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Macroeconomic Condition and Investment in Indonesia: 2004-2017

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Abstract

Investment in general and Foreign Direct Investment (FDI) in particular can be one of ways to handle crisis. Indonesia ever experienced a difficult economy crisis in 1997 and a mini economy crisis in 2005. In crisis period and its recovery, the role of Foreign Direct Investment for a country, especially for developing countries, is really needed. By using FDI, a country can gain opportunities to accelerate its developments and support economy growth by itself. Based on the data, the relationship between Gross Domestic Product and Foreign Investment in Indonesia is evident. It is clearly seen that trend of foreign investment is in line with trend of gross domestic product. The higher the gross domestic product, the higher the foreign investment. The graph shows that Japan describes clearly about this theory. When Japan's Gross Domestic Product increases, its foreign investment is also increases. On the contrary, if Japan's Gross Domestic Product decreases, its foreign investment also decreases. In the figure, it can be seen that the high economy growth stimulates Tiongkok's high growth of foreign investment for Indonesia. This phenomenon still needs to be proven in regression model to determine whether Gross Domestic Product of each country has significant influence towards Foreign Investment for Indonesia or not.

Keywords: macroeconomic, investment, indonesia

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Abstract

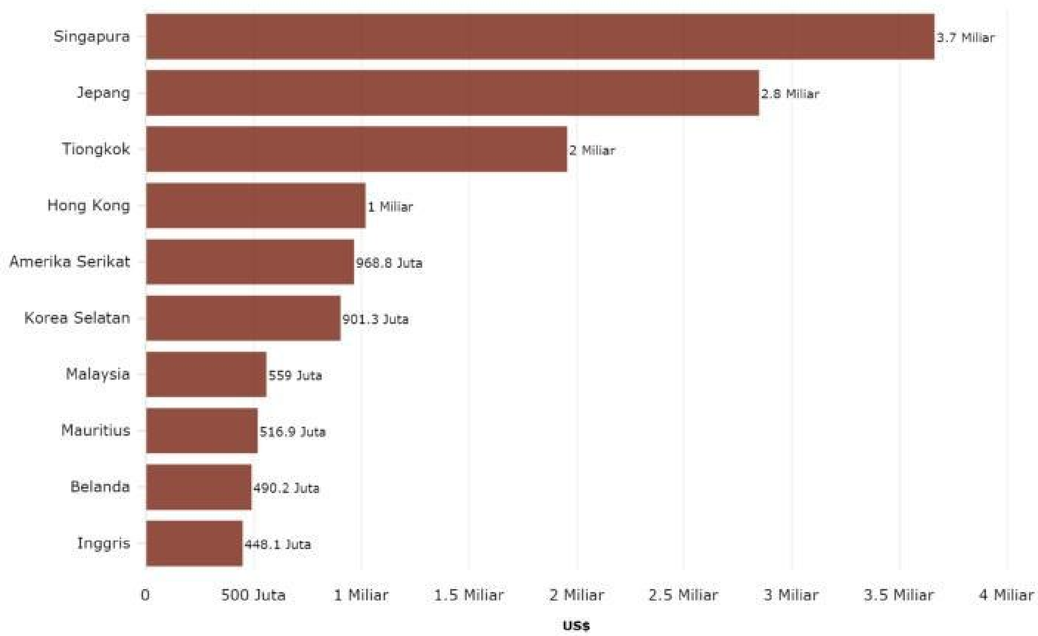
Introduction

Investment in general and Foreign Direct Investment (FDI) in particular can be one of ways to handle crisis. Indonesia ever experienced a difficult economy crisis in 1997 and a mini economy crisis in 2005. In crisis period and its recovery, the role of Foreign Direct Investment for a country, especially for developing countries is really needed. By using FDI, a country can gain opportunities to accelerate its developments and support economy growth by itself. Several previous researches showed that FDI is a direct investment that is more resistant to the crisis (Prasad et al., 2003) compared to portfolio investment. FDI is one of important parts for a country to finance its developments. FDI can stimulate technology expansion, efficiency, productivity, and economy growth.

Theoretically, investment inflow from countries of origin to host countries are business strategies of business players or industrial organizations. Decisions of FDI depend on profit and market orientation in short and long terms (Martin, 2005). Even though literature of FDI is very comprehensive, there are two main models. The first model is analyzed based on paradigm of OLI Dunning (Dunning, 1993), where foreign investment is considered as a result of profit of ownership (O) from the company, the advantage of location (L) in foreign location, and internalization of incentive (I). The combination of these points forms a strong organization in marketing transaction. The second one is gravitation model that attempts to predict the flow of FDI based on macroeconomic variables, such as the rate of Gross Domestic Product (GDP), the growth of GDP, and the size of population. (Brenton dan Gros, 1997; Brock, 1998).

[1] This study is a part of a research entitled Penanaman modal asing di Indonesia 2004-2017: Pendekatan Makroekonomi dan risiko politik, yang didanai oleh P3M Fakultas Ekonomi dan Bisnis, Universitas Katolik Soegijapranata. (*Foreign Investment in Indonesia 2004-2017: Macroeconomic Approach and Politics Risk Funded by P3M of Faculty of Economics and Business, Soegijapranata Catholic University)*.

In Indonesia, Singapore still became the biggest investor for Indonesia until the beginning of semester 1 in 2017. Based on the data of Capital Investment Coordinating Body (CICB), it is noted that FDI from Singapore in semester 1 2017 reached US$ 3,66 billion or Rp 48,69 trillion. This number is equivalent with 24% of the total Foreign Investment in Indonesia and it became the biggest one compared to other countries. Japan was on the second place with the investment value of US$ 2,85 billion. Tiongkok was on the third place with US$ 1,95 billion. There are 10 countries which have the biggest investments in Indonesia. The value reached US$ 13,33 billion or 86% of the total investment of US$ 15,55 billion. It is equivalent to Rp 206,9 trillion. Foreign investment to Indonesia in throughout the first half of 2018 has grown into 5,8% compared to the first half of 2017. The total investment in Indonesia in the first six months of 2017 reached Rp 678,8 trillion or about 49,6% of the target.



Source: Bank Indonesia

Figure of Foreign Direct Investment (FDI) for Indonesia in the Beginning of Semester 1 2017

In the previous theory and research, the development of investment is influenced by various macroeconomic indicators. The macroeconomic stability of a country, or positive trend on macroeconomics has positive impacts for conditions of FDI. Indonesia has good development in economy compared to other countries in ASEAN. On the other hand, Indonesia has unstable condition of exchange rate. The combination of macroeconomic indicators influences condition of FDI in Indonesia. This research is aimed to determine the influence of macroeconomic indicators towards inflow of foreign investment to Indonesia in 2004-2017.

Literature review

Simple theoretical study of foreign investment stated that foreign investment is motivated especially by the possibility of high profitability in developing markets. In this concept, low interest rate in host countries, safe sources of raw materials, and low barriers of trade become main factors that influence investment decisions. Some previous researches that are related to this concept are Akinkugbe (2003), Benacek et. al (2000) and Lim (2004). Akinkugbe (2003) showed that high income per capita, orientation of international trade, high rate of infrastructure development and high rate of investment return become significant factors of foreign investment. Benacek and friends (2000) also found that the major motive of investors is market search. The number of population and national income are the best market indicators. This finding was revised by Lim (2004) who argued that market size, infrastructural quality, economic stability and free trade zone are important for FDI. Other factors influencing investment decision are fiscal incentive, business and investment climate, employee cost and trade openness. (Lim, 2004).

Other theories of foreign investment are paradigm of OLI Dunning (Dunning, 1993) and gravitation model (Breton and Gros, 1997, Brock, 1998). Factors influencing foreign investment in OLI Paradigm are profit of company ownership (O), the advantage of location (L) in foreign location, and internalization of incentive (I) which support a hierarchy organization in market transaction. Gravitation model attempts to predict the inflow of foreign investment based on macroeconomic variables, such as the rate of gross domestic product, the growth of gross domestic product and the number of population.

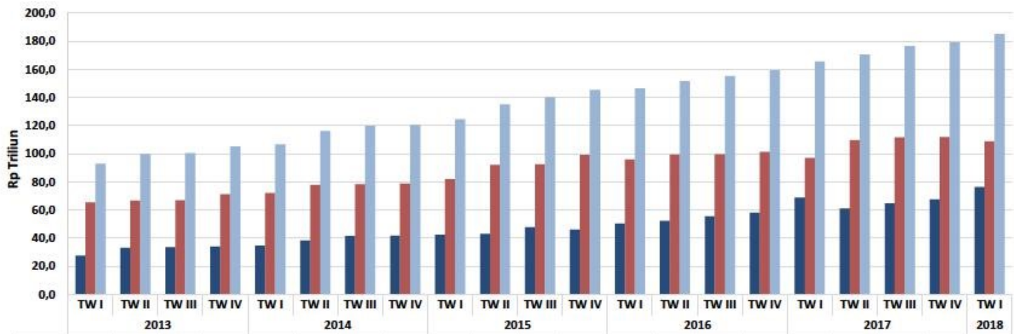
Methodology

This study uses secondary data collected from Central Statistics Body, Ministry of Finance, and Agency for Investment. Time range for this research is 2004-2017. Macroeconomic variables used are Gross domestic product, interest rate, trade openness, and economic condition of main investor countries. This study is a descriptive study about macroeconomic data that is related to foreign investment in Indonesia.

Description of foreign investment in Indonesia

Growth of direct investment in Indonesia from year to year shows positive development. The highest foreign investment was in 2017 for 24,9%. The increase number of foreign investment is supported by the acquisition and global bond issuance through overseas affiliate companies (Bank Indonesia, 2017). The increase of foreign investment occurs in the sector of non oil and gas. In 2017, there were four domestic e-Commerce companies which were acquired by foreign investors from Tiongkok, United States, and Singapore. On the contrary, investment of non oil and gas tend to be stagnant and reduce due to the lack of interest of foreign investors to invest their money on non oil and gas field in Indonesia.

The following figure shows the development of investment realization both in domestic and foreign investments in Indonesia. Viewed from the value, realization of foreign investment is bigger than domestic investment. The highest realization of foreign investment was in the third and fourth trimesters in 2017. They were 111,7 trillion rupiah and 122,1 trillion rupiah.

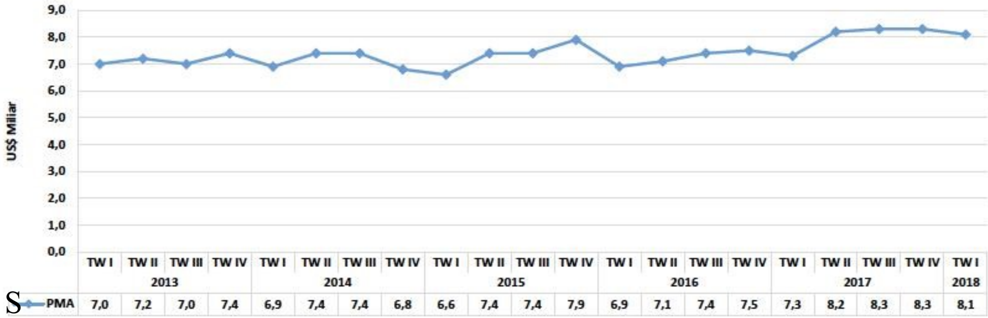


	2013				2014				2015				2016				2017				2018
	TW I	TW II	TW III	TW IV	TW I	TW II	TW III	TW IV	TW I	TW II	TW III	TW IV	TW I	TW II	TW III	TW IV	TW I	TW II	TW III	TW IV	TW I
PMDN	27,5	33,1	33,5	34,1	34,6	38,2	41,6	41,7	42,5	42,9	47,8	46,2	50,4	52,2	55,6	58,1	68,8	61,0	64,9	67,6	76,4
PMA	65,5	66,7	67,0	71,2	72,0	78,0	78,3	78,7	82,1	92,2	92,5	99,2	96,1	99,4	99,7	101,3	97,0	109,8	111,7	112,0	108,9
Total	93,0	99,8	100,5	105,3	106,6	116,2	119,9	120,4	124,6	135,1	140,3	145,4	146,5	151,6	155,3	159,4	165,8	170,8	176,6	179,6	185,3

Source: Capital Investment Coordinating Body

Figure of Development of Investment Realization in 2013 - March 2017.

In billion, it can be seen that there was a good increase of foreign investment in 2015 until the first quarter of 2018. Some decreases of foreign investment usually occur in the first quarter.

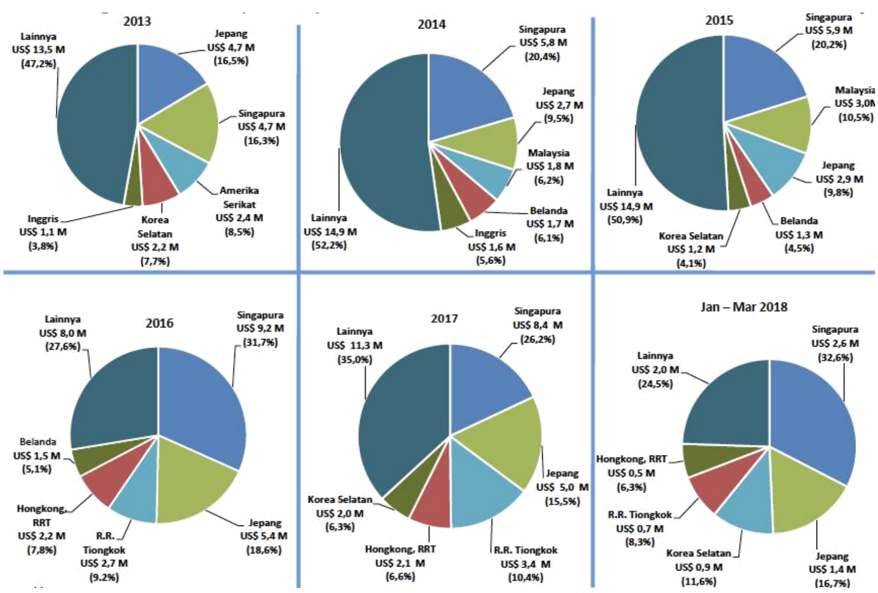


Source: Capital Investment Coordinating Body

Figure of development of investment realization of foreign investment in USD

Sectorally, realization of foreign investment is still concentrated on manufacture industry, trade, fishery, and finance. The segment of those economy sectors reached 82,4% from the total value of foreign investment in 2017. In 2017, five business sectors that were interesting for foreign investment were basic metal industry, metal goods, machines, and electronics (with the contribution of 14%); mining with the contribution of 12,4%; electricity, gas and water with the contribution of 11,9%; basic metal industry, chemical and pharmacy goods (11,2%), and housing, industrial and office area with the contribution of 10,3%.

Based on the countries of origin of foreign investment, Singapore, Japan, and Tiongkok are the biggest sources of foreign investment for Indonesia. Based on the area, in the first trimester of 2018, Java area still becomes a destination for the biggest investment. Besides Java, Sumatera, Sulawesi and Maluku are destinations for the biggest foreign investment.



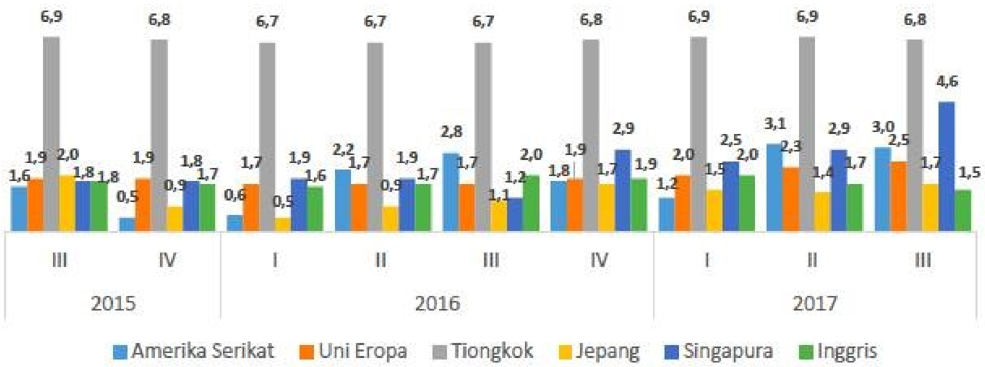
Source: Capital Investment Coordinating Body

Figure of biggest origin countries of foreign investment in 2013 – March 2018

The increase of domestic and foreign investments in Indonesia is related to the rank of new ease of business in Indonesia. Based on report of World Bank about the ease of business (EODN 2018), the ease of business in Indonesia increases from the rank of 19 to 72. Indonesian government has a target that Indonesia will be in rank 40 in 2020. Regarding to this target, government focuses on (i) starting business indicator by reducing procedure of licensing and implication of online system service, (ii) indicator of tax payment system, (iii) indicator of border pass trade, and (iv) indicator of constructing buildings by using procedure simplification and strengthening building inspection.

Description of factors that influence investment in Indonesia

The world economy is predicted to continuously grow. In 2017, the world economy grows 3,6%. It is predicted to grow for 3,7% in 2018. The economy growth in developing countries grows more rapidly compared to developed countries along with the economy growth in Tiongkok that is higher than what was predicted previously. United States grows 3,0% (yoy) in the third trimester in 2017. This growth was supported by public consumption expenditure and the occurrence of inventory change. Trade deficit in United States that gets smaller also forces the economy improvement even though Harvey and Irma hurricanes have impacts on retail sales.



Source: Indonesian Ministry of National Development Planning, 2018

Figure of economy growth in several countries (YoY)

From the previous figure, it can be seen that European area is still growing. It is supported by the increase of consumption. The highest growth is experienced by Tiongkok. In the third trimester in 2017, the economy growth reached 6,8% (yoy). Although it was lower than the previous trimester, it was higher than expected. The economy growth in Tiongkok is supported by the strengthening of export and import growths. The economy growth in Tiongkok is still moderate along with the efforts to reduce debt risk and fix property market situation.

Another important partner for Indonesia is Japan. In the third trimester in 2017, Japan showed a 1,7% growth. The economy growth in Japan was influenced by export growth of 6,4%. However, it was impaired by reduction of household consumption due to bad weather.

One of important variables in maintaining stability, managing debt risk and capital outflow is interest rate policy from Central Bank. The policy of interest rate from Central Bank plays an important role since it is derivated into interest rate deposit, saving interest rate, and loan interest rate.

Bank Indonesia along the third trimester in 2017 reduced the interest rate from 4,75% in July to 4,50% in August, and it decreased again into 4,25% in September 2017. The reduction policy of interest rate was conducted to stimulate credit growth, and because of relatively low and controlled inflation. On the other hand, almost all Central Banks in several groups of countries did not change their interest rate policy along the third trimester in 2017. The Fed still maintains its interest rate on 1-1,25%. The level of inflation that has not fulfilled the target is in 2% and it becomes a measurement to maintain the interest rate in The Fed. Central Bank Tiongkok is also noted to maintain its interest rate on 4,35%.

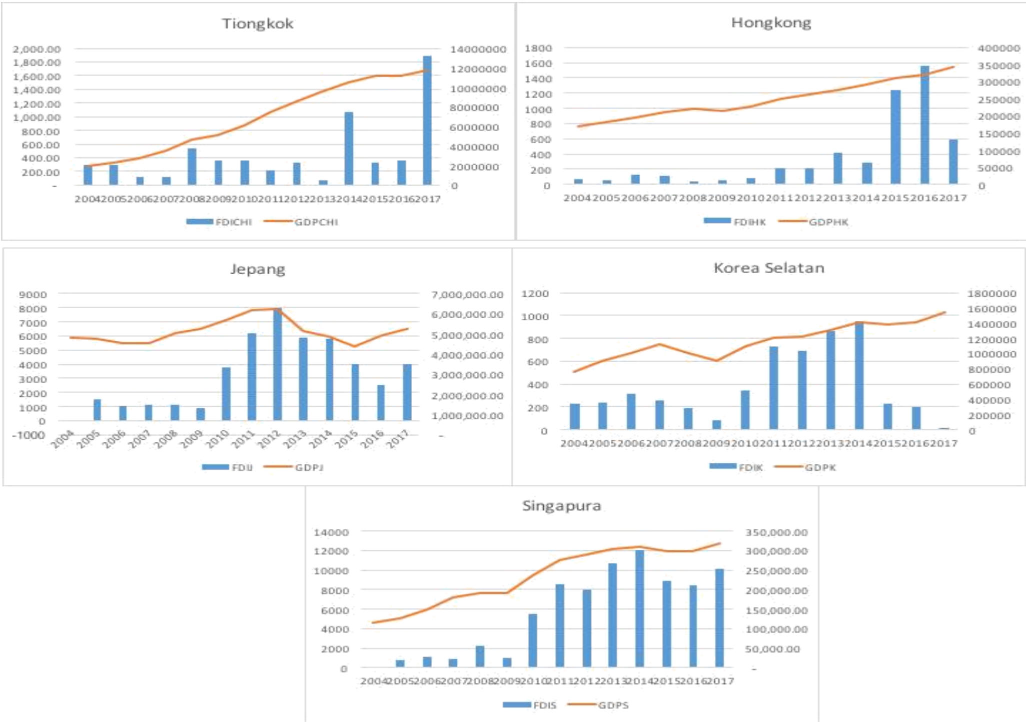
Foreign investment is influenced by gross domestic product of country partners. Theoretically, if a country has high gross domestic product, it will expand its investment to other countries. From the following table, it can be seen that Tiongkok has the highest national income. If it is viewed from the economy growth from 2004 to 2017, Tiongkok has the highest average of economy growth, that was 15,09%. Indonesia also has high average of economy growth, that is 10,34%. While Hongkong, Japan, South Korea, and Singapore have the average growth successively 5,6%, 1%, 5,92% and 8,53% in 2004-2017. In 2010 and 2011, almost all countries experienced high economy growth.

Table of the growth of gross domestic product in several countries in 2004-2017 (Million USD)

Year	Indonesia	Tiongkok	Hongkong	Japan	South Korea	Singapore
2005	11.30	17.42	7.37	-1.24	17.42	11.59
2006	27.53	20.16	6.59	-4.73	12.66	15.99
2007	18.56	28.73	9.33	-0.33	10.96	21.78
2008	18.76	28.92	3.63	11.58	-10.73	6.81
2009	3.63	11.24	-2.39	3.84	-10.01	0.09
2010	30.51	18.44	6.82	8.96	21.35	22.88
2011	18.26	24.00	8.69	8.02	9.86	16.57
2012	2.79	13.94	5.68	0.74	1.69	4.92
2013	-0.58	12.42	4.98	-16.89	6.77	4.61
2014	-2.38	9.34	5.72	-5.95	8.10	1.87
2015	-3.32	6.57	6.15	-9.67	-2.02	-3.67
2016	8.24	0.05	3.71	12.71	2.05	0.04
2017	1.06	4.90	6.48	6.02	8.92	7.36

Source: International Financial Statistics, IMF

Based on the data, we can see the relationship between Gross Domestic Product and Foreign Investment in Indonesia. It is clearly seen that trend of foreign investment is in line with trend of gross domestic product. The higher the gross domestic product, the higher the foreign investment. The graph shows that Japan describes clearly about this theory. When Japan's Gross Domestic Product increases, its foreign investment is also increases. On the contrary, if Japan's Gross Domestic Product decreases, its foreign investment also decreases. In the figure, it can be seen that the high economy growth stimulates Tiongkok's high growth of foreign investment for Indonesia. This phenomenon still needs to be proven in regression model to determine whether Gross Domestic Product of each country has significant influence towards Foreign Investment for Indonesia or not.



Source: International Financiall Statistics, IMF, processed data

Figure of Relationship between Foreign Investment and Gross Domestic Product

The next variable that is interesting to observe is the Openness Index. The Openness Index of a country the total number of export and import that is divided by Gross Domestic Product. If the Openness Index is high, the influence of international trade on domestic activities is also higher. It shows that the country's economy is stronger. The correlation of the Openness Index and Foreign Investment is when a country is more open to trade flow of other countries, it will be the next destination of foreign investment since it is more interesting than other countries that are closed. The openness of a country shows that domestic economy is not only dominated by domestic products but also foreign products.

In the time span of 2004-2011, the average of the highest openness index is between Indonesia and Japan. The openness index of Indonesia - Japan is 1,786. If the value of openness index is absolute, the next high openness index is between Indonesia - Singapore (0,654) and Indonesia - Tiongkok (0,603). The positive value in openness index shows the surplus balance of trade. It means that export is bigger than import. If the value is negative, it shows the negative balance of trade.

Table of the Openness Level of Indonesia towards Main Partner Country 2004-2017

Year	Tiongkok	Hongkong	Japan	South Korea	Singapore
2004	0.180	0.401	3.537	1.034	-0.029
2005	0.264	0.386	3.584	1.356	-0.526
2006	0.430	0.342	4.090	1.215	-0.279
2007	0.238	0.265	3.639	0.933	0.141
2008	-0.647	-0.100	2.260	0.392	-1.599
2009	-0.433	0.072	1.509	0.588	-0.914
2010	-0.627	0.085	1.168	0.645	-0.863
2011	-0.366	0.084	1.599	0.380	-0.842
2012	-0.842	0.077	0.803	0.336	-0.975
2013	-0.794	0.066	0.855	-0.019	-0.975
2014	-1.461	0.104	0.691	-0.138	-0.941
2015	-1.668	0.028	0.552	-0.090	-0.624
2016	-1.503	0.040	0.334	0.036	-0.288
2017	-1.218	0.074	0.388	0.033	-0.448

Source: International Financial Statistics, IMF, processed data

The exchange rate, theoretically, also influences foreign investment. The exchange rate can be functioned as a stimulation of investment entry to the destined countries. It is because currency strengthening of destined countries improves the investment results of investors and vise versa (Benassy-Quere, et al (2001). This following graph shows the relationship between economy openness and exchange rate.

Source: International Financial Statistics, IMF, processed data

Figure of Foreign Investment Relationship with Exchange Value and Openness Index in 2004-2017

The interest rate is a cost that needs to be paid by capital borrowers because of the loaning or the use of some fund to capital lenders. There is a negative relationship between interest rate and investment rate. If the interest rate is high, the total of investment is low. On the contrary, if the interest rate is low, the total of investment is high.

If it is compared with other countries, the interest rate of Indonesia's loan is relatively higher. In average, from 2004 to 2017, Indonesia's interest rate was 13,10%. The interest rate for Tiongkok, Hongkong, South Korea and Singapore is almost the same, that was in 5%. The lowest average of interest rate was for Japan's loan, that was on 1,49%. From these six countries, in the last 5 years, it can be seen that the interest rate kept decreasing. The problem is that Indonesia's interest rate compared to other countries since foreign investment considers the comparison between interest rate and recipient country.

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
RCHI	5.00	7.75	7.75	6.75	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
RHK	5.58	5.58	6.12	7.47	5.31	5.31	5.81	6.56	6.00	6.00	5.60	4.35	4.35	4.35
RJ	1.77	1.68	1.66	1.88	1.91	1.72	1.60	1.50	1.41	1.30	1.22	1.14	1.04	1.04
RK	5.90	5.59	5.99	6.55	7.17	5.65	5.51	5.76	5.40	4.64	4.26	3.53	3.37	3.48
RS	5.30	5.30	5.31	5.33	5.38	5.38	5.38	5.38	5.38	5.38	5.35	5.35	5.35	5.28
RI	14.12	14.05	15.98	13.86	13.60	14.50	13.25	12.40	11.80	11.66	12.61	12.66	11.89	11.07

S
ource: International Financial Statistics, IMF

Figure of the interest rate of loan in 2004-2017 (%)

Source: International Financial Statistics, IMF, processed data

Figure 15. The relationship between foreign investment and interest rate of loan in 2004-2017

Conclusion

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