# POLAND'S CURRENT ACCOUNT:
# THE ROLE OF INVESTMENT INCOME BALANCE

Ewa BILEWICZ

University of Szczecin, Faculty of Economics, Finance and Management; ewa.bilewicz@usz.edu.pl,
ORCID: 0000-0003-0155-506

**Purpose:** The paper aims to present the role of net investment income in the current account in Poland's balance of payments and to investigate the main factors driving net investment income.

**Design/methodology/approach**: The study uses quarterly, secondary data spanning from 2004 to 2022. The data gathered in the research were analysed using the ordinary least squares (OLS) regression.

**Findings:** The empirical results of research show that the balance of investment income in the analysed period was characterized by a persistent deficit. The scale of the net investment income' impact on the current account balance has increased. The income balance was mostly determined by the net foreign assets position while exchange rate had no significant effect.

**Practical implications:** Understanding variables that influence country's net investment income is essential for designing appropriate economic policies aimed at ensuring external balance. The research results can be used to formulate policy recommendations, which help to minimalize vulnerabilities of external position of Poland. A policy suggestion is that in order to reduce imbalance between payments and receipts in investment income flows, efforts should be made towards promoting domestic investments abroad. Poland should also decrease dependence on external financing and increase reliance on domestic savings. In addition, the results of study provide a reasonable basis for further research on the influence of the investment income composition on the balance of income account.

**Originality/value:** Until now, little research has been done about determinants of investment income balance. The study contributes to better understanding of changes in net investment income and dynamics of external position of Poland.

**Keywords:** balance of payments, net investment income, net financial assets, Poland.

**Category of the paper:** Research paper.

## 1. Introduction

The current account of balance of payments informs about the country's external position and stability of external finance. High level of deficit in this account increases the risk of a rapid outflow of foreign capital from the country, which destabilizes the economy and may trigger a crisis. Hence, the current account balance and the resulting net capital flow have become crucial for assessing the economy's vulnerability to the financial crisis (Butzen et al., 2014). A prolonged current account deficit can be a signal of unsustainable balance of payment.

The ongoing globalization process forces a new approach to the analysis of external stability using the current account balance. In the era of increasing capital flows, the assessment of external stability based solely on the level of the current account deficit does not reflect all the problems related to ensuring balance in cross-border payments. What generates the deficit and how it is financed provides important information about the sources of imbalances and financial threats to the economy.

Due to a build-up of gross external asset and liability positions of countries over recent decades, net investment income has become a large contributor to the current account balance in many countries. The net investment income from foreign investments, together with the balance of remittances and other income constitutes the primary income balance, which is a component of current account (NBP, 2019). Understanding the drivers of these compositional change in current account and the consequences of the growing investment income balance is important for the external sustainability analysis. Until now, relatively few studies have focused on international investment income flows. Previous literature have mostly focused on trade balance, given that it is typically the largest component of the current account (Romelli et al., 2018; Adamu, Audu, 2018).

The paper aims to present the role of net investment income in the current account in Poland's balance of payments and to investigate the main factors driving net investment income. For this purpose specifically the impact of net foreign assets and exchange rate on the income balance was examined, using quarterly time series data for the period from 2004 to 2022.

The study contributes to better understanding of changes in net investment income and dynamics of external position of Poland. The relevance of such a study is becoming increasingly important, as over recent decades, the deficit in Poland's investment income balance has increased significantly, making the debate on the role of foreign capital in financing the development process crucial.

## 2. An overview of the literature

The historical and empirical evidence suggest that persistent and large current account deficit increases country's vulnerability to disruptions in international capital flows. The long-term negative current account balance results in an increase in the country's foreign debt, which may lead to a decrease of credibility on the international markets (Kaminsky, 1998). This could in turn cause a lower inflow of foreign capital (or even a capital flight from domestic market) and an increase in the cost of financing, as a premium for growing risk resulting from the deteriorating creditworthiness of the debtor. In an extreme case, this may trigger a debt crisis, the consequence of which is the loss of external balance by the country (UN/DESA, 2016).

Traditionally, country's current account dynamics were mainly driven by trade balance. However, the rapid growth of foreign assets and liabilities over the last decades, both in absolute terms and in relation to GDP, had an impact on the value of income flows and the balance of investment income. According to (Behar, Hassan, 2022) the net income is at least half of the trade balance in half of the world's countries and the income balance exceeds the trade balance in 20 percent of countries. (Forbes et al., 2016) have pointed out that net investment income now constitutes a larger share of the current account deficit than trade balance in a number of countries, such as South Africa, Colombia, Peru, Brazil, Australia, New Zealand, Indonesia, Chile and Mexico. Moussa (2016) examined the main components of Sub –Saharan Africa's balance of payments and found that, since 1984, investment income payments, due to net payments to foreign direct investors, have been the main source of the deficit in their current accounts. Also Strauss (2015) pointed out that interest and dividend payments to foreign investors in its debt and equity markets determine South Africa's current account deficit. Lane (2015) claimed, that a drop in net foreign direct investment income, has been the primary factor in the recent deterioration in the United Kingdom's current account balance, with the trade balance relatively stable.

Considering above, the investment income balance has gained importance as a driver of the current account in many countries. Large current account deficits are not synonymous with large trade deficits, but could be the result of a negative investment income balance (Forbes et al., 2016). This means that the assessment of risks arising from a negative current account balance should also take into account the impact of changes in the balance of investment income.

The link between the balance of investment income and the current account balance has not been the subject of frequent analyses in the literature. (Forbes et al., 2016) investigated the role of financial components of current account for the risks related to the current account in a sample of OECD economies and found that they are increasingly important source of county's vulnerabilities related to current account. The results of (Behar, Hassan, 2022) show that the income balance may destabilize the current account through a liability trap. A country with

a higher net external liability position will tend to have a more negative income balance, a bigger deficit on current account and more net foreign borrowing needs, which in turn would decrease the income balance. However, they argue that the net investment could potentially stabilize the current account balance, due to a negative correlation with the trade balance.

Investment balance should be positively related to country's net foreign assets (Aberola, 2018), because it is generated by external assets and liabilities. The growing involvement of foreign investors in the domestic economy (increase in foreign liabilities) results in an increase in income paid to foreign entities. On the other hand, increasing investments of domestic entities abroad (increase in foreign assets) lead to an increase in income from foreign investments. Countries with a negative net foreign assets (an excess of foreign liabilities over assets, indicating that the country is a net debtor) tend to have a deficit in investment income balance, which has a negative impact on the current account balance, and conversely.

At the same time, the exchange rate should affect investment income balance. This is because foreign assets and liabilities are denominated in foreign currencies (Hattori et al., 2023). The impact of a change in the exchange rate is not straightforward. The currency denomination of foreign assets and foreign liabilities has mechanical effects on the investment income balance. An appreciation (depreciation) would decrease (increase) both inflows and outflows. But the net effect depends on the relative sizes of investment income receipts and payments as well as their currency denomination. In countries with a value of foreign liabilities significantly higher than the value of its foreign assets an appreciation would likely result in decrease in the income balance. Conversely, in countries with a large net creditor position, an appreciation would likely lead to an increase in the income balance (Colacelli et al., 2021). However, the exchange rate could also affect income flows through other channels, such as profitability (and hence investment income). A depreciation that increases exports would contribute to the profitability of domestic foreign direct investment and therefore profits (Joyce, 2019).

Relatively few studies have investigated empirically the determinants of net investment income. (Alberola et al., 2018) analysed the impact of foreign stock positions on the current account balance and its components and found that the income balance was mostly determined by the net foreign assets position while exchange rate had no significant effect.

Joyce (2019) examined the investment income flows of a group of 26 emerging market economies over the period of 1995 to 2015. He analysed the determinants of net investment income and found that total net investment income rises in response to increase in country's net international investment position. The results for the disaggregated income flows demonstrate that they respond to different factors. The openness of an economy can lead to outflows of income from direct investments, but capital openness has the opposite effect on income from other sources. Financial development, which is not significant for direct investment flows, affects income from portfolio investments. Other investments' income and the income from foreign exchange reserves have a negligible role in total investment income.

Colacelli et al. (2021) regressed the investment income flows on the exchange rate using a sample of more than 40 advanced and emerging economies. Separating income credits and income debits they found that an appreciation in the real effective exchange rate tend to decrease both inflows and outflows, mostly reflecting a mechanical effect due to the currency composition of the net foreign asset position. However, for large net creditor countries, the income balance response to exchange rate fluctuations may reinforce the trade balance response and reduce it in large debtors.

The same conclusions can be found in (Behar, Hassan, 2022). They use a similar approach as (Colacelli et al., 2021) in order to estimate elasticities with respect to the exchange rate but for a broader country sample. They find that the income balance is generally not a significant channel through which the exchange rate stabilizes the current account. This is to some extent due to the fact that income debits and credits offset each other in response to exchange rate changes. Depreciations tend to deteriorate investment income deficits and increase surpluses.

Hattori et al. (2023) investigated the impact of the exchange rate on income balance in Japan. They regressed not only net income but also income credit and debit separately in order to avoid the offsetting effects on the flows of income. They found that the real effective exchange rate does not affect income balance, both on gross and net basis. They also showed that accumulation of net foreign assets has fostered the income balance surplus in Japan. The gross level results indicate that foreign assets or debts have statistically significant impacts on income flows, while the real effective exchange rate is non-significant (Hattori et al., 2023).

Limbergen (2020) investigated EU Member States with persistent net investment income deficit. By comparing two groups of countries: potentially exposed to Aggressive Tax Planning (ATP) behaviour and catching-up countries, they determined variables that have a similar effect on the investment income balance for both groups of countries (such as net international investment position or the foreign-owned share of gross value added) and variables that differentiate between them (which relate to multinational enterprises activity and special purpose entities activity).

## 3. Trends in investment income and current account balance in Poland's balance of payments

The balance of investment income in the analysed period was characterized by a persistent deficit and additionally because of the faster growth of payments than receipts, it was deepening (Figure 1). In the years 2004-2022, the deficit in this item of the balance of payments more than doubled and in 2022 it amounted to -4.1% of GDP. The development of the economy based on foreign capital resulted in a growing burden of the costs of servicing foreign liabilities.
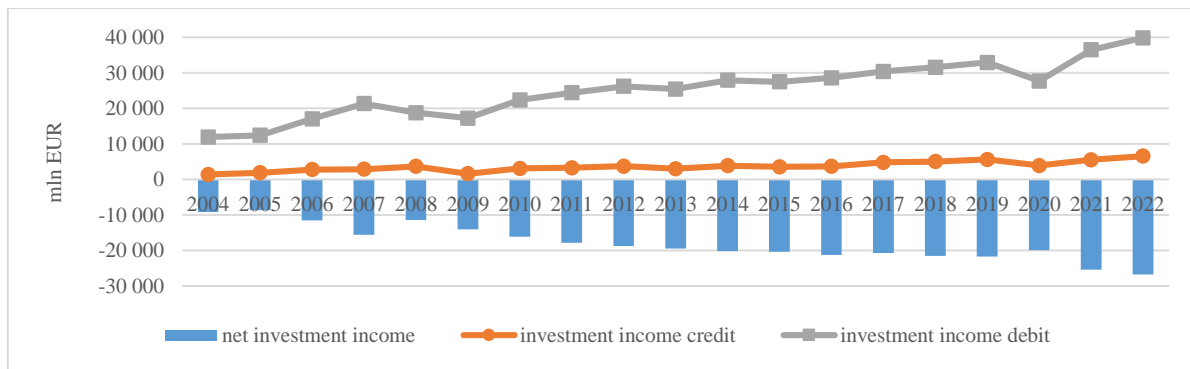
**Figure 1.** Investment income in Poland's balance of payments in 2004-2018 (EUR million).

Source: NBP.

Figure 2 shows the time series of Poland's current account balance and it's components. As Poland's primary income balance is composed mainly of net investment income in further considerations, primary income and investment income balance will be treated as equal. The composition of current account balance has changed over time, with increasing investment income deficit. During 2004 -2008 the deficit of current account in Poland was growing due to negative both trade and investment income balances. After the global financial crisis the current account improved in tandem with a trade balance. However, a rising trend of the trade balance has been offset by an downward trend in the investment income balance. Changes in the net investment income contributed to the deterioration of the current account balance. The scale of the impact of the net investment income on the current account balance increased in the analysed period. Currently, the net income investment is a serious cause of external imbalance in the economy. The secondary income balance remained low and relatively stable over the whole period, increasing only moderately in recent years.
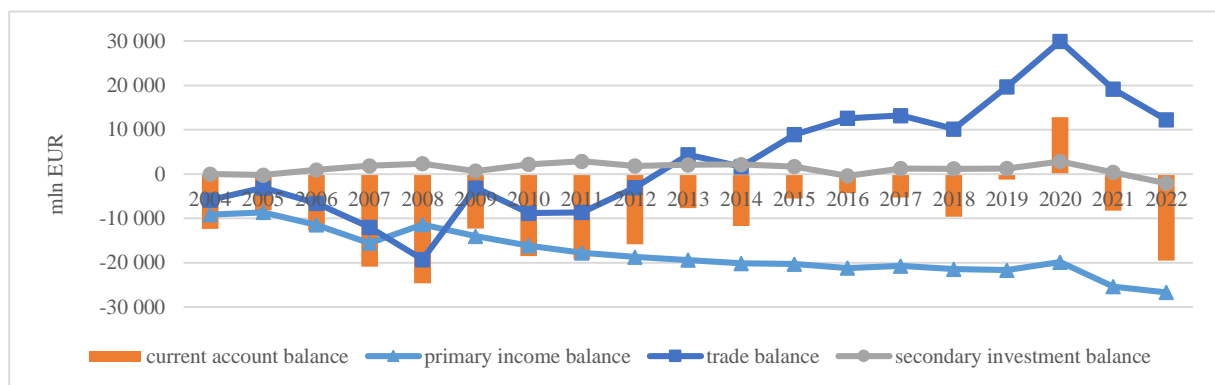


Note: The trade balance is identified with the difference between value of export and import of goods and services.

**Figure 2.** Current account balance and it's components in Poland's balance of payments in 2004-2018 (EUR million).

Source: NBP.

## 4. Research methods

In line with the objective of this study, to empirically examine the influence of net foreign assets, exchange rate and GDP growth on the investment income balance in Poland, secondary, quarterly data, spanning from 2004 to 2022 were used. The selection of period is based on the availability of data. The ordinary least squares (OLS) regression model was used to test the relationship among the selected variables. The estimated model in this work is based on (Hattori et al., 2023). The empirical analyse is based on the following equitation:

$IB_t = \alpha_0 + \alpha_1 NFA_{t-1} + \alpha_2 \triangle \ln(REER)_{t-1} + \alpha_3 GDP\ Growth_{t-1} + \varepsilon_t,$
where (at time t):

$IB_t$ – investment income balance scaled by GDP,

$NFA_t$ – net foreign assets scaled by GDP,

$REER$ – real effective exchange rate,

$GDP\ Growth$ – GDP growth rate,

$\varepsilon_t$ – error term.

Lagged values of the determinant variables are used to avoid endogeneity (Joyce, 2019).

The data collected from the Central Statistical Office, National Bank of Poland and OECD were used.

## 5. Results of the research

The results of the analysis of the determinants of net investment income are presented in Table 1. Model 1 is an estimate with only the NFA variable included, model 2 with the NFA and REER variables included, and model 3 with all three variables. With respect to the first variable in the equation the regression provides the expected result. The coefficient of NFA has a statistically significant, positive impact on the investment income balance. Net income rises in response to an increase of one percent in a country's NIIP/GDP by 0,008 of a percent of GDP. This relationship remains significant also when the REEF and GPD Growth control variables are included. This finding is in line with literature which claims that there is a positive relationship between net investment income and net financial asset (Joyce, 2019; Aberola et al., 2020; Hiattori et al., 2023).

**Table 1.**

*The OLS estimation results of modelling Net Investment Income/GDP in the period 2004-2022*

| Variables | Coefficient | Std. Error | t-Statistic | P-value |
|---|---|---|---|---|
| | N = 74 model 1 | | | |
| Constant | -0,024850 | 0,004485 | -5,54103 | 0,000000 |
| NFA | 0,008977 | 0,002067 | 4,34304 | 0,000045 |
| | N = 74 model 2 | | | |
| Constant | -0,025793 | 0,004503 | -5,72828 | 0,000000 |
| NFA | 0,008564 | 0,002073 | 4,13051 | 0,000097 |
| Δln (REER) | 0,038396 | 0,027053 | 1,41930 | 0,160188 |
| | N = 74 model 3 | | | |
| Constant | -0,0255 | 0,0046 | -5,5164 | 0,0000 |
| NFA | 0,0086 | 0,0021 | 4,1196 | 0,0001 |
| Δln (REER) | 0,0388 | 0,0273 | 1,4250 | 0,1586 |
| GPD Growth | -0,0002 | 0,0005 | -0,3480 | 0,7289 |

Note. For variables definitions and sources see section 4. N – number of observations. Significance was tested for $\alpha = 0.05$.

Source: Author's computation using STATISTICA version 13 Software.

As the value of Poland's foreign liabilities is significantly higher than the value of assets we could predict that a depreciation of exchange rate would also increase the value of payments of foreigners, resulting in an increase in the net income deficit. Results of research indicate that REER has statistically insignificant impact on net investment income, what is inconsistent with expectations. However, similar results has been found by Hattori et al. (2023) and Alberola et al. (2018, 2020). The statistical insignificance of exchange rate to income balance requires further examinations, which should take into account the currency structure and components of income balance. GDP growth variable also does not significantly affect investment income balance.

## 6. Conclusions

A deepening integration with international financial markets and investments of foreign capital in domestic economy led to changes in investment income flows in Poland's balance of payments. Due to investment income debits significantly larger than credit, an net investment income has consistently registered deficits in the analysed period. The results of empirical research show that net foreign assets have a strong impact on investment income balance. Net income deficit rises in response to increase in negative net foreign assets in relation to GDP. The research on the subject should be continued, in order to make the obtained results more detailed. Further analysis could disaggregate income flows and their currency composition in order to examine how they respond to different factors.

The results of research demonstrate that investment income balance become a significant component of Poland's current account in the analysed period. Servicing foreign liabilities absorbs a significant part of export revenues. This may mean difficulties with balancing the current account and improvement of the external position of Poland. If the deficit in the income account continues to deepen, balancing the current account will need a continuous increase in the trade balance, what requires reducing the level of national absorption. Moreover the rising deficit in net investment income in relation to trade balance makes the external stability of the economy more dependent on changes in the level of profitability of financial assets in the global market.

The study contributes to better understanding of changes in investment income balance and vulnerabilities of external position of Poland. Thus explaining the factors influencing current account is important for better designing the policies aiming at reducing the risks arising from the current account deficit and ensuring external balance of the economy. A policy suggestion is that, an economy in order to grow needs both foreign and domestic investment, however in order to reduce imbalance between payments and receipts in investment income flows, efforts should be made towards promoting domestic investments abroad. Another policy suggestion is that, in order to reduce the risks arising from dependence on foreign financing, government should strengthen policies aimed at mobilizing the accumulation of domestic savings to provide financial base for investment and accelerate economic growth.

# References

1.  Adamu, P, Audu, J. (2018). Impact of Trade Balance on Current Account of ECOWAS Member Countries. *International Journal of Trade, Economics and Finance*, *Vol. 9, No. 6*.
2.  Alberola, E., Estrada, Á., Viani, F. (2020). Global imbalances from a stock perspective: The asymmetry between creditors and debtors. *Journal of International Money and Finance*, *No. 107,* 102206, https://doi.org/10.1016/j.jimonfin.2020.102206.
3.  Behar, A., Hassan, R. (2022). The Current Account Income Balance: External Adjustment Channel or Vulnerability Amplifier? *IMF Working Paper, No 106*.
4.  Butzen, P., Deroose, M., Ide, S. (2014). Global Imbalances and Gross Capital Flows. *NBB Economic Review*, *September*, 39-60.
5.  Colacelli, M., Gautam, D., Rebillard, C. (2021). Japan's Foreign Assets and Liabilities: Implications for the External Accounts. *IMF Working Papers, No. 26*.
6.  Forbes, K., Hjortsoe, I., Nenova, T. (2016). Current account deficits during heightened risk: menacing or mitigating? *NBER Working Paper Series, No. 22741*.

7.  Hattori, T., Tomita, A., Asao, K. (2023). The accumulation of income balance and its relationship with real exchange rate: Evidence from Japan. *PRI Discussion Paper Series, No. 23*.

8.  Joyce, J. (2019). The sources of international investment income in emerging market economies. *MPRA Paper*, *No. 96568*. Retrieved from: https://mpra.ub.uni-muenchen.de/96568/, 10.04.2023.

9.  Kaminsky, G. (1998). Leading Indicators of Currency Crises. *IMF Staff Papers*, *vol. 45, no. 1*.

10. Lane, P. (2015). A Financial Perspective on the UK Current Account Deficit. *National Institute Economic Review*, *Vol. 234, Iss. 1,* https://doi.org/10.1177/002795011523400114.

11. Limbergen, D. (2020). Revisiting the investment income balance. What makes some EU countries different? IFC Bulletins chapters. In: *Bank for International Settlements*, *Bridging measurement challenges and analytical needs of external statistics: evolution or revolution? Vol. 52*. BIS.

12. Moussa, N. (2016). Trade and Current Account Balances in Sub-Saharan Africa: Stylized Facts and Implications for Poverty. *Trade and Poverty Paper Series, No. 1*. UNCTAD.

13. NBP (2019). *Statystyka bilansu płatniczego. Uwagi metodyczne*. Warszawa: Departament Statystyki NBP. Retrieved from: https://nbp.pl/statystyka-i-sprawozdawczosc, 2.02.2023.

14. NBP. *Bilans płatniczy*. Retrieved from: https://nbp.pl/statystyka-i-sprawozdawczosc/statystyka-bilansu-platniczego/bilans-platniczy/dane-roczne/, 2.05.2023.

15. Romelli, D., Terra, C., Vasconcelos, E. (2018). Current account and real exchange rate changes: The impact of trade openness. *European Economic Review*, *Vol. 105*. Retrieved from: sciencedirect.com/science/article/abs/pii/S001429211830045, 12.05.2023, https://doi.org/10.1016/j.euroecorev.2018.03.009.

16. Strauss, I. (2015). Understanding South Africa's current account deficit: The role of foreign direct investment income. *Africa Economic Brief, Vol. 6, Iss. 4*.

17. UN/DESA (2016). *World Economic Situation and Prospects 2016*. New York: United Nations.