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ANALYZING DISEQUILIBRIUM IN THE BALANCE OF PAYMENTS: THE CASE OF BOSNIA AND HERZEGOVINA

Abstract

For many years, Bosnia and Herzegovina's current account balance has been in deficit. The goal of the research described in this paper is to investigate the causes and sources of financing this deficit. Hence, an analysis of disequilibrium measures in the balance of payments was conducted for the past five-year period, or, more precisely, from 2010 to 2014. The analysis comprised the standard measures of disequilibrium, as well as some currently not so frequently used measures such as the basic balance, the net liquidity balance and the official settlements balance.

The cause of the current account deficit is the merchandise trade balance deficit, which is higher than the sum of the balance of services, balance of primary income and balance of secondary income surpluses. This deficit is financed largely by foreign direct investment, but also by debt instruments based on other investment, because of which the country's external debt grows.

Given that the merchandise trade balance deficit was the main cause of Bosnia and Herzegovina's current account deficit, in order to solve this problem, the country has to stimulate exports of goods and reduce its import dependence. Simultaneously, the country needs to strengthen the balance of services surplus.

Keywords: The balance of payments, the basic balance, the net liquidity balance, the official statements balance, measures of disequilibrium

1. Introduction

For many years, Bosnia and Herzegovina's current account balance has been in deficit. The cause of this deficit is the merchandise trade balance deficit, which is higher than the sum of the balance of services, balance of primary income and balance of secondary income surpluses. In order to settle this deficit, Bosnia and Herzegovina has to sell state-owned property or go into debt abroad. However, both options can have far-reaching consequences for Bosnia and Herzegovina' economy. Moreover, these financing sources are not infinite. Given the surpluses in other components of the balance on the current account, Bosnia and Herzegovina

should stimulate a surplus in the merchandise trade balance and simultaneously strengthen the surplus in the balance of services.

The goal of this paper is to investigate the causes and ways of financing Bosnia and Herzegovina's balance of payments deficit. Likewise, the paper mentions some consequences that this financing has (or could have) on the country's economy, considering the fact that the Central Bank of Bosnia and Herzegovina functions on the principles of a currency board.

In the paper, there is an analysis of Bosnia and Herzegovina's balance of payments in the past five-year period, i.e. from 2010 to 2014. For the analysis, the data from the International Monetary Fund database *Balance of Payments Statistics* (BOPS) are used[1]. The balance of payments concepts and their components are shown on the presentational basis from the Sixth Edition Balance of Payments and International Investment Position Manual (IMF, 2009). However, their amounts are presented on the sign-based presentation basis, which is described in the Fifth Edition Balance of Payments Manual (IMF, 1993). According to the sign-based presentation, the negative sign means net foreign exchange outflow, and the positive sign means net foreign exchange inflow[2].

The structure of the paper is as follows. After the introduction, in the second section there is an explanation of the methodology of measuring disequilibrium in the balance of payments. Measures of disequilibrium in Bosnia and Herzegovina's balance of payments are analyzed in the third section. Besides the standard measures of disequilibrium, some currently not so frequently used measures are applied, but keeping in mind their limitations. These measures include the basic balance, the net liquidity balance and the official settlements balance. At the end of the paper, in the fourth section, the conclusion is given.

2. *Measures of Disequilibrium in the Balance of Payments*

In the accounting sense, the balance of payments, just as any other balance, always balances. The reason for this is the double-entry bookkeeping system whose application has, as a consequence, that the sum of all credit items must equal the sum of all debit items. In the context of the balance of payments, this equality is most often shown as equality between a current account balance on the one hand and a capital and financial account balance on the other. In other words, the current account balance must be equal to the capital and financial account balance with reversed sign[3]. As a result, the current account deficit will be financed or settled by the capital and financial account surplus.

However, the same interpretation is valid for any other disequilibrium item of the balance of payments. A deficit in any item (or in a group of items) of the balance of payments is financed by the sum of surpluses in all other items. Technically, analytical emphasis is most often indicated by drawing a line below a particular item. In this fashion, the items that are considered autonomous are above the line – they cause the items below the line, and the items that are below the line are considered financing or accommodating ones – they result from international transactions or they are needed for financing these transactions. Thus, by drawing the line in the balance of payments one can get useful information on the ways of financing deficit items.

Over time, it became usual to draw the line below certain items in the balance of payments and to analyze their balance. For instance, if the line is drawn below imports and exports of goods, the merchandise trade balance or the balance of goods arises. Given that imports and exports are, in this case, above the line, a deficit in this balance is financed by the net surplus in all items below the line. Furthermore, if imports and exports of services are added to the balance of goods, the balance of goods and services arises. This balance is a component of the gross domestic product. By drawing the line below income inflows and outflows, the balance of primary income is obtained, and below inflows and outflows of current transfers, the balance of secondary income arises. The balance of primary income together with the balance of goods and services are components of gross national income.

All the four mentioned balances, the balance of goods, the balance of services, the balance of primary income and the balance of secondary income make up the balance on the current account. The balance on the current account is a part of the gross national disposable income. Given the equality of this balance and the balance of the capital and the financial account (with reversed sign), this balance has a special meaning in a macroeconomic analy-

sis. A current account deficit "*is tantamount to an increase in the international indebtedness of reporting country*" (Chacholiades, 1990: 295). Reversely, a current account surplus "*represents an increase in the net foreign wealth of the reporting country*" (Chacholiades, 1990: 295). In other words, a current account surplus is referred to as net foreign investment, and a current account deficit is usually called the net foreign disinvestment.

If the line is drawn below the balance on the current account and long-term capital, the basic balance is obtained. This balance "*represents an attempt to measure underlying trends, abstracting from such 'volatile' transactions as short-term capital movements*" (Cooper, 1966: 384). Except for the differences in prices of goods and services, in the long run, this balance reflects the differences in investment opportunities among countries. Put another way, "*it reflects tastes and preferences of consumers, efficiency of producers, and the time preference of all decisionmaking units*" (Bach & Balbach, 1971: 9).

However, there are several problems in the interpretation and preparation of the basic balance.

First, a deficit of this balance must be financed by a surplus of short-term capital, so sustainability of this situation in the long run and the usefulness of this balance as an indicator of long run trends in economic transactions abroad are questionable. In other words, the basic balance can be a truthful indicator of long run trends solely if it is in equilibrium. Because of this, Pippinger (1973: 11) argues that "*a deficit or surplus on current account plus long-term capital financed by a short-term capital inflow is only temporary*".

Second, a deficit of the basic balance is not necessarily bad, if it arose due to investing abroad and if it will result in the future in return on investment. In addition, a surplus of this balance is not necessarily good if it is a result of going into debt abroad.

Third, there is a problem in the classification of capital into long and short-term capital. Because of this, Kenen warns that "*one can find as many transitory elements in the so-called 'basic' balance, even in direct investment, and one can also argue that short-term private capital has its structural component*". Furthermore, a part of long-term liabilities can be converted into short-term ones and short-term liabilities may be renewed and so get characteristics of long-term ones. In addition, the long-term component of portfolio investment may be as volatile as the short-term. According to Branson (1971: 222):

"*Portfolio capital reacts to changes in interest differentials and credit market conditions, rather than real investment incentive*".

Consequently, it is sometimes useful to compute the basic balance without portfolio investment, as Branson (1971) did.

The net liquidity balance is a result of drawing the line below the basic balance, short-term non-liquid capital, SDR allocation, and the net errors and omissions. In this fashion, short-term liquid capital, international reserves, liabilities to foreign official agencies and exceptional financing remain below the line. Hence, the net liquidity balance represents potential pressure on international reserves (Kemp, 1975: 20). In other words, foreigners may request conversion of their liquid claims into foreign exchange, which is a component of international reserves.

Similar to the basic balance, there are several difficulties in interpreting and computing this balance.

First, it is sometimes difficult to classify the capital into liquid and non-liquid. That which is by one criterion liquid, may be, by another criterion, non-liquid. Likewise, the net errors and omissions is the item above the line "*as if this item represents only nonliquid capital flows*" (Kuwayama, 1975: 187).

Second, given short-term private liquid capital, foreigners hold foreign exchange for transactions purposes as well, so it is inappropriate to consider all liquid liabilities to foreigners as potential pressure on international reserves. According to Kemp (1975: 20):

"*Only those foreign-held claims which are in excess of those desired for transactions purposes can be rightfully considered as a potential source of pressure on our reserve assets*".

Hence, short-term liquid capital, which is held by foreigners for speculative purposes, may be considered as a potential danger to international reserves. In addition, Kindleberger (1969: 880) notes:

"*The liquidity definition is appropriate to a crisis but not to the steady state. It is well known that bank reserves suffer from the dilemma that in ordinary times none are needed, and that in crisis 100 percent reserves are hardly sufficient*".

Kindlberger's statement is often confirmed in practice, so Stiglitz (2001: 13) points out:

"*In studies conducted on vulnerability prior to the East Asia crisis, short-term foreign denominated liabilities did not appear to have significant explanatory power in explaining crises. Since with free convertibility, domestic "money" can be converted into dollars, the entire money supply, not just externally held debt, could be viewed as a 'claimant'".*

Third, under certain circumstances, this balance may be considered as an indicator of long-term trends. For instance, if the net errors and omissions and short-term non-liquid capital by its nature are similar to long-term capital, then it is appropriate to analyze the net liquidity balance. However, if these two items are more similar to short-term capital, then the basic balance is more useful (Pippinger, 1973: 12).

The official settlements balance arises by drawing the line below the net liquidity balance and short-term liquid capital. Given that international reserves, liabilities to foreign official agencies and exceptional financing remain below the line[4], this balance represents net amount of total settlements, which are made by monetary authorities to finance international transactions. Hence, this balance may be observed as an indicator of direct pressure on international reserves. In comparison with the net liquidity balance, which is an indicator of potential pressure, i.e. pressure that will happen in the future, the official settlements balance is an indicator of pressure, which has already happened (Kemp, 1975: 21).

3. Analyzing Measures of Disequilibrium in Bosnia and Herzegovina's Balance of Payments

Bosnia and Herzegovina's balance of payments is presented in Table 1. Its current account is in deficit, and the capital and the financial account is in surplus. A positive sign of the net errors and omissions means that some of the foreign exchange inflows are not comprised statistically.

The causes of the current account deficit can be revealed by analysis of the current account structure, i.e. by analysis of the balance of goods, balance of services, balance of primary income and balance of secondary income. This is done in the next few sections.

3.1 The Balance on the Current Account
3.1.1 The Balance of Goods

A high deficit in Bosnia and Herzegovina's balance of goods is evident from Table 2. It will be shown later that this deficit is the only cause of the current account deficit. Imports of goods as well as exports reached their maximum in 2014. In relation to 2010, the exports imports coverage ratio fell in 2014 approximately five percentage points.

Table 1 The Balance of Payments

US Dollars, Millions

Concept	2010	2011	2012	2013	2014
CURRENT ACCOUNT	-1,030.66	-1,767.39	-1,498.58	-1,029.33	-1,401.44
CAPITAL ACCOUNT	263.66	253.72	220.29	228.67	346.23
FINANCIAL ACCOUNT	666.97	1,456.01	1,147.57	581.91	895.11
NET ERRORS AND OMISSIONS	100.03	57.65	130.72	218.74	160.09

Source: The International Monetary Fund database Balance of Payments Statistics (BOPS), Available at: http://elibrary-data.imf.org/FindDataReports.aspx?d=33061&e=170784 (Accessed on: April 15, 2015)

Table 2 The Balance of Goods

US Dollars, Millions

Concept	2010	2011	2012	2013	2014
Goods	**-5,022.38**	**-5,748.58**	**-5,251.31**	**-4,973.91**	**-5,491.56**
Credit	**3,230.77**	**4,109.86**	**3,837.31**	**4,363.28**	**4,490.23**
General Merchandise: Export	3,228.34	4,101.32	3,824.49	4,339.48	4,482.52
Non-monetary Gold: Export	2.43	8.54	12.82	23.81	7.71
Debit	**-8,253.15**	**-9,858.45**	**-9,088.62**	**-9,337.20**	**-9,981.79**
General Merchandise: Import	-8,248.93	-9,853.29	-9,084.97	-9,335.69	-9,980.55
Non-monetary Gold: Import	-4.22	-5.16	-3.65	-1.51	-1.24
Exports Imports Coverage in %	60.85	58.31	57.79	53.27	55.02

Source: The International Monetary Fund database Balance of Payments Statistics (BOPS), Available at: http://elibrary-data.imf.org/FindDataReports.aspx?d=33061&e=170784 (Accessed on: April 15, 2015), and author's calculations.

The growth rates of goods imports and exports in relation to the previous year and annually on average, are shown in Table 3.

It is needed to note that, on average, exports of goods rise 8.58%, and imports of goods rise 4.87%. Yet, given low exports /imports coverage ratio, and taking as a basis 2014, Bosnia and Herzegovina would need 22.96 years to balance its imports and exports of goods, i.e. that its exports /imports coverage ratio reaches 100%[5].

3.1.2 The Balance of Services

From 2010 to 2014, Bosnia and Herzegovina's balance of services was in surplus, which is evident from Table 4. However, in relation to the balance of goods deficit, this deficit amounted to only 26.34% in 2010 and 22.54% in 2014. The manufacturing services have the highest share in this deficit and traveling and transport services are next.

Table 3 Growth Rates of the Balance of Goods

%

Concept	2010	2011	2012	2013	2014	Annual growth rate
Goods	**-**	**14.46**	**-8.65**	**-5.28**	**10.41**	**2.26**
Credit	**-**	**27.21**	**-6.63**	**13.71**	**2.91**	**8.58**
General Merchandise: Export	-	27.04	-6.75	13.47	3.30	8.55
Non-monetary Gold: Export	-	251.44	50.12	85.73	-67.62	33.46
Debit	**-**	**19.45**	**7.81**	**2.74**	**6.90**	**4.87**
General Merchandise: Import	-	19.45	-7.80	2.76	6.91	4.88
Non-monetary Gold: Import	-	22.27	-29.26	-58.63	-17.88	-26.37

(-) Indicates that a figure is zero.
Note: The annual growth rate is calculated using geometric mean.
Source: Author's calculations

Table 4 The Balance of Services

US Dollars, Millions

Concept	2010	2011	2012	2013	2014
Services	**1,322.77**	**1,313.56**	**1,180.55**	**1,225.47**	**1,237.95**
Total Credit	**1,863.67**	**1,870.78**	**1,696.76**	**1,739.87**	**1,789.77**
Total Debit	**540.91**	**557.22**	**516.21**	**514.40**	**551.82**
Manufacturing Services on Physical Inputs Owned by Others, Credit	659.77	660.00	564.81	518.51	541.34
Manufacturing Services on Physical Inputs Owned by Others, Debit	-2.63	-12.02	-0.96	1.45	0.02
Maintenance and Repair Services n.i.e., Credit	2.98	2.60	3.26	0.76	1.11
Maintenance and Repair Services n.i.e., Debit	-5.11	-6.68	-6.39	-4.80	-3.04
Transport, Credit	281.47	326.40	302.38	333.83	345.15
Transport, Debit	-180.60	-208.31	-209.08	-220.35	-257.86
Travel, Credit	588.78	634.77	615.05	684.94	707.06
Travel, Debit	-193.68	-159.73	-139.33	-133.18	-135.22
Other Services, Credit	330.68	247.01	211.25	201.83	195.12
Other Services, Debit	-158.89	-170.49	-160.45	-157.51	-155.72

Source: The International Monetary Fund database Balance of Payments Statistics (BOPS), Available at: http://elibrary-data.imf.org/FindDataReports.aspx?d=33061&e=170784 (Accessed on: April 15, 2015)

Table 5 shows the growth rates of services imports and exports in relation to the previous year and annually on average.

Annual average growth rates of total credit and debit items in the balance of services are negligible. The other items of this balance changed more, annually on average, but due to their low share in the structure of the balance of services, they do not affect significantly the changes of total credit and debit items.

Table 5 Growth Rates of the Balance of Services

%

Concept	2010	2011	2012	2013	2014	Annual growth rate
Services	-	**-0.70**	**-10.13**	**3.81**	**1.02**	**-1.64**
Total Credit	-	**0.38**	**-9.30**	**2.54**	**2.87**	**-1.01**
Total Debit	-	**3.02**	**-7.36**	**-0.35**	**7.27**	**0.50**
Manufacturing Services on Physical Inputs Owned by Others, Credit	-	0.03	-14.42	-8.20	4.40	-4.83
Manufacturing Services on Physical Inputs Owned by Others, Debit	-	357.03	-92.01	-251.04	-98.62	-
Maintenance and Repair Services n.i.e., Credit	-	-12.75	25.38	-76.69	46.05	-21.88
Maintenance and Repair Services n.i.e., Debit	-	30.72	-4.34	-24.88	-36.67	-12.18
Transport, Credit	-	15.96	-7.36	10.40	3.39	5.23
Transport, Debit	-	15.34	0.37	5.39	17.02	9.31
Travel, Credit	-	7.81	-3.11	11.36	3.23	4.68
Travel, Debit	-	-17.53	-12.77	-4.41	1.53	-8.59
Other Services, Credit	-	-25.30	-14.48	-4.46	-3.32	-12.36
Other Services, Debit	-	7.30	-5.89	-1.83	-1.14	-0.50

(-) Indicates that a figure is zero.
Note: annual growth rate is calculated using geometric mean.
Source: Author's calculations

3.1.3 The Balance of Primary Income

Over the observed period, Bosnia and Herzegovina's balance of primary income was in surplus, which is apparent from Table 6. However, in comparison with the balance of goods deficit, this surplus was relatively small – in 2010, it amounted to 5.55% of the balance of goods deficit, and in 2014 it amounted to only 3.81%. The main cause of the primary income surplus was foreign exchange inflow based on the compensation of employees.

The growth rates of the primary income components in relation to previous year and annually on average, are presented in Table 7.

Table 6 The Balance of Primary Income

US Dollars, Millions

Concept	2010	2011	2012	2013	2014
PRIMARY INCOME	**279.52**	**149.67**	**155.80**	**226.91**	**209.51**
Total Credit	**596.66**	**665.33**	**572.02**	**573.68**	**628.73**
Total Debit	**-317.14**	**-515.66**	**-416.22**	**-346.77**	**-419.22**
Compensation of Employees, Credit	479.28	529.54	471.60	471.44	518.93
Compensation of Employees, Debit	-12.57	-13.01	-11.08	-10.74	-8.92
Investment Income, Credit	66.20	93.23	71.99	72.10	81.14
Direct Investment Income	3.63	2.20	3.70	-1.29	2.25
Portfolio Investment Income	...	...	...	...	...
Other Investment Income	35.44	49.26	35.73	36.48	36.69
Income on Reserve Assets	27.13	41.77	32.56	36.91	42.20
Investment Income, Debit	-304.57	-502.65	-405.14	-336.03	-410.30
Direct Investment Income	-78.55	-276.41	-206.64	-187.31	-262.71
Portfolio Investment Income	-0.89	-0.33	-1.07	-0.39	-0.10
Other Investment Income	-225.14	-225.91	-197.43	-148.34	-147.48
Other Primary Income, Credit	51.19	42.56	28.42	30.14	28.66
Other Primary Income, Debit	...	...	...	...	...

(...) Indicates a lack of statistical data that can be reported or calculated from underlying observations. Source: The International Monetary Fund database Balance of Payments Statistics (BOPS), Available at: http://elibrary-data.imf.org/FindDataReports.aspx?d=33061&e=170784 (Accessed on: April 15, 2015)

Annually on average, the primary income surplus fell 6.95%, which is evident from Table 7. The cause of this fall was the rise of debit items in amount of 7.23 in relation to the rise of credit items in amount of 1.32%. The growth of the debit items was caused by foreign exchange outflow based on foreign direct investment.

Table 7 Growth Rates of the Balance of Primary Income

%

Concept	2010	2011	2012	2013	2014	Annual growth rate
PRIMARY INCOME	-	**-46.45**	**4.10**	**45.64**	**-7.67**	**-6.95**
Total Credit	-	**11.51**	**-14.02**	**0.29**	**9.60**	**1.32**
Total Debit	-	**62.60**	**-19.28**	**-16.69**	**20.89**	**7.23**
Compensation of Employees, Credit	-	10.49	-10.94	-0.03	10.07	2.01
Compensation of Employees, Debit	-	3.50	-14.83	-3.07	-16.95	-8.22
Investment Income, Credit	-	40.83	-22.78	0.15	12.54	5.22
Direct Investment Income	-	-39.39	68.18	-134.86	-274.42	-
Portfolio Investment Income	-	-	-	-	-	-
Other Investment Income	-	39.00	-27.47	2.10	0.58	0.87
Income on Reserve Assets	-	53.96	-22.05	13.36	14.33	11.68
Investment Income, Debit	-	65.04	-19.40	-17.06	22.10	7.73
Direct Investment Income	-	251.89	-25.24	-9.35	40.25	35.23
Portfolio Investment Income	-	-62.92	224.24	-63.55	-74.36	-42.10
Other Investment Income	-	0.34	-12.61	-24.86	-0.58	-10.04
Other Primary Income, Credit	-	-16.86	-33.22	6.05	-4.91	-13.50
Other Primary Income, Debit	-	-	-	-	-	-

(-) Indicates that a figure is zero.
Note: annual growth rate is calculated using geometric mean.
Source: Author's calculations

3.1.4 The Balance of Secondary Income

The balance of secondary income is presented in Table 8. This balance has the highest surplus in Bosnia and Herzegovina's current account. In 2010 the secondary income surplus amounted to 47.58% of the balance of goods deficit, and in 2014 it amounted to 48.12%. Current transfers from financial and nonfinancial corporations, households and NPISHs have the highest share in this surplus[6]. Personal transfers make up a significant share in the secondary income surplus as well.

Table 8 The Balance of Secondary Income

US Dollars, Millions

Concept	2010	2011	2012	2013	2014
SECONDARY INCOME	**2,389.44**	**2,517.97**	**2,416.38**	**2,492.21**	**2,642.66**
Credit	**2,563.85**	**2,716.06**	**2,598.63**	**2,681.75**	**2,844.62**
General Government	234.28	212.27	208.55	224.70	255.06
Financial Corporations, Nonfinancial Corporations, Households, and NPISHs	2,329.57	2,503.79	2,390.09	2,457.05	2,589.56
Personal Transfers	1,343.03	1,428.69	1,374.11	1,457.27	1,543.09
Other Current Transfers	986.54	1,075.09	1,015.98	999.77	1,046.47
Debit	**-174.41**	**-198.10**	**-182.25**	**-189.54**	**-201.96**
General Government	-133.29	-149.42	-137.76	-142.28	-147.80
Financial Corporations, Nonfinancial Corporations, Households, and NPISHs	-41.12	-48.67	-44.50	-47.26	-54.15
Personal Transfers	-33.87	-38.67	-35.77	-37.71	-41.80
Other Current Transfers	-7.25	-10.00	-8.73	-9.55	-12.35

Source: The International Monetary Fund database Balance of Payments Statistics (BOPS), Available at: http://elibrary-data.imf.org/FindDataReports.aspx?d=33061&e=170784 (Accessed on: April 15, 2015)

In Table 9, the growth rates of the secondary income components in relation to the previous year and annually on average, are presented.

According to the data which are shown in Table 9, both mentioned current transfers mildly rise, so net secondary income rise as well, annually on average by 2.55%. Due to their small share in the secondary income structure, the growth rates of other items are negligible.

Based on the present analysis, it is possible to conclude that the main cause of Bosnia and Herzegovina's current account deficit is the balance of goods deficit. This deficit is so high that it cannot be financed by the sum of surpluses in the balance of services, balance of primary income and balance of secondary income. Hence, the current account deficit is financed by foreign exchange from the capital and financial account. The analysis of Bosnia and Herzegovina's capital and financial account is presented in the next two sections.

Table 9 Growth Rates of the Balance of Secondary Income

%

Concept	2010	2011	2012	2013	2014	Annual growth rate
SECONDARY INCOME	-	**5.38**	**-4.03**	**3.14**	**6.04**	**2.55**
Credit	-	**5.94**	**-4.32**	**3.20**	**6.07**	**2.63**
General Government	-	-9.39	-1.75	7.74	13.51	2.15
Financial Corporations, Nonfinancial Corporations, Households, and NPISHs	-	7.48	-4.54	2.80	5.39	2.68
Personal Transfers	-	6.38	-3.82	6.05	5.89	3.53
Other Current Transfers	-	8.98	-5.50	-1.60	4.67	1.49
Debit	-	**13.58**	**-8.00**	**4.00**	**6.55**	**3.73**
General Government	-	12.10	-7.80	3.28	3.88	2.62
Financial Corporations, Nonfinancial Corporations, Households, and NPISHs	-	18.36	-8.57	6.20	14.58	7.12
Personal Transfers	-	14.17	-7.50	5.42	10.85	5.40
Other Current Transfers	-	37.93	-12.70	9.39	29.32	14.24

(-) Indicates that a figure is zero.
Note: annual growth rate is calculated using geometric mean.
Source: Author's calculations

3.1.5 The Balance on the Capital Account

The capital and financial account items are more usefully analyzed given their structure than given their changes through time. In this fashion, it is easier to conclude which capital and financial account item finances a particular item of the current account. Due to this fact, in the next section, the capital account balance and financial account balance are analyzed given their structure.

Table 10 The Balance on the Capital Account

US Dollars, Millions

Concept	2010	2011	2012	2013	2014
CAPITAL ACCOUNT	**263.66**	**253.72**	**220.29**	**228.67**	**346.23**
Capital Transfers, Credit	263.66	253.72	220.29	228.67	346.23
General Government	169.65	153.72	151.02	162.71	157.23
Debt Forgiveness	...	...	...	...	...
Other Capital Transfers	169.65	153.72	151.02	162.71	157.23
Financial Corporations, Nonfinancial Corporations, Households, and NPISHs	94.01	100.01	69.27	65.95	189.01
Capital Transfers, Debit	...	...	...	...	...

(...) Indicates a lack of statistical data that can be reported or calculated from underlying observations.
Source: The International Monetary Fund database Balance of Payments Statistics (BOPS), Available at: http://elibrary-data.imf.org/FindDataReports.aspx?d=33061&e=170784 (Accessed on: April 15, 2015)

In Table 10, the capital account balance components are presented. Over the observed period, this balance is in surplus.

The structure of the balance on the capital account is presented in Table 11.

Table 11 Structure of the Balance on the Capital Account

%

Concept	2010	2011	2012	2013	2014
CAPITAL ACCOUNT	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**
Capital Transfers, Credit	100.00	100.00	100.00	100.00	100.00
General Government	64.34	60.59	68.56	71.15	45.41
Debt Forgiveness	-	-	-	-	-
Other Capital Transfers	64.34	60.59	68.56	71.15	45.41
Financial Corporations, Nonfinancial Corporations, Households, and NPISHs	35.66	39.42	31.44	28.84	54.59
Capital Transfers, Debit	-	-	-	-	-

(-) Indicates that a figure is zero.
Source: Author's calculations

From Table 11 it is apparent that the causes of the capital account balance surplus are largely government transfers, and to a lesser extent, capital transfers from financial and nonfinancial corporations, households and NPISHs.

3.1.6 The Balance on the Financial Account

Bosnia and Herzegovina's financial account balance is shown in Table 12, and the structure of this balance is presented in Table 13. From Table 12 it is evident that the financial account has net foreign exchange inflows. The causes of these inflows are other investment and foreign direct investment. Actually, the credit items based on other investment decrease, and liabilities increase, which results in a strong foreign exchange inflow in the country.

The fall of the credit items of other investment is caused by selling debt instruments, and the rise of liabilities is caused by emission of new debt instruments. Foreign direct investment inflow rises because of the rise of liabilities – foreign direct investment in equity as well as in debt instruments. Portfolio investment causes net foreign exchange outflow, mainly because of repaying liabilities to foreign creditors.

Table 12 The Balance on the Financial Account

US Dollars, Millions

Concept	2010	2011	2012	2013	2014
FINANCIAL ACCOUNT	**666.97**	**1,456.01**	**1,147.57**	**581.91**	**895.11**
DIRECT INVESTMENT	**362.66**	**476.44**	**333.36**	**292.70**	**566.25**
Net Acquisition of Financial Assets	-81.18	4.83	-1.46	-22.32	5.33
Equity and Investment Fund Shares	-46.34	-13.83	-8.19	13.20	-4.42
Debt Instruments	-34.84	18.66	6.74	-35.52	9.75
Net Incurrence of Liabilities	443.84	471.61	334.82	315.02	560.92
Equity and Investment Fund Shares	148.77	343.46	161.74	291.98	281.23
Debt Instruments	295.07	128.15	173.08	23.04	279.69
PORTFOLIO INVESTMENT	**-121.01**	**-34.93**	**-10.46**	**-88.59**	**-61.77**
Net Acquisition of Financial Assets	-86.00	5.82	30.80	-45.92	-19.86
Equity and Investment Fund Shares	1.17	-0.15	-0.41	1.17	0.07
Debt Securities	-87.17	5.97	31.21	-47.09	-19.93
Net Incurrence of Liabilities	-35.01	-40.75	-41.26	-42.67	-41.91
Equity and Investment Fund Shares	...	...	...	...	...
Debt Securities	-35.01	-40.75	-41.26	-42.67	-41.91
OTHER INVESTMENT	**604.06**	**990.41**	**863.26**	**860.75**	**852.05**
Net Acquisition of Financial Assets	509.44	399.82	242.20	136.34	400.51
Other Equity	...	...	...	...	...
Debt Instruments	509.44	399.82	242.20	136.34	400.51
Net Incurrence of Liabilities	94.62	590.60	621.06	724.41	451.54
Other Equity	2.61	-7.31	1.74	0.48	-8.60
Other Debt Instruments	92.01	597.91	619.32	723.93	460.14
RESERVE ASSETS (increase -)	**-178.75**	**24.10**	**-38.59**	**-482.95**	**-461.42**

(...) Indicates a lack of statistical data that can be reported or calculated from underlying observations.
Source: The International Monetary Fund database Balance of Payments Statistics (BOPS), Available at: http://elibrary-data.imf.org/FindDataReports.aspx?d=33061&e=170784 (Accessed on: April 15, 2015)

Table 13 Structure of the Balance on the Financial Account

%

Concept	2010	2011	2012	2013	2014
FINANCIAL ACCOUNT	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**
DIRECT INVESTMENT	54.37	32.72	29.05	50.30	63.26
Net Acquisition of Financial Assets	-12.17	0.33	-0.13	-3.84	0.60
Equity and Investment Fund Shares	-6.95	-0.95	-0.71	2.27	-0.49
Debt Instruments	-5.22	1.28	0.59	-6.10	1.09
Net Incurrence of Liabilities	-66.55	-32.39	-29.18	-54.14	-62.66
Equity and Investment Fund Shares	-22.31	-23.59	-14.09	-50.18	-31.42
Debt Instruments	-44.24	-8.80	-15.08	-3.96	-31.25
PORTFOLIO INVESTMENT	-18.14	-2.40	-0.91	-15.22	-6.90
Net Acquisition of Financial Assets	-12.89	0.40	2.68	-7.89	-2.22
Equity and Investment Fund Shares	0.18	-0.01	-0.04	0.20	0.01
Debt Securities	-13.07	0.41	2.72	-8.09	-2.23
Net Incurrence of Liabilities	5.25	2.80	3.60	7.33	4.68
Equity and Investment Fund Shares	-	-	-	-	-
Debt Securities	5.25	2.80	3.60	7.33	4.68
OTHER INVESTMENT	90.57	68.02	75.23	147.92	95.19
Net Acquisition of Financial Assets	76.38	27.46	21.11	23.43	44.74
Other Equity	-	-	-	-	-
Debt Instruments	76.38	27.46	21.11	23.43	44.74
Net Incurrence of Liabilities	-14.19	-40.56	-54.12	-124.49	-50.45
Other Equity	-0.39	0.50	-0.15	-0.08	0.96
Other Debt Instruments	-13.80	-41.06	-53.97	-124.41	-51.41
RESERVE ASSETS (increase -)	-26.80	1.66	-3.36	-82.99	-51.55

(-) Indicates that a figure is zero.
Source: Author's calculations

Overall, foreign exchange inflow, based on other and foreign direct investments, finances (ignoring the net errors and omissions) the current account deficit and foreign exchange outflow based on portfolio investment. The excess of this inflow, which remains after these settlements, is evident as a rise in international reserves.

3.1.7 The Basic Balance, the Net Liquidity Balance and the Official Settlements Balance

The basic balance, the net liquidity balance and the official settlements balance are presented in Table 14. Given that the data on maturity of the International Monetary Fund loans are not available, it is supposed that these loans are long-term ones.

Table 14 Measures of disequilibrium in Bosnia and Herzegovina's balance of payments

US Dollars, Millions

Concept	2010	2011	2012	2013	2014
Current Account, Goods, Net	**-5,022.38**	**-5,748.58**	**-5,251.31**	**-4,973.91**	**-5,491.56**
Current Account, Services, Net	**1,322.77**	**1,313.56**	**1,180.55**	**1,225.47**	**1,237.95**
Current Account, Goods and Services, Net	**-3,699.62**	**-4,435.02**	**-4,070.76**	**-3,748.45**	**-4,253.61**
Current Account, Primary income, Net	**279.52**	**149.67**	**155.80**	**226.91**	**209.51**
Current Account, Secondary income, Net	**2,389.44**	**2,517.97**	**2,416.38**	**2,492.21**	**2,642.66**
Current Account, Net	**-1,030.66**	**-1,767.39**	**-1,498.58**	**-1,029.33**	**-1,401.44**
Long-term Capital	-50.48	934.56	752.67	922.11	849.30
Basic Balance	**-1,081.14**	**-832.83**	**-745.91**	**-107.22**	**-552.14**
Long-term Capital (Excluding Portfolio investment)	19.24	1,000.71	726.31	1,024.55	893.14
Basic Balance (Excluding Portfolio investment)	**-1,011.42**	**-766.67**	**-772.27**	**-4.78**	**-508.29**
SDR allocation	0.00	0.00	0.00	0.00	0.00
Short-term Nonliquid Capital	377.78	274.51	222.27	282.68	305.13
Net Errors and Omissions	96.13	57.69	133.81	218.95	166.56
Net Liquidity Balance	**-607.23**	**-500.63**	**-389.84**	**394.41**	**-80.45**
Short-term Liquid Capital	547.12	476.58	307.40	128.84	439.95
Official Settlements Balance	**-60.12**	**-24.05**	**-82.44**	**523.25**	**359.50**
Financing:					
Reserve Assets (Increase -)	-178.94	24.05	-38.48	-481.78	-461.69
Net Credit and Loans from the IMF	239.06	0.00	120.92	-41.47	102.19

Source: The International Monetary Fund database Balance of Payments Statistics (BOPS), Available at: http://elibrary-data.imf.org/FindDataReports.aspx?d=33061&e=170784 (Accessed on: April 15, 2015) and author's calculations.

From Table 14 it is obvious that the basic balance is in deficit, which means that this situation is unsustainable in the long run, because Bosnia and Herzegovina has to finance this deficit by short-term liquid capital. Even if portfolio investment is excluded from long-term capital, as is suggested by Branson (1973), the situation would not change significantly.

The net liquidity balance is in deficit, with the exception of n 2013. This deficit is mainly financed by short-term capital inflow. This inflow, as has already been pointed out, may mean a pressure on international reserves. Given that the Central Bank of Bosnia and Herzegovina functions as a currency board, the fall in international reserves means the fall in monetary base and money supply, which could later cause unemployment and recession in the country.

The official settlements balance from 2010 to 2012 is in deficit. However, this deficit, except in 2011, did not mean the fall in international reserves, but a rise due to loans from the International Monetary Fund. In 2013 and 2014, this balance is in surplus, so international reserves rose, in spite of repaying loans to the International Monetary Fund in 2013.

4. Conclusion

The goal of the research described in this paper was to investigate the causes and ways of financing the deficit in Bosnia and Herzegovina's balance of payments. Hence, an analysis of disequilibrium measures in the balance of payments, for the past five-year period or, more precisely, from 2010 to 2014, was conducted. The analysis resulted in several conclusions.

First, the main cause of the deficit in Bosnia and Herzegovina's current account balance is the deficit in the merchandise trade balance. This deficit is so high that it cannot be annulled by the sum of surpluses in other components of the current account balance – the balance of services, the balance of primary income and the balance of secondary income.

Second, the deficit in the balance of goods is financed mainly by foreign direct investment, but also by other investment, i.e. debt instruments, because of which the country's external debt grows.

Third, in spite of net long-term capital inflows, the basic balance is in deficit. This is an unsustainable situation in the long run, because this deficit has to be financed by short-term capital inflows. Obviously, net long-term capital inflows are not sufficient to balance outflows based on the current account deficit, or more precisely, on the deficit in the balance of goods.

Fourth, in the first three years of the observed period, the net liquidity balance was in deficit, and later it was in surplus. This deficit is financed mainly by short-term liquid capital inflows, and these inflows are continued in 2013 and 2014. Certainly, short-term liquid capital may mean a pressure on international reserves. As a result, a fall in international reserves will mean a fall in the monetary base and money supply, and later it could cause unemployment and recession in the country.

Fifth, from 2010 to 2012, the official settlements balance was in deficit and in 2003 and 2014, it was in surplus. However, with the exception of 2011, this deficit did not cause, a fall in international reserves, because it was financed by loans from the International Monetary Fund.

Given that the balance of goods deficit was the main cause of Bosnia and Herzegovina's current account deficit, in order to solve this problem, the country has to stimulate exports of goods and reduce its import dependence. Simultaneously, the country needs to strengthen the balance of services surplus. In which sectors and how remains a topic for further research.

References

1. Bach, C., Balbach, A. (1971), "The New Look for the Balance of Payments", Federal Reserve Bank of St. Louis Review, August, pp. 8-11.
2. Branson, W. H. (1971), "The Balance of Payments in 1970", Brookings Papers on Economic Activity, No. 1, pp. 219-225.
3. Caves, R. E., Frankel, J. A., Jones, J. W. (2002). World Trade and Payments: An Introduction. Boston: Pearson Education, Inc.
4. Chacholiades, M. (1990). International Economics. New York: McGraw-Hill, Inc.
5. Cooper, R. N. (1966), "The Balance of Payments in Review", Journal of Political Economy, Vol. 74, No. 4, pp. 379-395.
6. IMF (1993). Balance of Payments Manual. 5th edition. Washington D. C.: International Monetary Fund.
7. IMF (2009). Balance of Payments and International Investment Position Manual. 6th edition. Washington D. C.: International Monetary Fund.
8. IMF eLibrary Data, Available at: http://elibrary-data.imf.org (Accessed on: April 15, 2015)
9. Kemp, D. S. (1975), "Balance-of-Payments concepts – What do They Really Mean?", Federal Reserve Bank of St. Louis Review, July, pp. 14-23.
10. Kenen, P. B. (1964), "Measuring the United States Balance of Payments", The Review of Economics and Statistics, Vol. 46, No. 2, pp. 139-144.
11. Kindleberger, C. P. (1969), "Measuring Equilibrium in the Balance of Payments", Journal of Political Economy, Vol. 77, No. 6, pp. 873-891.
12. Kuwayama, P. H. (1975), "Measuring the United States Balance of Payments", Federal Reserve Bank of New York Monthly Review, August, pp. 183-194.
13. Pippinger, J. (1973), "Balance-of-Payments Deficits: Measurement and Interpretation", Federal Reserve Bank of St. Louis Review, November, pp. 6-14.
14. Stiglitz, J. E. (2001), "Monetary and Exchange Rate Policy in Small Open Economies: The Case of Iceland", working paper No. 15, Central Bank of Iceland, pp. 1-39.

(Endnotes)

1 Available from: http://elibrary-data.imf.org

2 On the alternative presentation see: IMF (2009).

3 In practice, however, it is not possible to comprise statistically all transactions of residents with abroad, so as a balancing item the net errors and omissions exist. See: Caves, E. R. et al. (2002).

4 On components of exceptional financing see: IMF (2009).

5 Let E = exports of goods, U = imports of goods, n = number of years; then:
$(1.0858)^n 4{,}490.23 = E = U = (1.0487)^n 9{,}981.79$, so, $n = 22{,}96$.

6 NPISH – Nonprofit institution serving households.

Dražen Koški

Analiza neravnoteže u bilanci plaćanja: Slučaj Bosne i Hercegovine

Sažetak

Mnogo je godina bilanca na tekućem računu Bosne i Hercegovine u deficitu. Cilj istraživanja ovoga rada bio je istražiti uzroke i izvore financiranja tog deficita. Provedena je analiza mjera neravnoteže u bilanci plaćanja za razdoblje od proteklih pet godina, preciznije od 2010. do 2014. Analiza je obuhvatila standardne mjere neravnoteže, ali i neke danas, ne tako često korištene mjere kao što su temeljna bilanca, bilanca neto likvidnosti i bilanca službenih podmirenja.

Uzrok deficita bilance na tekućem računu je deficit bilance roba koji je veći nego suma suficita bilance usluga, bilance primarnoga dohotka i bilance sekundarnoga dohotka. Taj deficit uvelike je financiran stranim izravnim investicijama, ali i dužničkim instrumentima po osnovi ostalih investicija zbog kojih raste inozemni dug zemlje.

S obzirom da je deficit bilance roba glavni uzrok deficita bilance na tekućem računu Bosne i Hercegovine, da bi se riješio ovaj problem, zemlja mora poticati izvoz roba i smanjiti uvoznu ovisnost. Istodobno, zemlja treba jačati suficit u bilanci usluga.

Ključne riječi: bilanca plaćanja, temeljna bilanca, bilanca neto likvidnosti, bilanca službenih podmirenja, mjere neravnoteže