

COMPARATIVE ANALYSIS OF THE YIELD OF FOREIGN INVESTMENTS IN BULGARIA AND ROMANIA

ПОРІВНЯЛЬНИЙ АНАЛІЗ ДОХІДНОСТІ ІНОЗЕМНИХ ІНВЕСТИЦІЙ БОЛГАРІЇ ТА РУМУНІЇ

UDC 339.7

DOI: <https://doi.org/10.32843/infrastruct61-6>**Rodionova Tatiana**

PhD in Economics,

Senior Lecturer at the Department of World Economy

and International Economic Relations, Odesa I.I. Mechnikov National University

Sheiko Valeriia

Student

Odesa I.I. Mechnikov National University

The purpose of this research paper is to analyze the profitability of external and domestic foreign investments of Bulgaria and Romania. For these countries, the return on foreign investment has reached a significant value, and the values of the coverage ratio are quite high. At the same time, national investors receive small returns relative to the size of their investments. The results of the study are not surprising because almost immediately after joining the European Union, Bulgaria and Romania faced economic crises and their economic systems were severely tested. Both states find themselves in a new, unfamiliar environment. Bulgaria and Romania must use investment opportunities to increase consumption and income. Meanwhile, foreign investment is a source of additional funds to finance domestic investment only as long as the repatriation of profits does not exceed these investments, because the heavy debt burden entails relatively high debt service. However, these countries need to invest in more countries in order to improve their investment returns on the current account.

Key words: yield, direct investment, portfolio investment, other investment, capital flow, coverage ratio, income, payment.

Данная статья направлена на анализ доходности иностранных инвестиций Болга-

рии и Румынии. Для этих стран доход от иностранных инвестиций достиг значительных размеров, а значения коэффициента покрытия достаточно высоки. При этом национальные инвесторы получают небольшой доход по отношению к размеру своих вложений. Результаты исследования не удивительны, поскольку почти сразу после присоединения к Европейскому Союзу Болгария и Румыния столкнулись с экономическим кризисом, и их экономические системы подверглись серьезным испытаниям. Оба государства оказались в новых, незнакомых условиях. Болгария и Румыния должны использовать инвестиционные возможности для увеличения потребления и увеличения своих доходов. Инвестиции являются источником дополнительных средств для финансирования внутренних потребностей только до тех пор, пока репатриация прибыли не превысит эти инвестиции, поскольку тяжелое долговое бремя влечет за собой относительно крупное обслуживание долга. В то же время этим странам необходимо вкладывать средства в большее количество стран, чтобы повысить свой инвестиционный доход по счету текущих операций.

Ключевые слова: доходность, прямые инвестиции, портфельные инвестиции, прочие инвестиции, движение капитала, коэффициент покрытия, доход, платеж. Ця стаття має на меті проаналізувати прибутковість іноземних зовнішніх та внутрішніх інвестицій Болгарії та Румунії. Для цих країн склалася ситуація, коли дохід від іноземних інвестицій досяг значних розмірів, а значення коефіцієнта покриття досить високі. При цьому національні інвестори отримують невеликий дохід по відношенню до розміру своїх інвестицій. За останнє десятиліття країни значно поглибили свою інтеграцію у світові фінансові ринки шляхом вступу до Європейського Союзу. Члени Європейського Союзу виявили інтерес до інвестування в Болгарію та Румунію, що призвело до зростання економічних і соціальних показників. Результати дослідження не дивують, оскільки майже відразу після вступу до Європейського Союзу Болгарія та Румунія зіткнулися з економічною кризою, а їхні економічні системи зазнали серйозних випробувань. Обидві держави опинилися в нових, незнайомих умовах: по-перше, вони зіткнулися з необхідністю вирішення економічних проблем, які багато в чому мали причини та наслідки у глобальному масштабі; по-друге, як члени ЄС вони були зобов'язані діяти в рамках спільної та єдиної європейської економічної політики. Сьогодні країни все ще долають відлуння криз, проводять активні реформи як в економічній, так і в ряді інших систем. Для таких країн важливо, щоб накопичення зовнішніх зобов'язань прискорювало процес економічного зростання. Болгарія та Румунія повинні використовувати інвестиційні можливості для збільшення споживання та збільшення своїх доходів. Водночас іноземні інвестиції є джерелом додаткових коштів для фінансування внутрішніх інвестицій лише до тих пір, поки репатриція прибутків не перевищить ці інвестиції, оскільки важкий борговий тягар тягне за собою відносно велике обслуговування боргу. Болгарія та Румунія є країнами, для яких прибуток інвестицій дійсно важливий для розбудови подальшої політики у цій сфері, оскільки інвестиції не тільки дозволили відкрити нові виробничі потужності, створити додаткові робочі місця та підвищити конкурентоспроможність країн, але й покращити інфраструктуру, а також призупинити процес еміграції молодшої висококваліфікованої робочої сили.

Ключові слова: дохідність, прямі інвестиції, портфельні інвестиції, інші інвестиції, потік капіталу, коефіцієнт покриття, дохід, оплата.

Formulation of the problem. Today, international investment activities are among the determining factors in terms of their scale and impact on national economies and global economic processes. Given the continued uncertainty in the dynamics of the world economy in recent years, which has revealed the imbalance of international capital flows and the presence of a significant speculative component in the strategies of international investors, the study of foreign investment returns is of particular relevance. Many factors influence the level of profitability:

macroeconomic indicators, the political and social situation in the country, as well as the reputation and international competitiveness. The relevance of this research paper is a comparative analysis of the profitability of foreign investment of Bulgaria and Romania. These countries are one of the few examples of accession to the European Union of once socialist countries.

Analysis of recent research and publications. T. Rodionova in her monograph (2015) investigated the return on foreign investment in emerging market

countries, namely the impact of the return on foreign investment on the formation of foreign economic imbalances (deterioration of current account dynamics and growth of foreign debt) [3, p. 69]. The monograph examines the period 2000–2010, and it should be noted that the coverage ratios of Bulgaria and Romania were significantly lower than in the period examined in this article.

In a study of current account stability in transition economies, N. Rubini and P. Watchell noted the importance of the composition and size of foreign capital flows in assessing the stability of the current account [2, p. 43]. Current account deficits that are financed by large FDI inflows are more sustainable than deficits that are financed by short-term flows, which can stop if market conditions change.

There is also a large number of studies aimed at identifying the impact of various financial and socio-economic factors on the profitability of foreign investment. Among them it is possible to distinguish studies by A. Ghosh [3, p. 54]; S. Claessens [4, p. 153–174], J. Blouin [5, p. 43] and T. Bracke [6, p. 45–78].

Problem statement. The purpose of this study is to estimate the amount of income received by Bulgarian and Romanian national investors from foreign investments, as well as the amount of income of foreign investors.

Presentation of the main material of the study. The concept of return on foreign investment as a factor in the dynamics of international capital can be studied either from the perspective of individual investors or from the perspective of the country receiving these investments. Revenues from investment flows are becoming increasingly important as elements of bridging the economic gap between emerging and developed countries. The cost of servicing these investments plays an important role in assessing priorities for attracting certain forms of foreign investment. To compare the scale of repatriation of profits of foreign investors and the corresponding received investment flows for a certain period of time, T. Rodionova introduced and developed the concept of "foreign investment coverage ratio".

$$\text{CoverInw}^x = \frac{\sum \text{INCd}_t^x}{\sum L_t^x}, \quad (1)$$

where CoverInw^x is the coefficient of coverage of inward foreign investments of type x (direct, portfolio and other investments) for a certain period of time. According to formula 1, the return on foreign investment attracted in Bulgaria and Romania is calculated as the ratio of investment income payments by the country (INCd^x – current account debit on liabilities of type X – direct, portfolio or other investments) to the accumulation of external liabilities (L) of type X . The following formula is used to determine the coverage ratios and profitability of foreign investment outflows:

$$\text{CoverOutfl}^x = \frac{\sum \text{INCC}_t^x}{\sum A_t^x}, \quad (2)$$

where CoverOutfl^x is the coverage ratio of outward foreign investments of type x (direct, portfolio and other investments) for a certain period of time. According to formula 2, the yield on outward foreign investment from Bulgaria and Romania is calculated as the ratio of investment income payments received by the home country (INCC^x – current account income credit on assets of type X – direct, portfolio or other investments) to the accumulation of external assets (A) of type X . To calculate the coverage ratio of incoming and outgoing foreign investments, annual data from 2005 to 2020, taken from the Balance of Payments Statistics of the International Monetary Fund.

Based on the data on the attraction of foreign investment in Bulgaria and Romania, calculations were carried out to build a database with the structure of the outflow of investment income. Analysis of the data obtained showed that in Bulgaria from 2005 to 2020 the share of outflows of foreign direct investment income in the total outflows of investment income is 77% (\$ 38 837 million), the share of outflows of portfolio investment income is 5% (\$ 2 428 million) and the share of outflows of other investment income is 18% (\$ 8 813 million). For Romania, the share of outflows of foreign direct investment income in total outflows of investment income is 61% (\$68,989 million), the share of outflows of portfolio investment income is 13% (\$15,059 million) and the share of outflows of other investment income is 26% (\$27,589 million).

The results of the calculation of the average return on investment for Bulgaria and Romania are presented in Table 1.

Table 1

Average return on incoming investments from 2005 to 2020, %

Country	FDI	Portfolio	Other
Bulgaria	7,52	4,88	2,67
Romania	6,68	6,59	2,49

Source: authors' calculations, IMF (2021)

Based on the resulting calculations, the highest return on incoming investments for the period 2005–2020 was received by foreign investors on direct investments in Bulgaria. The rate of yield on direct investments in Bulgaria was 7.52%. Returns on direct and portfolio investments in Romania are 6.68% and 6.59%, respectively, with the lowest returns for foreign investors from other investments in Romania. It can be noted that the average return in Bulgaria is higher than in Romania, only the return on portfolio investments in Romania is higher than the value of the Bulgarian indicator.

Nominally, over the last 16 years, Romania has received more foreign capital than Bulgaria. At the same time, the ratio of the amount of outflows of income from foreign investment to the total inflow of investment was also higher in Romania (about 65%), in Bulgaria the coverage ratio was 60%. The ratios of outflows of foreign investment income to the corresponding cumulative financial account receipts are shown in Table 2.

Analyzing the individual investment categories, it can be noted that portfolio investments account for the largest share of income in Bulgaria. The share of portfolio investments is 82%. The share of income from direct investments is slightly lower – 63%. Investment repatriation on other investments for the same period was 57%. Thus, it can be concluded that the inflow to Bulgaria's financial account exceeds the repatriation of investment income, which is 60%.

Foreign investment revenues of \$111 billion were repatriated from Romania between 2005 and 2020. The country received \$169 billion over the same period, a coverage ratio of 65%. Payments on portfolio investments account for only 28% of the capital received. Other investment payments dominate, accounting for 139% of capital received. Direct investment payments account for 71% of the capital received.

The analysis of the dynamics of changes in coverage ratios separately for each year reveals certain peculiarities for Bulgaria and Romania. In

particular, the return on foreign direct investment of non-residents in Bulgaria did not exceed one until 2011 (Fig. 1). After 2013, the rate of return did not fall below one. This means that in such years, countries received less foreign investment than they exported income to foreign investors. The maximum was reached in 2018, when the return was 2.1. For Romania, this return only became greater than one in 2017 and reached 2.9 in 2020, indicating the negative impact of the Covid-19 pandemic on investment returns in Romania.

Considering the return on non-resident portfolio investments in Bulgaria, there was a shock situation in 2009, when this ratio rose to 4.7, which indicates the negative impact of the 2009 financial crisis on investment returns in Bulgaria (Figure 3). The following year already shows a negative value because of the negative value of this year's financial account. The period 2017–2019 also shows a negative value. In Romania, the maximum value was reached in 2015 and was equal to 4, the minimum value was observed in 2008 and was equal to -1.8.

Rates of return on other investments were fairly stable for both countries until 2009. Then the values began to change sharply every year. For Romania, the rate of return on other foreign investments was negative from 2012 to 2019. The maximum value was in 2011, when the indicator was just slightly more than 1. At the same time, for Bulgaria, the negative value of profitability was observed in the

Table 2

Ratio of outflows of foreign investment income to corresponding total financial account receipts (foreign investment coverage ratio), 2005–2020

Country	FDI	Portfolio	Other	Total revenue outflow, million dollars	Cumulative revenues in the financial account, millions of dollars	The ratio of income outflows to total investment inflows
Bulgaria	63%	82%	57%	50 078,9	79 108	60%
Romania	71%	28%	139%	111 538,8	169 024	65%

Source: authors' calculations, IMF (2021)

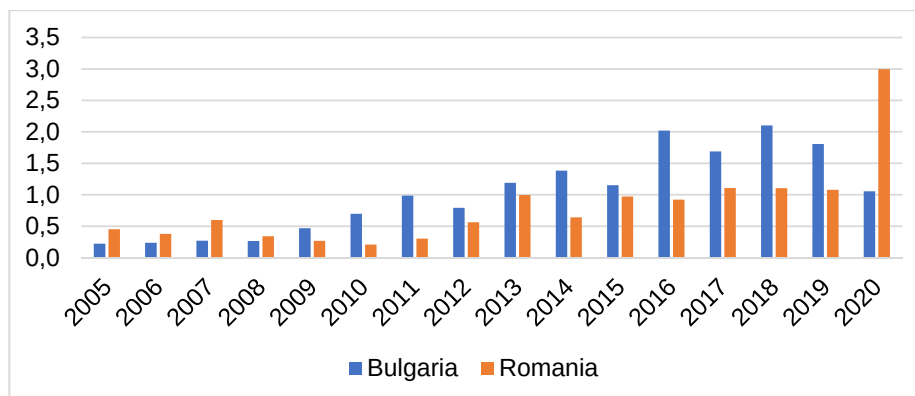


Fig. 1. Dynamics of return on direct incoming investments for the period 2005–2020

Source: authors' calculations

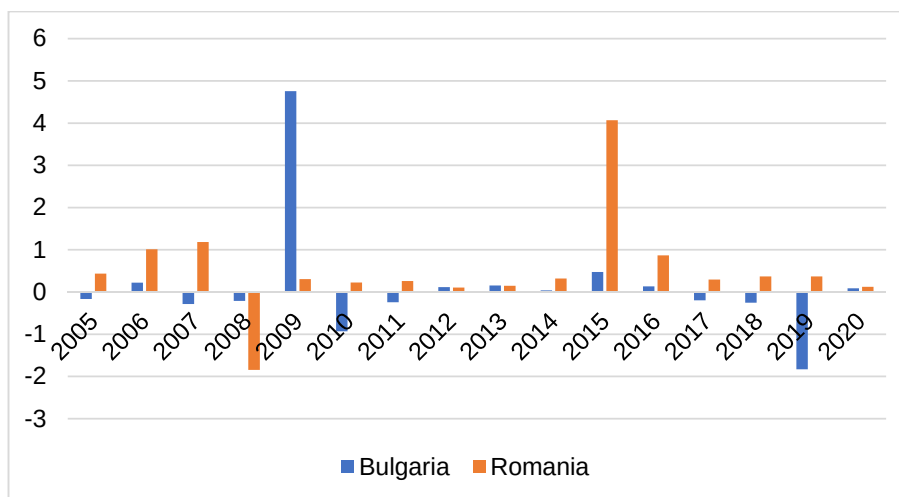


Fig. 2. Dynamics of returns on incoming portfolio investments for the period 2005–2020

Source: authors' calculations

period 2015–2017 and 2019–2020, and in 2018 the indicator showed a maximum value of 2.3.

Based on the Bulgarian and Romanian investment data, calculations were made to build a database with the structure of investment income inflow. The analysis of the obtained data showed that Bulgaria from 2005 to 2020 received income from direct investments in the amount of 1,024 million USD, which amounted to 13% of the total income. Portfolio investment income was 66% (\$5,008 million) and other investment income was 21% (\$1,503 million). During this period, Romania received income from direct investments in the amount of 459 million USD, which accounted for 11% of the total investment income. 48% of total income was income from portfolio investments. The share of income from other investments was 41%.

For a more detailed analysis the profitability of outgoing foreign investments was calculated. The calculation was made as a ratio of received payments of investment income from abroad (credit of current account income on assets of

type X – direct, portfolio or other investments) to the accumulation of external assets of type X. The results are presented in Table 3.

Table 3

Average return on investment outflows 2005–2020, %

Country	FDI	Portfolio	Other
Bulgaria	1,44	11,52	1,05
Romania	0,24	4,15	0,78

Source: authors' calculations, IMF (2021)

Thus, based on the calculations obtained, the highest return on foreign investment for the period 2005 – portfolio investment. The rate of return on direct investment from Bulgaria was 1.44%, which is higher than in Romania, where the rate of return on direct investment was only 0.24%. The rate of return on direct investment for Romania is the lowest. The return on Romania's portfolio investments was 4.15%, the highest for Romania. Returns on other investments in Romania and Bulgaria were

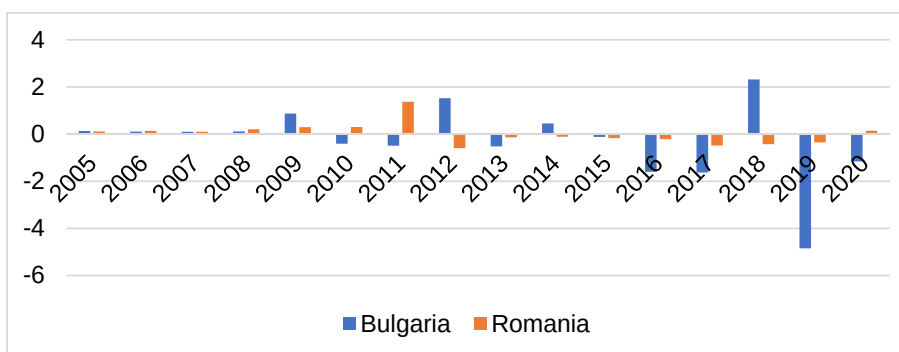


Fig. 3. Dynamics of return on incoming other investments for the period 2005–2020

Source: authors' calculations

almost at the same level. For Bulgaria, the return on other investments was 1.05%, and for Romania it was 0.78%. Thus, it should be noted that these countries have the highest returns on foreign portfolio investments.

Nominally, over the last 16 years Bulgaria has invested more capital than Romania. At the same time, the ratio of the amount of foreign investment income inflow to the total investment outflow was also higher in Bulgaria (about 23%), in Romania the coverage ratio was 10%. The ratios of total income inflows to the corresponding total expenditures in the financial account are presented in Table 4.

It can be concluded that the returns on investments made by investors in Bulgaria and Romania are very low. It is worth noting that in Bulgaria the largest share is obtained from portfolio investments – 36.49% of the capital. Payments of income to Bulgarian investors on other investments have a slightly lower percentage – 15.48%. Payments of income from direct investments for the same period are equal to 11.39%. For the entire period under review, Bulgaria received revenues of \$32 billion, corresponding to 23% of investments. Between 2005 and 2020, Romanian investors received a total of \$40 billion in foreign investment revenues. Payments to Romanian investors on portfolio investments have the highest percentage – 31.66%. Payments of Romania's income on other investments have a lower percentage – 6.57%. Payments of income from direct investments for the same period are equal to 5.22%.

Considering the returns on Bulgarian and

Romanian investments for each year, the returns on direct investments do not exceed 1 (Figure 4).

Only in 2009 and 2011, Romanian investors received more income than they invested. From 2010 to 2012–2014, Romanian direct investment returns were negative due to the negative current account income credit sign.

Returns on portfolio investments in Bulgaria and Romania also fluctuate around zero (Figure 5).

Only 2005 was a shock year for Bulgaria, when the yield on portfolio investments was -8. Then the returns far exceeded the assets of the financial account, which became negative. In 2011, income also exceeded the assets of the financial account, which was positive that year. For Romania, 2020 was marked by a significant income stream with a negative financial account.

Returns on other investments are also close to zero.

Like portfolio investment returns in Bulgaria in 2005, other investment returns declined significantly to -7, reaching 2 in 2010. Returns on other investments in Romania rose above one only in 2012 and 2013.

Conclusions. The results of the analysis of the structure of income received by foreign investors showed that the share of income from direct investment is the largest in the total income of Bulgaria and Romania. The next largest for these countries is income from other investments. Portfolio investment returns are the least significant. The result of calculating the returns on investments directed to Bulgaria and Romania showed that the most profitable investments are direct investments in

Table 4

The ratio of total income inflows to the corresponding total expenditures in the financial account (foreign investment coverage ratio) for the period 2005–2020

Country	FDI	Portfolio	Other	Total income inflow, million dollars	Cumulative outflow of all investments, million dollars	The ratio of income inflows to total investment outflows
Bulgaria	11,39%	36,49%	15,48%	7 537	32 413	23%
Romania	5,22%	31,66%	6,57%	4 100	40 313	10%

Source: authors' calculations, IMF (2021)

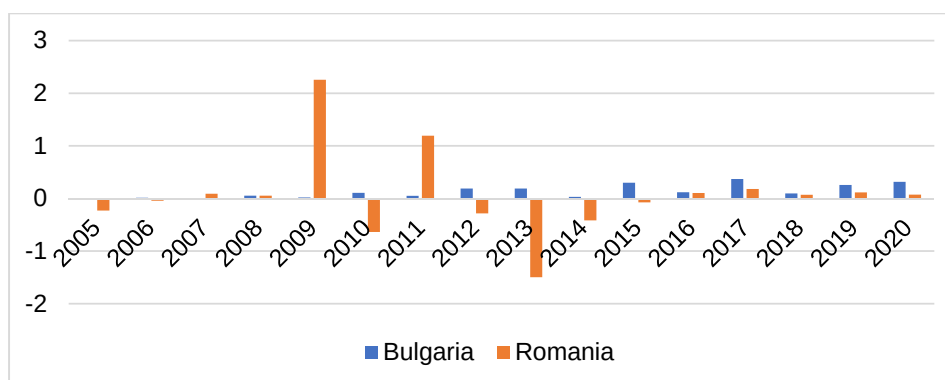


Fig. 4. Dynamics of return on direct outgoing investments for the period 2005–2020

Source: authors' calculations

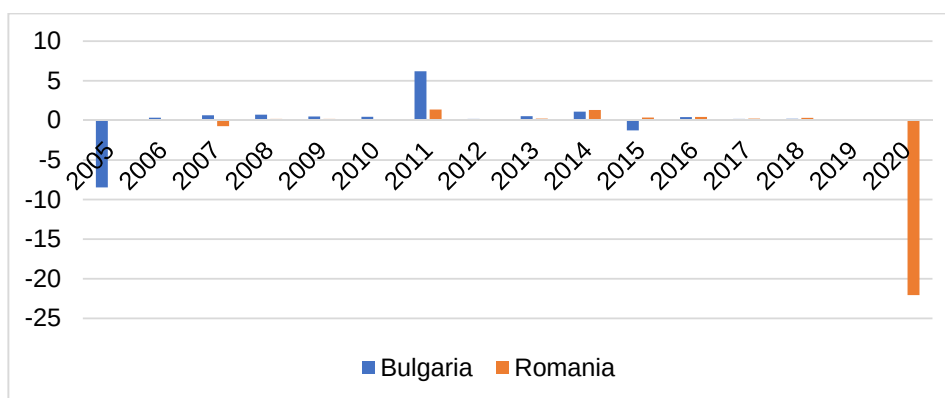


Fig. 5. Dynamics of return on outgoing portfolio investments for the period 2005–2020

Source: authors' calculations

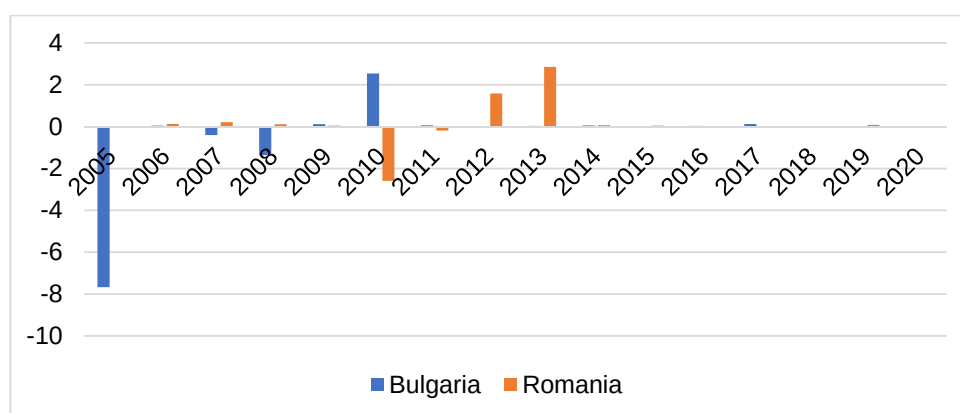


Fig. 6. Dynamics of return on outward other investments for the period 2005–2020

Source: authors' calculations

Bulgaria and Romania. Next, in terms of the level of return, are portfolio investments; other investments in the countries in question have the lowest level of return. For 16 years, foreign investors received more income in Romania than in Bulgaria. At the same time, the coverage ratio in Romania is higher than in Bulgaria. Analyzing the individual investment categories, it can be noted that portfolio investments account for the largest share of income in Bulgaria. This is followed by coverage ratios for direct and other investments. For Romania, coverage ratios for other investments exceeded 100%, meaning that investors received more income than they invested. Next is the value of coverage ratios for direct and portfolio investments. The analysis of the dynamics of changes in coverage ratios separately for each year showed that for Bulgaria and Romania the dynamics of return on direct inward investments grows every year, which may be a sign of deterioration of external sustainability. The dynamics of returns on incoming portfolio investments showed no trends, only Bulgaria experienced a shock in 2009, when the ratio rose to 4.7, indicating the negative impact of the

2009 financial crisis. In Romania, the maximum value was reached in 2015 and equaled 4. The dynamics of returns on other inward investments was quite stable for both countries until 2009. Then the values began to change sharply every year.

Analysis of the income structure of national investors in Bulgaria and Romania showed that the largest share belongs to portfolio investments for the two countries, followed by the share of other investments; income from direct investments has the smallest share. The average return on Bulgarian portfolio investment outflows exceeds all other returns on investment outflows. Romanian investors also receive the highest income from portfolio investments, although this income is almost 3 times less than the Bulgarian one. Bulgarian investors also receive 6 times more income from direct investments than Romanian investors. Over the past 16 years, Bulgaria has invested more capital than Romania. At the same time, the ratio of the amount of foreign investment income to the total investment outflow was also higher in Bulgaria (about 23%), in Romania the coverage ratio was 10%. It should be noted

that portfolio investment accounts for the largest share in Bulgaria and Romania, followed by direct investment and other investment. The dynamics of returns on outgoing direct investments showed that in 2009 and 2011 alone, Romanian investors received more returns than they invested. In 2005, portfolio investment returns for Bulgaria fell sharply to -8. For Romania, the year 2020 was marked by a significant inflow of income against the background of a negative financial account. The behavior of returns on other outward investments is similar to the behavior of returns on portfolio investments.

REFERENCES:

1. Rodionova T.A. (2015) The return of foreign investments in emerging countries: the impact on external imbalances. Odessa: Odessa I.I. Mechnikov National University, p. 69.
2. Roubini N., P. Watchell. (1998) Current Account Sustainability in Transition Economies. *NBER Working Paper*, no. 6468, p. 43.
3. Ghosh A. (2008) Capital Inflows and Balance of Payments Pressures – Tailoring Policy Responses in Emerging Market Economies. *IMF Policy Discussion Paper*, p. 54.
4. Claessens S., (1995) Portfolio Capital Flows: Hot or Cold? *World Bank Economic Review*, vol. 9, no. 1, pp. 153–174.
5. Blouin J. (2012) Where in the world are «permanently reinvested» foreign earnings? University of Pennsylvania, University of Oregon and Dartmouth College working paper, p. 43.
6. Bracke T. (2011) Channels of international risk-sharing: capital gains versus income flows. *International Economics and Economic Policy*. Springer, vol. 8, no. 1, pp. 45–78.
7. IMF Database. Available at: <http://data.imf.org/> (accessed 16 September 2021).