

Evaluation of the Factors Determining Risk of Growing Current Account Deficit to the Country in the Context of Economic Growth

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Global current account deficit as a ratio with GDP in 1980–2010 increased more than 200 %. The problem of growing current account deficit is encountered not only by developing countries but also by the developed ones and, evaluating the last decade, their average annual amounts reached the level of 20 % from GDP or even more (Island – 15,7 %, Malta – 9,9 %, the USA – 6 %, Lithuania – 11 %, Bulgaria – 25,2 %, Latvia – 22,4 % from GDP). The growing current account deficit is considered as a sign of economic weakness, which indicates certain problems of competitiveness change in a country. While solving the problem of the extents of growing current account deficit in the countries it is important to evaluate what determines growing current account deficit and its risk to the national economic growth.

The evaluation of the factors determining the risk of growing current account deficit to the country was performed in the groups of countries that experience economic slowdown and the ones that do not encounter it. Logistic regression is selected for a more accurate assessment of the growing current account deficit problem.

It was set by the survey that the risk of growing current account deficit to the country depends on the factors, which determined it; whereas the reasons of the growing deficit identified in the groups of countries that experience the economic slowdown and the ones, which do not encounter it are different. The performed research sets apart the factors of growing current account deficit in the country, which could explain the risk of it in the aspect of economic growth.

Keywords: *Growing Current Account Deficit, Risk, Economic Growth, Determinants, Logistic Regression.*

Introduction

In the course of countries' integration into the world market, the problem of growing current account deficit becomes especially important as well as the evaluation of its risk with regard to economic growth. In 2011 the report of the researchers of IMF Independent Evaluation Department named the problem of current account deficit as the main reason of national economic instability. It is acknowledged that the risk of growing current account deficit to the national economic growth might be explained by different reasons that have conditioned it. The current account deficit cannot be made absolute and we cannot state that economics is weak, but the growing extents of current account deficit might cause negative consequences for the economic growth. The mentioned circumstances have determined that the problem of growing current account deficit of the countries in the last decade and evaluation of its risk became a significant object of economic and political discussions.

While solving the problem of the extents of growing current account deficit in the countries it is important to evaluate what determines growing current account deficit and its risk to the national economic growth. The relevance of the evaluation of this problem is substantiated by the conclusion presented in the project "Evaluation of Current Account Deficit" by the Research Department of IMF in 2012, which indicates that up to now the research determining the levels of risky current account deficit has

not evaluated the reasons of growing current account deficit in the country. It is explained that the research determining risk levels of current account deficit for the evaluation does not select periods of increasing current account deficit which would allow determining the reasons due to which countries exceed these determined risk levels of current account deficit. While identifying the factors that have determined growing current account deficit and its risk with regard to economic growth, the research carried out in this paper contributes to the extent of growing current account deficit and the solution of the issues regarding its risk.

Scientific problem. First, the risk of growing current account deficit to the national economic growth depends on the factors determining current account deficit. Second, insufficient evaluation methods of risk of growing current account deficit to the country allow evaluating the impact of separate factors upon the possibility of slowdown of economic growth in the country. As a consequence, the scientific problem this paper attempts to solve is revealed by the following questions: (1) What factors are significant for the growing current account deficit and how to evaluate the impact of these factors? (2) What factors determine the risk of growing current account deficit to the country with regard to the slowdown of economic growth? *The object of the research* – factors determining the risk of growing current account deficit to the country. *The aim of the research* – to evaluate the factors determining the risk of growing current account deficit to the country in the

groups of countries experiencing different changes of economic growth.

In order to achieve the formulated aim of the research, the following *objectives of the research* are being pursued in the article: 1. To summarize the risk of the growing current account deficit and to highlight its potential impact on the economy as well as to discuss the factors determining the growth of current account deficit generalizing their risk to the country. 2. To create an evaluation model of the factors determining the risk of growing current account deficit to the country in the context of economic growth. 3. To identify the factors determining the risk of growing current account deficit in the country and their impact in the groups of countries experiencing different changes of economic growth.

Methods: comparative analysis of the existing scientific insights was applied and the results of the performed empirical research were summarized, also the methods of modelling and econometric analysis, the analysis of correlation, dual regression and logistic regression were applied.

Setting the Level of Current Account Deficit Risk to the Country

The actual countries current account imbalances are growing and the world's current account deficit of 2008 reached 3 % of the global GDP. International trade today is a dynamically developing part of global economy (Bernatonyte, Normantiene, 2009). The existing current account deficit and its growth is often seen as a sign of economy weakness among economists, and vice versa - the decline of the current account deficit or surplus growth is usually seen as a strengthening of economy. Such an approach is ambiguous and the current account deficit or surplus cannot be directly interpreted as a sign of weak or strong economy. Jakutis, *et al.* (2007) agrees that the current account deficit data are attributed to the country's key economic indicators, although they recognize no any substantial threats when current account deficit in Lithuania (in 2005) reached 7 per cent (measured as a percentage of GDP). Stankeviciene *et al.* (2014) studied the country risk, sustainability and economic security indicators, among which included the debt levels (government's net borrowing requirement), deficit/surplus (total government debt measured as a percentage of GDP)

also global competitive index, but they do not include the indicator of external balance.

According to Rutkauskas, Stasytyte (2011), risk is defined as the known results - the risk of loss or other negative (although possibly positive) consequences – possibility. Researchers state that the risks is described by the variability of future performance, the opportunity of loss, the possibility of a negative deviation from the expected result, the volatility of the potential results, which were formed in a particular situation, and so on. In the scientific literature, the current account deficit riskiness interpretation differs, but it can be deduced that the *current account deficit increases or its level is risky to the country*, if it leads to the negative effect on the country's economic growth, domestic consumption, the value of the domestic currency or a the country's foreign debt. Some authors refer *negative changes in the national economy* (Hudson & Stennett, 2003; Baharumshah *et al.*, 2004), others name a *slowdown in domestic consumption* (Aristovnik, 2006), the *depreciation of the national currency* (Camarero *et al.*, 2009; Aristovnik, 2006; Zaman, 2005). Some authors indicate a possible *growth of the foreign debt or its service costs* (Zaman, 2005; Ciocyte, 2006; Mancellari & Xhepa, 2003, Christopoulos *et al.*, 2004).

In the theoretical literature the risks of the economic growth slowdown are most commonly identified and the empirical studies examine the current account deficit impact on the economic growth. The countries, facing a long-term and growing current account deficit problem, experience the economic growth slowdown, which is listed by many researchers (Freund, 2005; Komarek & Melecky, 2005; Curcuru *et al.*, 2008; Christopoulos *et al.*, 2004; Ansari, 2004; Beidas-Strom, Cashin, 2011). The authors point out that if for several consecutive years the country's level of the current account deficit (from GDP) is increasing, it means, that the country sends much higher level of its GDP to foreign countries and the country's internal revenue decreases. It should be noted that the growing current account deficit situation in the economy shows that *the country purchasing goods and services spends abroad more than it is able to sell in foreign countries*. Next in the studies it is discussed, that the level of the current account was assessing, which is called the structural current account position (Bussiere *et al.*, 2004) or equilibrium rate (Lee *et al.*, 2008; Medina *et al.*, 2010).

Table 1

Research Evaluated Country's Risky Level of Current Account Deficit

Research group	Results	Research
Research evaluated country's risky level of current account deficit	Estimated (for individual countries)	Bussiere, Fratzscher & Muller (2004); Aristovnik & Setnicar-Cankar (2006); Medina <i>et al.</i> (2010); Jaumotte & Sodsriwiboon (2010); Gagnon (2011); Rodzko (2005); Leigh, (2005); Zanghieri (2004)
	Estimated (<i>for groups</i>)	Lee <i>et al.</i> (2008) ¹ ; Beidas - Strom, Cashin (2011); Aristovnik (2006a) – in developing countries 5 % (GDP)
	Failed	Gruber & Kamin (2005); Reisen (1998) – estimation failed for groups
	Ambiguous results	Abiad <i>et al.</i> (2007) - Europe with the EU countries distinguished as a special region in which capital moves from rich to poor countries. Estimated countries with biggest out of touch from the calculated CAD level.

¹ Groups: The European developed countries; Other developed countries; Oil-exporting countries; East Asian countries; Central and Eastern European countries; Latin American countries; other countries.

The summary of the research results of country's current account deficit risky level evaluation is presented in Table 1. These studies applied several methods evaluating risk level of the country's current account deficit. First, calculating expected cash flows of income (discounted) and considering them as current account deficit level, which fulfils the conditions of solvency in the country. Second, the long-term projections of the main current account deficit factors. It should be noted that this method of research simply determines how much country's current account deficit is out of touch from its directionally trends, but *does not evaluate the factors resulting deficit (or fast growing) which exceeds set risk level in the country.*

Researchers determine the risky current account deficit from GDP levels in the countries or their groups, but stress that the results should be treated with caution. The evaluated risky current account deficit from GDP levels differs among the examined countries and the researchers indicate that it would be difficult to determine the overall level. Aristovnik (2006a) evaluated 5 % criterion of current account deficit (from GDP), which if exceeded leads to instability problems in the country. Reizen (1998)

found large differences between the evaluated risky country's current account deficit level in the selected countries: from 3 % to 12 % of GDP. The researcher also sought to determine the excessive overall current account deficit of the eight selected countries, but he failed to evaluate the level because of these differences.

It is concluded that the evaluation of growing current account deficit risk should be based on its factor determination.

Factors Explaining the Risk of Growing Current Account Deficit

The sizes of the countries' current account deficit are increasing, so this confirms the need for their evaluation. According to Pettinger (2013), the current account deficit as a result of the international trade, is a reflection of the country's competitiveness. In a part of the most recent studies the risk of the current account deficit is explained through the differences of its determinants (Blanchard, Milesi-Ferretti, 2009; 2011; Jaumotte & Sodsriwiboon, 2010; Debelle, 2011; Obstfeld, 2012; Corden, 2007, 2008, 2011).

Table 2

Factors Explaining the Risk of Growing Current Account Deficit

Factors	Confirms the risk	Does not support the risk
Domestic demand, domestic demand deformation	Obstfeld & Rogoff (2010); Corden (2011); Freund & Warnock (2005); Kraay & Ventura (2002); Timmer (2010); Blanchard & Milesi-Ferretti (2009, 2011); Obstfeld (2012); Camarero <i>et al.</i> (2009); Debelle (2011)	Giles (2011)
Public sector consumption	-	Blanchard & Milesi-Ferretti (2011)
Domestic investment, saving	Zanghieri (2004); Corden (2011)	Blanchard & Milesi-Ferretti (2009, 2011); Obstfeld (2012), Fischer (2003)
Real effective exchange rate changes	Blanchard & Milesi-Ferretti (2009, 2011); Obstfeld (2012); Jaumotte & Sodsriwiboon (2010), the 2011 report of Bank for International Settlements (BIS)	-
Technological changes	-	Hervey & Merkel (2000)
The increase in credit to the private sector	Mendoza & Terrones (2008); Obstfeld & Rogoff (2010); Corden, (2011)	-

In the scientific literature there is no clear distinction of risk or risk-free determinants of growing current account deficit in the country, but many authors recognize that a risk of current account deficit to the economic growth rate in a country can vary because of its different determinants (Camarero *et al.*, 2009; Blanchard & Milesi-Ferretti, 2011; Corden, 2007, 2008, 2011). The risk of the growing current account deficit or the size of it is usually associated with the negative changes in economic growth - economic growth slowdown, experienced by the countries after the current account deficit. Further the authors of the paper aim to discuss and identify the growing current account deficit factors that could explain its risk to the country - economic growth slowdown. It should be noted that purposefully growing current account deficit may not be reflected in a slowdown in economic growth in the country, depending on the factors which have led to its formation. To understand the functioning of money demand is extremely important for the country (Foresti & Napolitano, 2014). The need for external capital inflow to finance current account deficit or some short-term economic failures of the developing countries cannot be over-emphasized, too (Zilinske, 2010). On the empirical

level, there is a body of evidence that suggests possible positive correlation between the FDI and economic growth (Brock, Urbonavicius, 2008). The scientists often identify the impulsive purchasing with the increased / excessive buying (Virvilaite, Saladiene & Bagdonaite, 2009), so this may also be the evidence of the growing current account deficit risk to the country. It can be assumed, that in these countries the growing current account deficit was caused by the factors that do not slow down the country's economic growth at the same time.

Theoretical and empirical studies are still under discussion, about the interpretation of the growing current account deficit in the country, and also how much the factors of its growth are important in this situation. Reizen (1998) argued that the necessarily high current account deficit (% of GDP) is dangerous to the country's economic growth, because it depends on the main factors that determined it.

Necessity of the growing current account deficit reduction should be associated with the assessment of its risk for the country. Timmer (2010) argues that if a country has a current account deficit, it means that even if it is a result of "risk-free" and "risky" determinants, it is obvious

that the country's domestic consumption exceeds its income from the foreign countries.

According to a summary of the scientific literature it can be stated that the growing current account deficit may be a consequence of domestic demand, the effects of monetary policy, the competitiveness of price or other important changes. These different factors of the growing current account deficit point out the different problems of the country's economy.

The 2011 report of Bank for International Settlements (BIS) states that there is no relevance to answer, when the countries will experience the purposefully growing current account deficit adjustment, but it is necessary to answer why (also what determines that) these countries are facing this situation. One of the fundamental questions is still in discussion among international economists - *if countries facing purposefully growing current account deficit will suffer from adverse economic slowdown*. Part of the studies, by sifting purposeful current account deficit periods assessed the factors determining this deficit, but did not evaluate whether the individual countries experience slowdown of economic growth (Adalet, Eichengreen, 2006; Benhima, Havrylchuk, 2006; Gruber,

Kamin, 2005). Another part of the study investigated whether individual countries experience an economic slowdown. Research summary of the results in terms of economic growth changes the observed countries after the growing current account deficit, given in Table 3.

Changes in economic growth in these studies are measured comparing the growth average in current account deficits growth and declining periods. The economic slowdown was determined in the country, if its average economic growth rate slowed down after purposeful current account deficit. In a part of the studies see table 3), by sifting purposeful current account deficit periods, it was assessed that both developed and developing countries experienced slowdown of economic growth. The other part of the researchers (De Haan *et al.*, 2006; Algieri & Bracke, 2007) found ambiguous changes of economic growth in different countries and confirmed that only in a part of the purposeful current account deficit countries the economic slowdown was determined, in the other part – the economic growth was accelerating. It could be argued that a purposeful current account deficit country is not always facing economic growth rate slowdown.

Table 3

Summary of Changes in Economic Growth After a Purposeful Current Account Deficit

	Result	Country group	Research
Economic slowdown	Confirmed	Developed countries	Freund & Warnock (2005); Debelle & Galati (2005); Croke <i>et al.</i> (2005)
		Includes both developed and developing country groups	Edwards (2005); Cardarelli & Rebucci (2007); Melecky (2005); Komarek <i>et al.</i> (2006); de Mello <i>et al.</i> (2011)
	Not confirmed	Low and middle-income countries	Milesi-Ferretti & Razin (1998)
	Ambiguous results	Developed countries	De Haan <i>et al.</i> (2006) – half of the selected countries; Algieri, Bracke (2007) – half of the selected countries.

Although the studies determined that the countries after growing current account deficit experienced these changes in the economic indicators, but the most of them did not seek to explain these differences. In the scientific literature, only a few studies sought to identify the factors that might explain these economic growth (no) slowdown changes in the countries with a similar current account deficit. These differences in the growth changes were interpreted in the studies forming the groups of countries with the economic growth (no) slowdown changes and identifying the factors that determined the current account deficit in them.

Based on the research results, it is possible to form the conclusion that not all the countries determine the economic growth slowdown after a purposeful growing current account deficit. Considering the discussed empirical research it can be stated, that the risk of the growing current account deficit - economic growth slowdown or other negative changes of the economic indicators – can be interpreted by the determinants of current account deficit.

Research Methodology

This part of the article presents the methodology of the evaluation of the factors determining the risk of growing current account deficit to the country. Having generalized the results of the theoretical and empirical research, the model (Figure 1) has been created helping to determine the

risk of growing current account deficit to the country in terms of the changes of the economic growth. With the help of the model we have tried to find out what factors, purposefully determined growing current account deficit, explain the result of the slowdown or non-slowdown of the national economic growth.

The created model extends the evaluation opportunities of the growth on current account deficit and risk factors as well as solves the problem issues that emerge while performing similar researches: (1) the model solves the problem of evaluation of the impact of individual factors in the country on growing current account deficit; (2) the model integrates domestic demand and price factors and with the help of them evaluates and explains the risk of growing current account deficit to the country in terms of economic growth; (3) the model distinguishes the factors of the intensity of national trade, national economic growth, domestic demand, national openness, market prices, the international movement of capital as well as the condition of world market from the channels of their impact.

Reasoned research sample and selection criteria of the periods of growing current account deficit. In the research the selected period 1980–2010 has been chosen due to the necessary greater number of investigated cases of growing current account deficit. It is important to mention, that the chosen 13 years' time period includes the intensive current account deficit growth (the period on some cases seeks till 2013).

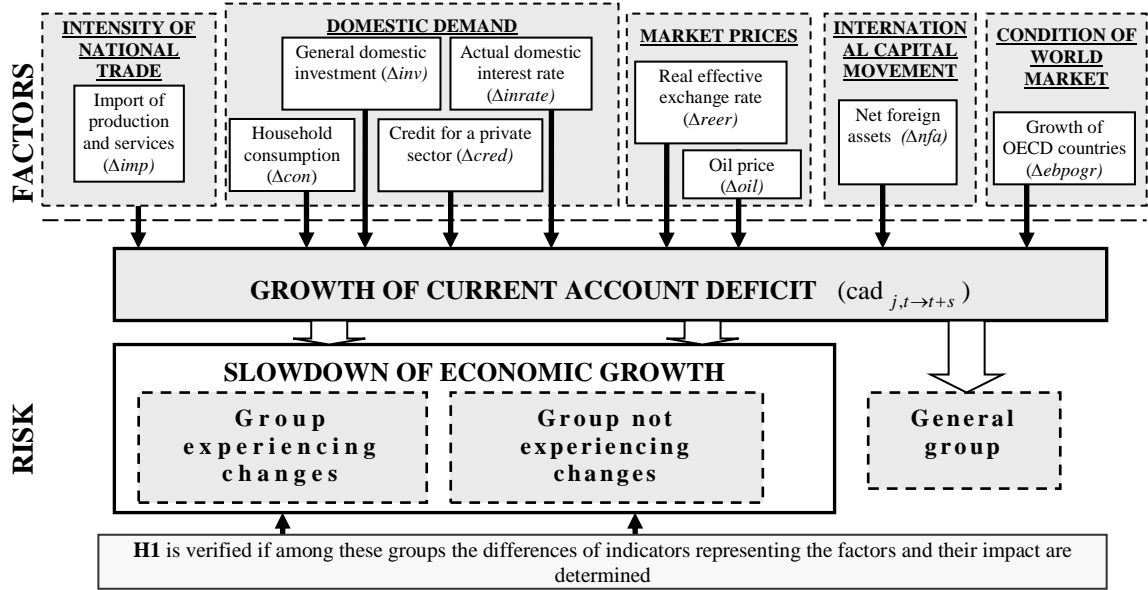


Figure 1. The Model of Empirical Evaluation of the Factors Determining the Risk of Growing Current Account Deficit to the Country

The period of 1980–2010 only illustrates the situation of the searched purposefully growing current account deficit, but the empirical research includes the data of 2013. Referring to the fact that growing current account deficit is the problem not only for the developing countries, in the paper the European countries have been investigated as well as the countries of the other geographical regions where the purposefully growing current account deficit was characteristic to. In the work we have disassociated from the countries of low income and the countries where the greater part of the trade is composed by oil and other excavation export.

Following the selection criteria of the research periods selected by the IMF and other researchers, the period of 13 years' time ($T-6; T+6$) has been selected. The selection of the periods of growing current account in the countries refers to the following criteria: (1) CAD makes more than 2 % from GDP and exceeds the value of their determined change tendency during the period of 1980–2010; (2) for

the 3–4 years' time CAD is decisively growing; (3) after the growth period the value of CAD decreased more than 1/3 of its amount during two years' time (and more than 2 % of GDP per year); (4) during the period of its decrease the value of CAD did not exceed its value during the growth period (for three years' time).

The demand and methods of the periods grouping the growing current account deficit according to the experienced changes of (non)slowdown of the economic growth in the country have been verified. The attribution of the periods of the growing current account deficit to the groups refers to the principle of the grouping presented in Table 4. Verification of significance of the differences among the formed groups was performed through: the evaluation of the significance of the experienced changes in the economic growth in the formed groups or among the groups; the evaluation of the relationship between the current account deficit and economic growth in the different groups of the countries.

Table 4

Attributes of Grouping of the Periods Investigated in the Article

Formed groups ↓	Attribute of grouping* →	Expression of growth of actual GDP per capita
I	The slowdown of economic growth asserts	$\Delta\mu_{j,t-2 \rightarrow t+2} < 0^*$
II	The slowdown of economic growth does not assert	$\Delta\mu_{j,t-2 \rightarrow t+2} > 0^*$

* The changes of growth of actual GDP per capita are calculated as the difference of average values of 2 years of CAD growth period (t-2; t-1) and 2 years of CAD decrease period (t+1; t+2). $\Delta\mu_{j,t-2 \rightarrow t+2} = \mu_{j,t+1 \rightarrow t+2} - \mu_{j,t-2 \rightarrow t-1}$

The selected and verified factors and indicators reflecting them and their expressions. In order to foresee the factors significant to purposefully growing CAD, its periods ($t=1, \dots, 13$;) are divided into the separate periods $t \rightarrow t+s$ referring to its growth and decrease. The expression $cad_{j,t \rightarrow t+s}$ indicates to which period – growth or decrease of CAD – country “j” is described to during the period $t \rightarrow t+s$. The dependent variable $cad_{t \rightarrow t+s}$ has a double meaning i.e. it is encoded either as 1 or 0. The periods of

investigations are divided into the periods of CAD growth ($cad_{t \rightarrow t+s}=1$) and decrease ($cad_{t \rightarrow t+s}=0$). The factors of intensity of the national trade, domestic demand, international movement of capital, market prices and the condition of the world market have been selected for the empirical evaluation as well as the indicators reflecting them. A model of evaluation of the factors determining the risk of growing current account deficit to the country has been composed, which is presented in a generalized form:

$$P(cad = 1) = f(\Delta imp; \Delta con; \Delta inv; \Delta cred; \Delta inrate; \Delta reer; \Delta oil; \Delta nfa; \Delta ebpogr) \quad (1)$$

$\Delta imp_{j,t \rightarrow t+s}$ measures the reversal of import of production and services; $\Delta con_{j,t \rightarrow t+s}$ measures the reversal of household consumption; $\Delta inv_{j,t \rightarrow t+s}$ measures the reversal of domestic investment; $\Delta inrate_{j,t \rightarrow t+s}$ measures the reversal of actual interest rate; $\Delta cred_{j,t \rightarrow t+s}$ measures the reversal of the credit for household sector; $\Delta reer_{j,t \rightarrow t+s}$ measures the reversal of actual effective exchange rate; $\Delta oil_{j,t \rightarrow t+s}$ measures the reversal of oil prices; $\Delta nfa_{j,t \rightarrow t+s}$ measures the reversal of absolute foreign assets; $\Delta ebpogr_{j,t \rightarrow t+s}$ measures the reversal of national economic growth of OECD. All these submitted expressions are considered for a country “j” during the period $t \rightarrow t+s$.

Formulated hypothesis: (H1): The risk of growing current account deficit with regard to the growth of national economy is determined by different specific factors determining current account deficit.

The method of logistic regression is applied in this article, which evaluates the result – periods of growth and

decrease of the purposefully growing current account deficit. The model of logistic regression may be presented as follows:

$$P(\text{cad}_{t \rightarrow t+s} = 1) = \frac{e^{Z(X)}}{1 + e^{Z(X)}}; Z(X) = \beta_0 + \beta_1 X_1 + \dots + \beta_k X_k; \quad (2, 3)$$

here: $e = 2,718$; $\beta_0, \beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7, \beta_8, \beta_9$ – values of constant of logistic regression.

Research Results

The performed analysis of the intensity and distribution of growing current account deficit in the investigated countries showed that during 1980–2010 the level of the global current account deficit increased more than 200 % (up to 3 % of the world GDP) and even 43 periods of purposefully growing CAD in respective countries have been selected for the research (Table 5).

Table 5

Structural Distribution of Research Sample According to the Dependence of the Countries to European or Other Geographical Regions or Their Level of Development

Periods	1980–1989	1990–1999	2000–2010	Totally:
Regions *	Number of periods of selected growing CAD			
EUROPE	Totally: 5	11	12	28
Developed countries	CYP 86–7,51 %, GRC 86–7,26 %, DNK 87–6,03 %, NOR 89–4,02 %, POL 89 - 11,1 %	GRC 91–3,8 %, GBR 91–3,7 %, FIN 93–4,6 %, ISL 93–2,3 %, ITA 93–2,6 %, ESP 93–3,4 %, SWE 93–2,7 %, BGR 94–24,1 %, MKD 99–8,6 %, MDA 99–19,7 %, ROM 99–6,8 %	ISL 01–0,13 %, CZE 05–5,1 %, ISL 07–15,7 %, MLT 07–9,9 %, SVK 07–7,85 %, LVA 00–8,9 %, LTU 00–10,8 %, HUN 01–8,6 %, BGR 08–25,2 %, EST 08–15,9 %, LVA 08–22,4 %, ROM 08–13,4 %	16
Developing countries				12
OTHER REGIONS *	Totally: 1	7	7	15
Developed countries	USA 88 - 3,39 %	ISR 97–4,92 %, CAN 94–3,86 %	AUS 08–6,19 %, USA 07–5,99 %	5
Developing countries		ARM 99–22,1 %, MEX 95–5,7 %, PNG 90–9,9 %, CHL 99–4,7 %, BHS 99–18,6 %	MWI 07–11,2 %, ATG 08–30,6 %, GRD 08–26,6 %, LCK 08–32,4 %, BRA 02–4,1 %	10
Totally:	6	18	19	43

* - other regions: Asia, North and South America, Africa, Oceania, Central America, the Caribbean, Middle East

During 1986–2008 the value of the current account deficit from GDP in the different countries reaches from 3 % to 30 %. About 37 % of the entire samples are composed by the countries where the deficit reached 2–5 %, 30 % - countries, which amount of deficit reached 6-10 % from GDP. The remaining part i.e. 33 % of the entire samples was composed by the countries that during the investigated period encountered higher than 11 % (up to 30) of current account deficit from GDP. The analysis of the intensity of current account deficit revealed that during the periods selected for the research the current account deficit from GDP within the period of growth averagely increased by 6.46 %. During the selected periods, the current account deficit averagely grew up around 52.66 % per year. 36 % of the selected countries encountered a more rapid than the average pace of the growth of the current account deficit that exceeded 100 %.

On the next inquiry stage the current account deficit declining and growth periods ($t \rightarrow t+s$) were identified in the exploratory sample, the dependent and independent variables were estimated as well. The general data sample size of the logistic regression analysis is $n = 184$. In the total group of the countries two study groups were formed accordingly: the economic slowdown countries (group 1)

$n=87$, and the ones, which do not encounter it (group 2) $n = 97$. The ratio between the study samples and the number of independent variables can not be less than 6 (n/k), considering assessed (20.44, 9.66 and 10.77), it can be stated that the survey sample is sufficient. The data outliers have not been established according to the standardized residuals (the critical value - 3) and a Cook measure (the critical value $-F_{0,5} (9 + 1, 184-9-1) = 0.927$). According to the pair correlation coefficients between in the model with 9 independent variables a multi-colinearity was not identified. After testing the assumptions of the logistic regression analysis, it can be stated that the survey data can be used for evaluation of the factors determining risk of the growing current account deficit to the country in the context of the economic growth.

The results can be summarized and the factors explaining the risk of growing current account deficit to the country can be formed.

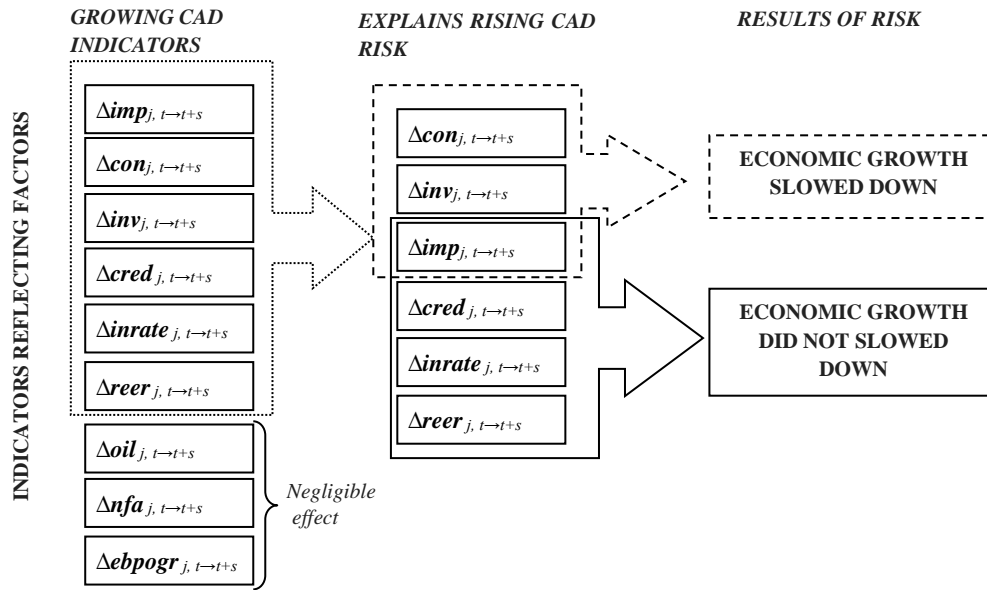


Figure 2. Summary of the Results of Empirical Research

The risk of the growing current account deficit to the country is determined by the rapid *growth of internal demand* – internal consumption, unprofitable investment and production and services’ import but not by the changes

of the national prices in comparison with its main partners. The empirical model for the countries facing the economic slowdown has a following form:

$$P(\text{cad}_{t \rightarrow t+s} = 1) = \frac{e^{0,15+24,65\Delta con+10,24\Delta inv+11,46\Delta imp}}{1 + e^{0,15 + 24,65\Delta con + 10,24\Delta inv + 11,46\Delta imp}} \quad (4)$$

Also the other set of the results had a significant impact on this generalization (for the countries facing the economic slowdown):

- A household consumption growth has the strongest impact on these countries and the increase of its growth by one percentage point to 160 per cent increases in the likelihood that the country will form a growing current account deficit, leading to the economic slowdown. It confirms the domestic consumption deformation theory, which explains the risk of the growing current account deficit to the country. If the risk is considered as the cause of the economic slowdown due to the purposely increasing current account deficits in the country, then these results support the view (Hervey, Merkel, 2000; Jaumotte, Sodsriwiboon, 2010; Blanchard, Milesi-Ferretti, 2011), that the growing current account deficit, as a private sector consumption increase, is risky for the country, because it does not increase the productivity.

- The domestic investment growth in this group determines the growing current account deficit in the country. When the other factors are stable, the growth

increases for 1 percentage point of the domestic investment into the development, capacity and housing, what increases the possibility to 50% that the current account deficit will grow. This country group facing the economic slowdown gets the stronger effect of this variable on the growing current account deficit in the country than the general group of countries (9.1%). The significance of this variable in this group of the countries confirms that the increasing domestic investment into the development, capacity and housing, as a useless investment opportunity, is dangerous for the country's economic growth. Broadening the investigation it would be possible to accurately assess the internal structure of the investment and its changes.

- In this group, the real effective exchange rate variable was insignificant.

The riskless growing current account deficit to the country is mainly determined by the changes of the national prices in the comparison with its main partners. The empirical model for the countries unfacing the economic slowdown has a following form:

$$P(\text{cad}_{t \rightarrow t+s} = 1) = \frac{e^{-1,52+8,93\Delta imp+0,022\Delta inrate+3,77\Delta cred+6,36\Delta reer}}{1 + e^{-1,52+8,93\Delta imp+0,022\Delta inrate+3,77\Delta cred +6,36\Delta reer}} \quad (5)$$

This would allow confirming that the growth and decline of the current account deficit in this group of the countries was strongly determined by the changes of the real effective exchange rate. Also the other set results had a

significant impact on this generalization (for the countries unfacing the economic slowdown):

- The increase of a real effective exchange rate by one percentage point, 215 percent increase in the

likelihood that the country will form a growing current account deficit, which does not lead to a slowdown in the economic growth. This suggests that if the growing current account deficit is elastic for real effective exchange rate changes, then its growth is not risky for the country's economic growth, because ultimately the economy is adjusted through the price.

- It could be argued that the onset of a large dependence appears between the growing current account deficit and the real effective exchange rate, therefore these countries do not face the economic slowdown because of its export growth.

- In the countries unfacing the economic slowdown the growing current account deficit is more elastic to goods and services import changes (Exp B = 2.9) than in the countries facing the economic slowdown (Exp B = 1.7).

- For these countries, the domestic demand changes are not significant. And it confirms that the growing current account deficit in these countries is not conditional on the increase of the domestic demand.

It was set by the survey that the growing risk of the current account deficit to the country depends on the factors, which determined it. The performed research sets apart the factors of the growing current account deficit in the country, which could explain the risk of it in the aspect of the economic growth. Using these mathematical models it is possible to simulate the probabilities of the growing current account deficit in the country (determined by the changes in the price competitiveness or domestic demand), and also identify its risk to the economic growth.

Conclusions

▪ Risk in the scientific literature is defined as an opportunity of known results – danger, loss or other negative (or positive) consequences. The performed analysis has showed that *the risk of current account deficit to the country* is related to the *negative changes of the national economic indicators*: the slowdown of the economic growth, decrease of the national exchange rate value, growth of the external debt, and increase of the unattractiveness for foreign investments.

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It was ascertained that in the scientific literature risky or risk-free reasons of the growth of current account deficit are not clearly distinguished. It has been ascertained that the risk of the growing current account deficit in the country might be explained by the differences of the factors that have determined it – *the deformations of the domestic demand, the reversal of the competitiveness due to the prices, etc.* These different factors of the growing current account deficit show the different problems of the country's economy and its possible diverse impact results to the economic growth.

▪ The research has ascertained that the risk of the growing current account deficit depends upon the factors that have determined it since the reasons of the growing deficit differ in the groups of the countries that either experience the slowdown of the economic growth or do not experience it. The performed research distinguishes the factors of the growing current account deficit in the country that might explain its risk with regard to the economic growth:

- the strongest direct impact upon the growing current account deficit is made by the changes of the national domestic consumption, product and service import and actual effective exchange rate, whereas the weaker significant impact is made by the growth of the domestic investment and credits to the private sector.

- the risk of the growing current account deficit to the country is determined by the rapid growth of the internal demand – internal consumption, unprofitable investment and production and service import but not by the changes of the national prices in comparison with its main partners.

▪ The Research results may be used when evaluating the risk of the growing current account deficit in the country with regard to the economic growth. Referring to the research results, through the impact of the separate indicators reflecting the factors, it is possible to quantitatively evaluate the expedience of the implemented or in the countries (at international level) prepared means of reduction of the growing current account deficit and its risk to the national economy.

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