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COMPARISON OF ABSOLUTE AND RELATIVE THRESHOLDS OF MACROECONOMIC IMBALANCE PROCEDURE INDICATORS IN SELECTED EUROPEAN UNION MEMBER STATES

PORÓWNANIE BEZWZGLĘDNYCH I WZGLĘDNYCH PROGÓW PROCEDURY NIERÓWNOWAG MAKROEKONOMICZNYCH W WYBRANYCH PAŃSTWACH CZŁONKOWSKICH UNII EUROPEJSKIEJ

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Streszczenie. Procedura nierównowag makroekonomicznych (ang. Macroeconomic Imbalance Procedure, MIP) stanowi mechanizm nadzorczy Unii Europejskiej (UE), którego celem jest identyfikacja potencjalnych zagrożeń na wczesnym etapie, zapobieganie powstawaniu szkodliwej nierównowagi makroekonomicznej i skorygowanie nierównowagi już istniejącej. Jednakże w ciągu pięciu lat funkcjonowania MIP była często krytykowana za niewłaściwy dobór wskaźników oraz uleganie wpływom politycznym. Głównym celem artykułu jest przedstawienie koncepcji progów względnego, który powinien zastąpić obecny system bezwzględnych wartości progowych, które są ustalone na dłuższe okresy. Proponowana koncepcja opiera się na obliczeniu średniej ważonej, która jest podstawą progów względnego. Następnie do podstawy progów względnego dodawane są określone wartości odpowiadające odchyleniu standardowemu lub wielokrotności średniej ważonej. Koncepcja ta została zastosowana w przypadku wszystkich wskaźników MIP w czterech wybranych państwach członkowskich UE. Wyniki dowodzą, że wartości bezwzględnych i względnych progów są często odmienne, co oznacza, że różnią się one w ocenie rozwoju gospodarczego oraz w identyfikacji potencjalnych zagrożeń gospodarczych i nierównowag. Wnioski te dotyczą funkcjonowania wskaźników i ich zastosowania w poszczególnych analizowanych krajach, co potwierdza potrzebę reformy mechanizmu MIP.

Key words: Macroeconomic Imbalance Procedure, relative threshold, weighted average, macro-economic indicators.

Słowa kluczowe: procedura nierównowag makroekonomicznych, względny próg, średnia ważona, wskaźniki makroekonomiczne.

INTRODUCTION

The so-called Great Financial Crisis was the most immense shock to the European economy since 1930s. One can find two particular reasons why the European Union (hereafter EU) and particularly the euro area has been experiencing the crisis and had difficulty resolving it. The first reason are major differences between countries in economic development, as well as political and social systems. The second, the euro area's inadequate economic governance typical of unsystematic discussions, and fruitless policies and responses.

As it comes to the euro area's economic governance, the European Commission introduced the Macroeconomic Imbalance Procedure (hereafter MIP) in December 2011 as an integral part of the EU economic surveillance framework. Although the MIP is designed and applied in all EU states, the euro area countries with no independent monetary policy are the primary target. The MIP purpose is to identify macroeconomic imbalances and initiate remedial policy actions. In other words, the MIP has two arms – preventive and corrective – with different objectives.

Although the response to decision of the European Commission to introduce the MIP was positive, and the MIP is generally considered a useful tool of economic governance and surveillance on the EU level, one can point to several vulnerabilities and bottlenecks that limit the applicability of the MIP and credibility of the MIP outcomes. This opinion is also well established in literature.

For instance, Moschella (2014) points out that the MIP is much better placed than the system applied by the International Monetary Fund in identifying imbalances and inducing corrective actions. On the other hand, the MIP does not provide mechanisms to prevent political and arbitrary considerations from interfering with the decision to activate sanctions and on how to share the burden of adjustment. Bénassy-Quéré and Ragot (2015) argue that the MIP was built asymmetrically as it uses different thresholds depending on whether the country has an external surplus or deficit. The aspect of built-in asymmetry is stressed also in Sapir and Wolff (2015) as they call for symmetric application of the MIP and for completion of the MIP by national procedures to monitor and correct competitiveness problems. Furthermore, Sapir and Wolff (2015) along with Ederer (2015) and Boysen-Hogrefe et al. (2016) articulate the need for increasing national ownership of the MIP and its outcomes and policy recommendations. Sufficient ownership at the country level is conditioned by transparency and consistency of the MIP with regard to how the results of the scoreboard are linked to the final outcome of the MIP.

Since we agree with the above cited critical opinions, the aim of this paper is to introduce a concept of relative threshold for the MIP indicators. For better illustration, we use real data and compute the relative threshold for all MIP indicators. Moreover, we compare this approach with official MIP results regarding four selected EU member states. The concept of relative threshold is a major reform proposal as it changes significantly the view on the extent and sustainability of macroeconomic imbalances.

The remaining of the paper is structured as follows. The second section introduces the MIP and its scoreboard of macroeconomic indicators. The third section formally proposes the concept of relative threshold and compares it with official absolute thresholds. The fourth section applies the relative threshold concept to four selected EU member states. The last section of the paper is the conclusion which summarizes the most important findings and results.

BASICS OF THE MACROECONOMIC IMBALANCE PROCEDURE

The yearly MIP cycle starts with a comprehensive economic analysis, the Alert Mechanism Report (AMR), which covers all EU member states not benefiting from financial assistance. The analysis is based on the reading of a scoreboard of 14 headline indicators in combination

with auxiliary indicators. Table 1 summarizes all the indicators along with ways in which the data are transformed and the indicators calculated. Table 1 also reports indicative thresholds for each indicator which specify the accepted range in which the indicator should be preferably found. The scoreboard includes both stock and flow indicators aiming at capturing the accumulation of imbalances over time, as well as detecting short-term risks (Bobeva 2013).

Table 1. Macroeconomic Imbalance Procedure scoreboard and indicators

Indicator	Measure	Accepted range
External imbalances and competitiveness		
Current account balance	3-year moving average [% of GDP]	between +6% and -4%
Net international investment position	[% of GDP]	> -35%
World export share	in current value, 5-year percentage change	> -6%
Real effective exchange rate	vis-à-vis 42 industrial countries, based on consumer-price indices, 3-year percentage change	-/+5% (euro area) and -/+11% (non-euro area)
Nominal unit labor costs	3-year percentage change	< 9% (euro area) and < 12% (non-euro area)
Internal imbalances		
Private sector debt	[% of GDP]	< 133.0%
Private sector credit flow	[% of GDP]	< 14.0%
House prices relative to consumer prices	year-on-year changes [%]	< 6.0%
General government debt	% of GDP	< 60.0%
Financial sector liabilities	year-on-year changes [%]	< 16.5%
Unemployment rate	3-year moving average [%]	< 10.0%
Activity rate	3-year change, in p.p.	> -0.2%
Long-term unemployment rate	3-year change, in p.p.	< 0.5%
Youth unemployment rate	3-year change, in p.p.	< 2.0%

Source: European Commission (http://ec.europa.eu/economy_finance/economic_governance).

After discussions of the AMR conclusions by the Council and the Eurogroup, the Commission decides for which countries it will prepare country-specific In-Depth Review (IDR). The purpose of the IDRs is to assess whether imbalances and excessive imbalances exist in the member states identified in the AMRs. If, on the basis of this analysis, the situation is considered problem-free, the Commission does not propose any further steps. However, if the Commission considers that there are some macroeconomic imbalances, it puts forward proposals for policy recommendations for the member state(s) concerned. In the preventive arm, these are part of the integrated package of recommendations under the European semester. If the Commission instead considers that there are severe or excessive imbalances that may jeopardize the proper functioning of the euro area, it may recommend to the Council to open an Excessive Imbalance Procedure (EIP) which falls under the corrective arm of the MIP.

Then, the member state is obliged to present a corrective action plan (CAP) setting up a roadmap to implement corrective policy actions. If the Council considers the CAP to be insufficient, the Council adopts a recommendation to the member state to submit a new CAP. If the new CAP is still considered to be insufficient, a fine (0.1% of GDP) can be imposed. If the Council considers the CAP to be sufficient, it will endorse the CAP through a recommendation that lists the corrective actions and their implementation deadlines. Then, once a satisfactory CAP is in place, the Council assesses whether or not the member state concerned has taken the recommended actions according to the deadlines set. Again, two possible outcomes can

be distinguished. If the actions of the member state were insufficient, the Council can impose an interest-bearing deposit (0.1% of GDP) which can be converted into annual fine if the member state's inability to correct imbalances continues. If the member state concerned has taken the recommended correction actions, the EIP can be closed or placed in abeyance depending on whether the member state is still experiencing excessive imbalances.

RELATIVE THRESHOLD FOR THE MACROECONOMIC IMBALANCE PROCEDURE SCOREBOARD INDICATORS

As Gros and Giovannini (2014) point out, the key point of the MIP and EIP is that they should warn of impending problems within the euro area and the whole EU. It is thus questionable whether one should use absolute indicators thresholds. For example, if all countries had a large external deficit, a sudden stop to capital inflows would affect all of them at the same time. And if most EU countries run external surpluses, a particularly large surplus in any one country should not be regarded necessarily as an "imbalance". Moreover, the loss in export market share is common to all advanced economies due to structural change in international trade imposed by the rise of emergent countries. Therefore, the absolute change of a single member state is not an effective indicator *per se*. This consideration applies, more in general, to almost all indicators included in the MIP scoreboard. Application of relative version of the indicators' threshold is a methodological response to a common criticism of the MIP which implies that imbalances arise solely within a single country, and not between countries (see e.g. Ederer 2015).

The basis of the relative version of the indicator threshold is calculated as a weighted average of the respective indicator values observed in all countries included in the sample. The weights are determined according to individual, national GDPs. Mathematically, the basis of the relative indicator threshold is calculated as follows:

$$BRT_i = \frac{\sum_{j=1}^n \omega_j i_j}{\sum_{j=1}^n \omega_j} \quad (1)$$

where:

BRT_i – the basis of the relative threshold of the scoreboard indicator i ,

ω_j – the weight of the country j determined by its national GDP,

i_j – value of the indicator i in the country j .

The basis of relative thresholds can be computed in relation to the whole EU and the euro area. The respective threshold is subsequently derived from the basis by addition of a certain component that specifies the accepted range for the indicator's value. This component can be defined as a multiple of the weighted average or multiple of the standard deviation of national indicator values.

Relative thresholds reflect much better the current economic environment and developments throughout the sample countries than the original and fixed indicative reference values. Let us focus on four MIP scoreboard indicators whose original thresholds have been breached by most countries (export market shares, private sector debt, general government

debt, and unemployment rate). Figure 1 compares the official threshold of these indicators with the basis of the relative threshold calculated according to the formula (1). As Fig. 1 implies, the weighted averages diverged from the original thresholds extensively in most cases and the differences remained present for a long period of time. In general, we can reveal two typical discrepancies between the basis of relative thresholds and absolute thresholds.

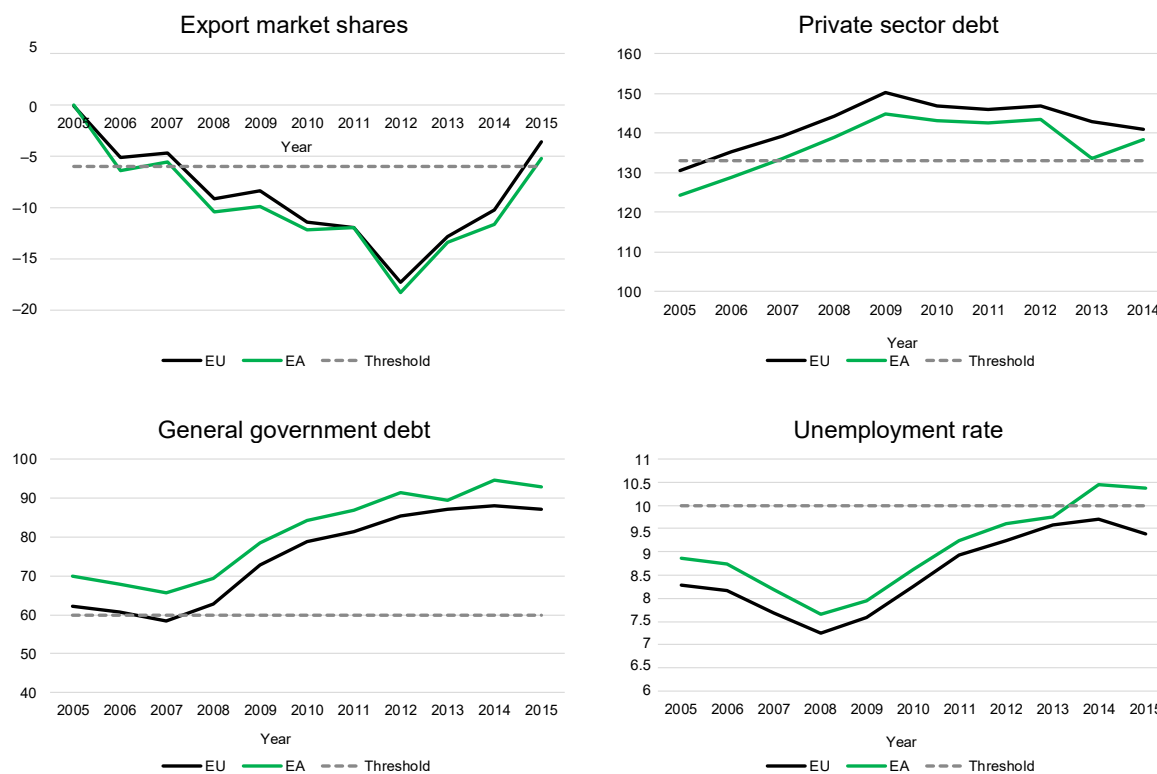


Fig. 1. Comparison of MIP official thresholds and basis of relative threshold
Source: author's calculations based on data from the MIP database.

As regards to export shares and government debt, Fig. 1 illustratively shows that the original thresholds were very ambitious comparing with the general development in the EU and the euro area. In that case, many examples of imbalance identified by the absolute threshold were not evident in the prevailing economic situation and, therefore, the original MIP rules could be too strict. By contrast, the unemployment rate graph suggests that official thresholds might be too permissive and potential risks stemming from imbalances could be hidden behind much lower indicator values than the absolute threshold. The only indicator depicted in Fig. 1 whose official threshold did not considerably diverge from real development in the EU was the private sector debt. However, it should be mentioned that the official threshold was modified in AMR 2014 from 160 to 133%. The indicator is now measured on a consolidated basis and financial derivatives have been excluded.

An efficient and reliable application of the relative threshold concept requires a proper solution of how to define the threshold. There are two crucial aspects that should be taken into consideration:

- the nature of imbalances and uniformity of thresholds,
- the width of accepted range.

The MIP scoreboard contains indicators of different character, computed in numerous ways. Consequently, the values of MIP indicators differ in units as well as magnitude. Therefore, the general formula of the basis of relative threshold can be modified in some details in order to fit the economic meaning of the indicator. For example, special attention should be paid to current account balance and net international investment position. Particularly these two imbalances have evolved in the EU and the euro area to the situation in which one group of countries has a surplus and the other one is in deficit (core vs. periphery, north vs. south). Hence, the basis of the relative threshold will be, by its definition in formula (1), oscillating around a constant value far from original thresholds, which makes it difficult to interpret. Therefore, absolute values of these MIP indicators should be used for calculation of the basis of the relative thresholds. In other words, we examine only magnitude of the imbalance and do not distinguish whether it is surplus or deficit.

With regard to the width of the range accepted by the relative threshold, we propose two fundamental approaches. The relative threshold can be determined either by a standard deviation of the national indicator values or a multiple of the weighted EU average. This issue should be empirically examined by a battery of simulations on real data from previous years. For instance, testing should be carried out with variants such as 0.5 or 1 standard deviation above (below) the basis of the relative threshold or alternatively with 130, 150 or 170% of the EU weighted average, etc. The aim should be to select only one approach (standard deviation or multiple of weighted average) for all MIP scoreboard indicators. However, the distance between the threshold and the basis of the threshold can vary across the indicators (e.g. 130% of the weighted average for one indicator and 170% of the average for another indicator).

APPLICATION OF THE RELATIVE THRESHOLD CONCEPT TO SELECTED EU MEMBER STATES

The proposed concept of the relative threshold is applied to four selected EU member states. Two of them represent large economies, pillars of the EU and members of the euro area. These are Germany and Spain. The other two countries are new EU member states from the group of small and medium size economies from outside the euro area, keeping the national currency and monetary policy. These are Czechia and Poland. The relative threshold is determined for all MIP scoreboard indicators uniformly. As an illustration of the practical application of the concept, we define the threshold as 170% of the weighted EU average which serves as a basis of the relative threshold.

The MIP indicator of the current account balance has asymmetrical thresholds +6% and -4% of GDP. Although the European Commission argues that the risks related to deficits are higher than risks stemming from surpluses, we do not consider this argument to be correct. By contrast, we argue that the reality in the EU shows that persistent surpluses do have negative spillovers as documented by e.g. De Ville and Vermeiren (2016). The higher allowable threshold for surplus countries provides them with greater leniency in disciplinary action than deficit countries (Johnston 2016). The pointless asymmetry is another argument for the introduction of relative thresholds. In the case of current account balance we apply absolute

values of the MIP indicator for calculation of the EU weighted average. Therefore, surpluses and deficits are treated identically.

Figure 2 depicts that the basis of the relative threshold was very stable and fluctuating between 3% and 4% of GDP. What also transpires is that the only country constantly showing higher current account imbalance was Germany. Germany's current account surplus regularly exceeded the relative threshold defined as 170% of the basis. Chronic surpluses of such size are a way of stealing demand from elsewhere. The surpluses are also being recycled into capital flows abroad. Germany should take some tax policy measures, particularly cut taxes on low incomes and VAT to stimulate domestic demand. The current account balance of other countries analyzed remained far below the relative threshold. Even Poland's deficits in 2011 and 2012, which surpassed the official absolute reference value -4% of GDP, were classified as sustainable according to the relative threshold.

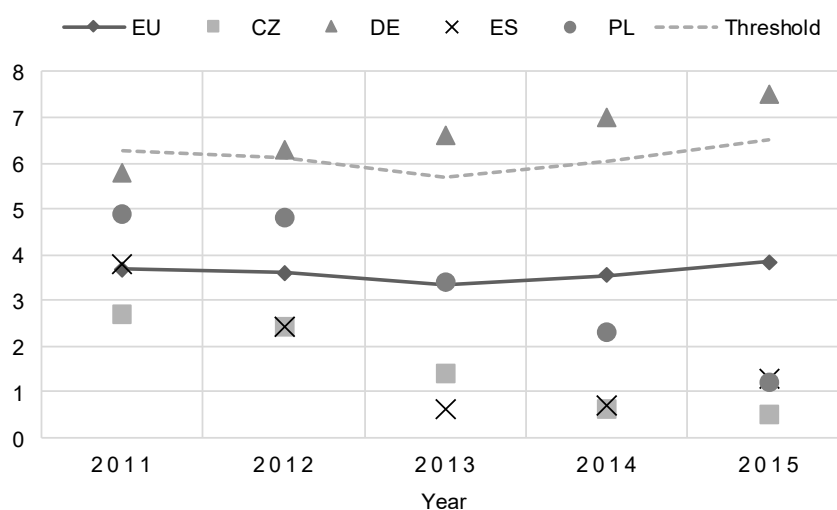


Fig. 2. MIP indicator of current account balance with relative threshold

Source: author's calculations based on data from the MIP database.

The second MIP indicator is the net international investment position. Similarly to the current account balance, absolute values of national indicators were used to compute the relative threshold basis. This approach is only natural since the net international investment position is a sum of past current account deficit and surpluses adjusted for regular valuation changes. Therefore, countries with persistent current account deficit exhibit negative net international investment position and vice versa.

Figure 3 shows that the EU weighted average and the respective threshold slightly increased over the examined period. While Poland's position was almost the same as the threshold, the Spanish net international investment position was significantly beyond the threshold which is again set as 170% of the EU weighted average. The Spanish net international investment position during the entire period and the investment position of Poland in 2011–2013 exceeded both the original absolute threshold and the relative threshold. On the contrary, Poland's position in 2014–2015 and Czechia's investment position throughout the period were of acceptable magnitude according to the relative threshold, although going

beyond the absolute threshold of -35% of GDP. An interesting trend can be seen in Germany. Due to large current account surpluses, the German net international investment position more than doubled from 2011 to 2015 reaching almost $+50\%$ of GDP.

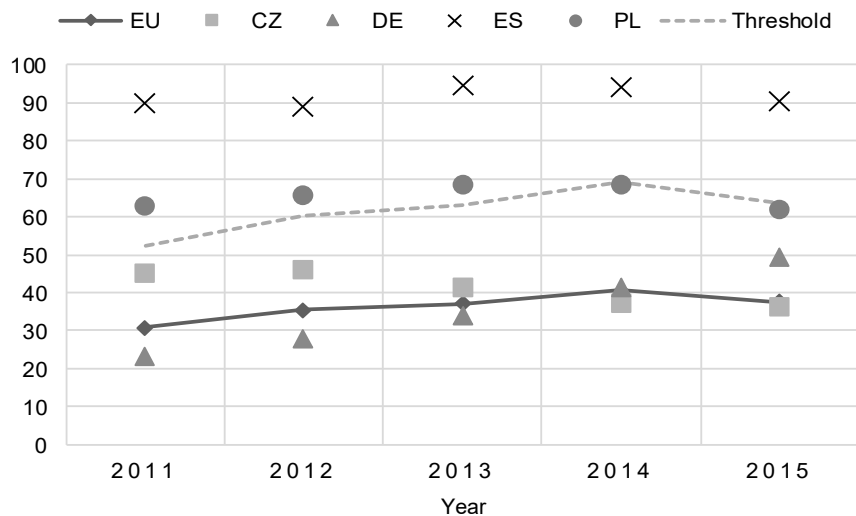


Fig. 3. MIP indicator of net international investment position with relative threshold
Source: author's calculations based on data from the MIP database.

Figure 4 illustrates the indicator of change in the world export share. While the absolute threshold of this indicator is -6% , the weighted EU average and respective relative threshold reached substantially lower values in 2011–2014. Hence, even the 5-year changes in Germany and Spain in 2012 (-16% and -17.4% respectively) or in 2013 (-11.9% and -10.8% respectively) cannot be assessed as excessive because they corresponded with general development in the EU. Poland and Czechia performed much better in world markets than the EU average. The difference between the absolute and relative thresholds of this indicator is one of the most striking examples of how the absolute threshold can be detached from reality and unresponsive to current developments.

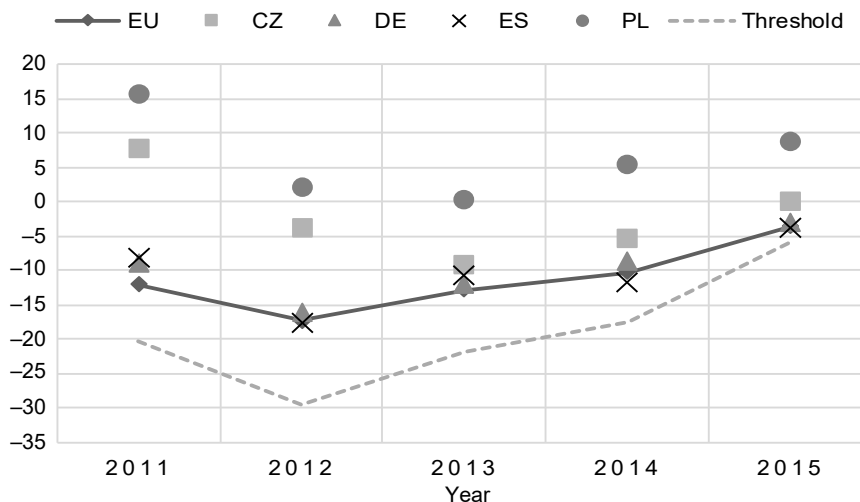


Fig. 4. MIP indicator of world export share with relative threshold
Source: author's calculations based on data from the MIP database.

Figure 5 shows a 3-year percentage change of the real effective exchange rate. Since the exchange rate development is one of the significant factors determining a country's international competitiveness, a causal relationship with the previous indicator as well as current account balance is quite likely. It is important to distinguish countries non-eurozone countries from eurozone countries. That is why the absolute thresholds differ for the eurozone members and the EU countries outside the euro area.

After a depreciation of about 4% in 2011–2012, the EU weighted average stabilized at levels around zero in 2013–2015. The respective relative thresholds set at 30% and 170% of the basis obviously converged in the second half of the analyzed period making the accepted range extremely narrow. However, the only country which did not follow such a development was Czechia. Especially the depreciation in 2014 and 2015 of 10% and 8% respectively did not tally with the situation in other countries and development of the EU average. This particularity should be attributed to the decision of the Czech National Bank taken in November 2013 to use the koruna exchange rate as an additional instrument for easing the monetary conditions. The exchange rate commitment is to keep the exchange rate close to CZK 27 to the euro. Hence, even though the indicator values were within the range $\pm 11\%$ stated in the MIP, they would be significantly beyond the relative threshold proposed in this paper.

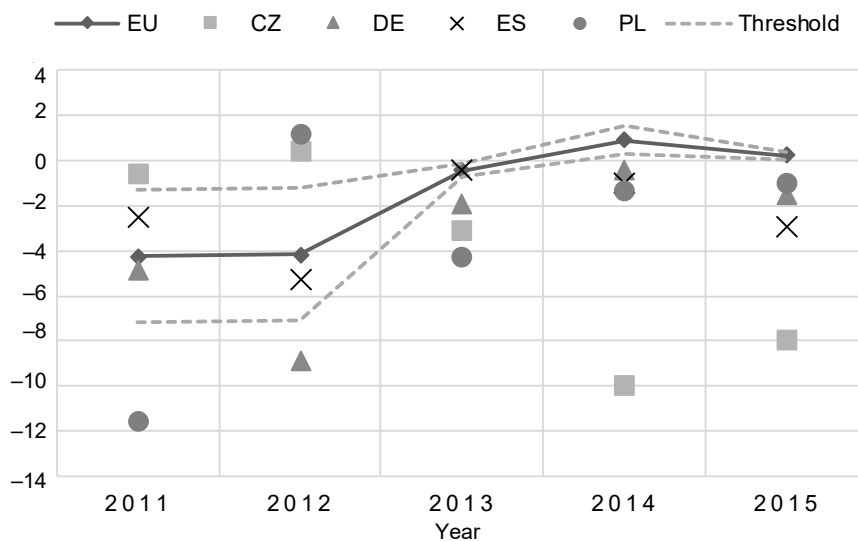


Fig. 5. MIP indicator of real effective exchange rate with relative threshold
 Source: author's calculations based on data from the MIP database.

Another example of absolute threshold which is remarkably far from the real economic development is the MIP indicator of nominal unit labor costs (Fig. 6). While the threshold for a 3-year change is set to maximally 9% for the euro area and 12% for the non-euro EU member states, the weighted average for the whole EU remained between 2% and 4% over the entire period of analysis. The only country where one can raise concerns about unit labor costs development is Germany. During the last three years the indicator value exceeded the relative threshold defined as 170% of the basis. By contrast, Spanish unit labor costs exhibit a continuing decline which illustrates a significant economic slowdown after the great financial crisis.

Figure 7 shows that the private sector debt indicator is the first case in which the absolute and relative thresholds are very similar in terms of stability. Whereas the official absolute

threshold is fixed at 133% of GDP the basis of the relative threshold decreased only marginally from 146% of GDP in 2011 to 141% of GDP in 2015. Consequently, our conclusion about potential risks stemming from imbalances would also be similar to the MIP assessment. There was an indication that indebtedness of the Spanish private sector is high. However, the most recent development shows that the private sector debt in Spain converged to standard levels described by the EU weighted average.

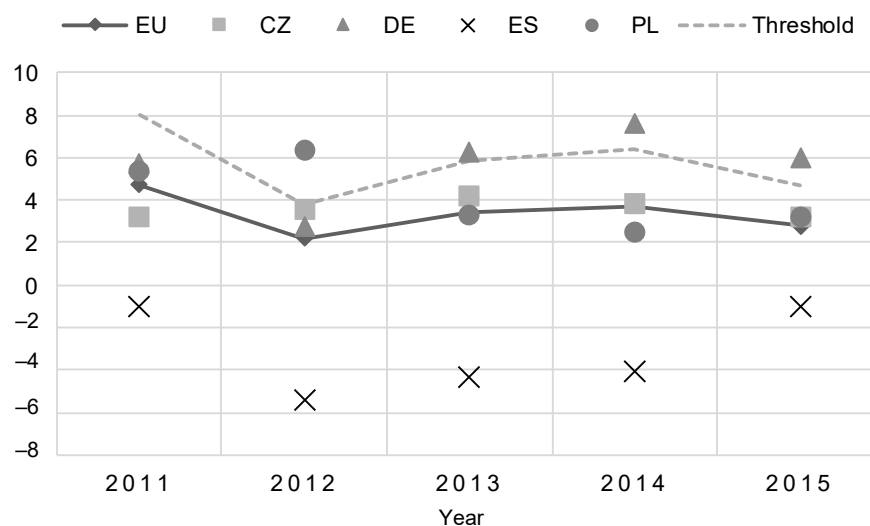


Fig. 6. MIP indicator of nominal unit labor costs with relative threshold
Source: author's calculations based on data from the MIP database.

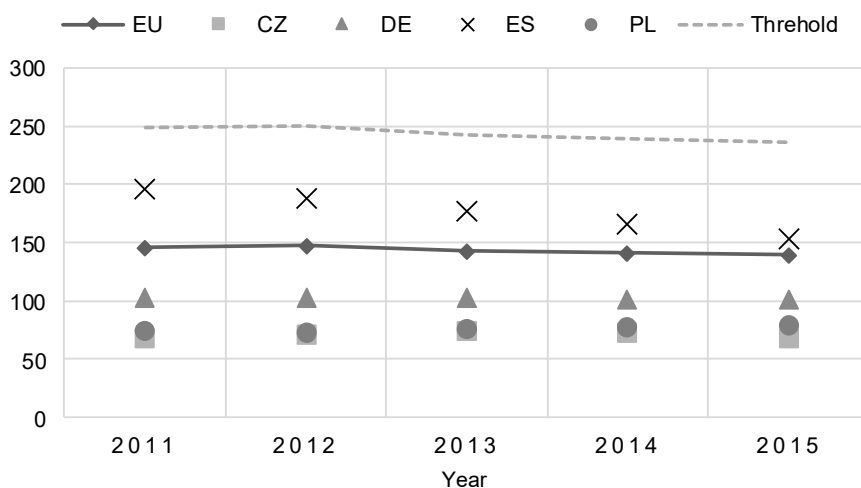


Fig. 7. MIP indicator of private sector debt with relative threshold
Source: author's calculations based on data from the MIP database.

The indicator of the private sector credit flow is depicted in Fig. 8. The weighted EU average remained around zero which is at a level very distant from the official threshold of 14%. The threshold was lowered by one percentage point from 15% in 2014 because the debt of the non-financial private sector used in the indicator is now measured on a consolidated basis, excluding financial derivatives. Habitually, the highest rate of credit flow can be found in

Poland. However, the credit flow of about 4% of GDP does not pose any threat. On the other hand, negative credit flow to the Spanish private sector also document a massive adjustment process after culmination of economic imbalances.

The indicator of house price index and its year-on-year changes show two interesting aspects presented in Fig. 9. First, there is a clear sign of house price increase in the EU, including all analyzed countries. Second, all study countries converged remarkably. While the indicator values ranged from -16.8% to 1.8% in 2012 the spread in 2015 was only 2.7 percentage points (range from 1.8% to 4.5%). Although Germany as the only country with increasing house prices was located beyond the relative threshold in 2011–2013, there was a tendency of closing the gap to the EU average.

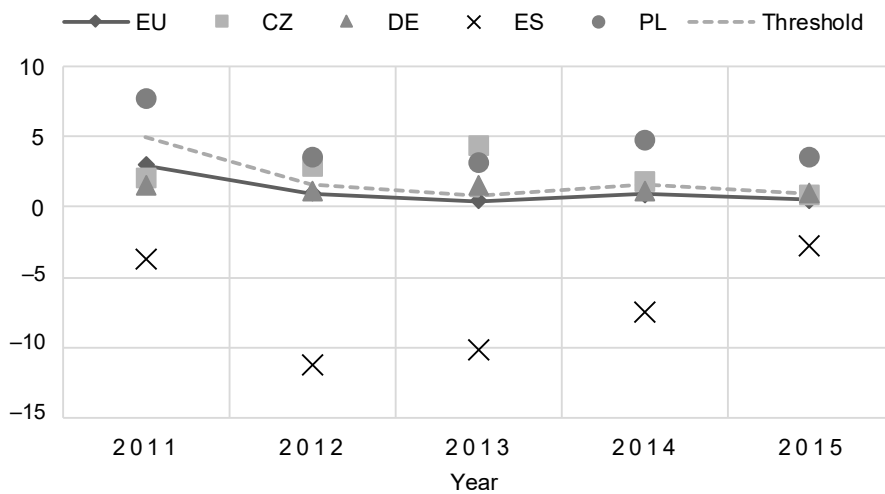


Fig. 8. MIP indicator of private sector credit flow with relative threshold
Source: author's calculations based on data from the MIP database.

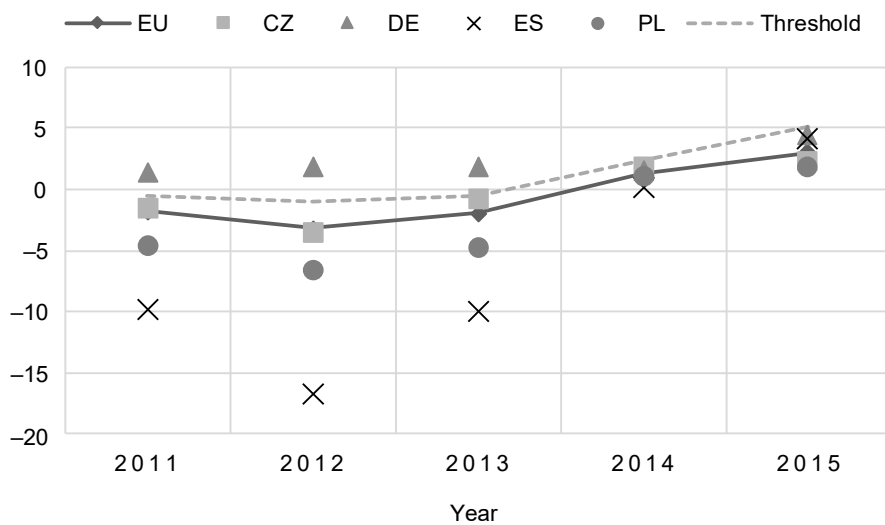


Fig. 9. MIP indicator of house price index with relative threshold
Source: author's calculations based on data from the MIP database.

The assessment of general government debt from the perspectives of absolute and relative thresholds lead to the finding that the EU weighted average exceeded the absolute threshold of more than 25 percentage points (see Fig. 10). While the official threshold is 60% of GDP, the average remained around 87% of GDP in the last three years. This indicator brings back the discussion on appropriate definition of the relative threshold. If we apply our experimental threshold set as 170% of the basis, the reference value is 148% of GDP, and Greece was the only country exceeding the relative threshold in 2015.

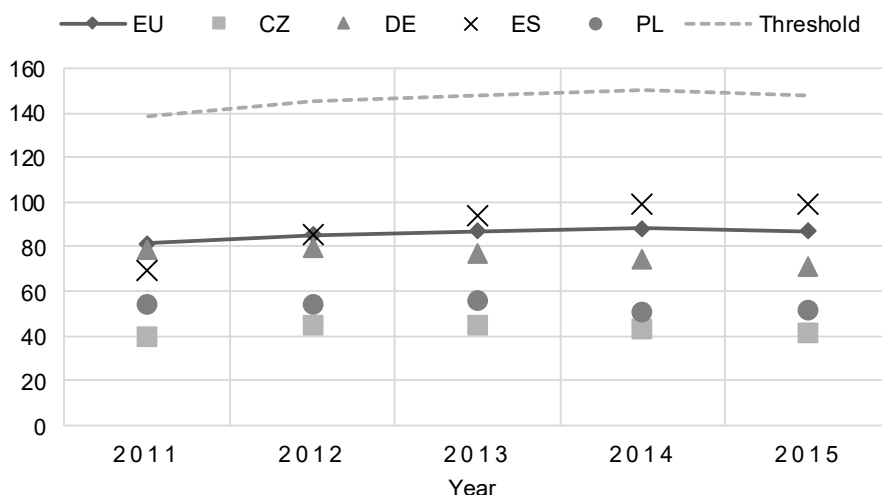


Fig. 10. MIP indicator of general government debt with relative threshold
Source: author's calculations based on data from the MIP database.

The official threshold for the year-on-year change of the financial sector liabilities is 16.5%, which might have reflected the pre-crisis situation, but totally does not correspond with the developments after the Great Financial Crisis. One can notice from Fig. 11 that the annual changes in Czechia and Poland usually exceeded the growth rates in Germany and Spain, as well as the EU weighted average. Although the Czech and Polish growth rates were within the accepted range below the official threshold in 2012 and 2013, they significantly exceeded the relative threshold. The 2014 data demonstrate higher convergence between the countries. Unfortunately, this trend cannot be confirmed further since there are no data available for the year 2015.

The last four MIP scoreboard indicators capture developments in the labor market. Apart from the general indicator of unemployment rate, the three other indicators focus on specific problematic areas of the labor market. While the level of unemployment was stable in the analyzed countries, as well as the EU, the partial indicators demonstrate stronger dynamics. As regards to general unemployment, Spain was beyond both thresholds (see Fig. 12), the relative and the official of 10%, during the entire period of examination. The level of unemployment in Poland was very close to the official threshold and was almost identical with the EU weighted average.

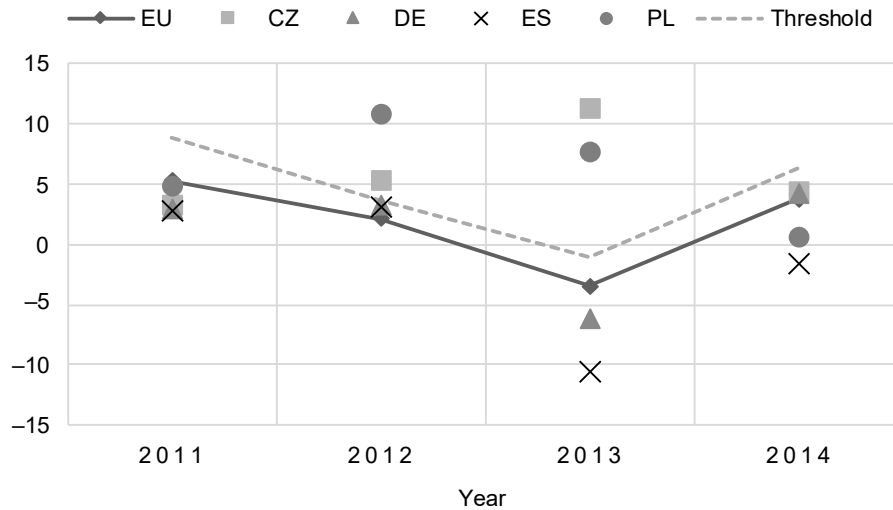


Fig. 11. MIP indicator of financial sector liabilities with relative threshold
 Source: author's calculations based on data from the MIP database.

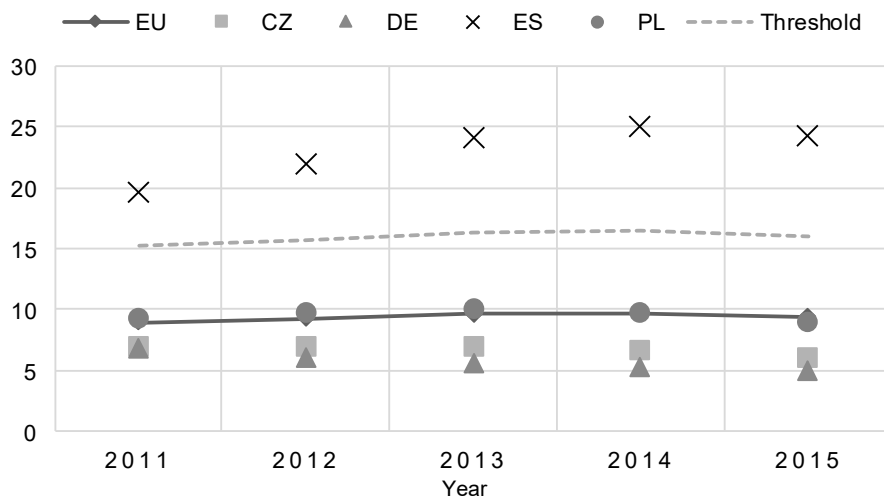


Fig. 12. MIP indicator of unemployment rate with relative threshold
 Source: author's calculations based on data from the MIP database.

The economic activity rate constitutes the manpower supply of the labor market and the official threshold for a 3-year change is at least 0.2%. Data depicted in Fig. 13 point to unsatisfactory development in Spain and negative trend in Germany. By contrast, a plausible development can be construed for long-term unemployment. In particular, indicator values in all analyzed countries, as well as the EU weighted average, decreased below the official threshold 0.5% for a 3-year change. A remarkable improvement can be seen especially in Spain. The indicators of youth unemployment were developing in a similar way. In 2015, the analyzed countries and EU weighted average exhibited figures that were safely within the accepted range specified by both thresholds.

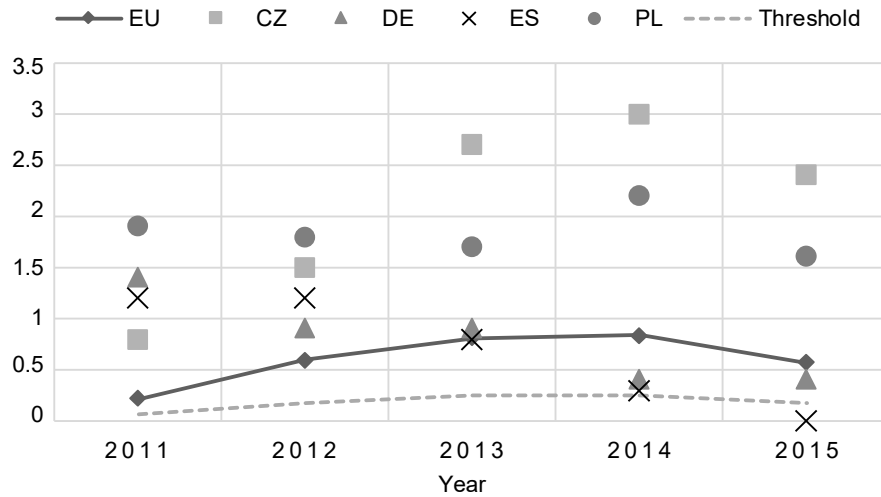


Fig. 13. MIP indicator of activity rate with relative threshold
Source: author's calculations based on data from the MIP database.

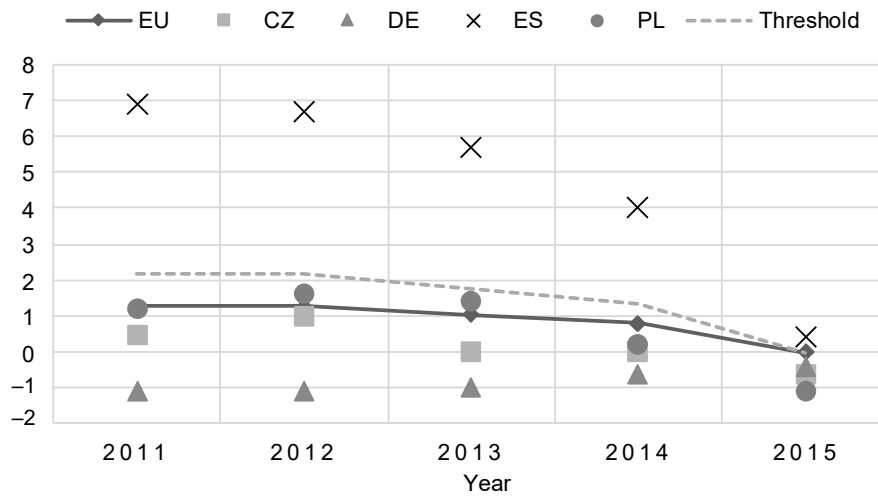


Fig. 14. MIP indicator of long-term unemployment with relative threshold
Source: author's calculations based on data from the MIP database.

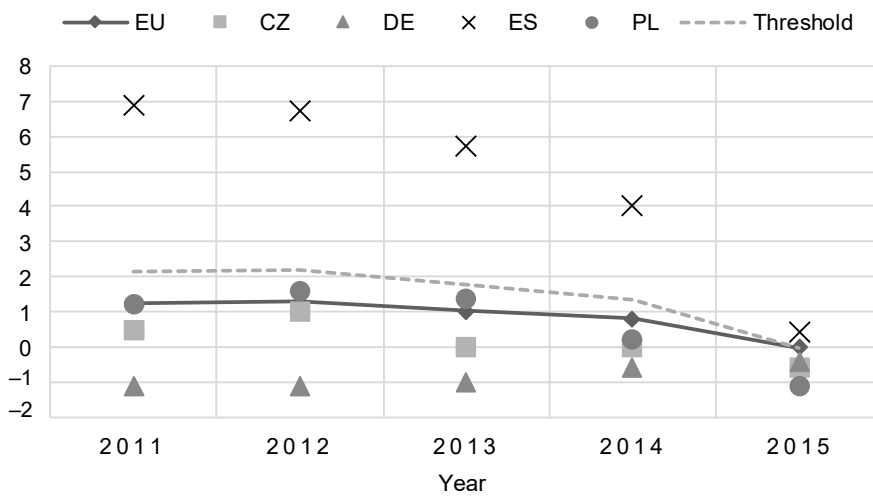


Fig. 15. MIP indicator of youth unemployment with relative threshold
Source: author's calculations based on data from the MIP database.

CONCLUSION

Based on existing criticism of the current settings of the MIP and a five-year experience of the MIP functioning in practice, the aim of the paper was to propose a concept of relative threshold as a major reform of the MIP. We are convinced that the official absolute thresholds fixed at a certain level for a long period of time are neither able to reflect current economic conditions nor completely reveal economic risks stemming from macroeconomic imbalances. By contrast, the concept of relative threshold is based on an idea that actual economic conditions matter and what previously represented a risk, can be perfectly normal today, after the economic situation has changed. For instance, a decline in world export market share of 15% can be considered as dangerous *per se*. However, if all other countries in the sample are experiencing a similar problem, the assessment perspective changes dramatically and the situation does not look so serious.

We propose the concept of relative threshold to be implemented in the MIP scoreboard. The relative threshold is based on computation of the EU weighted average for each indicator. National values of the MIP indicators are used in calculation, and the weights are determined by national GDP. The respective relative threshold is subsequently derived from the basis. A crucial question that requires further research is how to define the relative threshold. We put forward two alternatives. A standard deviation (and its multiples) or a certain multiple of the weighted average should be added to the basis. While our recommendation is to select only one approach for all MIP indicators, we admit that the magnitude of the multiples may differ across the indicators in order to fit their diverse character and construction.

We applied the proposed concept to all MIP indicators and illustrated our proposal on a case study of four EU member states. Two of them (Germany and Spain) represent large and influential eurozone economies, and the remaining two (the Czech Republic and Poland) are medium size non-eurozone economies conducting independent monetary policy. We experimentally defined the relative threshold as 170% of the basis (EU weighted average). The results confirm that the absolute and relative thresholds are often in conflict over the assessment of what is, or is not, considered imbalance and what is still within the accepted range. The most pertinent examples are current account surplus in Germany, net international investment position of Czechia, changes in world export shares of Germany and Spain, real effective exchange rate in Czechia or financial sector liabilities in Poland and Czechia. These examples highlight both options i.e. either the official absolute threshold is too strict or too permissive to capture the real economic situation. Therefore, this paper provides a proof that the current settings of the MIP are definitely not perfect. The modification of thresholds according to our proposal would be a major step towards the improvement of the MIP.

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Summary. The Macroeconomic Imbalance Procedure (MIP) is a surveillance mechanism of the European Union (EU) which aims to identify potential risks early on, prevent the emergence of harmful macroeconomic imbalances and correct the imbalances that are already in place. However, during its five years of operations, the MIP has been often criticized for improper settings and susceptibility to political influence. The main objective of the paper is to propose the concept of relative threshold that should replace the current system of absolute thresholds fixed for a long period of time. Our concept is based on calculation of weighted average which serves as the basis of the relative threshold. Consequently, the threshold is derived from the basis by addition of certain value corresponding to standard deviation or multiple of the weighted average. This concept is applied to all MIP indicators and four selected EU member states. The results suggest that the absolute and relative thresholds often differ in the assessment of economic development and identification of potential economic risks and imbalances. These findings relate to indicators and were detected across the studied countries, which confirms the need for reform of the MIP.