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PROSPECTS FOR THE EUROZONE: EVALUATION OF ECONOMIC COMPONENTS

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ABSTRACT. ***The present article discusses the question of the Eurozone's macroeconomic prospects. It aims to assess the development of fundamental categories characterizing the economies of the member states. It also explores designated variables associated with the concept of the macroeconomic stabilization pentagon. This analysis is based on IMF projections and refers to both economic conditions and the processes of nominal and sigma convergence. The obtained results do not unambiguously confirm that those countries in relatively good macroeconomic shape will experience less favourable dynamics, which in turn might imply a decrease in disparities within the zone. However, systematic conformance of member countries should be expected in terms of nominal values of basic macroeconomic categories and decreases in disparities in GDP p.c. levels, implying sigma convergence. Looking to the future, the article proposes a view of the homogeneity and internal consistency of the Eurozone that may serve to enrich the current debate over the future of the common currency area, which focuses on the scope of necessary institutional reforms.***

KEYWORDS: crisis, macroeconomic conditions, convergence, forecasts, Eurozone.

JEL classification: E01, E20, E30, E60, F01, F15, O47.

Introduction

The Eurozone is struggling with a serious existential problem. The crisis highlighted the instability of the Economic and Monetary Union (EMU), which had no mechanisms with which to neutralize internal imbalances. As well, it confirmed that the EMU had failed (as of then) to establish criteria for an optimal currency zone; thus it had neither guaranteed the mobility of labour in the event of asymmetric shocks, nor established so-called institutions/lender of last resort, nor ensured fiscal equalization mechanism/compensatory transfers (Mundell, 1961; Kenen, 1969; Obstfeld, Roggoff, 1996). Solution of these accumulated problems certainly demands ambitious and courageous steps[1]. Some measures to strengthen cooperation within the EU have already been taken. In the wake of the financial-economic crisis, the European Systemic Risk Board[2] was brought into existence; the EFSF, or European Financial Stability Facility[3], was activated; and in the spring of 2011, the idea of the European Semester (i.e., a mandatory review of the budgets of EU member states) was introduced (European Commission Communication, 2009, 2011; Consolidated Version EFSF Framework Agreement, 2010; Treaty Establishing the European Stability Mechanism, 2011; Council of the European Union, 2010). Subsequent European summits bore fruit in the form of new initiatives, and also led to the signing of the intergovernmental Treaty on Stability, Coordination and Governance in the Economic and Monetary Union (TSCG). In the context of the global crisis, the EU has decided to change its methods of economic management, taking steps which would be hard not to commend.

One remaining key problem is to cut the Gordian knot of interdependence of the banking system and public finances (Pisani-Ferry, Wolff, 2012). In the opinion of a growing number of economists, the formula for monetary union heretofore in place must be strengthened with a fiscal pillar in the form of a common European bond fund or even the creation of a debt repayment (redemption) fund, as well as a banking pillar, i.e., a system of supervision, guarantee of deposits and a resolution mechanism. Beyond the institutional issues, however, it is necessary to consider the actual state of the Eurozone's economy, in particular the processes of convergence or deepening diversity that may appear in the coming years and thus to assess the macroeconomic foundations of the countries included in this zone.

The crisis has exposed the impracticality, and even harmfulness, of most modern economic theories (The Economist*,* 2009). The rapid changes accompanying the crisis have made it necessary to revise most forecasts, whose wisdom has been called into question (Czarny, 2007). Despite the systematically depreciated (due to the crisis) role of economic forecasting and the reduction of forecasting to observations on the current situation (i.e., from forecasting to now casting), forecasting still makes sense and is useful (Warum Forscher die Krise nicht kommen sehen, 2012). Above all, basic economic decision-making, whether by governments, firms or private citizens, requires at least some familiarity, even if only general,

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[1] Reviews of leading analytical centres, including: the Centre for European Policy Studies, Bruegel, Centre for European Reform, The Peterson Institute for International Economics.

[2] Three new European supervisory authorities for the various markets have been established in London, Paris and Frankfurt. These are: the European Banking Authority (EBA), the European Insurance and Occupational Pension Authority (EIOPA), and the European Securities and Markets Authority (ESMA), which includes rating agencies. These authorities cooperate with ESFS (European System of Financial Supervision), which governs microprudentiality. However, macroprudentiality is governed by the newly-created European Systemic Risk Council (ESRC), with the participation of the heads of 27 central banks.

[3] The means of the EFSF would be combined with loans of up to €60 billion coming from the European Financial Stabilization Mechanism (EFSM), i.e. funds raised by the European Commission and guaranteed by the EU budget, and up to €250 billion from the International Monetary Fund for a financial safety net up to €750 billion. At the same time, the Eurozone finance ministers have agreed to the creation of the European Financial Stabilization Mechanism, which is intended to be a permanent element guaranteeing the solvency of the Eurozone countries. It has obtained new powers and is now referred to as the European Monetary Fund—an IMF for the Eurozone. Not only can it issue bonds on behalf of bankrupt countries, but it can also buy out debt on the secondary market. It also has the right to recapitalize banks. Thus, in a crisis, it will act not only on behalf of countries in need of rescue, but also as a preventive institution.

with developments in certain economic categories. It should be remembered that forecasts are not promises, but only the most probable scenarios of development, and that they constitute one of many factors in decision-making. They contribute to more rational action by complementing other available tools.

Identifying the similarities and differences in a given country's economic situation is important in the context of the postulates concerning the introduction of international economic governance and increased coordination of fiscal policies. Taking into account the heterogeneous nature of the crisis (different impacts on different countries) and its specific characteristics in the economies constituting the Eurozone, there may be some concern about potential conflict between the integrated regulations of the common market and the needs of particular countries in terms of using those instruments most effective from their point of view (Gros, 2012). Information on the subject of developing economic conditions therefore would appear indispensable for the identification of global irregularities and prevention of potential crises.

1. Methods

The study included 17 countries from the Eurozone, using materials from the statistical bases of the International Monetary Fund, which covers the forecasts of the most important macroeconomic categories during the period 2012-2017 (World Economic Outlook Database, April 2012 update). The conducted analysis is an attempt to assess the future economic state of the Eurozone nations in the context of convergence and the internal cohesion of the group. The study includes variables which succinctly describe a given economy while jointly forming the so-called magic macroeconomic stabilization pentagon. This is a concept including the following elements: the growth rate of GDP in percentages, constituting a synthetic expression of the level of economic development of a given country; the unemployment rate, measured as the relationship between the number of employed workers to the number of those able to work; the rate of inflation (consumer price index) expressed as a percentage; the ratio of budget balances to GDP; and ratio of current account balances to GDP. As the name "magic" suggests, reaching an optimal solution is, in practice, impossible. Nevertheless the components of the magic pentagon enable quick and easy insight into the current state of a given economy. Fitness assessments included both the mean values of basic macroeconomic categories describing the state of economies and the dynamics of their changes. This approach is implemented in various rankings which measure the economic potential of a country.[4]

Convergence is a process in which economies gradually become similar i.e. are catching up. The literature distinguishes between nominal and real (structural similarity between economies) convergence, business cycles, and income levels (Magrini, 2004). To assess these convergence processes, sigma convergence has been chosen and the concept of nominal convergence has been modified. Originally nominal convergence, also known as "level-demonstrating convergence," was most often associated with the requirements to be met before access to the third stage of EMU, i.e., the Maastricht criteria. For the requirements of this study, the list of indicators was adapted to the five designated categories of the pentagon. Another widely employed measure used in this analysis is sigma convergence,

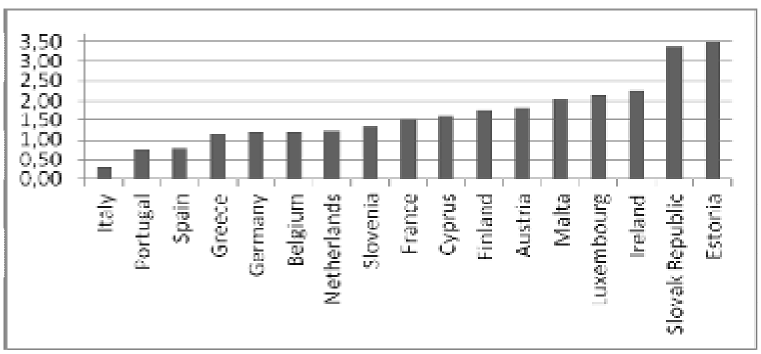
[4] For example: Gesamtindikator Bundesländerranking. A comprehensive study within the framework of the Neue Soziale Marktwirtschaft (INSM) initiative enables assessment of the German economy and its share of the determinants of economic growth (labour market, enterprises, economic structure, prosperity, attractiveness of location) in dynamic and static terms. Bundesländerranking, developed by IW Consult GmbH of Köln, http://www.bundeslaenderranking.de/.

which occurs when differences in GDP or per capita income decrease over time (Matkowski, Próchniak, 2004; Malaga, 2004). Estimates of nominal convergence require the analysis of the convergence of basic economic categories, while those of sigma convergence call for the calculation of changes in the development of differences in GDP as measured by standard deviation of in GDP p.c.

2. Results and Discussion

2.1 Macroeconomic Condition of the Eurozone Countries during the Period 2012-2017; Forecasts of the Basic Categories and the Dynamics of Their Changes

The most dynamic economic growth in the period 2012-2017, as evidenced by increases in GDP, will be enjoyed by the newest Eurozone member states, Estonia (3.5%) and Slovakia (3.4%), as well as, unsurprisingly, Ireland (2.3%), which is emerging from the crisis, and more surprisingly, wealthy Luxembourg and Malta (2%). Unfortunately, on the other end of the spectrum, the marginal rate of GDP growth will not exceed 1% in Italy or the other countries included in the so-called PIGS[5] group, i.e., Portugal, Greece and Spain (here, the average growth is supposed to reach 1.15%), or in Germany (1.2%), which was essentially spared by the crisis (see *Figure 1*). As is clear from the projections, the southern countries, those particularly affected by the crisis and thus most in need of rebounds, will continue to be afflicted by the lowest rate of economic growth in the Eurozone. Most likely they will be unable to emulate the success of Ireland, and thus will be threatened by stagnation.

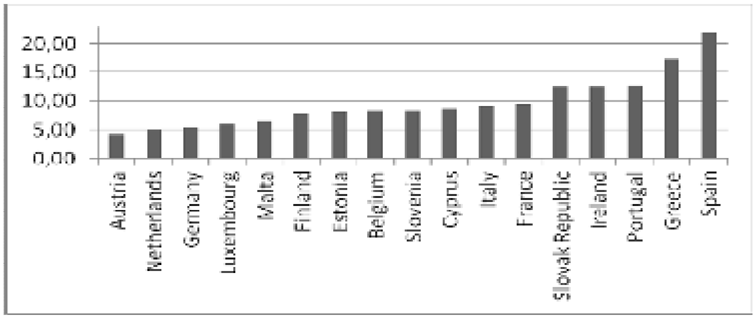


Source: our calculations based on IMF data.

Figure 1. **Average Rate of Change of GDP, 2012-2017**, **(%)**

The most favourable labour market situation, judging by the number of unemployed, will be observed in the core Eurozone countries – Austria, the Netherlands, Germany and Luxembourg. At the same time, the worst unemployment will be represented by the notorious PIGS group – Portugal, Ireland, Greece and Spain. These countries and the Slovak Republic will exceed permissible threshold of 10%.[6] The current post-crisis situation will somehow be maintained over the coming years, including the observed discrepancy between the high-performance economies of the core of Europe, where the unemployment rate will fluctuate in the neighbourhood of 5%, and the crisis-affected countries of the south, chiefly the PIGS group (see *Figure 2*).

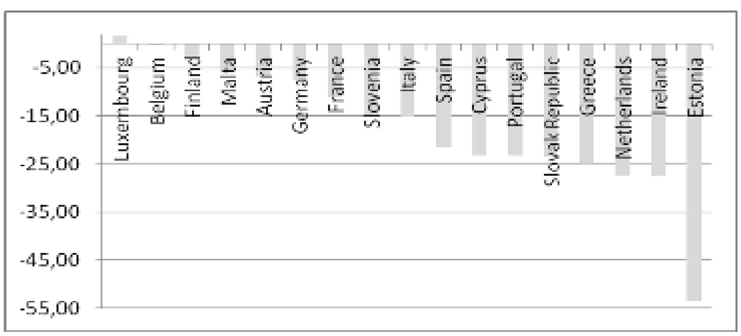
[5] The coined term PIGS referred originally to Portugal, Ireland, Greece and Spain. In light of the troubles in Italy, this country is often counted in the group, now called PIIGS.
[6] Applies to moving averages over the past three years.



Source: our calculations based on IMF data.

Figure 2. **Average Level of Unemployment, 2012-2017**, **(%)**

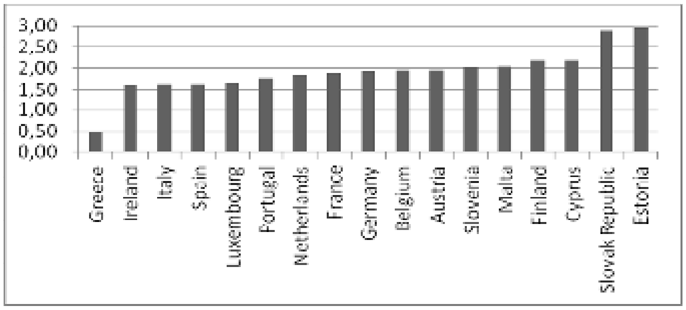
The decline predicted for unemployment in Greece and Ireland testifies to a certain "fair" axiom: the worse the situation, the more favourable the dynamic of change. Apart from these, the greatest relative improvement (change in percentage in 2017 as compared with 2012) should be noted in Estonia, the Netherlands and Slovakia (*Figure 3*). Available data, and observation based thereon, does not allow for more profound analysis, but it is worth mentioning that a statistically significant decrease in unemployment is not necessarily a sign of actual improvement in the labour market, i.e., it may not reflect an increase in employment. Not infrequently, it is the result of new forms and definitions of work enabling the inclusion of those previously not counted as working individuals (e.g., temporary jobs in Germany and other atypical forms of employment). Such improvements may also be associated with demographic changes, such as decreases in population or in working-age individuals actively seeking work.



Source: our calculations based on IMF data.

Figure 3. **Changes in Unemployment Rate, 2017 vs. 2012**, **(%)**

Economists are largely in agreement that a moderate rate of inflation is preferable to high and a low rate better than moderate (Bukowski, 2008). The theoretical arguments against inflation are distinctly more persuasive than the conclusions of empirical studies. The literature is dominated by views of the negative influence of inflation on economic activity and the growth of production. However, too low a rate of inflation is also detrimental to an economy. Low inflation, as well as the related low interest rate, limits the effectiveness of action during a possible economic slowdown. This poses a risk of a deflationary spiral of falling prices and, consequently, the regression of the economy in question.



Source: our calculations based on IMF data.

Figure 4. **Average Rate of Inflation, 2012-2017**

As a result of the crisis and the drastic contraction of the economy, the average rate of increase in prices in the coming years will be lowest – around 0.5-1.6% – in the PIIGS group: Portugal, Ireland, Italy, Greece and Spain. Average inflation in the period 2012-2017 should not exceed the medium-term targets of the European Central Bank, that is, 2% in most Eurozone countries, with the exception of Malta, Slovenia, Finland and Cyprus (slightly over 2%) and Slovakia and Estonia (close to 3%). From the forecasts it follows that most countries will record a relative decline in inflation rates in 2017 as compared to 2012. The largest declines will be in Portugal (-54%) and Italy (-40%). Rising inflation will, however, affect Malta (9.3%), Ireland (7.8%), Germany (4.7%) and France (3.2%) (see *Figure 4*). While such increased inflation in countries emerging from the crisis can be treated as a sign of "recovery" of the economy's growth potential, in most cases it can be read as a slight loss of competitiveness, even if also necessary to offset accrued imbalances in current account balances (The Economist*,* 2012).

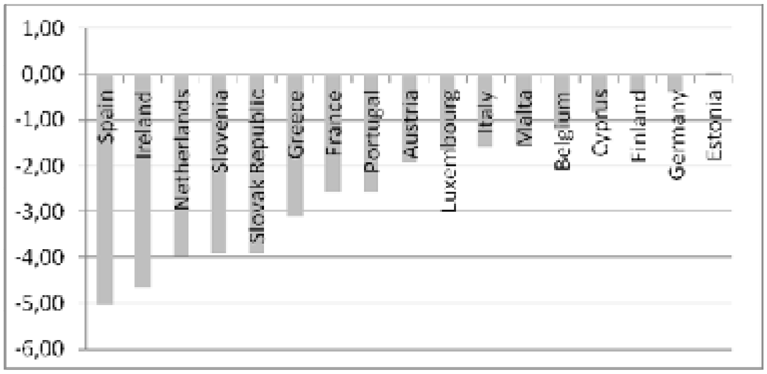
Deficits in public finance and related debt have negative effects on long-term economic growth through the "crowding out" effect, uncertainty about future taxes and inflation, and limits on the accumulation of capital. Thanks to Germany, EU policymakers have focused on public finances and the doctrine known as expansionary fiscal contraction, which assumes the positive (i.e. conducive to economic expansion) effects of spending cuts (Giavazzi, Pagano, 1990; Guajardo *et al.,* 2011).[7] The best expression of this rearrangement of priorities is the acceptance by some states of the so-called fiscal pact (the Treaty on Stability, Coordination and Governance), as well as a set of directives and regulations approved under the Polish presidency, referred to in the jargon of the EU as the "Six-Pack," introducing tighter controls and coordination of the economic policies of member states (EU Commission press release, 2011).[8]

Estimates of the average value of public finance balances show that during the period 2012-2017, only Estonia will manage to generate a minimum surplus of 0.02% of its GDP. The largest deficits belong to Spain, Ireland, the Netherlands, and the junior members of the

[7] A hypothesis put forward by Francesco Giavazzi, Marco Pagano in 1990. It assumes that under certain circumstances, reductions in government spending that can influence future expectations about taxes and government spending will expand private consumption, which in turn may lead to overall economic expansion. This view has been, however, recently questioned in an IMF paper by J. Guajardo, D. Leigh, and A. Pescatori.

[8] This focuses not only on the excessive deficit, but also on the public debt, assuming the possibility of sanctions (a deposit in a non-interest-bearing account, the introduction of which will be decided on by voting carried out under the so-called reverse procedure—it shall be deemed adopted unless a veto group is created). In addition, such supervision is subject to other economic policies. It provides for the so-called "excessive imbalances" procedure, which relates to such dimensions as the account of trade balances, the level of private debt, and real estate prices. It is difficult, however, to determine the precise indicators which should be used in the future in order to determine the existence of "excessive imbalances." It should be noted that in the opinion of some economists, the problem is not imbalance itself (literally, excess saving) as the lack of regulations to prevent its increase ("excess elasticity" of the international monetary and financial system) which gives rise to speculative bubbles. C. Borio, P. Disyatat, Global imbalances and the financial crisis: link or no link? BIS Working Papers No. 346, May 2011.

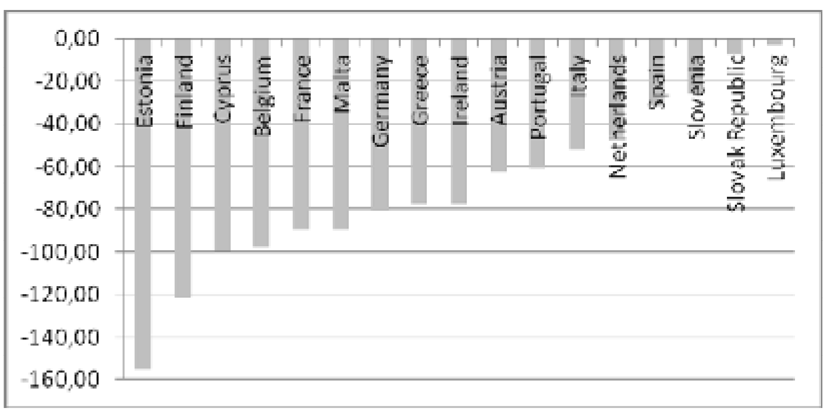
zone, Slovenia and Slovakia. As the forecasts show, in the analyzed period six countries will exceed the threshold of the Maastrich criteria, i.e., 3% (*Figure 5*).



Source: our calculations based on IMF data.

Figure 5. **Average Balance of Public Finances, 2012-2017**, **(% GDP)**

Unfortunately, the group of countries with the highest imbalances does not coincide with the group which will reduce deficits the most. Estonia, Finland, Cyprus and Belgium are expected to be not only leaders in terms of the lowest deficits, but also the winners in the category of greatest improvement (*Figure 6*). It should be noted at this point that deficit reduction should be done in conjunction with curbing spending, not with increasing revenue, i.e., raising taxes (Alesina, Giavazzi, 2012). Moreover, in a situation of economic stagnation, interference based on fiscal stringency seems counterproductive, or at any rate ineffective (no business means, no tax revenue).



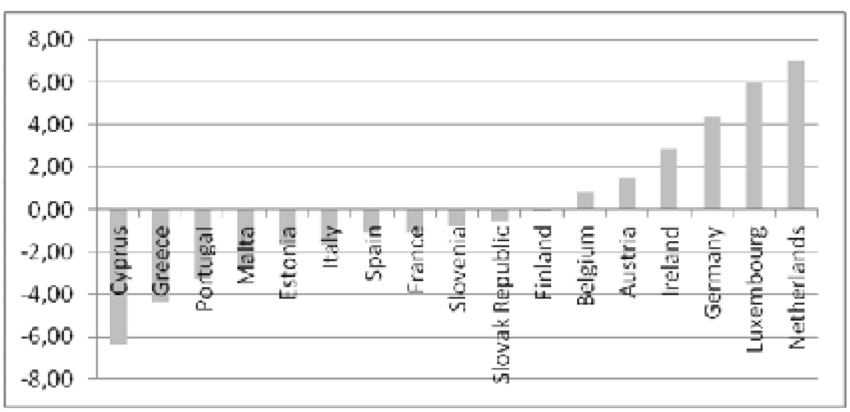
Source: our calculations based on IMF data.

Figure 6. **Relative change in the balance of public finances, 2012-2017**, **(% GDP)**

The crisis has highlighted the need to look after not only public finances, as evidenced by the excessive deficit procedure, but also the balance of payments, as reflected in the procedure of excessive imbalances (MIP, or Macroeconomic Imbalances Procedure). This establishes the acceptable thresholds at which the balances of current accounts, as well as international investment positions, should be set. According to accepted guidelines, the average current balance over a period of three years should be somewhere between a 4%

deficit and 6% surplus (European Commission Occasional Paper No, 92, February 2012).[9] This inequality in the treatment of countries showing negative or positive balances is faced with the growing criticism of economists (De Grauwe, 2012).

The available data show that in the period 2012-2017, six countries will manage to generate surpluses: the Netherlands, Germany, Luxembourg, Ireland, Austria and Belgium. The countries of southern Europe – Cyprus, Greece, Portugal and Malta – will find themselves at the opposite extreme. This arrangement confirms the division of Europe into two competing units, a "core" made up chiefly of northern economies, and the "southern periphery." The complex situation of Eurozone countries in terms of initial value of balances of current accounts (in 2012) and anticipated changes in the period 2012-2017 prevents the creation of a simple ranking of dynamics. To determine the precise nature of the changes, four groups of countries must be distinguished. The first includes those economies which will record deficits in 2012, but will manage to eliminate them over the next five years. This group includes Belgium and Finland. The second group includes countries with surpluses, that is, those that will maintain surpluses during the analyzed period, whether those surpluses are increased (Austria, Ireland, Luxembourg) or reduced (Germany, the Netherlands). The third group includes states that can be described as deficit nations. In this group are found both those countries whose deficits will diminish over time (France, Greece, Italy, Malta, Portugal and Spain) as well as those whose deficits will grow (Cyprus, Slovakia). The fourth group is composed of the countries whose initial surpluses will be transformed over the years into deficits. In this ignominious group will be two of the youngest members of the Eurozone, Estonia and Slovenia. It is worth noting that the largest group will be made up of the deficit countries, dominated by those which will manage to reduce their deficits. The most desirable trend in this regard would be to decrease deficits through increased exports, rather than limiting imports as a result of weakening demand. In reference to the introduced thresholds of excessive imbalances, it should be remembered that they will be exceeded in the case of Cyprus and Greece due to deficits over 4%, and in the case of the Netherlands due to a surplus over 7% (*see Figure 7*).

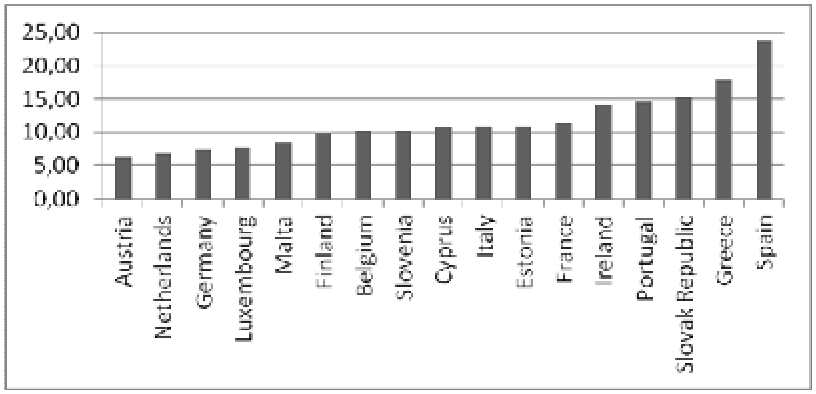


Source: our calculations based on IMF data.

Figure 7. **Average Balance on Current Accounts, 2012-2017, (% of GDP)**

[9] European Commission Occasional Paper No. 92, February 2012. Importantly, indicators introduced in the aftermath of the crisis are neither political instruments nor goals of economic policy, but only early-warning mechanisms to prevent the accumulation of imbalances.

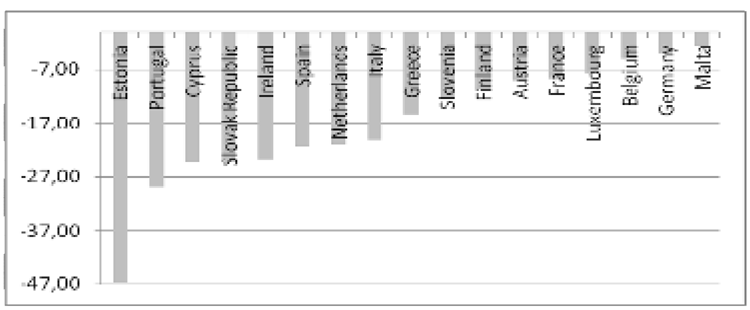
As a consequence of the crisis, the problem of poverty has made a comeback.[10] One synthetic measure of poverty is A. Okun's "misery index," the sum of the rates of inflation and unemployment. Among the five countries most at risk for poverty in the period 2012-2017, it is likely that the infamous PIGS group, i.e. Portugal, Ireland, Greece and Spain, will be represented, as well as one of the newest members of the Eurozone, Slovakia (*Figure 8*).



Source: our calculations based on IMF data.

Figure 8. **Indicator of Poverty: Average Level, 2012-2017**, **(%)**

However, the forecasts concerning the dynamics of change in this respect should be read positively. The largest (as expressed in percentages) relative decrease in poverty values can be expected in Portugal, Slovakia and Ireland, among others, along with Estonia and Cyprus. At the same time, justly enough, the economies least vulnerable to poverty (Germany, Luxembourg, Malta, Belgium and Austria) will experience the weakest reductions (*Figure 9*). Of course, apart from measuring the risk of poverty itself, the development of intranational distinctions in this category in terms of regional or social groups needs to be tracked as well.



Source: our calculations based on IMF data.

Figure 9. **Relative Decline in Poverty Rate in 2017 vs. 2012, (%)**

It should be emphasized that the presented estimates of the macroeconomic condition of the Eurozone economies refer to projections involving a relatively short period (6 years) and hence must be treated with caution. They do not allow for a clear, unambiguous assessment of economic foundations, but rather draw attention to the risk of perpetuating current characteristics of the Eurozone and prolonging its internal heterogeneity.

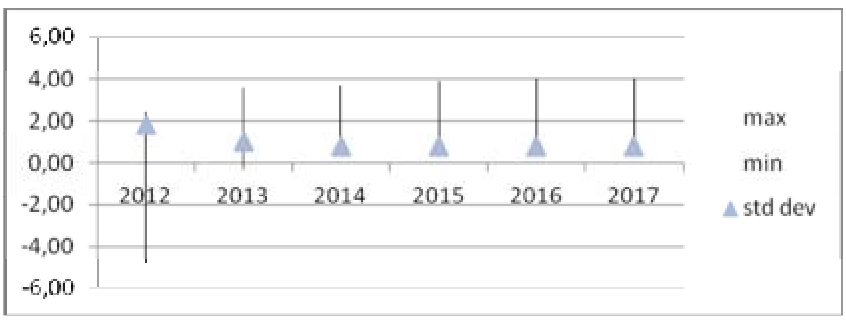
[10] For more on other methods of measuring poverty and on the year 2010 being dedicated to the fight against poverty, see: M. Götz, J. Dobrawolska-Polak, 2010 European year for combating poverty and social exclusion. Poverty in Poland and Germany. MA Bulletin No. 41/2010, 6/16/10, Poznań.

2.2 Economic Convergence in the Eurozone in 2012-2017

2.2.1 Nominal Convergence

Only some of the analysed categories included in the pentagon have been assigned official thresholds. According to the Maastricht criteria (the reinforced "six-pack"), the public finance deficit must not exceed 3% of GDP, and under the procedures concerning excessive imbalances, the current balance (three-year average) relative to GDP should fall between a 4% deficit and a 6% surplus, during which time the unemployment rate should not exceed 10%.

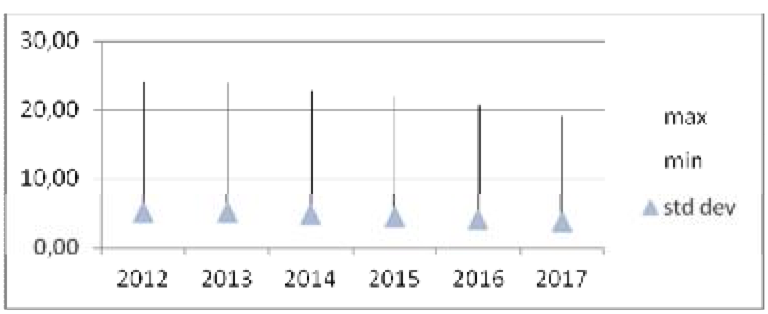
The growing convergence of economic growth – though only to the year 2016 – is evidenced by the systematically decreasing divergence in growth rates (a decrease, that is, in standard deviation), as well as the annual decreases in the differences between the maximum and minimum rate of change in GDP predicted for the Eurozone countries. This decrease in disparities is caused chiefly by increases in the minimum values, something which needs to be viewed in a positive light. Estimates regarding 2016/2017 suggest a slight increase in the diversity of GDP growth rates. The time frame included in the forecast is too short, however, to answer the question of how durable this change will be. (*Figure 10*).



Source: our calculations based on IMF data.

Figure 10. **Variation in Economic Growth (%, Change in GDP) within the Eurozone, 2012-2017**

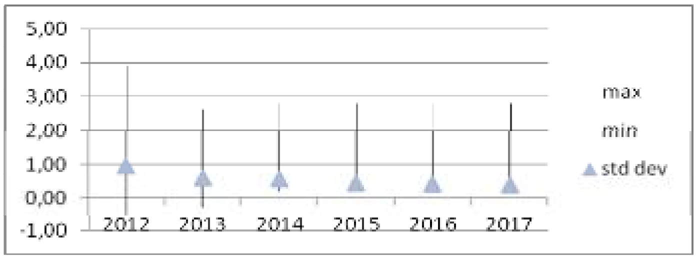
According to the estimates, in the period 2012-2017 the countries in the studied group should systematically come to resemble each other in terms of the labour market. This may be evidenced by annually decreasing variations in unemployment rates, resulting from a considerable decline in the maximum values. This is a positive trend in comparison to hypothetically possible changes caused by increases in the minimum values (*Figure 11*).



Source: our calculations based on IMF data.

Figure 11. **Differences in Unemployment Rates within the Eurozone, 2012-2017**

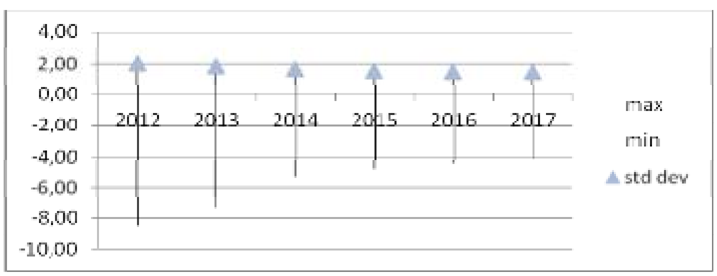
The Eurozone countries will also become increasingly similar in terms of price stability. The weakening degree of variation in levels of inflation is confirmed by the systematic decrease in standard deviation, as well as the decreasing difference between minimum and maximum values. In all probability, however, this will be due chiefly to increases in minimum values, which would confirm the general trend toward higher inflation (*Figure 12*).



Source: our calculations based on IMF data.

Figure 12. **Differences in Inflation Levels within the Eurozone, 2012-2017**

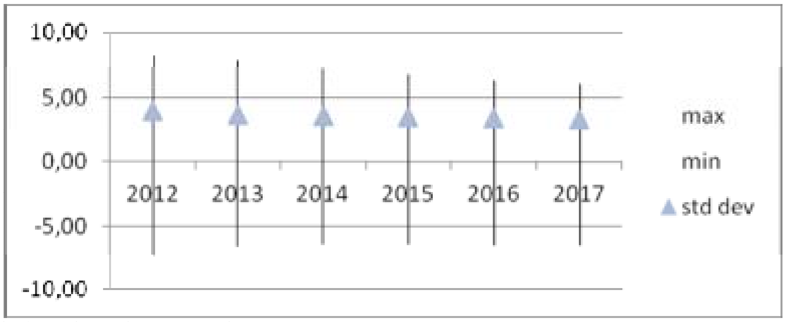
In terms of public finances, the countries of the Eurozone appear to be becoming a more and more homogenous group, considering the decreasing differences in the level of public deficits over the forecast period. Slight fluctuations, however, will occur due to the difference between the largest and smallest deficit amounts. Certainly, the positive aspect of these changes is that the gradual convergence of the Eurozone economies will result from the systematic reduction of deficits, which in turn can be regarded as the desired effect of the programs of fiscal consolidation implemented on a wide scale in Europe (*Figure 13*).



Source: our calculations based on IMF data.

Figure 13. **Differences in Levels of Public Finances Budgets within the Eurozone, 2012-2017**

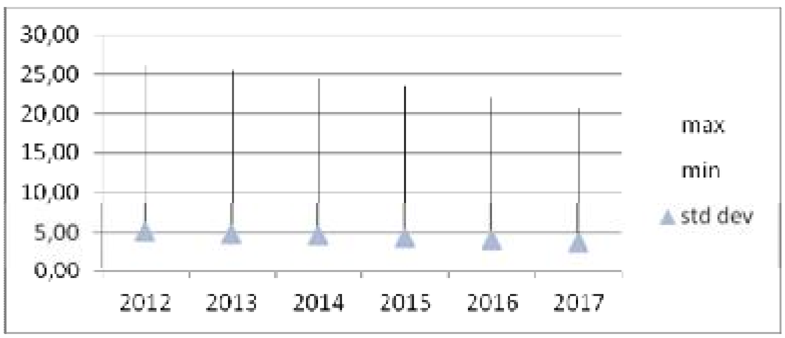
The Eurozone will also become an increasingly homogeneous group in terms of the situation in current account balances. Such a conclusion can be arrived at through the development of standard values measuring average deviation for the entire zone, as well as the difference, decreasing from year to year, between extreme levels of current account balances. This will be largely the result of a very favourable trend toward a simultaneous decrease in surpluses and a relatively weak (positive) decrease in deficits (*Figure 14*).



Source: our calculations based on IMF data.

Figure 14. **Variability in Balances in Current Accounts within the Eurozone, 2012-2017**

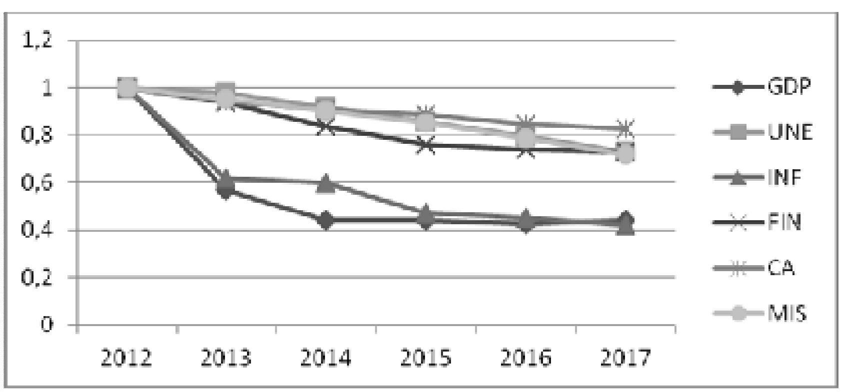
The standard deviation, decreasing from year to year, and differences between high and low values indicate that there will be fewer and fewer differences among the members of the Eurozone in poverty levels. This will occur due mainly to significant decreases in the maximum values (*Figure 15*).



Source: our calculations based on IMF data.

Figure 15. **Differences in Poverty Rates within the Eurozone, 2012-2017**

Establishing the level of diversity in 2012 as 100% and comparing the scale of changes, it can be seen that the strongest decline of disparities should happen in the rate of GDP growth (*Figure 16*).



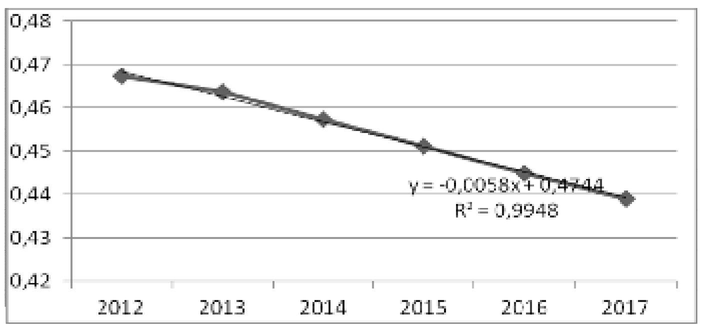
Source: our calculations based on IMF data.

Figure 16. **Comparison of the Rate of Decline within the Eurozone for Each Category (value in 2012 = 100%)**

Also, differences in inflation rates should be subject to relatively rapid erosion. The slowest decline that can be inferred from the projections will be in the dispersion of the levels of current account balances. Meanwhile, in the opinion of many economists, imbalances accumulated over years exactly in this area are the hallmark of the current crisis and the biggest challenge for the future (De Grauwe, 2012; Gros 2012).

2.2.2 Sigma Convergence

Sigma convergence refers to the measurement of differences in the wealth of countries and is associated with the attempt to answer the question about long-term trends in the degree of polarization of wealth or income within a group of countries (Matkowski, Próchniak, 2004). The effect of sigma convergence is revealed by decreasing variances, or standard deviations, in the logarithm of GDP within a given group of countries within a given time frame (Malaga, 2004).



Source: our calculations based on IMF data.

Figure 17. **Disparities in per Capita Income Levels between Countries of the Eurozone (Standard Deviation in Percent of GDP)**

The results (*Figure 17*) seem to confirm the possibility of sigma convergence in the period 2012-2017. This would mean a reduction in variations in the level of GDP between member countries of the Eurozone. If we assume that changes in the level of differentiation of GDP in the successive years describe a linear function (the high coefficient of determination R2 specifying the degree of the matching function is 0.99) a systematic and steady decrease in dispersion can be expected.

To summarize, on the basis of attempts to assess the macroeconomic condition of the Eurozone in the context of convergence and the internal consistency of the group, it can be concluded that:

- in the coming period 2012-2017, the Eurozone should be more homogeneous in terms of development of the basic economic categories, and less varied in the levels of GDP p.c.;
- despite the growing similarities, the Eurozone division into the stronger core countries and the weaker periphery - observed practically since the establishment of the EMU and distinguished on the basis of the development of current account balances (Gros, 2012) – persist;
- the petrification of the current system emerging from the conducted analyses is most probably connected with the short time series for which forecasts are available.

However, this also results from the unprecedented scale of contraction which the economies of Southern Europe suffered during the crisis;

- therefore, taking into consideration the genesis of the economic collapse of these countries – a sharp increase in consumption fueled by the influx of foreign capital, followed by the sudden cutoff of credit ("sudden stops") and the urgent necessity to deleverage economies – efficient and rapid correction of accumulated imbalances is not to be expected in the immediate future. As was concluded in the analyses of the IMF, The Economist and the OECD, the PIGS group of countries will need nine years or more, in the case of Portugal, to nearly thirteen for Greece and fifteen for Italy, to achieve the GDP they had attained before the crisis, i.e., in 2008.

Conclusions

Looking to the future, the article proposes a view of the homogeneity and internal consistency of the Eurozone that may serve to enrich the current debate over the future of the common currency area. Based on the study, it cannot be unequivocally concluded that countries in relatively good macroeconomic condition, as measured by the development of basic economic indicators, will experience less favorable dynamics which might imply a decrease in disparities within the zone. At the same time, however, the results obtained suggest that Eurozone countries will probably achieve sigma convergence, and the difference between levels of the most important macroeconomic variables will systematically decrease. The obtained results are quite encouraging, though they do not diminish the scale of the challenges facing the EU.

The macroeconomic situation of the Eurozone, while it need not give rise to increasing tensions, remains difficult. Still needed are bold and unconventional solutions beyond the traditional policy mix, incorporating imagination and force[11]. Fiscal and monetary policy instruments must first of all take into account the internal differences within the group.

As demonstrated by the analysis, although there is no danger of further divergence within the Eurozone, at least as measured in basic macroeconomic categories, finding a solution for the accrued imbalances will be a challenge. The relatively optimistic conclusions of the analysis should certainly not be considered a counterargument to the idea of a "greater Union", that is, tighter EU integration. The future of the Eurozone still requires strong political action: efficient and urgent implementation of appropriate institutional solutions.

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EUROZONOS PERSPEKTYVOS: EKONOMIKOS KOMPONENTŲ VERTINIMAS

Marta Götz

SANTRAUKA

Eurozona susiduria su rimta problema. Ekonominė krizė pabrėžė ir parodė Ekonominės ir pinigų sąjungos (EPS) nestabilumą, kuri neturėjo jokių mechanizmų, su kuriais būtų galima neutralizuoti vidaus disbalansą. Šiame straipsnyje aptariamos Eurozonos makroekonominių perspektyvų galimybės. Žvelgiant į ateitį, straipsnyje siūlomas Eurozonos homogeniškumas ir vidaus darnumas, kurie gali būti naudingi, siekiant praturtinti esamus debatus dėl bendros valiutos zonos, kurioje pagrindinis dėmesys skiriamas būtinoms institucinėms reformoms. Straipsnio tikslas – įvertinti pagrindinių rodiklių, apibūdinančių valstybių narių ekonomiką, plėtrą. Taip pat analizuojami nustatyti kintamieji, susiję su makroekonomikos stabilizavimo penkiakampe koncepcija. Ši analizė grindžiama "IMF" prognozėmis ir remiasi ekonomikos sąlygomis bei nominalios ir sigma konvergencijų apsvarstymais. Gauti rezultatai vienareikšmiškai nepatvirtina, kad šalys, kuriose egzistuoja geros makroekonominės sąlygos, patirs mažiau palankią dinamiką, o tai savo ruožtu gali reikšti skirtumų sumažėjimą zonoje. Tačiau, šie rezultatai rodo, kad Eurozonos šalys išgyvens sigma konvergenciją, o tai savo ruožtu sumažins skirtumus tarp svarbiausių makroekonominių rodiklių. Eurozonai ateityje vis dar reikės tvirtų politinių veiksmų – veiksmingai ir nedelsiant įgyvendinti atitinkamus institucinius sprendimus.

REIKŠMINIAI ŽODŽIAI: krizė, makroekonominės sąlygos, susiliejimas, prognozė, Eurozona.