The Causal Relationship between Current Account and Financial Account Balance in Selected CEE Countries

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Abstract

This paper first examines the causal relationship between the current account and financial account then the current account and the main components of financial account and finally the financial account, saving, and investment in Croatia, Hungary, Poland, Romania and Slovenia. In this context we employ Toda-Yamamoto approach to Granger causality test by using the quarterly data. We find a causal relation running from the financial (current) account to the current (financial) account in Croatia (Poland) and Slovenia (Romania) while a bi-directional causality exists in the case of Hungary. We conclude that at least one component of financial account balance Granger causes current account in Croatia, Poland, Romania and Slovenia while the causality running from the current account to at least one component of financial account in Poland, Romania and Hungary. It seems that the financial account Granger causes the saving in Hungary and investment in Croatia while the causality running from the saving in Romania and investment in both Croatia and Poland to the financial account.

Keywords: *current account, financial account balance, saving and investment, causality*

JEL Classification: E60, F32, F40

1. Introduction

Although the relationship between the current account and financial account balance is obvious from the balance of payments account, it has drawn more attention since 1990s. This largely stems from the liberalization of capital flows in late 1980s and early 1990s in many countries including developing or emerging economies. As a result capital flows have increased over time, inevitably

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leading to the investigation of the causal relationship between the current and financial accounts.

An intertemporal model, like in Obstfeld and Rogoff (1996), the current account imbalance can allow to smooth the consumption over time and provide a higher welfare. Moreover the current account deficits enable a country to make investment or enhance the productive capacity more than its domestic savings or funds afford. This can help developing countries attain a higher capital and growth rate per worker. Therefore, contrary to common wisdom, a current account deficit does not have to be necessarily a bad or harmful thing to the economic activity. However it should be kept in mind that high current account deficits can have some distorting or negative effects as well. It is clear that the capital flows or current account deficits make recipients countries more vulnerable to external shocks and developments. Many studies, among them Calvo, Leiderman and Reinhart (1996) and Boosworth and Collins (1999), Bustelo (2000), argue that the large capital flows or sudden stops can end up triggering severe economic or financial crisis. Furthermore Calvo and Reinhart (2000) argue that capital inflow reversals are more damaging for emerging economies. So, the capital flows allow emerging and developing countries to benefit from the international funds and resources on the one hand, bear some important risks on the other hand.

Current account and financial account balances can affect each other via different channels. Moreover the current account balance may have a different relation with the components of financial account. For example there is no reason to expect that the foreign direct and portfolio investment have the same causal relation with the current account. Similarly the effect of financial account on the saving and investment can greatly differ from each other. In order to design and implement successful or welfare-maximizing economic policies, it is important to uncover the direction of causality between: (i) the current and financial account, (ii) the current account, net foreign direct investment, portfolio investment and other investment, (iii) the financial account, saving, and investment. As far as we are aware, these interesting and important relationships have not been investigated for Croatia, Hungary, Poland, Romania and Slovenia before. This paper aims to contribute to a rapidly growing literature by examining these relationships in these 5 (CEE) countries. In this context Granger (1969) causality tests are performed by using the approach developed by Toda and Yamamoto (1995), which allows to examine the causality between the variables that have the different orders of integration. Our empirical findings clearly indicate that the causal relationship between the current account and financial account balance significantly varies among countries examined, suggesting a need for the implementation of different economic policies to deal with the issue.

The remainder of the paper is organised as follows: Section 2 reviews the theoretical framework and literature, section 3 examines the evaluation of current account, financial account, saving, and investment over time, section 4 explains the empirical specification, section 5 presents and discuss the empirical results and finally section 6 concludes.

2. Theoretical Framework and Literature Review

There would be a uni-directional or bi-directional causal relation between the current account and financial account (Fry et al., 1995; Wong and Carranza, 1999; Yan, 2007; Yan and Yang, 2008). Many factors, such as the changes in exchange rates and demand for imported goods, can contribute to widening the current account deficit, which needs to be financed by capital flows. Although the financing needs of current account deficits are very straightforward mechanism to explain of why current account deficits cause capital inflows, it is not the sole reason or determinant of capital inflows. In the literature, like Calvo, Leiderman and Reinhart (1993), Goldstein (1995), Montiel and Reinhart (1999) and Yan and Yang (2008), the causes of capital inflows are generally divided into two: External and internal or push and pull factors. External or push factors are motivated by the developments such as the decline in the interest rates or profitability in developed countries while internal or pull factors include the successful stabilization programs, structural reforms or improvement in investment opportunities. It is a well-known fact that the capital inflows can have a strong effect on the current account by primarily changing the exchange and interest rates. As indicated in some studies, among them Calvo, Leiderman and Reinhart (1993), Bustelo (2000), Brooks et al. (2001), Lartey (2007), Bakardzhiava, Naceur and Kamar (2010), Combes, Kinda and Plane (2011), the capital inflows can lead to an appreciation in the exchange rates. An appreciation in the exchange rate, in turn, can worsen the competitiveness of domestic producers and facilitate the imports ends up widening current account deficits. In a similar way, some studies, such as Cebula (1997) and Warnock and Warnock (2009), find that the capital inflows lead to a decline in the domestic interest rates in recipient countries. A sound and well-functioning financial system is crucial to allocate scarce resources efficiently, manage and share risks, increase the confidence in the economy. In the absence of effective financial institutions, capital flows can be easily directed into consumer spending rather than investment or enhancement of productive capacity. In this way a decline in the interest rate can boost private spending and retard domestic saving, leading to a higher current account deficit. Goldstein (1995) and Calvo, Leiderman and Reinhart (1996)

highlight this trend in Latin American countries. Furthermore the capital flows can cause overinvestment in emerging market economies. Since the current account deficit is the difference between the domestic saving and investment, an increase in the investment causes the current account deficit to rise.

To sum up, we conclude that there would be a causal relationship running from the current (financial) account to the financial (current account) or a bi-directional causality between the two. As indicated in some studies, like Yan (2007) and Yan and Yang (2008), each component of financial account can have a different relation with the current account. For example if the direct investment concentrates in exports oriented or import-substitution sectors, it can contribute to reducing the current account deficit. Also, as found by Bakardzhiava, Naceur and Kamar (2010), unlike portfolio investment, the foreign direct investment may not have an effect on exchange rates, implying a different effect on the current account. Finally a causality can run from the saving in some countries and investment in others to the financial account or vice versa. Therefore the aggregated data can hide some important causal relations in some cases. Since it is theoretically difficult to determine the direction of causality, empirical studies are needed to shed more light on the subject in the discussion.

Although many studies, such as Khalid and Guan (1999), Salvatore (2006), Kumhof and Laxton (2013), Makin and Narayan (2013), Xie and Chen (2014), Tosun, Varol İyidoğan and Telatar (2014), focus on the testing of the twin deficit hypothesis, the causal relationship between the current account and financial account balance is empirically investigated as well. Some studies examine the relationship between the current account and financial/capital account in developing or emerging market economies. Fry et al. (1995), using data for a large sample of developing countries, report that in 13 (8) countries capital (current) account Granger causes current (capital) account, in 4 countries there exists a bi-directional causality. Wong and Carranza (1999) argue that capital flows Granger cause in 4 emerging market economies. Lau and Fu (2011) conclude that financial account Granger causes current account in 4 emerging market economies and also find that causality running from current account to foreign direct investment (other) and portfolio (portfolio) investment in Indonesia (Philippines). Erden and Çağatay (2011) report that the capital account Granger causes the current account in Turkey.

A few studies examine the causal relationship using data for both developing and developed countries. Yan (2005) using data for 5 developing and 5 developed countries find that Granger causality running from the financial account to the current account in developing countries whereas it is running from the current account to the financial account in developed countries. Yan (2007), for 14

developing and emerging market economies, confirms the previous results about the direction of causality between the current account and financial account in developing countries. He also examines the relationship between the current account and the main components of financial account, namely the foreign direct investment, portfolio investment and other investment, and concludes that at least one component Granger causes current account in developing countries, except for only one country. Yan and Yang (2008), report that in all 5 emerging economies the financial account Granger causes current account while there exists a causal relation running from the financial account to current account in only 1 out of 5 developed countries examined. Yan and Yang (2008) find that the causal relationship between the financial inflows (gross), saving and investment is much more common in emerging economies than that of developed countries. Sarisoy-Guerin (2003) also points to the difference between developing and developed countries regarding the subject. To explain the difference regarding the causal relationship between the developing and developed countries, Yan (2005; 2007) pays attention to the lack of sound financial institutions in developing countries. Capital flows to developing countries can lead to a widening current account deficit not only by increasing the private consumption but also encouraging investment. It is also possible that since there are more credit-constrained consumers and investors in developing countries, capital inflows enable them to spend and invest more.

3. The Data and the Evolution of the Current Account, Financial Account, Investment and Saving over Time

The current account and financial account data taken from respective central banks, namely Croation National Bank, Magyar Nemzeti Bank, Narodowy Bank Polski, National Bank of Romania, Banka Slovenije, for Croatia, Hungary, Poland, Romania and Slovenia respectively. GDP and investment (Gross Fixed Capital Formation plus Changes in Inventories) data obtained from Eurostat. We define the saving rate as the sum of current account balance and investment. Our data cover the following periods: 2000:1 – 2014:4 for Croatia, 1995:1 – 2014:4 for Hungary, 2004:1 – 2014:4 for Poland, 2005:1 – 2015:1 for Romania and 1995:1 – 2015:1 for Slovenia.

All series are seasonally adjusted and expressed as a share of GDP. We present the evolution of the current account (CA), financial account (FA), saving (S) and investment (I), as a share GDP, in Figure 1. We should note that a negative value shows a deficit for the current account while it represents a net capital or financial inflow.

Figure 1a

CA, FA, S and I in Croatia

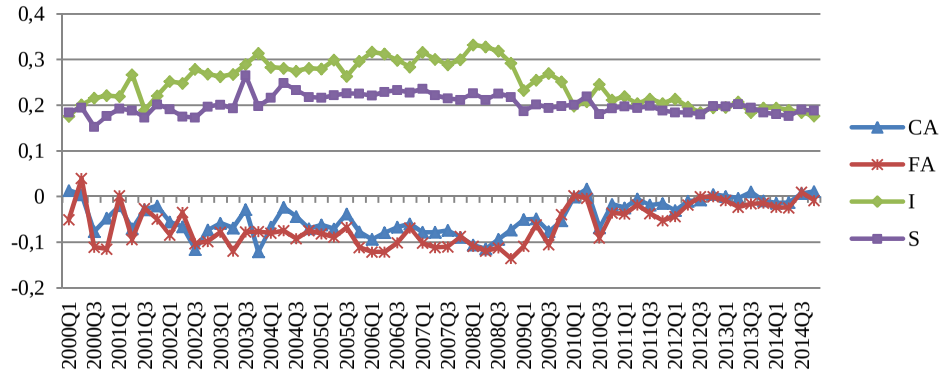


Figure 1b

CA, FA, S and I in Hungary

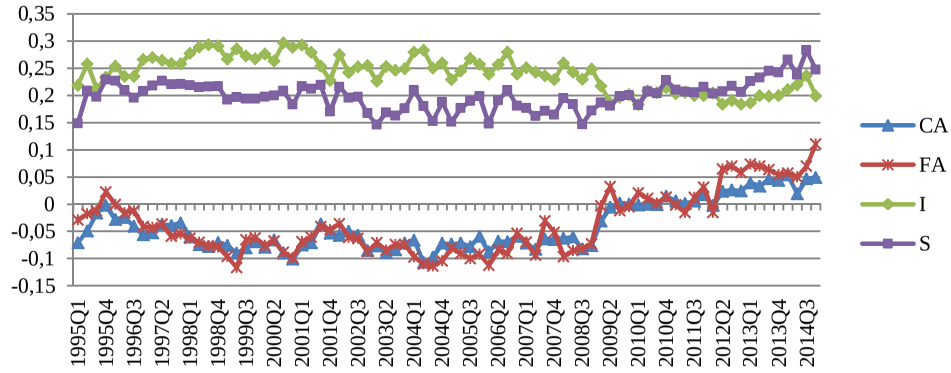


Figure 1c

CA, FA, S and I in Poland

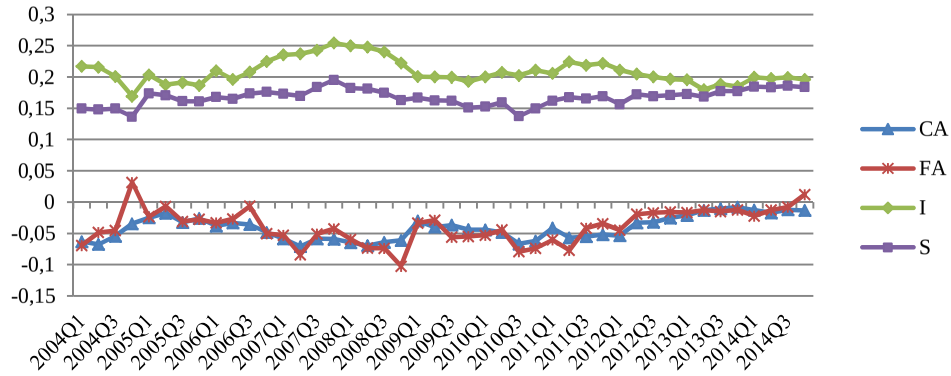


Figure 1d

CA, FA, S and I in Romania

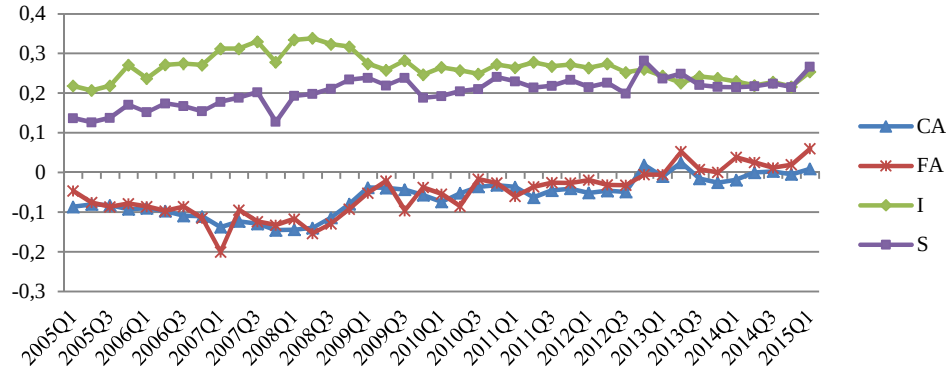
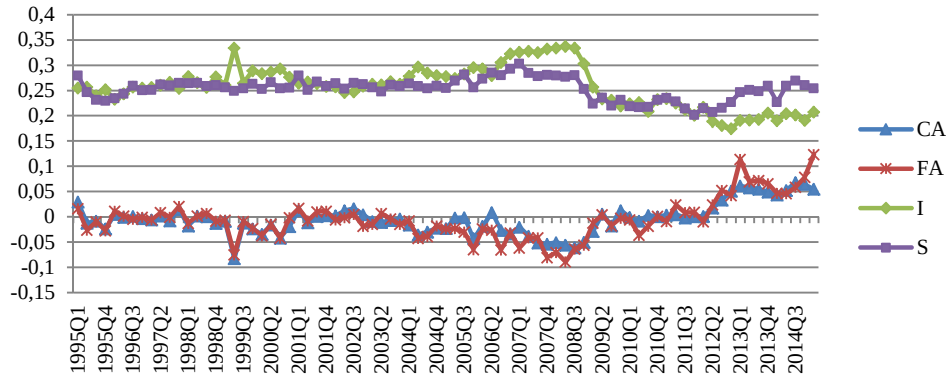


Figure 1e

CA, FA, S and I in Slovenia



Source: Respective central banks and Eurostat.

As can be seen from Figure 1, there is a seemingly clear association between the current account and financial account balance. Moreover the current account and financial account display somewhat similar patterns over time across all countries. It seems that current account deficits are relatively high around mid-2000s. However there exists a significant contraction in the current account deficit in Croatia, Poland and Romania after the last global crisis. Furthermore, Hungary and Slovenia have a considerable current account surplus in recent years. All countries attract an important amount of financial flows until the 2008 – 2009. However there is a sharp decline in the financial flows afterwards. Particularly, Hungary and Slovenia have experienced a remarkable financial account surplus recently.

Since economic crises affect the investing and saving decisions, the observed contractions in current account and financial flows are not surprising at all. When we examine the saving and investment rates in these countries, some important changes between the post and pre-crisis periods are noteworthy. Saving rate significantly increases in Hungary and Romania after the global crisis but does not change much in Poland while it declines in Croatia and Slovenia. As for the investment, a serious increase in the investment rates around 2006 – 2007 experienced compared to that of previous periods in Poland, Romania, Croatia and Slovenia.

However the investment rate is much lower in all countries in 2010 – 2013 period than that of 2005 – 2009. The decline in the investment rates is very sharp in Romania, Croatia, Hungary and Slovenia. Therefore we can conclude that after the global crisis the change in the saving and investment rates leading to a decisive contraction in the current account deficits in Poland, Croatia and Romania and a robust surplus in Hungary and Slovenia.

4. Empirical Specification

Following the literature, specifically Yan (2007) and Yan and Yang (2008), we first examine the causal relationship between the current account (CA) and financial account (FA) and then the current account and the main components of financial account, finally the financial account, saving (S), and investment (I) by means of Granger causality tests. Suggested in a seminal study by Granger (1969), this test helps to uncover the causal relations between variables.

However if these variables are not stationary a modification is needed. An approach, developed by Toda and Yamamoto (1995), enables to perform Granger causality tests among variables with different orders of integration. Also this approach allows to test the causality between variables without carrying out pre-tests for stationarity.

4.1. The Causality between the Current Account and Financial Account

In order to perform Toda and Yamamoto (1995) approach to Granger causality test a VAR model can be written as follows:

$$CA_t = \eta_1 + \sum_{i=1}^{p+n} \beta_{1i} CA_{t-i} + \sum_{i=1}^{p+n} \delta_{1i} FA_{t-i} + \varepsilon_{1t} \tag{1a}$$

$$FA_t = \eta_2 + \sum_{i=1}^{p+n} \beta_{2i} CA_{t-i} + \sum_{i=1}^{p+n} \delta_{2i} FA_{t-i} + \varepsilon_{2t} \tag{1b}$$

where

p – stands for optimal lag length,

n – for the degree of integration of the variable which has the highest order of integration and finally,

ε – for error term.

Unlike standard Granger causality test, Toda-Yamamoto approach suggests to add the highest order of integration, (n), to the optimal lag length. The choice of optimal lag length is based on information criteria like SIC (*Schwarz information criterion*) and AIC (*Akaike information criterion*). When determining the optimal lag length the presence of a serial correlation must be tested. If a serial correlation is detected then another lag is added to deal with that. Standard Wald or F tests are carried out to test non-causality between variables. For example in Equation 1, the rejection of null hypothesis, which is $H_0: \delta_{1i} = 0$, leads to the conclusion that financial account has a predictive power for current account, implying the FA Granger causes CA. On the other hand if the null hypothesis is not rejected then we conclude that FA does not Granger cause CA. In a similar way the rejection of the null hypothesis, that is $\delta_{1i} = 0$ and $\beta_{2i} = 0$, suggesting a bi-directional causality between FA and CA.

4.2. The Causality between the Current Account, Foreign Direct Investment, Portfolio Investment and Other Investment

Since the current account can have a different relation with the components of financial account, the causal relation between the current account (CA), foreign direct investment (DI), portfolio investment (PI), and other investment (OI) is investigated by estimating the following VAR model:

$$CA_t = \eta_3 + \sum_{i=1}^{p+n} \beta_{3i} CA_{t-i} + \sum_{i=1}^{p+n} \alpha_{3i} DI_{t-i} + \sum_{i=1}^{p+n} \theta_{3i} OI_{t-i} + \sum_{i=1}^{p+n} \nu_{3i} PI_{t-i} + \varepsilon_{3t} \quad (2a)$$

$$DI_t = \eta_4 + \sum_{i=1}^{p+n} \beta_{4i} CA_{t-i} + \sum_{i=1}^{p+n} \alpha_{4i} DI_{t-i} + \sum_{i=1}^{p+n} \theta_{4i} OI_{t-i} + \sum_{i=1}^{p+n} \nu_{4i} PI_{t-i} + \varepsilon_{4t} \quad (2b)$$

$$OI_t = \eta_5 + \sum_{i=1}^{p+n} \beta_{5i} CA_{t-i} + \sum_{i=1}^{p+n} \alpha_{5i} DI_{t-i} + \sum_{i=1}^{p+n} \theta_{5i} OI_{t-i} + \sum_{i=1}^{p+n} \nu_{5i} PI_{t-i} + \varepsilon_{5t} \quad (2c)$$

$$PI_t = \eta_6 + \sum_{i=1}^{p+n} \beta_{6i} CA_{t-i} + \sum_{i=1}^{p+n} \alpha_{6i} DI_{t-i} + \sum_{i=1}^{p+n} \theta_{6i} OI_{t-i} + \sum_{i=1}^{p+n} \nu_{6i} PI_{t-i} + \varepsilon_{6t} \quad (2d)$$

The same estimation and testing procedure, stated in the previous sub-section, are applied. For example in Equation 2, the rejection of null hypothesis, which is $H_0: \alpha_{3i} = 0$, leads to the conclusion that the lags of DI have a predictive power for the current value of CA, implying a causal relation from DI to CA.

4.3. The Causality between the Financial Account, Saving and Investment

It is important to understand the relation of financial account (FA) with the saving (S) and investment (I). Therefore the causal relationship between the financial account, saving and investment is examined by means of the following VAR model:

$$FA_t = \eta_7 + \sum_{i=1}^{p+n} \gamma_{7i} S + \sum_{i=1}^{p+n} \eta_{7i} I + \sum_{i=1}^{p+n} \delta_{7i} FA_{t-i} + \varepsilon_{7t} \quad (3a)$$

$$S_t = \eta_8 + \sum_{i=1}^{p+n} \gamma_{8i} S + \sum_{i=1}^{p+n} \eta_{8i} I + \sum_{i=1}^{p+n} \delta_{7i} FA_{t-i} + \varepsilon_{8t} \quad 3b)$$

$$I_t = \eta_9 + \sum_{i=1}^{p+n} \gamma_{9i} S + \sum_{i=1}^{p+n} \eta_{9i} I + \sum_{i=1}^{p+n} \delta_{7i} FA_{t-i} + \varepsilon_{9t} \quad (3c)$$

We perform the same estimation and testing procedure explained in subsection 4.1.

5. Empirical Results and Discussion

We estimate the specified VAR models by using quarterly data for Croatia, Hungary, Poland, Romania and Slovenia. Test results of causality between CA and FA are reported in Table 1.

T a b l e 1
Causality Tests (CA, FA)

Countries	Lagged Var.	Dependent variables Chi-square values (prob.)		Lag length (*p* + *n*)
		CA	FA	
	CA		2.947 (0.2291)	
Croatia	FA	5.394*** (0.0674)		2 + 1
	CA		12.821** (0.0122)	
Hungary	FA	18.168* (0.0011)		4 + 1
	CA		5.742** (0.0166)	
Poland	FA	0.483 (0.4866)		1 + 1
	CA		6.6426* (0.010)	
Romania	FA	0.0824 (0.7740)		1 + 1
	CA		0.273 (0.8720)	2 + 1
Slovenia	FA	6.009** (0.0495)		

Notes: *, **, *** show significance at 0.01, 0.05, 0.10 level respectively. The choice of optimal lag length is based on Schwarz Criteria and LM tests.

Source: Own calculation.

As can be seen in Table 1, we reject the null hypothesis that FA does not Granger cause CA in Croatia and Slovenia while we fail to reject in the case of Poland and Romania. We reject both the null hypothesis that CA does not Granger cause FA and also FA does not Granger cause CA in Hungary. Therefore we conclude that a unidirectional causality runs from FA to CA in Croatia and Slovenia. This finding is consistent with that of some studies report that FA Granger causes CA in developing or emerging economies. We also find that CA Granger causes FA in Poland and Romania suggesting that Granger causality can run from CA to FA in some emerging economies as well. We find a bidirectional causality between CA and FA in Hungary, which is in line with some studies, such as the findings of Yan (2007) for Argentina and Mexico, Wong and Carranza (1999) for Philippines and Thailand. We should note that Croatia and Slovenia, in which we find that the financial account Granger causes the current account, have experienced the sharpest decline in the investment rate after the global crisis and had a negative per capita growth rates, on average, in 2010 – 2013 period.

We summarize the causality test results of VAR model in equation 2 in Table 2.

A somewhat different picture emerges when the relationship between the current account and the main components of financial account is examined. Except for Hungary, at least one component of financial account Granger causes CA in all countries. It seems that the results using aggregated and disaggregated data for FA are consistent with each other in the case of Croatia and Slovenia. We find that causality runs from DI and OI to CA in Croatia and OI to CA in Slovenia while CA does not Granger cause any component of FA in these countries. However we obtain some surprising results for Poland and Romania. It seems that DI, PI and OI Granger cause CA in Romania and Poland while we don't find any causal relation from aggregated FA to CA in these two countries. Moreover CA Granger causes OI in Romania, PI in Poland. In the case of Hungary it seems that disaggregation of FA causes a fundamental change in the results. We find that a unidirectional causality running from CA to PI and OI. It seems that OI is the only variable that Granger causes CA in 4 countries while DI Granger causes CA in three countries. However Yan (2007) reports that OI Granger causes CA in only 3 out of 7 emerging economies and argue that causality runs from all three components of financial account to the current account for Argentina, like our findings for Romania and Poland. Lau and Fu also (2011) also conclude that OI Granger causes the current account in only South Korea and Thailand out of 4 emerging economies. Our results clearly show that it would be helpful to use the disaggregated data when examining the relationship between the current and financial account.

T a b l e 2

Causality Tests (CA, DI, OI, PI)

Countries	Lagged Var.	Dependent variables Chi-square values (prob.) CA	DI	PI	OI	Lag length (*p* + *n*)
	CA		2.394 (0.8801)	4.865 (0.5612)	7.523 (0.2751)	
	DI	12.906** (0.0446)		7.937 (0.2427)	7.255 (0.2979)	
	PI	5.804 (0.4454)	9.019 (0.1725)		19.622* (0.0032)	
Croatia	OI	11.711*** (0.0687)	6.677 (0.3517)	5.382 (0.4957)		6 + 1
	CA		2.735 (0.2547)	7.023** (0.0298)	15.361* (0.0005)	
	DI	2.074 (0.3544)		2.068 (0.3556)	1.635 (0.4415)	
	PI	0.3751 (0.8290)	0.750 (0.6871)		0.1351 (0.9346)	
Hungary	OI	1.183 (0.5534)	2.011 (0.3658)	10.116 (0.0064)		2 + 1
	CA		1.766 (0.4135)	5.864*** (0.0533)	1.674 (0.4329)	
	DI	8.236** (0.0163)		6.259** (0.0437)	0.105 (0.9487)	
	PI	5.844*** (0.0538)	0.51 (0.7747)		0.895 (0.6391)	
Poland	OI	7.782** (0.0204)	1.703 (0.4267)	1.032 (0.5968)		2 + 1
	CA		5.16 (0.5234)	2.416 (0.8777)	13.766*** (0.0324)	
	DI	46.772* (0.0000)		1.786 (0.9383)	17.710* (0.0070)	
	PI	19.618** (0.032)	2.087 (0.9115)		4.970 (0.5476)	
Romania	OI	33.704* (0.0000)	3.180 (0.7850)	2.665 (0.8495)		6 + 1
	CA		5.056 (0.7515)	8.430 (0.3926)	6.169 (0.6283)	
	DI	9.492 (0.3025)		12.560 (0.1279)	13.001 (0.1118)	
	PI	8.487 (0.3873)	8.070 (0.4266)		5.606 (0.6912)	
Slovenia	OI	15.911** (0.0437)	7.642 (0.4692)	8.265 (0.4079)		8 + 1

Notes: *, **, *** show significance at 0.01, 0.05, 0.10 level respectively. The choice of optimal lag length is based on Schwarz Criteria and LM tests.

Source: Own calculation.

The estimation results of causality tests between the financial account, saving, and investment are reported in Table 3.

The financial account Granger causes the investment in Croatia and saving in Hungary. On the other hand the saving in Romania, investment in Croatia and Poland Granger cause FA. Moreover we find a causality running from the saving to investment in Romania and Slovenia. We conclude that there exists at least one

causal relation among the financial account, saving, and investment in all countries examined. This result is in line with that of Yan and Yang (2008) for emerging economies. Furthermore in 2 out of 5 countries we find that financial account Granger causes saving or investment while Yan and Yang (2008) report that a causal relation running from financial inflows (gross) to investment or saving in 4 out of 5 emerging economies and only 1 out of 5 developed countries.

T a b l e 3

Causality Tests (FA, S, I)

Countries	Lagged Var.	Dependent variables Chi-square values (prob.) FA	S	I	Lag length (*p* + *n*)
	FA		0.864 (0.9297)	10.938** (0.0273)	
	S	5.687 (0.2237)		2.163 (0.7057)	
Croatia	I	23.235* (0.0001)	1.647 (0.8003)		4 + 1
	FA		12.561*** (0.0835)	4.684 (0.6985)	
	S	8.685 (0.2760)		9.861 (0.1966)	
Hungary	I	1.230 (0.9902)	12.006 (0.1003)		7 + 1
	FA		0.980 (0.3222)	1.835 (0.1754)	
	S	4.011 (0.0452)		0.994 (0.3186)	
Poland	I	5.439** (0.0197)	0.056 (0.8126)		1 + 1
	FA		0.752 (0.6865)	1.138 (0.5659)	
	S	13.976* (0.0009)		7.018** (0.0299)	
Romania	I	2.005 (0.3668)	0.698 (0.7053)		2 + 1
	FA		5.536 (0.2365)	3.474 (0.4817)	
	S	3.759 (0.4395)		11.943** (0.0178)	
Slovenia	I	1.342 (0.8541)	1.382 (0.8473)		4 + 1

Notes: *, **, *** show significance at 0.01, 0.05, 0.10 level respectively. The choice of optimal lag length is based on Schwarz Criteria and LM tests.

Source: Own calculation.

Conclusion

We first examine the causal relationship between the current account and financial account balance, then the current account, foreign direct investment, portfolio investment, and other investment and finally the financial account,

saving and investment in Croatia, Hungary, Poland, Romania and Slovenia by means of Toda-Yamamoto approach to Granger causality test.

We find that a causal relation running from the financial (current) account to the current (financial) account in Croatia (Poland) and Slovenia (Romania) while a bi-directional causality exists in the case of Hungary. Our results regarding Poland, Romania and Hungary don't lend any evidence for the idea that in emerging countries the financial account uniderectionally Granger causes the current account.

We also conclude that at least one component of financial account Granger causes the current account in Croatia, Poland, Romania and Slovenia. Our results show that the causality running from the current account to at least one component of financial account in Poland, Romania and Hungary.

We also examine the relationship among the financial account, saving, and investment. We conclude that there exists at least one causal relation among financial account, saving and investment in all countries examined. It seems that the financial account Granger causes the saving in Hungary and investment in Croatia while the saving in Romania, investment in Croatia and Poland Granger cause the financial account.

Furthermore we find a causal relation running from the saving to the investment in Romania and Slovenia. We should note that our results indicate that it would be helpful to use the disaggregated data when examining the relationship between the current and financial account.

Our findings have some policy implications. The sustainability of high current account deficits is a concern for many emerging or developing economies. A causal relation from the financial account to the current account implies that economic policies aimed at reducing the current account deficit should take the financial account into consideration as well. Other than the sustainability concerns, the last global crisis has affected the saving and investment decisions and led to either a sharp contraction or even a surplus in the current account in all countries examined, implying a hard adjustment. When determining economic policies regarding the capital flows, paying enough attention to the possible relation with saving and investment is necessary. It seems that a sharp decline in international flows to developing or emerging countries is likely to occur in coming years. In this context, only countries that undertake some structural reforms, implement pro-business policies and provide the most profitable investment opportunities could attract more foreign direct investment. So these countries should design some new policies while minimizing the associated risks and volatilities in order to avoid dealing with a costly and disruptive adjustment in the future.

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