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Macroeconomic Imbalances in the Euro Area

Abstract

Macroeconomic imbalances constitute one of the most important threats to the cohesion of the monetary union. The aim of this article is to examine the current state of imbalances using the new composite indicator of macroeconomic stability. The calculated composite indicators of macroeconomic stability allow for the formulation of the following interpretations regarding changes and the current level of macroeconomic imbalances in the Euro area: 1. The aggregate pressure from macroeconomic imbalances in the Euro area is currently the lowest in the whole period for which data is available; 2. The imbalances in the Euro area have been partially limited, but more precisely, it should be said that they have changed their face rather than disappeared; 3. A significant reduction of imbalances occurred in the case of variables which, in the majority of interpretations, were directly blamed for the exacerbation of the post-2008 crisis phenomena: current account balance, unit labour costs, or credit growth. At the same time, imbalances in terms of international net investment position and public and private debt, as well as imbalances in the labour market, have significantly increased.

Keywords: Euro, Macroeconomic Stability, EMU, Macroeconomic Imbalance Procedure

Introduction

Macroeconomic imbalances are one of the most notable threats to the cohesion of the monetary union. Within the EMU's institutional framework, a different course of macroeconomic dynamics that would deepen the differences between member states poses a threat to all member economies because of possible contagion and also poses a threat to the integrity of the entire scheme of a common currency. Numerous

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measures, including the introduction of the Macroeconomic Imbalance Procedure (MIP), were aimed at reducing the risk coming from an unstable macroeconomic environment. Hence, the question arises as to what extent the risk related to macroeconomic imbalances has been successfully limited in the Euro area. The aim of the article is to study the current state of imbalances using a new composite indicator which describes the aggregated level of imbalances (MSCI).

It is important to be reserved regarding the very way in which macroeconomic imbalances are here understood. In the contemporary (mainstream) economy, *stability* and *instability* or *balance* and *imbalance* are fundamental terms that refer to a variety of fields. Even the term *macroeconomic stability* might include sets of variously defined variables. In this paper, the way in which the terms *macroeconomic stability*, *balance* and *imbalance* are understood corresponds to a specific understanding that was ascribed to them in discussions on global imbalance and with imbalances in the Euro area (i.e. what is expressed on the MIP scoreboard).

This paper is structured as follows. Part one briefly discusses the character of macroeconomic imbalances. Secondly, the rules of calculating the macroeconomic stability composite index (MSCI) are presented. Part three presents the current situation related to imbalances and indicates a change in their character.

The Nature of Macroeconomic Imbalances in the Euro Area

The character and scope of macroeconomic imbalances in the Euro area is widely debated.¹ The discussion concerns, in particular, the relative importance in the processes of increasing the imbalance of such factors

¹ The quickly growing list of literature includes: *The eurozone crisis; a consensus view of the causes and a few possible remedies*, eds. R. Baldwin, F. Giavazzi, CEPR, London 2015; P. De Grauwe, *The legacy of the Eurozone crisis and how to overcome it*, "Journal of Empirical Finance", Vol. 39, December 2016, pp. 147–155; S. Ederer, P. Reschenhofer, *Macroeconomic imbalances and structural change in the EMU*, "Structural Change and Economic Dynamics", Vol. 46, September 2018, pp. 59–69; E. Febrero, J. Uxó, F. Bermejo, *The financial crisis in the eurozone: a balance-of-payments crisis with a single currency?*, "Review of Keynesian Economics", Vol. 6, No. 2, pp. 221–239; J. Pietrucha, J. Czech-Rogosz, M. Tusińska, *Nierównowaga zewnętrzna krajów strefy euro (Euro area external imbalances)*, Wydawnictwo Uniwersytetu Ekonomicznego w Katowicach, Katowice 2013; J. Pietrucha, *Kryzys w strefie euro jako tło zmian w zarządzaniu gospodarczym (Euro area crisis as a background for changes in economic governance)*, in: *Zarządzanie gospodarcze w strefie euro (Economic governance in the Euro area)*, eds. J. Pietrucha, J. Zabińska, Difin, Warszawa 2014.

as domestic demand, private and public indebtedness, as well as price and non-price competitiveness. However, it is possible to present some fundamental stylised facts and basic interpretations that are generally accepted.

Since the mid-1990s, macroeconomic imbalances in the Euro area have included, above all, an imbalance in the current account of the balance of payments (Figure 1), a credit boom (a considerable increase of the credit/GDP ratio), and an imbalance in public finance. As a consequence, a group of deficit states has emerged – these countries were characterised by a deepening deficit in their current account, as well as a decrease in international competitiveness (an increase in unit labour cost, an appreciation of the real currency exchange rate), a significant increase in credit, and a relatively higher inflation rate.

On the other hand, the (few) surplus states were characterised by surpluses in their current accounts, as well as the lack of a credit boom, a stable public debt, and stable or improving international competitiveness. Deficits in the current accounts of deficit countries were balanced by surpluses in the financial accounts resulting from an influx of capital associated with the refinancing of the private and/or public debt on international markets – especially in the surplus states of the Euro area.

The differences between these two groups of states were deepening until 2008 (cf. Figure 1). In order to avoid a common misunderstanding, it is important to note that these data should not be interpreted as surpluses and deficits in bilateral trade between Euro area states. Data included in Figure 1 shows different tendencies in international trade with all partners, most of whom are usually from outside the Euro area. For instance, surpluses in Germany's current account were not obtained as a result of a trade surplus in transactions between them and Greece (or, to be more precise, this surplus contributed to the current account surplus very slightly). In general, bilateral trade between surplus and deficit countries is rather insignificant. For example, the export of goods and services from Germany to Greece in 2008 constituted as little as 0.8% of total German export (in 2018, it was 0.4%). In turn, as far as Greece is concerned, importing goods and services from Germany accounted for approximately 13% of its total import in 2008 (approximately 10% in 2018). The total export from surplus countries to deficit countries in 2008 was 6.5% of the total export in these countries (in 2018, it was 4.9 %). Conversely, the import from surplus countries to deficit countries amounted to approximately 19.7% of total import in the deficit countries (19% in 2018).²

² All the calculations based on the IMF's database, Direction of Trade Statistics, 2019, retrieved 10th May 2019.

It is worth mentioning that a varied terminology related to both groups of countries emerged (surplus vs. deficit states, core eurozone states vs. peripheral eurozone states, the north vs. the south, and the unfortunate term PIGS). Each pair of terms refers to different criteria and to a group of states that is defined in a different manner. The differences between the post-2008 crisis-related countries (the ones that belong to the deficit group) and the countries that demonstrated a relative gain in the last 10 years (those belonging to the surplus group) are particularly interesting. This paper uses the term “deficit countries/states” to refer to states belonging to the first group, and “surplus countries/states” to signify the second group. The first group includes Greece, Ireland, Portugal, and Spain. Meanwhile, Germany, the Netherlands, Austria, and Finland were members of the second group. These two types of states were distinguished because of the average level of current account balance in 2004–2008 (that is, the final five pre-crisis years). The first group is composed of the states characterised by the highest deficit. States characterised by the lowest deficit were listed as members of the second group – with the exception of Luxembourg, since its influence on the eurozone economy is insignificant (Table 1).

Table 1. Current account balance 2004–2008 (% of GDP)

Nether-lands	Ger-many	Fin-land	Austria	Bel-gium	France	Italy	Ireland	Spain	Portu-gal	Greece
7,14	5,48	3,66	3,2	1,66	0,02	-1,38	-4,34	-8,2	-10,14	-11,68

Source of data: Eurostat – Balance of payments by country (BPM6).

Initially, the different processes in surplus countries and deficit countries were interpreted as the result of a catch-up process of lower-income countries.³ In the case of those states in which economic development progressed quickly, a decrease in the current account conforms to the theory. Thus, macroeconomic imbalances did not give rise to an adequate response from economic policy and were even treated as a desired effect of the expected accelerated convergence processes after the establishment of the monetary union. It took the 2007+ economic crisis to reveal the scale of imbalances in the eurozone along with the deficit states' vulnerability to the effects of a crisis.

This “great divergence” between eurozone states was determined by

³ O. Blanchard, F. Giavazzi, *Current Account Deficits in the Euro Area: The End of the Feldstein-Horioka Puzzle?*, “Brookings Papers on Economic Activity”, Vol. 33, No. 2/2002, pp. 147–210; B. Schmitz, J. von Hagen, *Current account imbalances and financial integration in the euro area*, “Journal of International Money and Finance”, Vol. 30, No. 8/2011, pp. 1676–1695.

a number of factors that occurred simultaneously and operated at a global level, a monetary union level and an individual states level. Since the 1990s, the process of imbalance deepening has been global,⁴ with China and the US as notable examples. The divergence in the eurozone has been a part of it. It was accelerated by two global factors. Firstly, there is the liberalisation of capital flows and the globalisation of financial markets – these have progressed quickly since the mid-1990s. Secondly, there is the global savings surplus (generated by China and oil exporting states in particular). Both of these factors made it easier to use surpluses in financial accounts (i.e. external financing) to finance even those current account deficits that were long-lasting and significant. On a global scale, two groups of countries emerged that differ in terms of the current account balance: surplus countries (China is a prominent example) and deficit countries (with the US as a notable member). Deficit countries have experienced credit booms – including a boom that was mostly focused on real estate. As a result, private debt and consumption increased which had a negative impact on the relationship between a state's savings and investments.

In the case of the Euro area, this global process intensified due to the specific conditions that characterise the monetary union and the policy that member states enforce. Due to member states' different needs, the uniform interest rate had different influences. For some, it proved to be too low, making it difficult to halt the credit boom or even increased it. Moreover, in reality, the unified nominal interest rate operated on a pro-cyclical basis – in countries characterised by a higher inflation it implied a lower real interest rate, while in countries characterised by a lower inflation, it implied a higher real interest rate (this is the so-called Walters' critique). Furthermore, the creation of the monetary union was well judged by financial markets. As a result, risk assessments for many countries (especially those in the south) became more favourable, which, in turn, resulted in a radical decrease in long-term interest rates (in Greece from about 19% in the middle of 1990 to about 5% in 2002 and about 4% in 2007).

All of the above-mentioned factors worked towards the mitigation of monetary conditions in some of the member states, resulting in a credit boom. Domestic credit growth was mostly driven by cross-border net debt inflows.⁵ An increase in credit has fuelled consumption and investments in the less productive sectors (such as real estate), which had little effect on future productivity growth and delayed adjustment to

⁴ T. Bracke, M. Bussière, M. Fidora, R. Straub, *A Framework for Assessing Global Imbalances*, "The World Economy", Vol. 33, No. 9/2010, pp. 1140–1174.

⁵ P.R. Lane, P. McQuade, *Domestic Credit Growth and International Capital Flows*, "The Scandinavian Journal of Economics", Vol. 116, No. 1/2014, pp. 218–252.

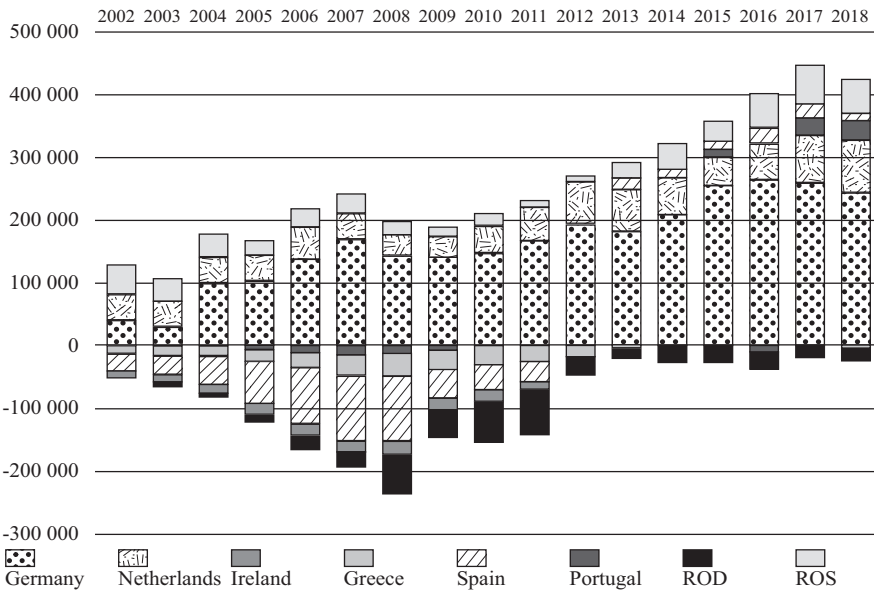


Figure 1. Balance of payments' current account imbalances

Balance of payments' current account balance in millions of EUR

ROD – rest of deficit countries

ROS – rest of surplus countries

Source of data: Eurostat – Balance of payments by country (BPM6)

structural shocks. This resulted in extreme consumption and excessive inflation, triggering a further decline of the current account by a decrease in price competitiveness. Wyplosz⁶ argues that in countries where the monetary policy was too relaxed, domestic demand boomed and led to a deterioration of the current account. The loss of competitiveness (ULC change) was then a mere reflection of the relaxation in financial condition rather than a cause in itself. Recently, Unger⁷ showed that the flow of bank loans to the non-financial private sector is a significant determinant of the current account and that, together with changes in competitiveness, it constituted the most important factor driving the build-up of current account imbalances in deficit countries.

It is worth mentioning that such an interpretation of the imbalance mechanisms marks the points of emphasis differently than the initial interpretations offered as an immediate response to the crisis, which identified

⁶ C. Wyplosz, *The Eurozone Crisis and the Competitiveness Legend*, “Asian Economic Papers”, Vol. 12, No. 3, pp. 63–81.

⁷ R. Unger, *Asymmetric credit growth and current account imbalances in the Euro area*, “Journal of International Money and Finance”, Vol. 73, May 2017, pp. 435–451.

competitiveness and fiscal imbalances as the main issue (which seems to result from an over-interpretation or unjustified extrapolation, as in the case of Greece). Later, the attention shifted to domestic demand and financial factors, quoting them as the main drivers of current account imbalances.

The Composite Index of Macroeconomic Stability

In order to present the general tendencies, a simple composite measurement of macroeconomic stability has been designed. This method has the advantage of allowing the study of general aggregated tendencies that could otherwise remain invisible even to an experienced researcher, especially when the number of variables is significant. However, using a composite index is also associated with a number of methodical and interpretative problems linked to the aggregation of non-homogeneous features.⁸ The choice to use an aggregation method, variables, and weights is widely disputed. The fact that the aggregated variables are usually related to different levels of theoretical reasoning constitutes a separate issue as well. All the above issues apply to a composite index describing macroeconomic imbalances, but are also true for other similar indexes (e.g., the European Innovation Scoreboard Summary Innovation Index, the Composite Index of Leading Indexes, etc.). While balancing the method's weaknesses (whereas, it would be naive to believe that similar problems do not affect other measures such as HDI⁹) and the advantages, it should be stated that using the composite indicator is legitimate, but it should not be employed as the sole indicator.

Regardless of the ongoing discussions related to the specific mechanisms leading to macroeconomic imbalances, it is possible to distinguish a group of variables that characterise the phenomena that occurred after the eurozone was established and were used to create the macroeconomic stability composite index (MSCI). The list of variables comprises: current account balance (% of GDP), nominal unit labour cost (annual rate of change); real effective exchange rate (deflator: unit labour costs in the total economy, annual rate of change); export market share (annual rate of change); net international investment position (% of GDP); HICP (annual average rate of change); private sector credit flow (% GDP); private sector debt (% GDP); general government deficit/surplus

⁸ *Handbook on Constructing Composite Indicators: Methodology and User Guide*, OECD, Paris 2008.

⁹ The three areas that constitute the HDI index (GNI per capita, education, and life expectancy) come from different levels of theoretical considerations and they are mutually dependent.

(% of GDP); general government gross debt (% of GDP). The source of all the data is Eurostat.

In general, the list of studied variables contains the same indicators used by the European Commission in the macroeconomic imbalance procedure¹⁰ with some notable exceptions. Firstly, due to technical aspects, real estate prices were excluded (this data is unavailable in a few countries). Secondly, the unemployment rate has been excluded as this is a variable characterised by different properties in the context of macroeconomic imbalances. However, since unemployment is not included in the basic indicator, an unemployment composite indicator was simultaneously designed. It also includes new labour market variables that were added to the MIT scoreboard in 2015. Thirdly, the consumer price index (HICP) and the public finance balance were included in the basic index. Fourthly, the calculation procedure for long-term averages adopted by the European Commission was abandoned.

It was necessary to further transform some of the employed variables. In general, it was assumed that any deviations from the equilibrium towards either side are equally dangerous for the integrity of the monetary union. For instance, a sudden growth in private sector credit flow (e.g. credit/GDP ratio) or a CPI inflation implies an imbalance, just as a decrease would. Hence, in the case of some variables (e.g., private sector credit flow, real effective exchange rate, private sector debt, and CPI), worth modules were used. This transformation was not necessary for certain variables such as public debt or unemployment rate, as these cannot be expressed as a negative value. In the case of some of the variables, the fact that it is difficult to unambiguously determine whether a given variable is a stimulant or a deterrent of macroeconomic stability proved to be an issue. For instance, current studies indicate that the dependency between the level of financial depth ratio (e.g. credit/GDP) and the increase and volatility of GDP is non-linear, i.e., until a certain point financial depth supports the growth of GDP¹¹ and lowers volatility,¹² but when it reaches and exceeds a critical value it hinders growth and intensifies the scope of deviation. The critical threshold is usually estimated to be about

¹⁰ *The Macroeconomic Imbalance Procedure: rationale, process, application: a compendium*, European Commission & Directorate-General for Economic and Financial Affairs 2016, Retrieved from http://ec.europa.eu/economy_finance/publications/eeip/pdf/ip039_en.pdf (access 1.05.2019).

¹¹ J.L. Arcand, E. Berkes, U. Panizza, *Too much finance?*, “Journal of Economic Growth”, Vol. 20, No. 2/2015, pp. 105–148.

¹² J. Acedański, J. Pietrucha, *Level and dynamics of financial depth: consequences for volatility of GDP*, “Applied Economics”, Vol. 51, No. 31/2019, pp. 3389–3400.

100–150% of the GDP (depending on the measure used). For private sector debt (e.g. credit/GDP ratio), the European Commission proposes a threshold of 133% of the GDP. Hence, data related to private sector debt was transformed in such a way that a module of deviations from 133% was calculated. In a few cases, it was necessary to supplement the missing data (the nearest neighbour method was used). Moreover, values of the maximal deviation from stability were restricted (in order to minimise the influence of outliers).

At the next stage, all variables were subject to unitarisation. The adopted manner of unitarisation allowed for the conversion of all variables in macroeconomic stability boosters (i.e. values from the range of $<0,1>$, whereas, 0 means the highest stated deviation from macroeconomic stability and 1 – value being the closest to macroeconomic stability). Then, the composite indicator was calculated with the use of the formula:

$$W_i = \frac{100}{m} \sum_{j=1}^m \alpha_j x_{ij}$$

where m is the number of variables, a is the weight of the i variable (equal weights were adopted), x is the value of the variable.

Due to data accessibility and interpretative integrity, the focus was placed on 12 countries (EMU12) which constituted the Euro area (including Greece). Equal weights (for the specific member states) were adopted in this case as well. Measuring the GDP value was an alternative method. This approach could be more justified, as it allows the size of the country to be taken into consideration when calculating the total imbalance index. However, unfortunately, an index calculated in this manner is dominated by values associated with the largest economy in the eurozone – Germany. Hence, it limits the possibility to interpret matters from the point of view of the aim of this paper, i.e., studying the different tendencies in the specific member states. Even if the degree to which the particular member states contribute to the GDP of the entire eurozone is hugely diverse, it is more sensible to treat them as equivalent subjects (i.e. adopt equal weights) in the study, since member states remain the natural point of reference – as they also are in the process of taking decisions related to economic policy.

Indexes for the particular states that adopted the common currency in subsequent years were also calculated – but the index for the entire Euro area in its present state was not calculated due to the fact that more data was missing in this case, and the fact that the states adopted the common currency in different years. This would make it difficult to interpret such an index. In order to make the comparison possible, an MSCI was

calculated for EU countries not belonging to the Euro area (the UK, Sweden, and Poland), and for the US. In the case of the US, it is important to interpret the index with caution, as it was not always possible to collect data that was fully comparable (in the case of 3 variables, data gaps in the Eurostat were supplemented with data from the World Bank – WDI).

The Changing Face of Macroeconomic Imbalances in the Euro Area

When analysing the current state of macroeconomic imbalances in the eurozone, it is useful to begin by considering the current account balance. This was discussed more than any other aspect (especially in the initial period) and has evolved into a symbol of the loss of competitiveness in some of the eurozone members. Figure 1 shows the cumulative positive and negative balance of EMU12 states. Starting from 2009, there was a gradual reduction of the previous disproportions up until the present state in which it is completely unnoticeable, and most countries record balances or surpluses. Nowadays – in the literal sense – it is difficult to categorize states as surplus and deficit. The question is, obviously, to what extent does the improvement of the balance in, for example, Greece, reflect a long-lasting structural change, and to what an extent is it a short-term effect of a currency account deficit reverse during recession (a balance improvement is a natural phenomenon associated with adjustment processes in a crisis) or the temporary effect of the internal devaluation? Regardless of these doubts, this process is one of the major arguments in the discussion related to the limitation of macroeconomic imbalances in the Euro area.

General conclusions based on a composite indicator are similar (data related to particular states is presented in Table 2, while data reflecting groups of states is shown in Table 3). Firstly, the majority of the indexes have values that are higher than those recorded before the crisis and those recorded soon after the EMU was established. Secondly, it could be said that nowadays there are no significant differences in the (aggregated) macroeconomic imbalances between the states that were categorised as deficit or surplus states in 2008. Thirdly, the cumulative value of the index is now higher than it was when the eurozone was being established. This is true for all countries, both those with surpluses – in particular – and those with deficits. Until 2018, the scope of imbalances decreased significantly, especially in comparison to the most disadvantageous value of 2012. The combined pressure exerted by macroeconomic imbalances in the eurozone is currently at its lowest considering the entire period for which data is available.

Table 2. Macroeconomic stability indicators (MSCI)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
	euro12																
Belgium	71	62	68	63	63	66	47	64	58	46	50	61	69	57	58	61	59
Germany	71	65	70	63	68	69	64	63	60	65	61	63	72	67	73	65	64
Ireland	61	46	55	44	41	37	18	46	40	35	33	45	53	60	54	54	56
Greece	25	33	36	25	37	38	30	38	33	41	47	52	56	47	63	60	62
Spain	52	51	47	41	37	38	30	56	43	48	41	56	61	58	69	63	63
France	59	56	60	58	60	62	54	66	56	60	56	62	67	64	69	61	60
Italy	48	44	51	53	53	59	46	55	51	57	54	62	69	62	71	66	61
Luxembourg	65	61	54	60	55	46	45	58	45	48	47	57	61	63	61	47	59
Netherlands	45	49	60	57	57	57	52	50	55	51	48	52	64	62	69	65	61
Austria	71	67	67	61	63	68	59	63	61	62	61	64	66	68	70	68	67
Portugal	44	43	44	39	42	44	34	42	36	41	39	53	54	53	60	54	59
Finland	65	65	73	67	74	72	53	53	59	61	54	61	66	62	73	74	69
	rest of euro zone countries																
Estonia	39	45	43	49	38	40	38	66	66	72	57	58	64	66	70	55	58
Cyprus	35	25	54	38	42	35	31	35	29	41	31	53	51	50	44	47	51
Latvia	54	48	42	34	31	35	36	51	61	61	57	57	53	58	64	59	55
Lithuania	59	61	51	46	32	39	41	48	57	53	55	60	61	52	53	55	58
Malta	64	43	51	52	53	67	45	52	57	53	60	63	70	69	76	69	67
Slovenia	54	52	55	60	62	56	45	54	59	63	55	61	66	63	68	65	63
Slovakia	41	42	37	36	42	50	38	44	51	51	52	64	66	61	64	54	58
	other countries																
UK	67	56	50	59	50	45	38	42	49	54	46	61	50	60	49	52	57
Sweden	64	63	71	61	66	55	46	43	59	53	53	55	58	55	64	59	55
Poland	53	57	49	48	58	46	33	40	36	43	44	66	66	63	64	56	63
USA	50	40	42	48	50	45	36	60	48	38	49	53	52	51	55	55	53

Note: The indicator adopts values within the range of <0,100>, where 0 means the highest macroeconomic imbalance, and 100 means the highest macroeconomic stability. The values have been rounded.

Source: own calculations.

Table 3. Macroeconomic stability indicators for groups of EU states

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
EMU12	56	53	57	53	54	55	44	55	50	51	49	57	63	60	66	61	62
D	45	43	46	37	39	39	28	46	38	41	40	52	56	54	61	58	60
S	63	62	67	62	66	67	57	57	59	60	56	60	67	65	71	68	65

D – deficit countries (Ireland, Greece, Spain, Portugal)

S – surplus countries (Germany, Netherlands, Austria, Finland)

Source: own calculations.

What is more, the index for EMU12 is higher than the indexes for the UK and the US. It is a good idea to investigate this slightly surprising conclusion closely and to place it in a proper context. It is important to remember that an interpretation is possible only for MSCI-related aspects and does not include the differences between these economies that occur in other areas. In the case of the US, the major factors that cause MSCI to be slightly lower include the net investment position, a decrease in the share of exports of goods in world exports, and the condition of public finances (budget deficits and public debt are higher than those of the euro area). In the case of the UK, the issue is, to a certain degree, based on the fact that international trade tendencies are much worse than those present in eurozone states (a decrease in price competitiveness and shares in trade), and also related to budget balance and inflation.

However, such a decryption based on intensely aggregated data does not illustrate the situation fully. Imbalances associated with the variables that posed a major challenge for the stability in the period before the 2007 crisis (i.e. current account balance, unit labour cost, inflation, and private sector credit flow) became significantly limited. In peripheral states that experienced the crisis, the adjustment was especially intense (figure 2). For a year, the level of imbalances in these countries was lower than in the surplus countries before 2008. Automatic adjustment responses during the crisis can be considered as the major causes of this phenomenon. It is also the effect of directing the economic policy towards the problems that were identified during the crisis, i.e., price competitiveness (ULC, REER) and a negative balance in the current account. This redirecting economic policy in deficit countries includes internal devaluations and cuts in public finances (promoted by the European Commission as ways to escape the crisis). Both had strong adjustment effects.

At the same time, imbalances related to debt level (figure 3), such as the net investment position, private debt and public debt were not reduced and in some cases, even increased. For example, imbalances in

the current account were reduced, but it did not lead to an improvement of the net investment position. Public finances deficits were also limited, but the public debt was not. Credit booms were halted, but no significant improvement in private debt occurred. This is dramatically visible in the case of the net investment position and public debt in former deficit states. Imbalances that can be observed in these areas are much greater than those recorded before the crisis. The situation is similar in the other states – especially in terms of private debt, public debt, and participation in international trade; these imbalances are more pronounced than they were in the initial years of the existence of the eurozone.

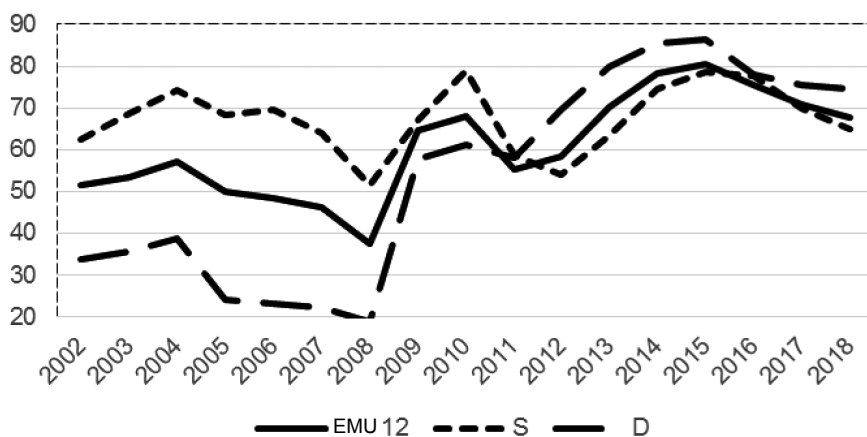


Figure 2. MSCI: flow variables

Flow variables: current account balance, unit labour cost, inflation, private sector credit flow

D – deficit countries (Ireland, Greece, Spain, Portugal)

S – surplus countries (Germany, Netherlands, Austria, Finland)

Source: own calculations.

Thus, even though the division into surplus states and deficit states is no longer valid, its long shadow is still visible in the present division which separates states into those which are heavily indebted and those that are moderately indebted (the latter are also creditors in terms of international investment position). Figure 4 indicates the relationship between the scale of imbalances in 2004–2008 and the current level of debt-related imbalances. Current debt imbalances (and the present division of countries into debtors and creditors) are strictly associated with macroeconomic imbalances before the crisis.

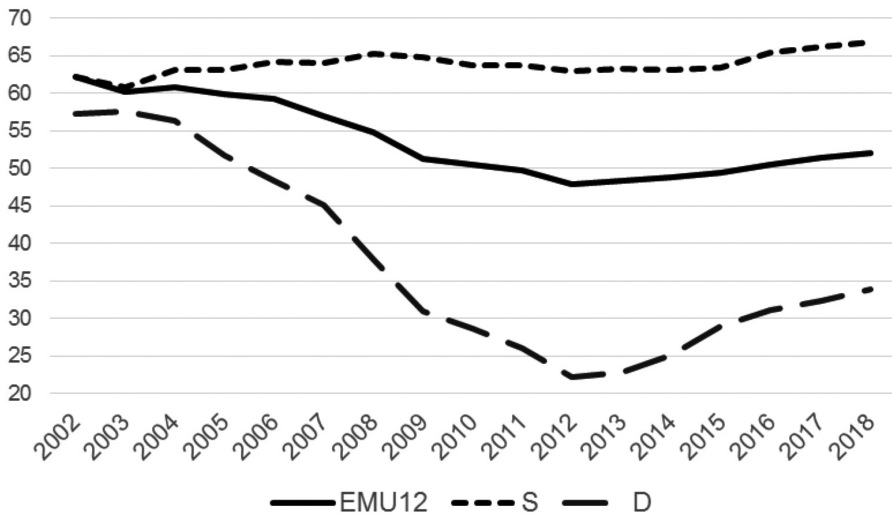


Figure 3. MSCI: debt-related variables

Debt-related variables: net investment position, private debt and public debt
 D – deficit countries (Ireland, Greece, Spain, Portugal)
 S – surplus countries (Germany, Netherlands, Austria, Finland)

Source: own calculations.

Of course, the variables that describe the level of debt are cumulative, meaning they partially result from the cumulative emergence of such variables as credit increase, budget balance, or current account balance. For example, public debt is a derivative of budget deficits from the past. Similarly, the net investment position stems from the cumulated balances of the balance of payment's financial account. This means that after a sufficiently long period of a positive changes in the budget balance or the current account balance, the debt level will decrease. Estimations indicate that in order to reduce the high negative net investment position in some of the eurozone states, it is necessary to maintain a surplus of over 3% in the current account for 10 to 15 years.¹³

Nowadays, public debt constitutes one of the major elements of macroeconomic imbalances in the Euro area. The value of the imbalance index for this variable did not improve in comparison to the period before the 2007+ crisis; to the contrary, it deteriorated significantly despite the fact that for a few years there was relative economic recovery.

¹³ B. Pierluigi, D. Sondermann, *Macroeconomic imbalances in the euro area: where do we stand?*, "ECB Occasional Paper Series", No. 211/2018.

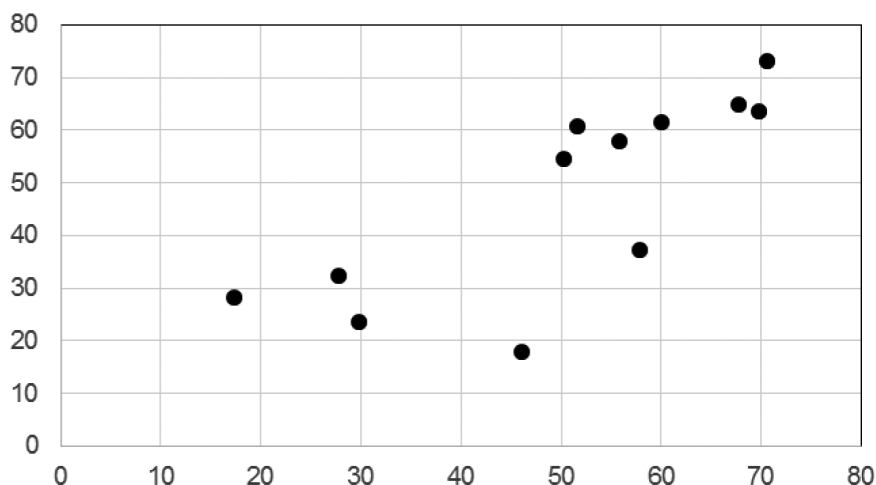


Figure 4. Flow variables 2004–2008 vs. debt-related variables 2014–2018

Flow variables: current account balance, unit labour cost, inflation, private sector credit flow

Debt-related variables: net investment position, private debt and public debt

Source: own calculations.

Furthermore, it could be beneficial to separately investigate the labour market. An index that corresponds with macroeconomic imbalances was calculated for the labour market. It includes four variables (figure 5). While in the pre-crisis period, the differences between deficit states and surplus states were not substantial; they grew significantly in the crisis period and since then the gap has reduced only slightly despite a global economic revival in the business cycle. In the deficit states, the index is still lower than it was before the crisis.

Imbalances related to the labour market together with the level of debt constitute a feature of the altered character of macroeconomic imbalances in the eurozone. A diversification of macroeconomic processes between states that use the common currency is still a fact – but the image of these differences has changed. Of course, any attempt at interpreting the causes must include many factors; it is important to consider not only the effects of imbalances that have their source in the pre-crisis era and the character of the reactions towards the crisis, but also the institutional and structural differences that may operate as a deep cause of all the processes discussed above. In the recent years, the gap related to all the types of imbalances between both groups of states has been narrowing. Further, it is crucial to remember that this was happening in conditions characterised by

a global economic revival and an extremely relaxed monetary policy of the European Central Bank. In the context of the present institutional factors and the rate at which corrections are happening, the eurozone might have too little time left before the next test in the form of another potential global downturn in the business cycle comes.

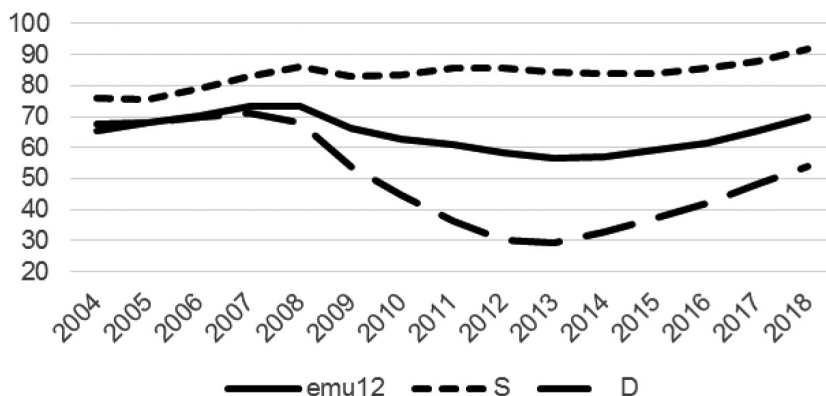


Figure 5. Composite index: labour market-related variables

D – deficit countries (Ireland, Greece, Spain, Portugal)

S – surplus countries (Germany, Netherlands, Austria, Finland)

Source: own calculations.

Conclusions

Imbalances in the Euro area have partially been reduced, but, to be more precise, it should be said that they have changed their character rather than disappeared. Instead of imbalances related to an increase of credit, the current account balance, or deterioration in price competitiveness, now we can notice imbalances in debt (private, public, and foreign) and on the labour market. These imbalances tend to become less pronounced during an economic revival. However, before the gap is reduced completely, the Euro area remains vulnerable to another potential economic crisis. The threat comes from a different side than in the period before 2008. Currently, the key problem is the limited scope of the available flexible response of macroeconomic policy resulting from a significant level of indebtedness.

References

- Acedański J., Pietrucha J., *Level and dynamics of financial depth: consequences for volatility of GDP*, “Applied Economics”, Vol. 51, No. 31/2019, pp. 3389–3400, DOI: <https://doi.org/10.1080/00036846.2019.1578857>.
- Arcand J.L., Berkes E., Panizza U., *Too much finance?*, “Journal of Economic Growth”, Vol. 20, No. 2/2015, pp. 105–148, DOI: <https://doi.org/10.1007/s10887-015-9115-2>.
- Blanchard O., Giavazzi F., *Current Account Deficits in the Euro Area: The End of the Feldstein-Horioka Puzzle?*, “Brookings Papers on Economic Activity”, Vol. 33, No. 2/2002, pp. 147–210, DOI: <https://doi.org/10.1353/eca.2003.0001>.
- Bracke T. Bussière M., Fidora M., Straub R., *A Framework for Assessing Global Imbalances*, “The World Economy”, Vol. 33, No. 9/2010, pp. 1140–1174, DOI: <https://doi.org/10.1111/j.1467-9701.2010.01266.x>.
- De Grauwe P., *The legacy of the Eurozone crisis and how to overcome it*, “Journal of Empirical Finance”, Vol. 39, December 2016, pp. 147–155, DOI: <https://doi.org/10.1016/j.jempfin.2016.01.015>.
- Ederer S., Reschenhofer P., *Macroeconomic imbalances and structural change in the EMU*, “Structural Change and Economic Dynamics”, Vol. 46, September 2018, pp. 59–69, DOI: <https://doi.org/10.1016/j.strueco.2018.04.002>.
- Febrero E., Uxó J., Bermejo F., *The financial crisis in the eurozone: a balance-of-payments crisis with a single currency?*, “Review of Keynesian Economics”, Vol. 6, No. 2, pp. 221–239, DOI: <https://doi.org/10.4337/roke.2018.02.04>.
- Handbook on Constructing Composite Indicators: Methodology and User Guide*, OECD, Paris 2008.
- Lane P.R., McQuade P., *Domestic Credit Growth and International Capital Flows*, “The Scandinavian Journal of Economics”, Vol. 116, No. 1/2014, pp. 218–252, DOI: <https://doi.org/10.1111/sjoe.12038>.
- Pierluigi B., Sondermann D., *Macroeconomic imbalances in the euro area: where do we stand?*, “ECB Occasional Paper Series”, No. 211/2018.
- Pietrucha J., Czech-Rogosz J., Tusińska M., *Nierównowaga zewnętrzna krajów strefy euro (Euro area external imbalances)*, Wydawnictwo Uniwersytetu Ekonomicznego w Katowicach, Katowice 2013.
- Pietrucha J., *Kryzys w strefie euro jako tło zmian w zarządzaniu gospodarczym (Euro area crisis as a background for changes in economic governance)*, in: *Zarządzanie gospodarcze w strefie euro (Economic governance in the euro area)*, eds. J. Pietrucha, J. Zabińska, Difin, Warszawa 2014.
- Schmitz B., von Hagen J., *Current account imbalances and financial integration in the euro area*, “Journal of International Money and Finance”,

Vol. 30, No. 8/2011, pp. 1676–1695, DOI: <https://doi.org/10.1016/j.jimonfin.2011.08.003>.

The eurozone crisis a consensus view of the causes and a few possible remedies, eds. R. Baldwin, F. Giavazzi, CEPR, London 2015.

The Macroeconomic Imbalance Procedure: rationale, process, application: a compendium, European Commission & Directorate-General for Economic and Financial Affairs 2016, http://ec.europa.eu/economy_finance/publications/eeip/pdf/ip039_en.pdf (access 1.05.2019).

Unger R., *Asymmetric credit growth and current account imbalances in the euro area*, “*Journal of International Money and Finance*”, Vol. 73, May 2017, pp. 435–451, DOI: <https://doi.org/10.1016/j.jimonfin.2017.02.017>.

Wyplosz C., *The Eurozone Crisis and the Competitiveness Legend*, “*Asian Economic Papers*”, Vol. 12, No. 3, pp. 63–81, DOI: https://doi.org/10.1162/ASEP_a_00238.