Patterns of International Capital Flows in Indonesia

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Abstract. Financial globalization is expected to be able to encourage the integration of financial markets and the economies of various countries, where it will have an impact on the movement and patterns of capital flows between countries. This will result in the accumulation of capital needed for investment in driving Indonesia's economic growth.

This study aims to look at the pattern of international capital flows in Indonesia by analyzing several variables that influence these capital flows internationally. These variables are interest rates, economic growth, inflation rates, and the real exchange rate of Rupiah and USD in Indonesia in the period of 2005–2019. The analytical method used is multiple linear regression with time series data. The research findings show that interest rates, the economic growth and the exchange rate have a positive effect on net capital inflows in Indonesia, while the inflation rate has no effect on net capital inflows in Indonesia.

Keywords: Net Capital Inflow · Interest Rate · Economic Growth · Inflation Rate · Real Exchange Rates

1 Introduction

International capital flows consist of capital inflows and capital outflows, where these two capital flows of course have opposite impact on a country's economy. Of the two capital flows, the one that has a positive impact on economic growth is capital inflows, so to see the net impact of these two capital flows, this study will focus on net capital inflows.

Generally, capital flows that move in international capital flows are in the form of direct investment, portfolio investment, and other forms of capital flows. Direct investment is a form of long-term foreign investment that generally has a direct impact on the real sector, while portfolio investment is a short-term investment that generally has a direct impact on the monetary sector, and other forms of capital flows include trade credit and government loans.

Figure 1 shows the trend of net capital inflows in Indonesia from 2013 to 2019. It can be seen that the volatility in net capital inflows is quite large, so the impact is also large. In 2013 net capital inflows were in the position of USD10,315 million and then increased in 2014 to reach USD17,992 million due to the increase in components in

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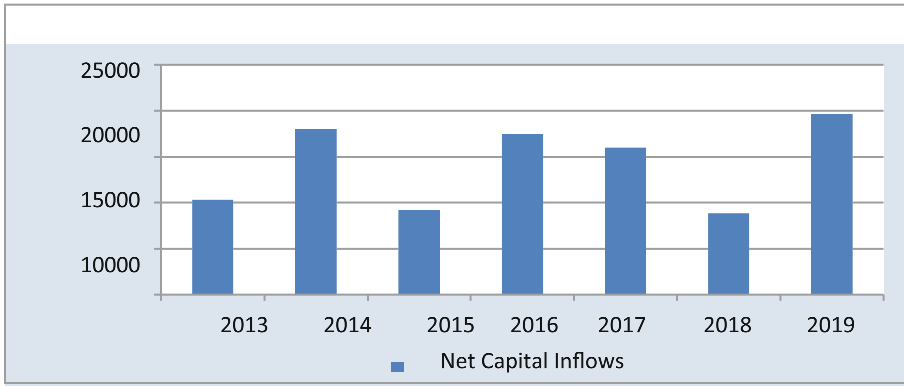

Fig. 1. Net Capital Inflows in Indonesia 2013–2019. Source: Bank Indonesia (data processed)

portfolio investment. Furthermore, net capital inflows decreased until 2018 was in the position of USD 8,843 million which illustrates the decline in investor confidence in economic conditions in Indonesia.

Net capital inflows are interesting and important to study in order to find out the pattern of international capital inflows so that capital can provide benefits to the economy and minimize risks. According to Agenor and Calvo et al. in Indawan et al. (2012) there are two main determinants of capital inflows, namely pull factors originating from within the country itself, and push factors related to global factors as drivers.

The international flow of capital is explained by Mundell-Fleming in their theory which explains that when domestic interest rates rise and the assumption of world interest rates remains constant, the gap between domestic and foreign interest rates will widen. This will encourage capital inflows, and vice versa if the interest rate gap narrows it will encourage capital outflows.

This is again explained by portfolio allocation theory which emphasizes that rates of return and risk factors can affect the movement of capital flows. The difference in rates of return is a driving factor for capital flows to a country. Rates of return as measured by interest rates, where when world interest rates become lower than domestic interest rates cause capital inflows [1].

Furthermore, the accelerator theory emphasizes that investment is not only influenced by interest rates but is also influenced by national income or national production. The increase in national income will encourage an increase in the demand for goods and services, and this becomes a special attraction for investors to invest, which will ultimately have an impact on capital inflows.

Furthermore, the inflation rate has an ambiguous effect on capital flows internationally. If the inflation that occurs is caused by an increase in demand, known as demand-pull inflation, investors will respond positively to the increase in the inflation rate and encourage capital inflows. However, if the inflation that occurs is caused by an increase in production costs, which is called cost-push inflation, then investors will respond negatively to the increase in inflation resulting in capital outflows.

Finally, purchasing power parity theory and interest rate parity theory also explain the international flow of capital in relation to exchange rates and interest rates. The theory explains that the price of goods and the rate of return of an investment instrument will be the same in any country, where if there is a difference, the exchange rate will adjust. So that when a country depreciates in its currency, this will encourage investors to buy that currency and have an impact on capital inflows from other countries, and vice versa.

2 Method

This research design refers to a conceptual framework based on theoretical and empirical reviews using the multiple regression estimation method, in which the analysis model to be used is as follows:

$$y = f\left(x_1, x_2, x_{3,}, x_{4,}\right) \tag{1}$$

$$y = x_4^{\alpha_4} e^{\alpha_0 + \alpha_1 x_1 + \alpha_2 x_2 + \alpha_3 x_3 + \mu} \tag{2}$$

$$y = \alpha_0 + \alpha_1 x_1 + \alpha_2 x_2 + \alpha_3 x_3 + \alpha_4 lnx_4 + \mu \tag{3}$$

where:

$y =$ Net capital inflow
$x_1 =$ Interest Rate
$x_2 =$ Economic Growth
$x_3 =$ Inflation Rate
$x_4 =$ Exchange Rate
$\mu = errorterm$

In this study, it will also be observed what variables most dominantly affect capital flow in Indonesia among the four variables of this study. This is intended to see the pattern of capital flows in Indonesia.

3 Results

The estimation results obtained in analysing the pattern of international capital flows in Indonesia by looking at the effect of interest rates, economic growth, inflation rates and real exchange rates on Indonesia's net capital inflows using multiple regression analysis can be seen in the Table 1.

Table 1. Estimation Results of the Effect of Interest Rate (X1), Economic Growth (X2), Inflation Rate (X3), and Exchange Rate (X4) on Indonesian Net Capital Inflow (Y)

Variable	Regression Coefficient	t-Statistic	Prob
X_1	0.094**	2.069	0.065
X_2	0.815*	2.953	0.014
X_3	0.035^{ns}	0.924	0.377
X_4	1.505*	2.801	0.019

*) Significant at $\alpha = 5\%$
**) significant at $\alpha = 10\%$
ns) not significant
R2 = 0.701

4 Discussion

The findings of the study indicate that interest rates have a positive and significant effect on net capital inflows, ie increasing interest rates can cause an increase in net capital inflows and vice versa, a decrease in interest rates can cause a decrease in net capital inflows. This is due to the increase in interest rates which illustrates that there is an increase in the reward of investment. Investors will always look for investment opportunities that can provide high rewards so that government policies in increasing interest rates can be used to attract capital inflows that can increase net capital inflows.

This is supported by several previous studies which also found that interest rates can increase investor interest in investing in the country so that it can increase net capital inflows. The implication of this finding is that the government through the Central Bank as the monetary authority should create attractive interest rates for investors to invest their capital domestically to increase net capital inflows.

Furthermore, economic growth which has a significant positive effect on net capital inflows, it can be explained that an increase in economic growth will increase national income which in turn will increase people's purchasing power and encourage an increase in aggregate demand. This will show the capacity and market opportunities that are getting bigger and open for the company's products and reflect the profit potential for companies that can take advantage of the open market. This signal will be seen by investors as something positive to gain profits by exploiting the potential of the open market to encourage an increase in investment demand and increase net capital inflows.

The increase in economic growth reflects the growing and increasing production sectors. The more production sectors can grow and develop properly and conducively, the output produced by the company in the form of goods and services will be abundant in the domestic market and the profits generated will be greater. This will attract investors to invest in the company and encourage an increase in net capital inflows. Therefore, the government needs to maintain sustainable economic growth conditions in order to attract investors to invest in the country, which in turn will increase net capital inflows.

On the other hand, the inflation rate does not have a significant effect on net capital inflows. This is due to the fact that the inflation rate during the research year was still

very controlled and not yet harmful to economic activity. As long as the inflation rate is not in the heavy category, inflation will not have a major impact on the returns obtained by investors. In addition, the phenomenon of inflation often occurs in countries in the world due to the increase in people's purchasing power so that investors see it as a natural thing. Thus, investors in order to move their capital to Indonesia do not really consider the inflation rate in Indonesia.

Finally, the appreciation of the USD against the rupiah caused the price of imported goods in Indonesia to become relatively more expensive for similar goods produced domestically. This will encourage the population to make substitutions by shifting their consumption from imported goods to locally produced goods. The next impact is that domestic production is getting more excited and becomes a special attraction for investors to invest in the country and ultimately increase net capital inflows.

The implication of this finding is that the depreciation of the domestic currency exchange rate does not need to be too worried, as long as the impact of the depreciation can be responded positively by the population by shifting their consumption from imported products to local products, so that domestic absorption increases, and is able to attract investors to flow their capital in. to Indonesia.

5 Conclusion

The conclusion of this paper can be written as follows:

1. Interest rates have a significant positive effect on net capital inflows in Indonesia from 2005 to 2019. This shows that foreign investors are still very sensitive to changes in interest rates.
2. Economic growth has a significant positive effect on net capital inflows in Indonesia from 2005 to 2019. The implication of this finding is that the government needs to maintain sustainable economic growth so that capital inflows are maintained.
3. The inflation rate has no effect on net capital inflows in Indonesia. This indicates that the behavior of foreign investors is not sensitive to changes in the price level that occur in the country.
4. The rupiah/USD exchange rate has a significant positive effect on net capital inflows in Indonesia, which means that net capital inflows are still highly dependent on how much the exchange rate is capable of adjusting to differences in price levels and rates of return between countries.

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