices, for example, increase the cost of doing business and, for non-oil related companies, reduce profits.

Rising oil prices can be passed on to consumers in the form of higher prices for final goods and services, but this will reduce demand for final goods and services and once again reduce profits. Rising oil prices are often seen as inflationary by policy makers and central banks respond to inflationary pressures by raising interest rates which affects the discount rate used in the stock pricing formula. While most of the research investigating the relationship between oil prices and stock prices has been conducted using developed economies, there is some research looking into the relationship between oil prices and emerging stock markets (Basher, 2010).

2.4.4 The Relationship Between Exchange Rate With Stock Price

Fluctuations in the value of the rupiah against foreign currencies will affect the condition investment in the country, particularly the capital market. Fluctuations in the exchange rate impact is different for stocks one with the other shares. Positive and negative impacts exchange rate changes on stock index depends on the dominant Which affected by exchange rate changes. Logically, if the U.S. dollar strengthened against the Euro, investors tend to invest funds in Rupiah currency than the dollar because it gives higher returns than investing in Rupiah.

Base on Dimitrova (2005) There are several ways in which the exchange rate can affect the stock market. First, a depreciating currency causes a decline in stock prices because of expectations of inflation (Ajayi and Mougoue, 1996). Second, foreign investors will be unwilling to hold assets in currency that depreciates as that would erode the return on their investment. In a case of USD depreciation, investors will refrain from holding assets in the US, including stocks. If foreign investors sell their holdings of US stocks, share prices ought to drop.

Third, the effect of exchange rate depreciation will be different for each company depending on whether it imports or exports more, whether it owns foreign units, and whether it hedges against exchange rate fluctuation. Heavy importers will suffer from higher costs due to weaker domestic currency and will have lower earnings, thus lower share prices. Multinational corporations based in the US will have higher income when the US currency depreciates. The income realized by the foreign subsidiary is converted into dollars at the higher exchange rate. Companies that have hedged adequately will have their earnings and stock price unaffected by a fluctuating currency. The stock market, which is a collection

of a variety of companies, will tend to react ambiguously to currency depreciation. Last, on a macroeconomic level, a depreciated dollar will boost the export industry and depress the import industry. The impact on domestic output will be positive. Increasing output is seen as an indicator of a booming economy by investors and tends to boost share prices.

There are interactions between national stock markets and exchange rates through changes in foreign investment. Rates of return on foreign investment in stocks are converted from one currency into another currency through changing spot exchange rates. When rates of return in a depreciating currency are translated into a stronger currency, the adjusted rates of return decline. In contrast, when rates of return in an appreciating currency are translated into a depreciating currency, the adjusted rates of return increase. Foreign portfolio investors pay close attention to timing their return conversions based on the anticipated exchange rate movements. Moreover, increasing foreign investments in a country's stock market cause the local currency to appreciate. Conversely, sales of a country's stocks by foreign investors cause foreign capital outflows, which in turn make the local currency depreciate against a related foreign currency. The depictions of such relationships between stock and foreign currency markets have possible flows of bidirectional causality. As currency depreciation and uncertainty adversely affect stock market returns, international fund managers readjust their stock market investment decisions (Banerjee and Adhikary).

CHAPTER III

HYPOTHESIS FRAMEWORK

3.1 Conceptual Framework

Conceptual framework describe the relationship between variables which will be researched. The relationship based on the theory framework, previous research and logical motive. In this research, there are some variable which used and will be analyzed. Four macroeconomics factors are Economic growth (X1), interest rate (X2), world oil prices (X3) and world gold price (X4) as independent variable. Exchange rate become intermediate variable independent variable as description before and the dependent variable. The dependent variable here is stock market price by using Jakarta Composite Index (Y2). This graph is the relationship framework between economic growth, BI rate, world oil price, and world gold price on exchange rate, and Jakarta Composite Index:

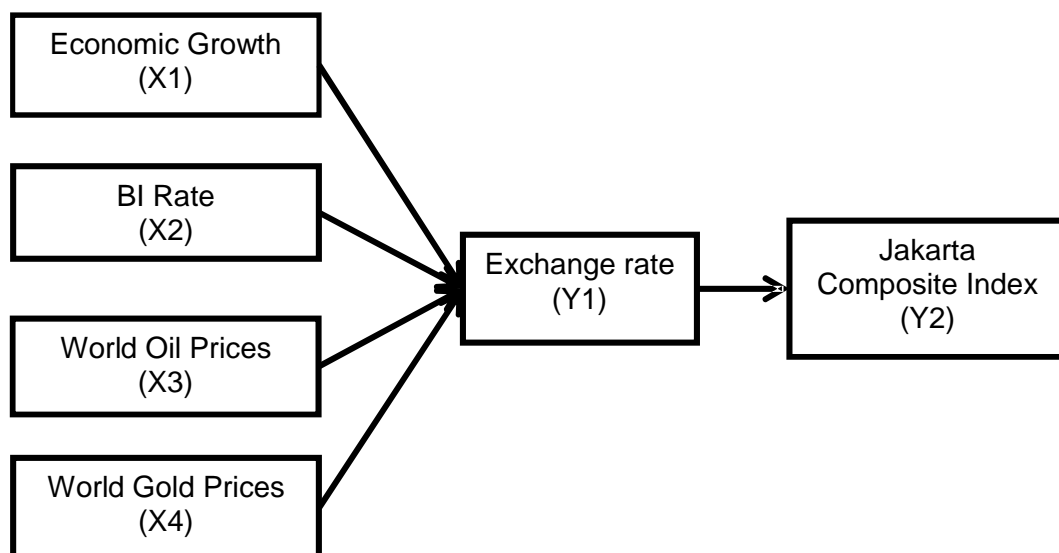


Figure 3.1 Conceptual Framework

Based on the picture above, there are direct arrow from four macroeconomics factors to exchange rate. After that from exchange rate to Jakarta Composite Index. Four arrows at the left show the macroeconomy factors influence on the exchange rate. One arrow in the right shows the influence of exchange rate on the stock market price. The whole framework shows the influence of macroeconomics factors on the stock market by exchange rate as intermediate variable.

3.2 Hypothesis

Based on problem formulation and empirical study above, it can be conclude some hypothesis as below:

- a. H1 = The variable of economic growth (X1), BI rate (X2), world oil prices (X3) and world gold prices (X4) have significant simultaneously effect on exchange rate variable (Y_1).
 - 1) H1.1 = economic growth variable (X1) has significant and negative effect on exchange rate variable (Y_1).
 - 2) H1.2 = BI rate variable (X2) has significant and negative effect on exchange rate variable (Y_1).
 - 3) H1.3 = world oil price variable (X3) has significant and positive effect on exchange rate variable (Y_1).
 - 4) H1.4 = world gold price (X4) has significant and positive effect on exchange rate variable (Y_1).
- b. H2 = The variable of economic growth (X1), BI rate (X2), world oil prices (X3), world gold prices (X4) and exchange rate (Y_1) have significant effect on Jakarta Composite Index variable (Y_2).

- 1) H2.1 = economic growth variable (X_1) has significant effect on Jakarta Composite Index variable (Y_2)
 - 2) H2.2 = BI rate variable (X_2) has significant and effect on Jakarta Composite Index variable (Y_2)
 - 3) H2.3 = world oil price variable (X_3) has significant effect on Jakarta Composite Index variable (Y_2)
 - 4) H2.4 = world gold price (X_4) has significant and positive effect on Jakarta Composite Index variable (Y_2)
 - 5) H2.5 = exchange rate variable (Y_1) has significant effect on Jakarta Composite Index variable (Y_2).
- c. H3 = exchange rate variable (Y_1) has significant effect on Jakarta Composite Index variable (Y_2).

3.3 Variable Operationalized Definition

This research uses some variable, such as exogeneous variable and endogeneous variable. Exogeneous variable is a variable which not any explicit reasons or in the diagram didn't has arrows pointed to the variable, exept error measurement. Endogeneous variable is a variable which has arrow pointed to the variable, from the variable include the intervening or moderate variable. Each variable in this research can be defined as follow:

a. Exogeneous Variable

1) Economic Growth

Economic growth is the number of the growing economy in Indonesia.

One of the economic growth indicator is Gross Domestic Product

(GDP). The data which used is the quarterly GDP of Indonesia start from 2005 until 2013 by billion rupiah notation.

2) BI Rate

BI (Bank Indonesia) Rate is the interest rate which announce by Indonesian federal Bank. The data which used is the quarterly GDP of Indonesia start from 2005 until 2013 by billion percentage notation.

3) World Oil Price

World Oil Price is the spot price that has formed from the accumulation from demand and supply. The data that used in this research are the data which concerning the changing of world oil price quarterly by closed price. The world oil price based on basket price standart every end of annual quarter and taken from *www.opec.org*. The data period is during the research period from January 2005 till December 2013.

4) World Gold Price

The world gold price that used in this research is the the closing price at the evening (*Gold P.M price*) which taken from *www.kitco.com*. The data that used is the changing of quarterly gold price USD notation during the research period from January 2005 till December 2013.

b. Endogeneous variable

1) Exchange rate

Exchange rate is the currency value a country with other country. The data of the currency value in this research is the exchange rate of Indonesian rupiahs (IDR) against United State Dollar (USD) that use direct quotation by IDR/USD (Indonesian Rupiahs/US Dollar). The

data which used is the average currency (the currency which based on buy and sale currency) at the end of month in currency trade which has note by Central Bank of Indonesia start from January 2005 untill December 2013.

2) Jakarta Composite Index

The Jakarta Composite Index (JCI) is the average of all stock price in Indonesian Stock Exchange. The data which used is the closing price quarterly start from January 2005 untill December 2013 by rupiah (IDR) notation.

CHAPTER IV

METHODOLOGY

4.1 Research Type

The type of this research is explanatory research, use quantitative approach. The hypothesis in this research by use four dependent variables, they are economic growth, interest rate, world oil price and world gold price which have effect on exchange rate as intermediate variable, Jakarta Composite Index (JCI) as dependent variables. The focus of this research is to explain the relationship between the independent variable, intermediate and the dependent variable as parameter on the decision taking or investment strategy, and finally will effect on the Jakarta Composite Index.

4.2 Population and Sample

The researcher take all the population in order to describe the variable appropriately. The population and the sample from this research is 36 unit analysis, that is from economic growth data, BI rate, world oil price, world gold price, exchange rate and Jakarta Composite Index. All of the data on 9 years period, from January 2005 till December 2013 period. Base on the statement above, the sample is all of the population.

The reason for choosing of research period is to get more accurate result and appropriate with the new situation. The choosing data quarterly is for save from the bias consequence by market panicity in response to react some information and get the detail data for GDP. So, with using data as said before to hope can get the accurate and appropriate result.

4.3 Source of Data

The data's source of research is the source from where the data taken. The data which used in this research is secondary data. Secondary data is data which available and have collected by other party. Concerned by it, the researcher use it as the researcher needed. The secondary data which used in this research was gotten from internet because time efficiency and already available. The data is include:

- a. Economic growth data, the data of economic growth will be taken from site www.bps.go.id, this site supply data about Indonesian economic incator completely from year to year, one of them is about economic growth by use Gross Domestic Product (GDP) as indicator. The data about GDP that will used in this research is from January 2005 till December 2013 period.
- b. The data about Indonesian interest rate or usually call as BI rate that produced from Indonesian Federal bank (Bank Indonesia). BI rate on every month appropriate with the decision of Governor Board Meeting. Data obtained from www.bi.go.id, because this site provides complete data on economic conditions and banking in Indonesia. Interest rate data which used is on the end of each month during the observation period January 2005 till December 2013 period.
- c. Data in world oil prices is the price of spot oil market which is formed from the accumulation of demand and supply. In this study, the world oil price used is the basket price quarterly taken from this site www.opec.org, because complete data on world oil prices. The data used is the end of

each month during the observation period January 2005 till December 2013 period.

- d. Data on the price of gold is obtained from the spot price which is formed from the accumulation of supply and demand in the London gold market. The gold price used is the price of gold closing at dusk (gold price Gold PM) taken from www.kitco.com, because the site provides complete information on a wide range of precious metals, particularly gold prices in units of U.S. dollars per ounce. World gold price data used is the average monthly gold price during the observation period January 2005 till December 2013 period.
- e. Foreign exchange rate data is derived from the Indonesian Financial Statistics of Bank Indonesia (www.bi.go.id) because the site provides complete data on the Indonesian monetary conditions, including data on the exchange rate (the exchange rate against the currencies of other countries). The data used is the data rate of the rupiah against the U.S. dollar during the period January 2005 till December 2013 period.
- f. The data is taken from the website of the Stock Exchange Composite Index (www.idx.co.id), because IDX provides a complete and detailed data all the shares of companies going public during the period January 2005 till December 2013 period.

4.4 Variable and Indicator

The data have different value. The GDP has high nominal, the other data like interest rate by percentage. Analyze by using Amos 17, should has same data type. The data in this research will lock by In, using Microsoft Excel 2010.

Table 4.1 Variable and category of data research

Variable	Indicator	Category & data sources
Economic growth (X1)	Economic growth indicator that used is Gross Domestic Product (GDP).	-Quarterly data category (January 2005 till December 2013 period) -Source www.bps.go.id
Interest rate (X2)	Indicators of the impact of the results of the risk-free rate is obtained from the data department of finance which use BI rate.	- Quarterly data category (January 2005 till December 2013 period) -Source www.bi.go.id
World oil price (X3)	Indicator of changes in the price level of oil every month by the OPEC price.	- Quarterly data category (January 2005 till December 2013 period) -Source: www.opec.com
World Gold Prices (X4)	Indicator of changes in the average price level of gold on quarterly period.	- Quarterly data category (January 2005 till December 2013 period) -Source: www.kitco.com
Exchange rate (Y1)	Changes in the level of the exchange rate of the rupiah against the U.S. dollar, which is calculated based on the exchange rate.	- Quarterly data category (January 2005 till December 2013 period) -Source www.bi.go.id
Composite Stock Price (Y2)	Indicator of changes in the level of each index which was recorded at the end of the quarter with the IDX unit, called Jakarta Composite Index.	- Quarterly data category (January 2005 till December 2013 period) -Source: www.idx.co.id

4.5 Research Location

Study site was selected based on consideration of the availability of data and information needed by researchers. Retrieval of data for this study were obtained from the internet, is based on the consideration that the available data on the sites that will be used to load complete data, and consideration of time and cost efficiency. Websites data collection in this study are:

- a. Website www.bps.go.id, to obtain data on the economic growth by using Gross Domestic Product (GDP). This site provides complete data on economic indicators of Indonesia in full from year to year, one of which is data on the economic growth.
- b. Website www.bi.go.id, to obtain Indonesian Financial Statistics Data Bank Indonesia, including data on the exchange rate (the exchange rate against the currencies of other countries), especially rupiah exchange rate against the U.S. dollar.
- c. Website www.bi.go.id, to obtain data about the SBI interest rate issued by Bank Indonesia at the end of the month in accordance with the decision of the board of governors meeting. This site provides complete data on economic conditions and banking in Indonesia.
- d. Website www.opec.com that provides all the information relating to the world's oil, including data on world oil prices in either daily, weekly, monthly, and annual complete.
- e. Website www.kitco.com to obtain data on the price of gold. This site provides complete information on the various kinds of precious metals, particularly gold prices in ounce per dollar Amerika.yang units derived from the spot price is formed from the accumulation of supply and

demand in the London gold market. The gold price used is the price of gold closing at dusk (gold price Gold PM).

- f. Website IDX (www.idx.co.id), to obtain data on the index because IDX provides all information related to the financial activities of companies that have gone public on various sectors, including stock prices, as well as Composite Stock Price Index is used as a reference to see the performance of the market in general.

4.6 Method of Data Collection

Data collection techniques are the most strategic step in the research, because either the goal of the research is to get the data. Data collection techniques used in this study is documentation method, this method doing by collecting and recording data related to the research problem. The source like documents/books, online newspapers, and Internet sites about the level of economic growth, exchange rate, the interest rate of Bank Indonesia, world oil prices, gold prices, and the Jakarta Composite Index (JCI) returns in the form of quarterly data during January 2005 till December 2013 period.

4.7 Data Analysis Technique

Techniques of data analysis is to describe what the analysis technique to be used by researchers to analyze the data that has been collected, including the test (Sanusi, 2011). Data analysis techniques used in this research is the analysis of the path or path analysis. Path analysis aims to explain the direct and indirect result of a set of independent variables with the dependent variable set.

The steps are performed in a study using path analysis are as follows, formulate hypotheses and structural equation

Structure:

$$1. Y_1 = \alpha_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + e_1$$

$$2. Y_2 = \alpha_1 + b_5Y_1 + b_6X_1 + b_7X_2 + b_8X_3 + b_9X_4 + e_2$$

where:

Y_1 = exchange rate

Y_2 = stock market price

$\alpha_{0,1}$ = constanta

X_1 = independent variable GDP rate

X_2 = independent variable interest rate of BI

X_3 = independent variable oil prices

X_4 = independent variable gold prices

Then run the Amos 17, the path coefficient is very significant as the basis of analysis. P coefficient will be positive (+) if it shows a direct relationship between the independent variables with the dependent variable, that is, an increase in the independent variable will result in increase in the dependent variable, and vice versa if the independent variable has decreased. P value will be negative (-) if it showed the opposite relationship, meaning that the increase will result in a reduction of independent variables the dependent variable, and vice versa.

CHAPTER V

EMPIRICAL RESULTS

5.1 Research Variables Description

One of the data processing in the explanatory research is using descriptive statistics. Descriptive statistics were used to describe the data. The descriptive statistics uses to facilitate observation by calculating the amount of data, the maximum value of the data, the minimum value of the data, the data mean, and standard deviation in order to obtain an overview of research data in outline.

The amount of data shows the number of research samples. The minimum value of the variable indicates the lowest value and the maximum value of the variable indicates the highest value of each variable. The average value of the data (mean) describe the range of data values.

There are six variables to be analyzed, they are the GDP, BI rate, the world oil price and the price of gold as the independent variable. Exchange rate and JCI as the dependent variable. Measurement of descriptive statistics on the study conducted by Statistics Package for programs utilizing Social Science (SPSS) 16.0 for MS Windows. The results of the descriptive statistical calculation shows the descriptive statistics of the study sample in which the samples in the test period the study was conducted on an ongoing observation period (time series analysis) for 9 years start from quarter of 2005 to the last 2013.

5.1.1 Gross Domestic Product (GDP)

According to the table 5.2, average of the GDP during 2005 to 2013 is 1,438,854. The highest GDP at 2013 is 2,367,929 and the lowest GDP at 2005 is

632,331 with the standard deviation 0.397. The GDP increasing year by year. It can be concluded that the economic condition of Indonesia so far so good. The global economic brought on by the global financial crisis in the late 2000s had a relatively small impact on the Indonesian economy as compared to its impact on other countries.

Table 5.1 Growth Domestic Product (GDP, in billion rupiahs)

Year	Q1	Q2	Q3	Q4
2005	632,331	670,476	713,000	758,475
2006	782,753	812,741	870,320	873,403
2007	920,203	963,863	1,031,409	1,035,419
2008	1,110,032	1,220,606	1,327,510	1,290,541
2009	1,315,272	1,381,407	1,458,209	1,451,315
2010	1,505,857	1,588,848	1,670,567	1,681,580
2011	1,749,387	1,822,473	1,929,006	1,918,321
2012	1,972,939	2,047,748	2,116,374	2,092,379
2013	2,143,672	2,212,724	2,359,648	2,367,929
	Average	1,438,854	Maximum	2,367,929
			Minimum	632,331

Source: www.bps.or.id

In 2009 Indonesia's GDP growth dropped to 4.6 percent, which means that the country was one of the top GDP growth performers worldwide (and the third-highest among the G-20 group of major economies). Despite sharply falling commodity prices, a falling stock market, higher domestic and international bond yields and a depreciating exchange rate, Indonesia was still able to grow significantly. This success was mainly due to the relatively limited importance of Indonesian exports towards the national economy, maintained high market confidence, and sustained robust domestic consumption.

Domestic consumption in Indonesia (in particular private consumption) contributes around two-thirds to the country's national economic growth. With annually around seven million people being added to its middle class, Indonesia

contains a consumer force that drives the economy and has triggered significantly increased domestic and foreign investments from 2010 (www.indonesia-investments.com).

5.1.2 BI Rate

Based on the table 5.2, the data of BI rate which uses in this research is the interest rate of federal Bank of Indonesia quarterly per year, start from 2005 to 2013. Based on the table 5.2, it is seen that the average interest rate of BI rate during the 2005 to the last 2013 was at 8%. BI rate was highest in 2005 and 2006 at the level of 12.75%. BI rate lowest occurred in 2012 and 2013 at 5.75%, while the standard deviation of 0.238.

Table 5.2 Annualized quarterly BI rate from 2005-2013 (percentage)

Year	Q1	Q2	Q3	Q4
2005	9	9.5	10	12.75
2006	12.75	12.5	11.25	9.75
2007	9	8.5	8.25	8
2008	8	8.5	9.25	9.25
2009	7.75	7	6.5	6.5
2010	6.5	6.5	6.5	6.5
2011	6.75	6.75	6.75	6
2012	5.75	5.75	5.75	5.75
2013	5.75	6	7.25	7.5
	Average	8	Maximum	13
			Minimum	6

Source: www.bi.go.id

BI rate lowest occurred in 2012, which amounted to 5.75%. BI rate is still considered in line with the achievement of the inflation target, measures to safeguard the stability of the financial system and remains conducive to the expansion of the domestic economy amid global economic uncertainty.

The highest BI rate occurred in 2005 and 2006, which amounted to 12.75%. the BI rate start from 2005, BI Rate applies formally as the reference of other bank's interest rate since 2005 continuous high till 2006. When the rupiah dropped to penetrate the lowest level in four years, the BI rate drastically increased to 9.5 percent. On 6 September, the central bank to raise the BI rate to 10 percent in order to control inflation. And on the 4th of October, central bank to raise the BI rate to 11 percent for the same reason. And along with the surge in inflation to penetrate the highest level in the past four years, the central bank decided to raise the BI rate to 12.25 percent (*finance.detik.com*).

During 2012 BI rate remained at the level of 5.75%. The interest rate is still considered consistent with low inflation pressure and controlled in accordance with the inflation target in 2012. In 2012 the world economy growing more slowly than the previous year. The growth of the European economy has a contraction associated with settlement of the crisis in the region.

The US economy grew quite well although overshadowed concerns about the threat of fiscal abyss (fiscal cliff). In Asia, China and India, as a major trading partner of Indonesia, also experienced a decline in economic growth. Slowing global economic growth and commodity prices fell sharply causing global inflation pressure decreases. Accordingly, the policy response of developed countries and also some emerging market countries in general still accommodative. Performance is supported by strong growth in domestic demand, especially household consumption and investment, while the decline in export performance continues.

5.1.3 World oil Price

Based on the table 5.3 it can be seen that the average standard oil price during 2005 to last 2013 amounted to \$ 83/barrel, and with the highest price at \$ 136/barrel and the lowest price of \$ 36/barrel, while the standard deviation of 0.316. The highest oil price was in 2008. This is due to rising world oil prices because political tensions in major oil producing countries and was exacerbated by speculators, the falling value of the U.S. dollar and the storm in the Gulf of Mexico (<http://www.esdm.go.id>). World oil prices experienced the highest ever in June 2008 due to the action of a massive rush of speculators out of panic: the economic crisis in the U.S. (subprime mortgages), the entry of China and India as the Asian tiger economies in the world political arena, the cessation of the supply of oil from the east amid Iran tensions and the U.S. as a result.

Table 5.3 World oil price (USD) during 2005-2013 period

Year	Q1	Q2	Q3	Q4
2005	50	52	58	53
2006	61	67	57	56
2007	64	68	77	91
2008	99	136	90	36
2009	47	70	66	77
2010	79	72	77	89
2011	111	108	102	107
2012	121	93	110	108
2013	107	101	106	109
	Average	83	Maximum	136
			Minimum	36

Source: www.opec.com

World oil prices in last 2008 was recorded as the lowest prices, in the amount of \$ 36/barrel. The decrease was due to the economic recession in the U.S., EU, Japan and other countries, have kept investors worried that demand for oil in industrialized countries will weaken, especially from China.

5.1.4 World Gold Price

Based on the explanation of the table 5.3 it can be seen that the average price of gold during the 2005 to last 2013 amounted to \$ 1,054. The highest gold price in 2011, which amounted to 1,772 USD. The lowest gold prices occurred in 2005, which amounted to 431 USD, while the standard deviation of 0,439.

Table 5.4 World gold price (USD) during 2005-2013 period

Year	Q1	Q2	Q3	Q4
2005	434	431	456	510
2006	557	596	598	630
2007	655	655	713	803
2008	968	889	830	816
2009	924	946	997	1,135
2010	1,113	1,233	1,271	1,391
2011	1,424	1,529	1,772	1,652
2012	1,674	1,597	1,744	1,689
2013	1,593	1,342	1,349	1,225
	Average	1,059	Maximum	1,772
			Minimum	431

Source:www.kitco.com

World gold price lowest occurred in 2005, which amounted to USD 434. Starting from 2005, the price of gold began fluctuate, with a tendency to rise. Can be seen in the 9 years of the study, the price of gold increased by about 400%. This increase makes gold as a good long term investment. But gold is not good for short-term investments of less than two years. Due to the resale price is not too high can be seen from the above table that the investment is less than two years. World gold price highest occurred in 2011, the which amounted to USD 1,772. The highest price, and then fell again in the following year. although not significant, but continued and slightly drawn up in 2013 world gold prices declined.

5.1.5 Exchange Rate

According to the table 5.5 it can be seen that the average value of the rupiah against the U.S. dollar from 2005 to December 2013 was Rp 9.584,-. The rupiah strengthened by Rp 8.597,-/dolar at 2011. The rupiah weakened against the U.S. dollar at a rate of Rp.12.189,-/dolar the U.S. at 2013, while the standard deviation for 0,08. Indonesia's currency has strengthened in recent months after plunging by more than 20 per cent and inflation is easing after almost doubling in 2013 from the previous year (gulfnews.com).

Table 5.5 Exchange Rate during 2005-2013 period

Year	Q1	Q2	Q3	Q4
2005	9480	9713	10310	9830
2006	9075	9300	9235	9020
2007	9118	9054	9137	9419
2008	9217	9225	9378	10950
2009	11575	10225	9681	9400
2010	9115	9083	8924	8991
2011	8709	8597	8823	9068
2012	9180	9480	9588	9670
2013	9719	9929	11613	12189
	Average	9584	Maximum	12189
			Minimum	8597

Source: www.bi.go.id

The impact of the "attack" the global economy also affected the rate of the rupiah against the US dollar (US). In early 2013, the currency of Garuda was opened in late level Rp9.600 per USD and now fell at the level of Rp12.200 per USD. Not only the amount that continues to weaken, the stock market in Indonesia was shaken. Composite Stock Price Index (CSPI) entered the gloomy period, below the level of 4500 even struggling at 4100-4200 levels despite never hit a record level of 5,200.

This weakness is not apart than "attack" the global economy, but is also driven by the current account deficit (current account deficit) due to import fuel

and high crude oil. The steps taken by the government continues to maintain the amount and capital markets in the country awake. There are a number of steps taken such as raising the benchmark interest rate (BI Rate), issued a policy packages, as well as preventive measures.

Four external factors that will put pressure on the rupiah. The first is the tightening of monetary stimulus by the Central Bank of the United States are expected to be issued by the end of 2013. Second, emerging investor concerns over economic growth in emerging markets, especially China, India, and Brazil. It affects the activity of economic transactions in the international market.

Third, the world oil price volatility due to geopolitical turmoil several producing countries in the Middle East. Fourth, shrinking interest rate differentials Bank Indonesia and the world interest rate that investors are getting attracted to divert capital to Indonesia.

In the second half, we expect the exchange rate in line with the potential to strengthen the balance of payments that is still potentially achieve a surplus, and the worsening situation in Europe due to the Greek crisis, last week before the close of the year there is an additional pressure other than the main global issues also some foreign investors take profits, then foreign companies in order to close the book, taking some of their investments to bonuses and so on.

5.1.6 Jakarta Composite Index (JCI)

Based on the table 5.6, the average stock index during 2005 to December 2013 amounted to 2.744 basis points. JCI highest level in 2013 at 4.941 and the lowest level of JCI occurred in 2005, which amounted to 1.079 basis points, while the standard deviation of 0,485.

Table 5.6 Jakarta Composite Index during 2005-2013 period (in Indonesian rupiahs)

Year	Q1	Q2	Q3	Q4
2005	1080	1122	1079	1163
2006	1323	1310	1535	1806
2007	1831	2139	2359	2746
2008	2447	2349	1833	1355
2009	1434	2027	2468	2534
2010	2777	2914	3501	3704
2011	3679	3889	3549	3822
2012	4122	3956	4263	4317
2013	4941	4819	4316	4274
	Average	2744	Maximum	4941
			Minimum	1079

Source: www.idx.co.id

Indonesian stock market price increasing year by year, it can be seen from the table 5.6. Indonesia as emerging market from Asia, now be one of the country which interesting to investor. Indonesia has good increasing economy, that is signal of prospect investments in the future of Indonesia.

Economics can not be separated from political activity. Correlation is seen not only from government policies, but seen from the JCI movement rate. From the existing data, the correlation between the election and JCI seen in 2009. Currently election held five years ago, JCI jumped 38.4 percent. Along with that, quite heavy flow of foreign capital into Indonesia. Value reached Rp 14-51 trillion.

Composite Stock Price Index (CSPI) Indonesia Stock Exchange (IDX) opened sharply higher 3.30 percent, after 9 April 2009 legislative elections was calm and peaceful. BEI index rise 3.30 percent, or 48.331 points to 1514.081 and the LQ index rose 11.311, or 4.02 percent, to 300,395.

The data about standart deviation is from table 5.7 by using SPSS. The value of minimum, maximum and mean from the data which locked by In. Based on the table 5.7, it can see that all data has good distribution after locked by In.

Table 5.7 Result of Descriptive Statistics Data

	N	Minimum	Maximum	Mean	Std. Deviation
GDPIn	36	13.3572	14.6775	14.106345	.3979456
BIRateIn	36	1.7492	2.5455	2.042769	.2382629
OilpriceIn	36	3.5718	4.9129	4.368000	.3161637
Golgin	36	6.0653	7.4798	6.877090	.4399650
ExchangerateIn	36	9.0592	9.4083	9.164535	.0807578
IHSGIn	36	6.9840	8.5053	7.810299	.4850075
Valid N (listwise)	36				

Source: data proceed by SPSS 16

From the table above, exchange rate has the lowest standart deviation. The stock market price (IHSG variable) has the highest standart deviation.

5.2 The Influence of Economic Growth (X1), Interest Rate (X2), World Oil Price (X3) and World Gold Price (X4) on Exchange Rate (Y1)

5.2.1 The Influence of Economic Growth (X1) on Exchange Rate (Y1)

The relationship between GDP (X1) with exchange rate (Y1), the probability of getting a critical ratio as large as 27.053 in absolute value is less than 0.001. In other words, the regression weight for X1 in the prediction of Y1 is significantly different from zero at the 0.001 level, has estimate value 0.548. the relationship is positive significant. The result support to Rodrik (2008) and Rappoti et al (2011), but did not support to Takatoshi et al (1999). While the GDP in 2013 increase a lot, the exchange rate also increase because the money become depreciate after the people being rich or have increasing economic power. The consumption level increase, and push the import become high, then the exchange rate become depreciate.

GDP partiallyno significant effect on the exchange rate.This relationship was not significant due toIndonesia's economic growth steady andtends to increase

realized with greater import than export. it is cause less economic fundamentals well and then have an impact on macroeconomic in Indonesia. this condition cause people will tend to be more choosing to buy goods rather than holding money so that the value of the rupiah will weaken (depreciated). Therefore, although the level of Indonesia's economic growth is relatively large and continued to increase, the effect is not significant and have an inversely proportional influence on the exchange rate of Rupiah.

5.2.2 The Influence of Interest Rate (X2) on Exchange Rate (Y1)

The relationship between the interest rate (X2) with the exchange rate (Y1) has a probability of getting a critical ratio as large as 0.873 in absolute value is 0.382. In other words, the regression weight for X2 in the prediction of Y1 is not significantly different from zero at the 0,05 level with estimate value as 0.03. The result supports Hakkio (1986) and did not support Hamrita and Trifi (2011). The relationship is not significant between the interest rate with exchange rate variable. In the previous year, the exchange rate has depreciated or increased the number. The interest rate has fluctuated and decreased, by the Bank Indonesia policy.

BI rate changes can also affect the exchange rate. This mechanism is often called the exchange rate channel. The increase in the BI rate, for example, will push up the difference between the interest rates in Indonesia and overseas interest rates. With the widening interest rate differentials are encouraging foreign investors to invest in financial instruments in Indonesia such as SBI because they will get a higher rate of return.

Foreign capital inflows in turn will encourage appreciation of the rupiah. The currency appreciation resulted in the price of imported goods cheaper and we export goods abroad become more expensive or less competitive so that it

will encourage imports and reduce exports. Decline in net exports will decrease the economic growth and economic activity.

5.2.3 The Influence of World Oil Price (X3) on Exchange Rate (Y1)

The relationship between world oil price (X3) with the exchange rate (Y1) the probability of getting a critical ratio as large as 23.223 in absolute value is less than 0,001. In other words, the regression weight for X3 in the prediction of Y1 is significantly different from zero at the 0.001 level and has estimate value as - 0.43. This research support to Appergis (2014). The result has negative significant effect between the world oil price (X3) with the exchange rate (Y1). When the oil price goes up, the export oil of Indonesia as exporter will increase. Then make the rupiah appreciate, during increasing world oil price and vice versa. Indonesia is one of the big support in crude oil production, if any increasing on the price of world oil it will make increasing revenue for Indonesia.

5.2.4 The Influence of World Gold Price (X4) on Exchange Rate (Y1)

The relationship between the variable of worl gold price (X4) with exchange rate (Y1) has the probability of getting a critical ratio as large as 3,418 in absolute value is less than 0,001. In other words, the regression weight for X4 in the prediction of Y1 is significantly different from zero at the 0,001 level with estimate value as -0.088. The results are consistent with Basher et al (2010), that is the relationship has negative significant between the worl gold price (X4) with exchange rate (Y1). The gold price has decrease in previous year and the exchange rate has depreciate.

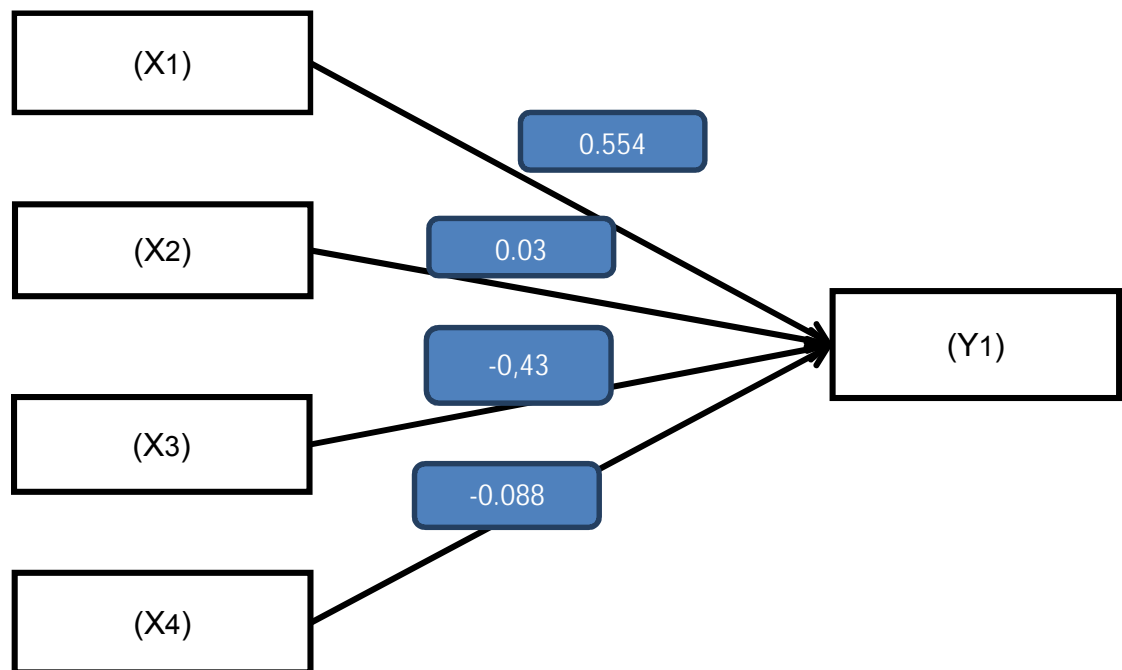


Figure 5.1 The estimate value of independent variables on the first dependent variable

5.3 The Influence of Economic Growth (X1), Interest Rate (X2), World Oil Price (X3) and World Gold Price (X4) on Stock Market Price (Y2)

5.3.1 The Influence of Economic Growth (X1) on Stock Market Price (Y2)

The relationship between the GDP (X1) with the stock market price (Y2) the probability of getting a critical ratio as large as 4.856 in absolute value is less than 0.001. In other words, the regression weight for X1 in the prediction of Y2 is significantly different from zero at the 0.001 level with estimate value as 1.107. The results support Hsing Yu (2013), the relationship is positive significant between the variables.

When the GDP goes up, the stock market increase. The value has same direction in the graph like in chapter I. Indonesia has increasing economy and on

the capital market. The investor looks this country has good and positive prospect in the future, so it make convenient to investing in Indonesia.

5.3.2 The Influence of Interest Rate (X2) on Stock Market Price (Y2)

The relationship between the interest rate (X2) with the stock market price (Y2) the probability of getting a critical ratio as large as 5.038 in absolute value is less than 0.001. In other words, the regression weight for X2 in the prediction of Y2 is significantly different from zero at the 0.001 level with estimate value as - 0.414. The result support to research of (Alam and Uddin, 2009; Humpe and Macmillan, 2007) and did not support (Hamrita and Triffi, 2011; Alam and Uddin, 2009). This relationship is negative significant, between the interest rate and stock market price. When the interest rate decreasing, the stock market price increase.

5.3.3 The Influence of World Oil Price (X3) on Stock Market Price (Y2)

The relationship between the world oil price (X3) with the stock market price (Y2) the probability of getting a critical ratio as large as 2.171 in absolute value is 0.030. In other words, the regression weight for X3 in the prediction of Y2 is significantly different from zero at the 0.05 level with estimate value as 0.448. The result support to Blose and Shieh (1995) and did not support to Aghei et al (2013). The relationship is positive significant between the world oil price (X3) with the stock market price (Y2).

The increasing world oil price effect on the individual stock market of oil

company. It make the investor prefer to invest to the oil company and make the price of stock increase. After increasing the stock price it will make the average of stock market price increase too. During the previous year the oil price has increase, so do to the stock market price.

5.3.4 The Influence of World Gold Price (X4) on Stock Market Price (Y2)

The relationship between the world gold price (X4) with the stock market price (Y2) the probability of getting a critical ratio as large as 6.331 in absolute value is less than 0.001. In other words, the regression weight for X4 in the prediction of Y2 is significantly different from zero at the 0.001 level with estimate value as -0.388. The result support to Basher et al (2010), Wang et al (2013), Aghei et al (2013), Dagher and El Hariri (2013), Cunado and de Gracia (2013), Reboredo et al (2014), did not support to Reboredo et al (2014).

The relationship between world gold price (X4) with the stock market price is negative significant. Gold is investment alternative beside the stock market. If the gold price increase, the investor lean to invest in gold. So, when the gold price decrease the investor choose to invest in stock market.

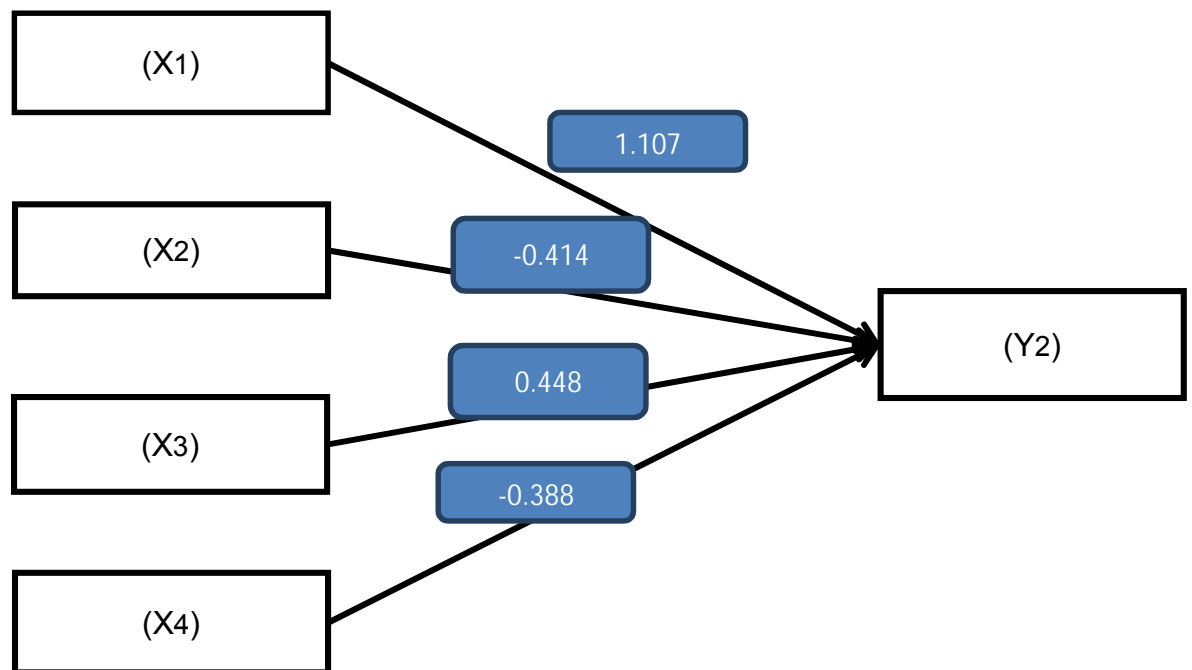


Figure 5.2 The estimate value between the independent variables with the second dependent variable

5.4 The Effect of Exchange Rate (Y1) on Stock Market Price (Y2)

The relationship between the variable of exchange rate (Y1) with the stock market price (Y2), the probability of getting a critical ratio as large as 2.635 in absolute value is .008. In other words, the regression weight for Y1 in the prediction of Y2 is significantly different from zero at the 0,01 level with estimate value as -1.06. The result support to (Dimitrova, 2005; Hsing, 2013) and did not support to (Hamrita and Triffi, 2011; Aghei et al, 2013; Tabak, 2006). When the exchange rate appreciate, the stock price increase. The increasing stock price it mean the increasing economy power, so the exchange rate become appreciate. The investor can look that the market is good to investing at that time.



Figure 5.3 The estimate value between exchange rate (Y1) with stock market price (Y2)

Table 5.8. Regression Weights

	Estimate	S.E.	C.R.	P	Sobel value
Y1 <--- X2	.030	.034	.873	.382	-0,07853402
Y1 <--- X1	.554	.020	27.053	.001	-128,865559
Y1 <--- X3	-.430	.019	-23.223	.001	126,62479
Y1 <--- X4	-.088	.026	-3.418	.001	73,3054297
Y2 <--- Y1	-1.060	.402	-2.635	.008	
Y2 <--- X1	1.107	.228	4.856	.001	
Y2 <--- X2	-.414	.082	-5.038	.001	
Y2 <--- X4	-.388	.178	-2.171	.030	
Y2 <--- X3	.448	.071	6.331	.001	

The formula

$$1. Y_1 = \alpha_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + e_1$$

$$Y_1 = \alpha_0 + 0.554X_1 + 0.03X_2 - 0.43X_3 - 0.088 X_4 + e_1$$

$$2. Y_2 = \alpha_1 + b_5Y_1 + b_6X_1 + b_7X_2 + b_8X_3 + b_9X_4 + e_2$$

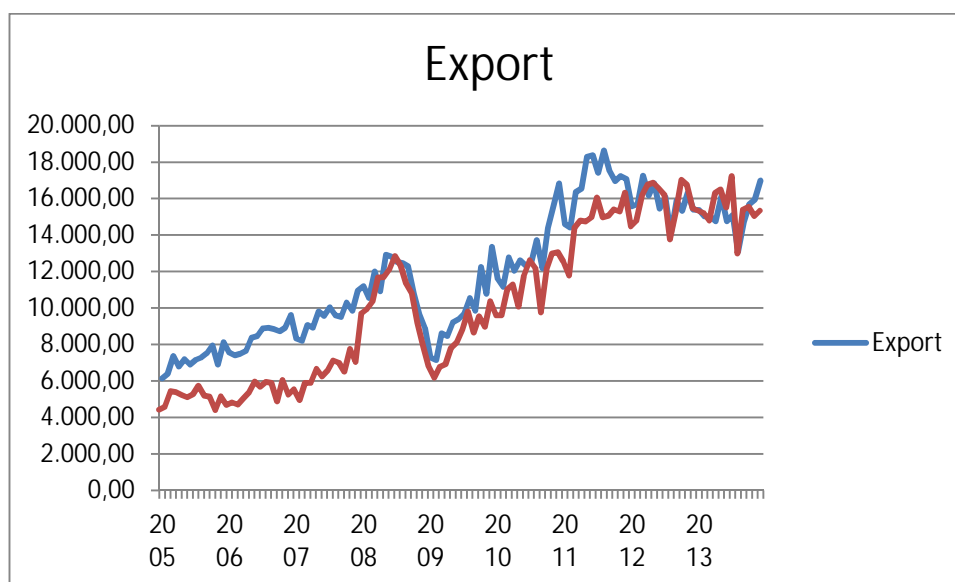
$$Y_2 = \alpha_1 - 1.06Y_1 + 1.107X_1 - 0.414X_2 + 0.448X_3 - 0.388X_4 + e_2$$

The GDP variable has significant effect with exchange rate, it is different with the hypothesis. The debt ratio to GDP already decrease, it has shown that the Indonesian economic become stronger as looked at the figure.



**Figure 5.4 The Comparison between Indonesian Government Debt to GDP
(2004-2014 period)**

Source: <http://www.tradingeconomics.com/charts/indonesia-government-debt-to-gdp.png?s=idndebt2gdp>



**Figure 5.5 The Comparison graphic between Import and Export value of
Indonesia Government**

Source : data proceed

5.5 Model Fit Summary (Goodness of Fit Indices)

Turning to those other indices, it can be look at their values by clicking on the text output icon, which is supposed to represent columns of text (9th dowcentre column). The goodness of fit indices come near the end of the file (Model Fit from the list on the left). The beginning of the goodness of fit sumodels is shown in AMOS Screen 7.4.

5.5.1 CMIN

CMIN is a Chi-square statistic comparing the tested model and the independence model to the saturated model. It saw the former a bit earlier. CMIN/DF, the relative chi-square, is an index of how much the fit of data to model has been reduced by dropping one or more paths. One rule of thumb is to decide you have dropped too many paths if this index exceeds 2 or 3.

Table 5.9 CMIN Result of the research Model

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	15	169,701	6	,000	28,283
Saturated model	21	,000	0		
Independence model	6	306,802	15	,000	20,453

5.5.2 RMR, GFI

RMR, the root mean square residual, is an index of the amount by which the estimated (by your model) variances and covariances differ from the observed variances and covariances. Smaller is better, of course.

GFI, the goodness of fit index, tells you what proportion of the variance in the sample variance-covariance matrix is accounted for by the model. This should exceed .9 for a good model. For the saturated model it will be a perfect 1. AGFI (adjusted GFI) is an alternate GFI index in which the value of the index is

adjusted for the number of parameters in the model. The fewer the number of parameters in the model relative to the number of data points (variances and covariances in the sample variance-covariance matrix), the closer the AGFI will be to the GFI. The PGFI (P is for parsimony), the index is adjusted to reward simple models and penalize models in which few paths have been deleted. Note that for our data the PGFI is larger for the independence model than for our tested model.

Table 5.10 RMR and GFI Result of the research Model

Model	RMR	GFI	AGFI	PGFI
Default model	,084	,438	-,966	,125
Saturated model	,000	1,000		
Independence model	,085	,298	,017	,213

5.5.3 Baseline Comparisons

These goodness of fit indices compare your model to the independence model rather than to the saturated model. The Normed Fit Index (NFI) is simply the difference between the two models' chi-squares divided by the chi-square for the independence model. For our data, that is $(134.142) - .847 / 134.142 = .994$. Values of .9 or higher (some say .95 or higher) indicate good fit. The Comparative Fit Index (CFI) uses a similar approach (with a noncentral chi-square) and is said to be a good index for use even with small samples. It ranges from 0 to 1, like the NFI, and .95 (or .9 or higher) indicates good fit.

The next block of indices, include two such, NFI (normed fit index) and CFI (comparative fit index), which are among those most frequently reported. The NFI is an example of a so called descriptive fit index and indicates the proportion of improvement of the overall fit of the model relative to the independence model.

The CFI is also a descriptive fit index and is interpreted in the same way as the NFI, but may be less affected by sample size. For these indices, values close to 1 are generally considered to indicate a good fit, so our values for NFI (0.95) and CFI (0.96) suggest that our model is quite a good fit. Quite a few more batches of related indices follow.

Table 5.10 Baseline ComparisonsResult of the research Model

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	,447	-,383	,456	-,402	,439
Saturated model	1,000		1,000		1,000
Independence model	,000	,000	,000	,000	,000

5.5.4 Parsimony-Adjusted Measures

PRATIO is the ratio of how many paths you dropped to how many you could have dropped (all of them). The Parsimony Normed Fit Index (PNFI), is the product of NFI and PRATIO, and PCFI is the product of the CFI and PRATIO. The PNFI and PCFI are intended to reward those whose models are parsimonious (contain few paths).

Table 5.10 Parsimony-Adjusted MeasuresResult of the research Model

Model	PRATIO	PNFI	PCFI
Default model	,400	,179	,176
Saturated model	,000	,000	,000
Independence model	1,000	,000	,000

5.5.5 RMSEA

The Root Mean Square Error of Approximation (RMSEA) estimates lack of fit compared to the saturated model. RMSEA of .05 or less indicates good fit, and .08 or less adequate fit. LO 90 and HI 90 are the lower and upper ends of a 90% confidence interval on this estimate. PCLOSE is the p value testing the null that RMSEA is no greater than .05.

Table 5.10 RMSEAResult of the research Model

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	,883	,771	1,000	,000
Independence model	,746	,674	,819	,000

5.5.6 HOELTER

If your sample size were larger than this, you would reject the null hypothesis that your model fit the data just as well as does the saturated model.

Table 5.10 HOELTERResult of the research Model

Model	HOELTER .05	HOELTER .01
Default model	3	4
Independence model	3	4

CHAPTER VI

CONCLUSION

6.1 Conclusion

Indonesia has increased in economy well and has good economic condition in the previous year. It look from the increasing stock market price. The domestic and foreign macroeconomic factor influence on this performance. The four macroeconomies factors are used in this research. They are become independent variables, there are economic growth, interest rate, worl oil price and world gold price. The dependent variable is the stock market price. This research also use exchange rate as intermediate variable.

1. The variable of economic growth has positive significant effect to exchange rate with estimate value as 0.554. The interest rate has not significant value with p value as 0.382 and estimate value as 0.03 on the exchange rate. The world oil price and world gold price have negative significant value to the exchange rate, with estimate value as -0.43 and -0.088. This foreign factor has negative effect because both of them are the comodity from Indonesia. If their price goes up, the revenue for Indonesia also increase and make the exchange rate appreciate.
2. The variable rate of economic growth and world oil price have positive significant effect to the stock market price. They have estimate value as 1.107 and 0.448, it mean when the GDP and world oil price increase then the stock market price also increase at that period. Interest rate has negative significant value to stock market price with estimate value -.414. The variable of world gold price has not significant effect to stock market

price and has negative relationship, because the gold is the other investment object beside stock market.

3. Exchange rate has negative significant effect to stock price with estimate value as -1.06. It makes the other coefficient become negative if use exchange rate as intermediate variable. This is happen during the period of research. When the exchange rate depreciate, the foreign investor prefer to invest to the bank. They hope will get more gains. When the exchange rate become appreciate and the stock market increase, the investor prefer to invest to the stock market.

6.2 Sugestion

This research hopefully can be the literature review for the future research in macroeconomy, which use the same variable such as economic growth, interest rate, worl oil price and world gold price. The research which use exchange rate and stock market price are welcome too. Especially the research which use domestic macroeconomy and foreign macroeconomy factors as use in this research.

1. For the future research, the researcher can add the variable to make the result can be more significant and use more variables to measure the relationship between macroeconomy and stock market price. There is no close the chance which the other variables of this research give more result. Many macroeconomy factors can be choosen beside the factors which used in this research.

2. The future research could use foreign variable to measure economic performance, compare with other economic performance of the other country not include the variable which use in this research.

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CURRICULUM VITAE

Rohmat Hidayat

email : rohmat383@gmail.com



Date and Place of Birth : Ngawi, 3 September 1990
Statue : Single
Sex : Male
Height, Weight : 165 cm, 65 kg
Address : Jalan Mayjen Panjaitan Gang IV nomor 5
Malang 65113, Jawa Timur
Hobby : Jogging, puzzle gaming

EDUCATION

- 2012- 2015 : Postgraduate double degree program of Administrative Science Faculty of Bwawijaya University
 - 2013-2014 : Double Degree Program at National Pingtung University of Science and Technology, Taiwan
 - 2008-2012 : Bachelor of Administrative Science Faculty of Bwawijaya University
IPK : 3.71
 - (2005-2008): Science department SMA N 1 Sine, Ngawi
-