CHAPTER II

LITERATURE REVIEW

A. Theoretical Framework

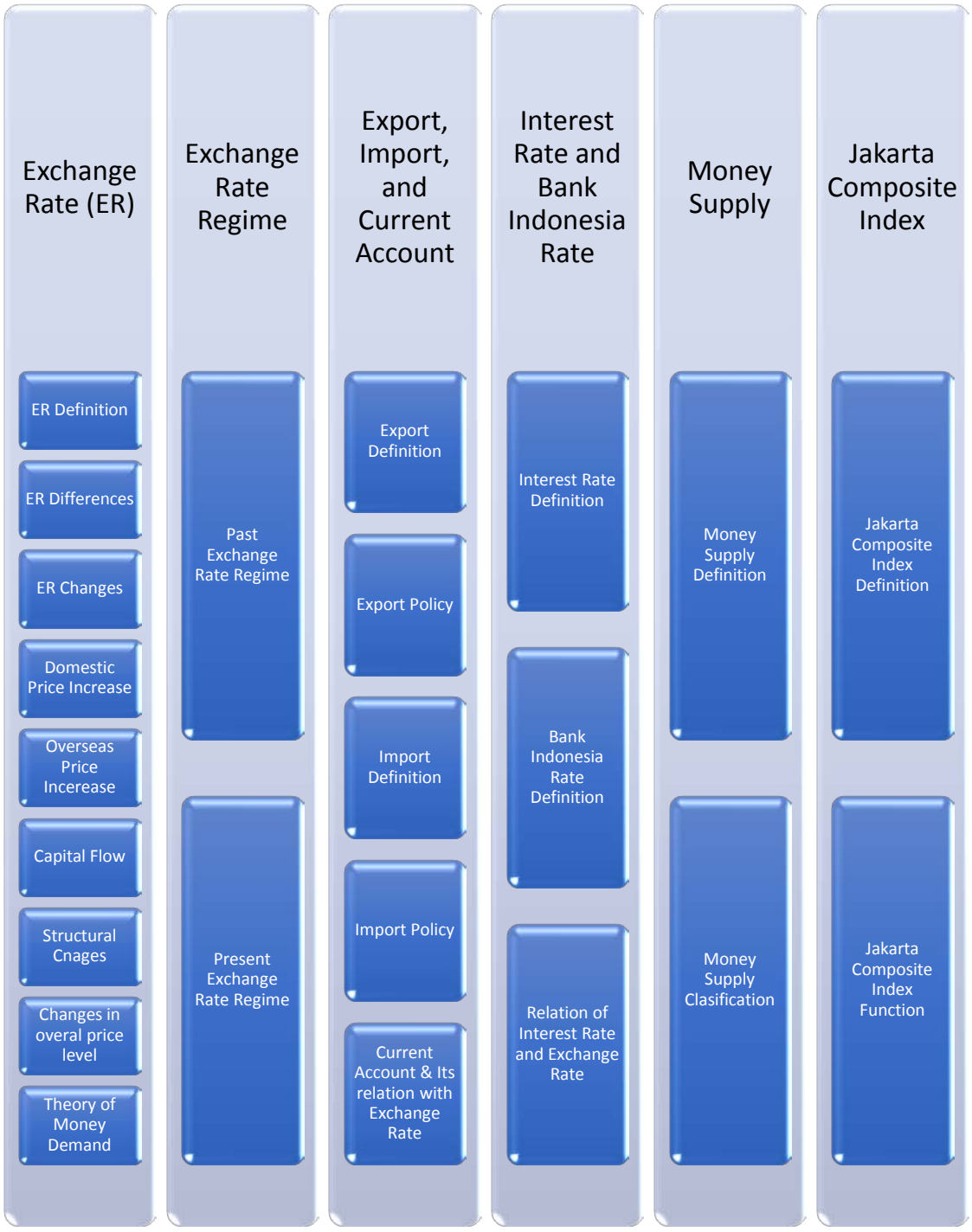

Figure 2.1. Theoritical Framework Mapping

1. Exchange Rate

a. Exchange Rate Definition

Exchange rate is a rate at which one currency will be exchanged for another. It is the value of one country's currency in relation to another currency. For example, an interbank exchange rate of 14,000 Indonesia Rupiah (IDR, RP) to the United States Dollar (US$) means that Rp14,000 will be exchanged for each US$1 or that US$1 will be exchanged for each Rp14,000. In this case, it is said that the price of a dollar in relation to IDR is Rp14,000, or equivalently that the price of a Rupiah in relation to dollars is $1/14,000.

b. Exchange Rate Differences

According Nopirin (1999: 138) there are several causes of differences in exchange rates, some of them are:

The difference between the buying and selling of foreign exchange traders or banks. Buying rate is the rate that is used when the foreign exchange traders or banks buy foreign currency, and selling rates when they sell. The exchange difference is an advantage for traders.

The exchange rate differences arising from differences in the timing of payments. Telegraphic transfer rate is higher than the mail transfer rate because the order payment by using a bank telegram for foreign exchange received immediately or faster than the delivery by mail.

The difference in the level of security in the right of reception payments. It often happens that the receipt of payment from the rights of foreign banks that are well known, the rate is higher than the un-established.

c. Exchange Rate Changes

Supply and demand in the foreign exchange market cause exchange rate to change. Anything that shifts the supply curve to the right or the demand curve for a given currency to the left will invite the appreciation of the currency. Anything that shifts the supply curve to the left or demand curve to the right will make the depreciation of the currency.

Some factors that may cause exchange rate changes are:

d. Domestic Price Increase on Export Goods

Suppose the value of American-made electronic equipment expressed in dollars rose. Effect on demand for the dollar will depend on the elasticity of demand for American goods would shrink; resulting in fewer dollars will be required. In other words, the dollar demand curve shifts to the left and the dollar was depreciating.

When demand is inelastic, such as the US are able to provide goods that are not overshadowed by the substitution of goods typically, the amount of money spent will be more, demand for dollars to pay bills increase, it will shift the demand curve to the right, and dollar appreciate.

e. Overseas Price Increase on Imported Goods

As a result of large price increases on offered import goods. Suppose the price of whiskey Scotch in the value of the pound sterling raised sharply. Assume also Americans drinkers have elastic demand against the scotch whiskey, because they can easily switch to another substitution beverages. Then they will spend fewer pounds on scotch whiskey than before. In other words, they should offer fewer dollars into the foreign exchange market. Dollar supply curve will shift to the left, and the value of the dollar tends to rise.

f. Capital flow

Large-scale capital flows can be a strong influence on the exchange rate. For example, US businessmen increased the willingness to invest in Indonesian assets, it will shift the dollar supply curve to the right and the value of the dollar will depreciate. The flow of investment funds resulted in currency appreciation for a country which import a capital, and with the appreciation of capital export country's currency.

g. Structural Changes

The economy may undergo structural changes that alter the equilibrium exchange rate. Change in the structure is a general term that applies to changes in the cost structure, the discovery of new products, or anything that affects the pattern of comparative advantage. For example, if the product of a particular country is not

developing as fast as in other countries, consumer demand (at a rate fixed) slowly shifted away from the first state to the competing countries which are more advanced. This led to the depreciation of the state currency slowly at first because it will shift the currency demand slowly to the left.

h. Changes in the overall price level

Changes in prices of certain export goods, such as electronic calculators, or there are also changes in all prices caused by inflation. The problem here is the change in the domestic relative price level to the price level in other countries; changes in the price of the same percentage in both countries. Suppose there is a 10% inflation rate in the United States and Indonesia. In this case, the price of Indonesian goods expressed in rupiah and the price of American goods are expressed in dollars which both increase 10%. With the current exchange rates, Indonesian goods (expressed in dollars) and American goods (expressed in rupiah) each will rise 10%. Thus, the relative price of imported goods and goods produced in the country will not change in both countries. Now there is no reason to expect any change in the demand of each country for imported goods, with the original exchange rate. Thus, the rate of inflation in the two countries will not change the equilibrium exchange rate. (This argument is the basis of the theory of purchasing power parity in effect on the exchange rate).

i. Theory of Money Demand

The theory of money demand is essentially a theory about the allocation of economic resources that are limited. Someone who holds the money will be faced with the advantages and possible disadvantages of ownership with a form of wealth. Advantages of people who hold cash will get the level of liquidity that can be spent, but he will be faced with the possibility of losing the opportunity to get more value for money (value added of money) if the money is invested in productive activities. Holding cash will also be exposed to the risk of a decline in the real value of money because of inflation. In a conventional money demand theory, the interest rate is the cost that is used to explain the behavior of individuals in managing their real cash money.

2. Exchange Rate Regime

There are basically two main groups, a fixed exchange rate and a floating exchange rate model. In its development, the structure of the world's financial system is divided into two periods, past and present.

a. Past Exchange Rate Regime

The Gold Standard

Gold was made standard in the world economic activities precisely before the first world war. The majority of currencies in all countries are converted directly to gold units. Standardization of international currency into gold units produces an international

financial system with a fixed exchange rate system. The advantage of the current fix exchange rate is important because it encourages world trade by eliminating the uncertainty that occurs when exchange rates between countries are uncertain. This gold standard system cannot be regulated using monetary policy, because the supply of money is determined by the gold flows between countries. In addition, the gold standard system is determined by the discovery and production of gold. In 1870 and 1880, gold production was low, as a result of slowing economic growth, the value of money fell, causing deflation. The discovery of gold in Alaska and South Africa in 1890 made the expansion of gold production increase, causing money supply to rise rapidly and price levels rise until the first world war.

Bretton Woods System

The Bretton Woods system is made by the IMF. After second world war, the winning States met in Bretton woods in order to discuss the development of a new international monetary system for international trade. The agreement applies only to the participating States, where the central bank buys and sells its own currency to keep their currency in order to keep its exchange rate steady at a certain level. This is where the role of the IMF, namely to maintain and lend to States that difficulty in the balance of payments.

The second world war victory by the allies in 1944 made USA into a superpower, making the Bretton Woods system based on the

USA dollar, where at that time the dollar against gold was $ 35 per ounce.

European Monetary System

This system first appeared in 1979 with 8 members of the European Economic Community. The Eighth Countries agree to set the exchange rate and exchange rates to be floating together against the US dollar. Each member must contribute 20% of the gold and dollars held for European monetary corporate funds. EMS mechanism is the exchange rate of each currency State participation does not fluctuate outside the limit of exchange rate determination. When the currency falls out of bounds, the central bank provides international reserves. The central bank does not intervene if the exchange rate is still within the limit.

b. Present Exchange Rate Regime

Fixed Exchange Rate

Exchange rate remains an exchange rate system in which the holders of a country's monetary authority (Central Bank) fix the level of the exchange rate of the domestic currency against the currency of another country to a certain extent, regardless of the supply or demand for foreign currency. If there is a shortage or an excess supply or demand higher than that set by the government, then in this case the government will take action to bring the exchange rate in the direction

that has been set. Measures taken by the monetary authority may be the purchase or sale of foreign exchange.

Advantages of this system are:

1) The activity of speculation in the money market is getting narrower.
2) The government's active intervention in regulating exchange rates remains stable.
3) The Government plays a full role in the supervision of foreign exchange transactions.
4) Certainty of the exchange rate, so that production planning in accordance with the results.

Weakness of this system are:

1) Foreign exchange reserves must be large, to absorb the advantages and disadvantages in the forex market.
2) Less flexible to global changes.
3) Determining the exchange rate is too low or too high will affect the export and import market.

Managed Floating Exchange Rate

The determination of the exchange rate does not entirely occur from the exchange market activity. In this market, there is still government intervention through existing monetary and fiscal monetary tools. Thus, this currency market is not purely derived from the supply and demand of money.

Advantages of this system are:

1) Able to maintain monetary stability and balance of payment of a country well.
2) The existence of MD / MS activities in the exchange market based on the indication rate will be able to stabilize the exchange rate with the economic conditions that occur.
3) The required foreign exchange is not as large as that required at a fixed exchange rate.
4) Able to integrate fixed and floating systems.

Weakness of this system are:

1) Foreign exchange should always be available and ready for use at any time.
2) Intense competition between government and speculators in predicting and setting the exchange rate.
3) Not always able to overcome the balance of payments.
4) The exchange rate difference that occurs in the foreign exchange market will reduce foreign exchange because it uses foreign exchange to cover the difference.

Free Floating Rate

A free-floating exchange rate is an economic system aimed at a country with an established economic system. This exchange rate system will leave it entirely to the market to achieve equilibrium

conditions in accordance with internal and external conditions. So in this exchange rate system almost no government intervention.

Advantages of this system are:

1) Foreign exchange reserves are safer.
2) Export-import market competition in accordance with market mechanism.
3) Economic conditions of other countries will not have a big effect on the domestic economic conditions.
4) The balance of payments issue can be minimized.
5) No foreign currency restrictions.
6) Equilibrium money market.

Weakness of this system are:

1) The practice of speculation is increasingly free.
2) The application of this system is limited to countries with well-established economic systems, still lacking for developing countries.

Table 2.1. Exchange Rate Regime Timeline

Date	Exchange Rate Regime
1880–1914	Classical gold standard period
April-1925	United Kingdom returns to gold standard
October-1929	United States stock market crashes
September-1931	United Kingdom abandons gold standard

July-1944	Bretton Woods Conference
March-1947	International Monetary Fund comes into being
August-1971	United States suspends convertibility of dollar into gold – Bretton Woods system collapses
December-1971	Smithsonian Agreement
March-1972	European snake with 2.25% band of fluctuation allowed
March-1973	Managed float regime comes into being
April-1978	Jamaica Accords take effect
September-1985	Plaza accord
September-1992	United Kingdom and Italy abandon Exchange Rate Mechanism (ERM)
August-1993	European Monetary System allows ± 15% fluctuation in exchange rates
Source: Salvatore, Dominick (2004). International Economics. John Wiley & Sons. ISBN 978-81-265-1413-7	

3. Export, Import, and Current Account

a. Export Definition

Export means shipping in the goods and services out of the jurisdiction of a country. The seller of such goods and services is referred to as an "exporter" and is based in the country of export whereas the overseas based buyer is referred to as an "importer". In international trade, "exports" refers to selling goods and services produced in the home country to other markets.

Exports of goods on a large generally requires the intervention of the customs in sending and receiving countries. Exports are an important part of international trade, which is the opposite of import. Recovering export sector is a driver of economic growth for most countries in Southeast Asia, as the Asian Development Bank (ADB) said in its report recently. But it confirmed also that the issue of security remains worrying, especially in certain countries, including Indonesia (Apridar, 2009).

The results obtained from the export is a sum of money in foreign currencies, or commonly referred as foreign exchange, which is also one of the sources for state revenue. Thus, exports are trading activity that provides stimulation to induce domestic demand led to the emergence of a large factory industries, along with the positive structure stable and efficient social institutions (Todaro, 2000).

Exports is one of the economy sectors which plays an important role in the expansion of the industrial sector market which will encourage other industries and economic sectors (Meier, 1996: 313). In conclusion, export influence on the exchange rate that resulted in the rupiah weakened or strengthened.

Exports expands markets overseas for certain items, as emphasized by the classical economists, an industry can grow rapidly if the industry can sell their produce across the ocean rather than just a narrow domestic market. Besides, Export creates a new effective

demand. As a result, the goods in the domestic market looking for innovations intended to boost productivity. Expansion of export activities facilitate the development, for specific industries to grow without the need for investing in social capital as much as needed if these items will be sold in the country, for example because of the narrowness of the market in country due to low level of real income or inadequate transport links

Thus, in addition to adding the increased production of goods to be shipped abroad, exports also increase domestic demand. Effective demand as government hopes can be fulfilled in order to show the nation's welfare. It indirectly influences foreign demand of domestic industries to use the example of production factors of capital. As well as using cheaper production methods and efficient so the price and quality can compete in international markets.

b. Export Policy

Indonesia is on of group from developing countries (third world countries) on its way these groups are among the countries that fall behind in their starting development even in economic growth improvement. This is due to many third world countries are former colonialized or due to other conditions. Up to initiate self-improvement course, they faced to developed countries (first world countries) which has a strong fundamental from its development or economy because it has developed earlier.

Professor Lance Taylor (2000) provides a good review when he said "it is certain that the ability to export is the engine of growth". But the uniqueness of the historical and geographical environment of industrial countries have recently further enlarge doubts about how possible export capabilities can be owned universally by all countries. What must be demanded by the countries of the third world from the international economic order is a protection for their interests of their lawful trade, not just concessions in trade (Santiago Resolution of the World Social Scientist, April 1997).

One of an objective for any policy strategy used is how to determine the increase in development in the countries of the Third World. This specific policy demands the attention of every developing country to choose between a focus to look outward or inward. The words of Professor Paul Streeten, who looked out the policy not only encourages free trade but also move freely capital, labor, company and students, multinational corporations, and an open system for communication. While the policy inward lead in the development effort of their own development and made them as master of their own destiny. This means that these policies encourage the natives to "learn to work" in the field of manufacturing and building of appropriate technologies dug from their own cultural treasure grace according to the state-owned resources. Both directions of this policy can be classified as export expansion policy strategy which looked outward

and the strategy of import substitution policies are looked inward. But the majority of third world countries choose the strategy of import substitution and some maintain it until today include Indonesia.

It should be known what distinguishes between these two strategies. The supporter or advocate of import substitution believe that emerging countries must substitute domestic production first, prior to import simple consumer goods (import substitution first stage) and then substituted with domestic production for a range that is wider on the producing more sophisticated goods (the second stage of import substitution) are all behind the protection of the “children industry” (the term for the domestic industry) for high tariffs and quotas on imports. In the long-term advocate of import substitution citing the dual goals diversification of the domestic industry which larger and the high ability to export goods that have previously been protected because of the economy on a large scale and low labor costs has caused domestic prices to be more competitive with world prices (Todaro, 2000).

c. Import Definition

Import is the process of transporting goods or commodities from one country to another legally, generally in the process of trading. The import process is generally the act of entering goods or commodities from other countries into the country. Large imports of goods

generally require the interference of customs in the sending and receiving countries.

Foreign goods which processed and corrected in the country are recorded as imports although the item will be brought back abroad. In international trade statistics, import is the same with the trade by including goods from abroad into the customs territory of Indonesia to meet the applicable provisions. Imports have a nature which oppose to exports.

Import of a country correlated with the output and income of the country positively. Demand for import depends on the relative prices of goods overseas and domestically. Therefor the volume and value of imports will be affected by the output in the country and relative prices between domestic and foreign-made goods. Import opposed to exports. Exports can be said injection to the economy, but imports are leaks in the national income (Amir MS, 2003).

Imports are determined by the willingness / ability to produce goods that compete with foreign goods, which means that the value of imports depending on the value of the country's national income levels. The higher level of national income, and the lower the traffic in producing certain goods, the import would be even higher, as a result many leaks in the national income happened.

d. Import Policy

For more than two decades, emerging countries face of the decline absorption of the world market for their primary product, the increase of the current account deficit in the balance of payments and their confidence in the mystique of industrialization, induce the third world countries including Indonesia to pursue what is commonly known as the development strategy of "import substitution". This led to an attempt to replace the commodity, usually manufacturing products previously imported to the sources of production and stocks in the country. The strategy with this type, first of all is to create hurdles in tariffs or quotas on certain commodities which are imported, and then attempts to establish local industries that produce goods that formerly they imported such as radios, bicycles, or electric appliances household.

This kind of strategy involves cooperation with foreign companies which encouraged in setting a factory up behind a wall of tariff protection with the provision of tax relief and obtaining investment incentives. Although the initial cost of production will push the retail price higher than the price of imports, but the economic though underlying the development of imports substitution manufacturing operations is that the industry will get an advantage of production on a large scale and low production costs (this is called 'Child Industry' tariff protection) or that the balance of payments will

improve since imports of consumer goods can be limited (Todaro, 1998).

e. Current Account and its relation with Exchange Rate

Current account is the balance of trade between a country and its trading partners, reflecting all payments between countries for goods, services, interest and dividends.

A deficit in the current account shows the country is spending more on foreign trade than it is earning, and that it is borrowing capital from foreign sources to make up the deficit. In other words, the country requires more foreign currency than it receives through sales of exports, and it supplies more of its own currency than foreigners demand for its products. The excess demand for foreign currency lowers the country's exchange rate until domestic goods and services are cheap enough for foreigners, and foreign assets are too expensive to generate sales for domestic interests.

4. Interest Rate and Bank Indonesia Rate

a. Interest Rate Definition

The interest rate is the amount of interest paid per unit of time which referred to a percentage of the amount lent. In other words, people should pay for the opportunity to borrow money. The cost of borrowing money measured in dollars per year per dollar borrowed, which called interest rates (Samuelson and Nordhaus, 2004: 190).

Sunariyah (2006: 80) defines the interest rate as the price of loans. Interest rate expressed as a percentage of the principal per unit. Interest is a measure of the prices of resources used by the debtor paid to creditors. "In general, when interest rates are low, the more money flows resulting economic growth has also increased. Likewise, when the interest rate is high, then the little funds that flow will result in lower economic growth "(Sundjaja Barlian, 2003: 57).

The investment function which links to the amount of investment or the real interest rate investment depends on the real interest rate, because the interest rate is the cost of borrowing. The investment function is downward sloping or when the interest rate rises, then the investment projects which profitable are fewer (Mankiw, 2000: 53).

The nominal interest rate has an important role in financial development for the nominal level which determines the high level of real interest. The real interest rate is the nominal interest rate adjusted for inflation (for the exact inflation rate expected by the public). If there is no determination of the nominal interest rate by the government, the nominal interest rate will tend to adjust to the movement of inflation. But with the determination of the nominal interest rate, the nominal interest rate can be lower than inflation, so that creates a negative real interest rate, which will reduce the amount of deposits in the economy again.

b. Bank Indonesia Rate Definition

The BI Rate is the policy rate reflecting the monetary policy stance adopted by Bank Indonesia and announced to the public. (http://www.bi.go.id)

The BI Rate is announced by the Board of Governors of Bank Indonesia in each monthly Board of Governors Meeting. It is implemented in the Bank Indonesia monetary operations conducted by means of liquidity management on the money market to achieve the monetary policy operational target. (http://www.bi.go.id)

The monetary policy operational target is reflected in movement in the Interbank Overnight (O/N) Rate. It is then expected that bank deposit rates will track the movement in interbank rates, with bank lending rates following suit. (http://www.bi.go.id)

While other factors in the economy are also taken into account, Bank Indonesia will normally raise the BI Rate if future inflation is forecasted ahead of the established inflation target. Conversely, Bank Indonesia will lower the BI Rate if future inflation is predicted below the inflation target. (http://www.bi.go.id)

Bank Indonesia strengthened monetary operations by introducing a new policy rate known as the BI 7-Day (Reverse) Repo Rate, effective from 19th August 2016. In addition to the existing BI Rate, the new policy rate does not represent a change of monetary policy stance. (http://www.bi.go.id)

c. Relation of Interest Rate and Exchange Rate

Changes in interest rates affect the relative investment in foreign securities, which in turn will affect the demand and supply of foreign exchange. This will also affect the exchange rate. A perfect relationship between the relative interest rate and the exchange rate between two countries is explained by the theory of international Fisher effect-IFE. Berlianta (2005: 20) argues that the theory of International Fisher Effect shows fluctuations in the currency of the country compared to other countries due to the difference in nominal interest rates in the two countries. Implications of International Fisher Effect is people cannot enjoy the higher benefits by simply infusing funds to countries that have a high nominal interest rate because the currencies' value of countries whose interest rates higher will be depreciated by the difference between nominal interest with a country that has a lower nominal interest rate.

The decline in interest rates will push the investment up (and thus also the total expenditure). As a further consequence income rises. The amount of capital goods that are required depends on the interest rate that measures the cost of funds used to finance the investment. To be a profitable investment projects, the result (acceptance of the increase in production of goods and services of the future) must exceed the costs (payments for borrowed funds). If

interest rates rise, fewer investment projects are profitable, and the amount of investment goods demanded will fall.

5. Money Supply

a. Money Supply Definition

Money is a medium used to make payment, exchanged for goods and services. Commonly, money is defined to include coin and currency in circulation outside government and financial institutions, together with the checkable accounts in depository institutions which include commercial banks, savings and loan associations, mutual savings banks, and credit unions owned by individuals and firms.

b. Money Supply Classification

Some experts classify money supply into two categories:

Money supply in narrow area called “narrow money (M1)”, which consists of currency, demand deposits, checkable deposits, and travelers check. Simply, money in the narrow money is the whole currency and demand deposits in the hand of society. Government currency which is in the deposit in the commercial bank and central bank does not include M1. While demand deposit represented deposit checkable in the society include the M1. Demand deposit represented M1 because the money can be used anytime (Thomas, 1997).

Money supply in broad area called “broad money (M2)”, which is consists of M0 + M1 combine savings deposit, small time deposit, and money market deposit accounts. In broad sense, M2 represented

narrow money combined M2 which is include saving deposits, small time deposit, and money market mutual fund share. In the monetary system money in broad sense often referred as the liquidity of economic (Thomas, 1997).

While some other experts classified broad money into (M2) combined (M3) which all consist of financial deposit of all non-bank.

6. Jakarta Composite Index

a. Jakarta Composite Index Definition

Jakarta Composite Index (Index Harga Saham Gabungan [IHSG]) is one of the stock market indices used by the Indonesia Stock Exchange (Bursa Efek Indonesia [BEI]), formerly Jakarta Stock Exchange (Bursa Efek Jakarta [BEJ]). First introduced on April 1, 1983, as an indicator of the movement of stock prices on the Jakarta Stock Exchange, this Index includes the price movements of all common stock and preferred stock listed on the Indonesia Stock Exchange. The Base Day for JCI computation is August 10, 1982. On that date, the Index is assigned with the base value of 100 and the listed shares at that time amounted to 13 shares.

According to Anoraga and Pakarti (2001: 101), JCI is an index that shows the movement of stock prices in general listed on the stock exchange which became a reference about the development of activities in the capital market. This JCI can be used to assess the general market situation or measure whether the stock price has increased or decreased. JCI also involves all stock prices listed on the exchange.

The basis for calculating the JCI is the total Market Value of the total shares listed on August 10, 1982. Total Market Value is the total multiplication of each listed share (except for the company under the restructuring program) at a price on the JSE on that day. The formula of calculation is as follows:

$$JCI = \frac{\Sigma p}{d} x100$$

$$JCI\ average = \frac{Total\ of\ daily\ JCI\ during\ 1\ month}{Total\ of\ time\ period\ during\ 1\ month}$$

Where:

p is the Closing Price at the Regular Market
x is the Number of Shares
d is the Basic Value

Calculation of Index represents the movement of stock prices in the market / exchange that occurs through the auction trading system. Basic Value will be adjusted quickly if there is a change in issuer's capital or there are other factors that are not related to the stock price. Adjustments will be made in the case of additional new issuers, rights issue, partial / company listings, warrants and convertible bonds as well as delisting. In the event of a stock split, stock dividend or bonus shares, the Base Value is not adjusted because the Market Value is not affected. The stock price used in calculating the JCI is the stock price in the regular market based on the price that occurs based on the auction system.

a. Jakarta Composite Index Function

Jakarta Composite Index (JCI) has some function or description of performance of a stock such as:

a. As an indicator of market trends.

b. As an indicator of profitability.

c. As Benchmark performance of a portfolio.

d. Facilitating the formation of portfolio with a passive strategy.

The Composite Stock Price Index is the main indicator that describes the movement of stock prices in the capital market. Generally, all composite share price indices in various countries use the weighted average method including in Indonesia Stock Exchange.

B. Previous Research

(1) William Theo and (2) Ratna Juwita did a research entitled Pengaruh Suku Bunga, Inflasi, dan Pendapatan Nasional Terhadap Nilai Tukar Rupiah Tahun 2008-2012. Variables included are Exchange rate, interest rate, inflation, national income and the method used is Multiple linear regression. The research concluded that All variables both simultaneously and partially are not significantly affecting Rupiah exchange rate.

(1) Sugeng, (2) M. Noor Nugroho, (3) Ibrahim, and (4) Yanfitri did a research entitled Effects of Foreign Exchange Supply and Demand Dynamics to Rupiah Exchange Rate and Economic Performance. Variables included are Rupiah exchange rate against US dollar (IDR), Supply and demand transactions of forex, Foreign assets ratio against foreign liability of bank (FA / FL), EMBIG index as the risk indicator, Currency exchange rates of some trading partners processed to be a composite index of nominal exchange rate (NEER), The customer price index (CPI), Import prices index (Pm), Inflation of trading partner

countries, World oil price, GDP, Terms of trade, US Industrial Production Index, and the methods used are (1) Descriptive analysis of domestic banking forex and (2) analysis applying the simultaneous equation econometric estimate technique. The research concluded that (1) The movement of rupiah is influenced by the forex supply and demand, where the foreign players are dominating. (2) The demand and supply of foreign exchange is asymmetric. (3) Impact of exchange rate movements on output is only in the short term with a more significant influence to the import, while the depreciation of Rupiah has a larger impact than its appreciation.

Triyono (2008) did a research entitled Analisis Perubahan Kurs Rupiah terhadap Dollar Amerika. Variables included are (1) Indonesia Rupiah exchange rate to US Dollar, (2) Money supply, (3) Inflation, (4) SBI rate of interest, (5) Import and the method used is Multiple regression analysis instrument with model Error Correction Model (ECM). The research concluded that Inflation, SBI rate of interest, and import have positive significant influence at $\alpha = 0.05$ toward exchange rate. While money supply has negative influence toward exchange rate at $\alpha = 0.05$

Ari Mulianta Ginting (2013) did a research entitled The Influence of Exchange Rate on Indonesia's Exports. Variables included are (1) Export, (2) Exchange Rate, (3) Gross Domestic Product and the method used is Error Correction Model (ECM). The research concluded that Exchange rate appreciation, both in long run and short run, has a significant negative impact on exports.

Istiqomah (2011) did a research entitled Pengaruh Inflasi dan Investasi terhadap Nilai Tukar Rupiah di Indonesia. Variables included are (1) Rupiah Exchange Rate to Dollar, (2) Inflation, (3) Domestic Direct Investment, (4) Foreign Direct Investment, (5) Dummy Crisis Variable and the method used is Ordinary Least Square. The research concluded that Inflation, foreign direct investment, and dummy crisis give positive influence to Rupiah exchange rate significantly. While domestic direct investment gives positive but not significant on exchange rate.

(1) Zainul Muchlas and (2) Agus Rahman Alamsyah (2015) did a research entitled Faktor-Faktor yang Mempengaruhi Kurs Rupiah terhadap Dolar Amerika Pasca Krisis (2000-2010). Variables included are (1) Exchange rate movement, (2) Inflation, (3) Interest rate, (4) Money Supply, (5) BOP and the method used is Multiple linear regression. The research concluded that Both jointly and partially, inflation, interest rate, money supply, and BOP (all independent variables) are proven that they influence exchange rate movement.

Wahyu Ario Pratomo (2008) did a research entitled Exchange Rate of Indonesia: 'Does Rupiah Overshoot?'. Variables included are (1) Exchange rate, (2) GDP, (3) Money Supply, (4) Interest rate, (5) CPI and the method used is Ordinary least square method. The research concluded that (1) All of time series are stationary at the first difference in the Augmented Dickey-Fuller and Phillip-Perron test. (2) Johansen cointegrating test shows that the exchange rate and macroeconomic fundamentals are cointegrated in the long run. (3) Chow test

proves that rupiah is instable after the financial liberalization. The finding shows that there is a structural change in rupiah.

Akbar Faoriko (2013) did a research entitled Pengaruh Inflasi, Suku Bunga, dan Nilai Tukar Rupiah terhadap Return Saham Di Bursa Efek Indonesia. Variables included are (1) Stock return of manufacture company in BEI, (2) Inflation, (3) Interest rate, (4) Rupiah exchange rate and the methods used are Simple linear regression and multiple linear regression. The research concluded that (1) Inflation, Interest rate, Rupiah exchange rate, partially have negative and significant influence on Stock return. (2) Simultaneously, all independent variables have significant influence on Stock return.

Antonius Viva Hardiyanto (2007) did a research entitled Time Series Studies on Indonesian Rupiah/ USD Rate 1995 – 2005. Variables included are (1) Indonesian IDR/USD, (2) Japanese Yen/USD, (3) Singapore Dollars/USD, (4) Thai Baht/USD, (5) Philippines Peso/USD, (6) Politic and economic history events affecting exchange rate and the method used is Stochastic Volatility Model. The research concluded that (1) The stochastic volatility model shows that Yen, Baht, Peso, and SGD all against USD seem to have common movement in volatility, while IDR/USD has a cyclical characteristic in its stochastic volatility. The trend component in its cyclical volatility is also driven by the volatility movement of Yen/USD. (2) Multivariate stochastic volatility model estimation shows a clear picture of the inter-volatility taking place amongst the currencies being investigated. (3) Stochastic volatility IDR/USD has a cyclical characteristic in its gyration. (4) IDR/USD volatility has shorter average peak to peak

movements towards the end of the observation, albeit subsequently with smaller magnitude. (5) The distance between the immediate-preceding troughs and the major peaks are getting shorter, at least along the observation. (6) against the perpetual image that IDR/USD volatility has always been the result of depreciation pressures that come from speculations.

Mohammad Rusydi (2006) did a research entitled Exchange Rate Determination in Indonesia. Variables included are (1) Exchange rates, (2) Relative Price, (3) Money Supply, (4) Relative Income and the methods used are Ordinary Least Square, and Error correction mechanism (ECM). The research concluded that the decision to freely float Rupiah in Indonesia when the contagious currency crisis in 1997 was in fact neither timely nor appropriate.

C. Research Framework

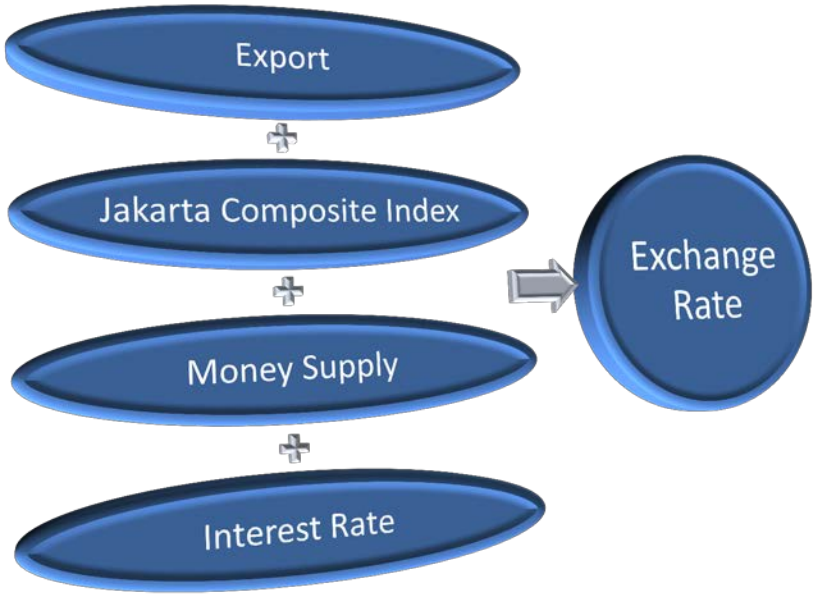

Figure 2.2. Research Framework Mapping

Below are the explanations regarding the effects of each independent variable toward exchange rate.

a. Effect of Exports on Exchange Rate

When Indonesia receive the payment of export, Indonesia will receive US dollar or any foreign currency which can be exchanged with US dollars. The more export, the more US dollar supply. The increase US dollar supply makes dollar less valuable against Rupiah, thus, Rupiah currency will appreciate. Therefore, higher Indonesia export causes Rupiah to strengthen. This means that export have negative relationship with exchange rate.

b. Effect of Jakarta Composite Index on Exchange Rate

When the entities performance is trusted to be stable and profitable, their stocks are more attractive and people will demand the stocks more. Since Jakarta Composite Index is open for international investors, the increasing demand force of stock is estimated to be influenced by foreign capital inflow too. Such capital inflow results in appreciation of Rupiah. At the same time, the purchase of Indonesia Stock increases the price equilibrium that result in higher JCI. Thus, when JCI increases which is partially as a result of foreigner investor participation, the exchange rate appreciates (decrease) along with the capital inflow. In other word, Jakarta Composite Index has negative influence toward exchange rate.

c. Effect of Money Supply on Exchange Rate

Based on the quantity theory of money by Irving Fisher, MV = PT, the money supply (MS) capable of causing something called inflation, which in turn could push the price level changes in currency values. If the offer amount of money given by the government increases, the price of the currency value will fall and vice versa. (Irving, 1991). This make domestic currency exchange rate depreciated against currency abroad. Therefore, more money supply leads to depreciation of Rupiah exchange rate (positive relationship).

d. Effect of Interest Rate on Exchange Rate

Interest rates will lead to the appreciation of the exchange rate for their income and foreign capital (Arifin, 1998: 4). However, based on theory of International Fisher Effect, higher interest rate will also tend to have a higher inflation rate. If inflation in the country is much higher than in others, or if additional factors serve to drive the currency down, higher interest rates tend to depreciate exchange rate.

Considering the low interest to invest in Indonesia relative to other country, BI rate increase won't be that strong to attract foreign investment. Therefore, BI rate change will have greater effect on inflation compared the effect on capital flow change. Thus, it is estimated that BI rate has positive influence on exchange rate (higher BI rate leads higher inflation, making currency depreciation).

D. Hypothesis

Based on the discussion above, hypothesis can be taken as a temporary answer but still need to be tested. Below is the hypothesis:

a. Export has negative influence toward exchange rate.

b. Jakarta Composite Index has negative influence toward exchange rate.

c. Money Supply (M2) has positive influence toward exchange rate.

d. Bank Indonesia rate has positive influence toward exchange rate.