ARGUMENTA OECONOMICA No 1 (50) 2023 ISSN 1233-5835; e-ISSN 2720-5088

Jakub Karnowski*, Andrzej Rzońca**

Should Poland join the euro area? The challenge of the boom-bust cycle

The article makes references to the existing cost-benefit analyses on adopting the euro in Poland and other new member states of the EU. In general, they considered a decrease in the cost of capital to be among the crucial benefits of adopting the common currency. As a result, the costs of a credit boombust cycle, to which adoption of the euro may lead, were at best underestimated. The authors discussed the possible solutions to mitigate the risk of boom-bust cycles and concluded that although they are conceptually simple, their effective implementation may be difficult, mostly due to political pressures. To overcome the feasibility problem, the power over undertaking macro prudential measures should be delegated to the central bank. Its past performance in stabilising the economy (at least until recently) suggests that it could make a good use of such a power. Furthermore, adopting the euro would resolve the problem of the 'difficult cohabitation' of monetary and macro prudential policy that such a delegation would otherwise create.

Keywords: euro adoption, boom-bust cycle, macro prudential measures

JEL Classification: E32, E58, E61, E62, G0

DOI: 10.15611/aoe.2023.1.11

©2023 Jakub Karnowski, Andrzej Rzońca

This work is licensed under the Creative Commons Attribution-ShareAlike 4.0 International License. To view a copy of this license, visit http://creativecommons.org/licenses/by-sa/4.0/

Quote as: Karnowski, J., Rzońca, A. (2023). Should Poland join the euro area? The challenge of the boom-bust cycle. Argumenta Oeconomica, 1(50), 227-262.

1. Introduction

Since the beginning of its political transition, Poland has become highly integrated with the euro area in terms of trade, FDI inflows and other financial linkages. The integration notably gained in pace after accession to the European Union in 2004. It has proven to be beneficial to income convergence and technological advance of the Polish economy, however the cornerstone of integration, i.e. adoption of the euro, still lies ahead of Poland.

Through joining the EU, Poland became "a Member State with a derogation". Such a status means that there is no room for the question of *whether Poland will join the Euro area*, and only the question of *at what point it will happen* remains open.

^{*} Warsaw School of Economics, Poland. ORCID: 0000-0003-4447-4753.

^{**} Warsaw School of Economics, Poland. ORCID: 0000-0002-8631-2595.

As of now, Poland is not eligible to join the euro area, which would require meeting the Convergence Criteria (in other words: the *Maastricht Criteria*). As the latest Convergence Report¹ of June 2020 indicated, Poland had hardly fulfilled the price stability criterion even then. While HICP stood within the 1.5 p.p. of acceptable deviation from the reference value², the European Commission pointed out that "there are concerns regarding the sustainability of inflation convergence in Poland over the longer term" (European Commission 2020a, p. 95). These concerns proved to be justified (see Figures 1-2). Poland has also ceased to comply with the second monetary convergence criterion, that is the long-term interest rates criterion (see Figures 3 and 4). Interest rates are being pushed upwards not only by the currency risk (the central bank's ability to keep the currency stable), but the country risk as well. Due to pandemic, the general government deficit increased well above the Maastricht limit, while sovereign debt has dangerously come close to that limit (see Figure 5). In 2021, both the deficit and the sovereign debt declined (although the exact figures are not available yet). However, that improvement of fiscal stance was largely driven by an inflation surprise, which in the years to come will result in strengthened pressure on the government to increase expenditure, which will further intensify due to the Russian invasion of Ukraine, as Poland will have to cover the cost of aid to refugees and to increase military spending. Lastly, Polish zloty does not participate in ERM II.

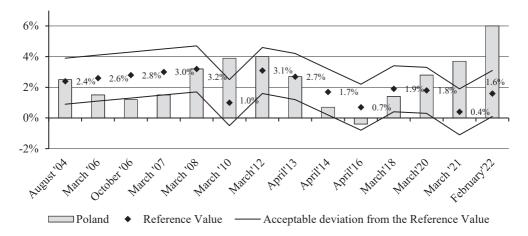


Fig. 1. Inflation in Poland vs. Maastricht criterion (2004-2021)

Source: authors' elaboration based on the European Commission (2020) and Eurostat, Series: HICP monthly data (12-month average rate of change).

¹ Convergence report is published every two years.

² Calculated for March 2020, as the average HICP rate of the three best performers in the EU: Portugal, Cyprus, Italy.

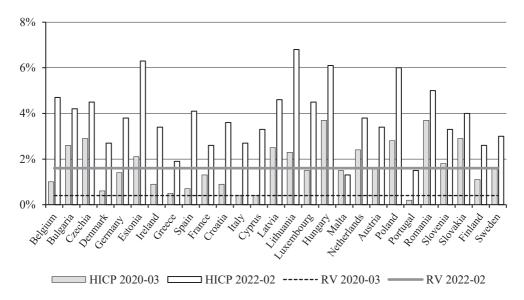


Fig. 2. Inflation vs. Maastricht criterion across EU countries in 2020 and 2021

Source: authors' elaboration based on the Eurostat, Series: HICP monthly data (12-month average rate of change).

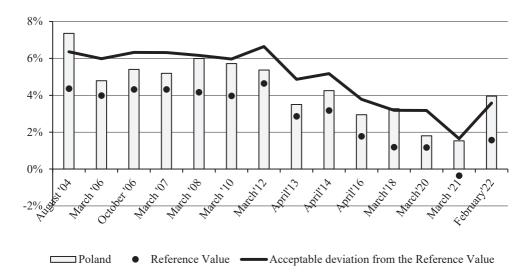


Fig. 3 Long-term interest rates in Poland vs. Maastricht criterion (2004-2021)

Source: authors' elaboration based on the European Central Bank Statistical Data Warehouse. Series: Harmonised long-term interest rates for convergence assessment purposes, (percentages per annum; period averages; secondary market yields of government bonds with maturities of close to ten years).

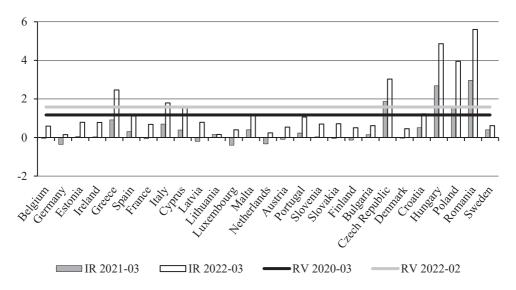


Fig. 4. Long-term interest rates vs. Maastricht criterion across EU countries (2020 and 2021)

Source: authors' elaboration based on the European Central Bank Statistical Data Warehouse. Series: Harmonised long-term interest rates for convergence assessment purposes, (percentages per annum; period averages; secondary market yields of government bonds with maturities of close to ten years).

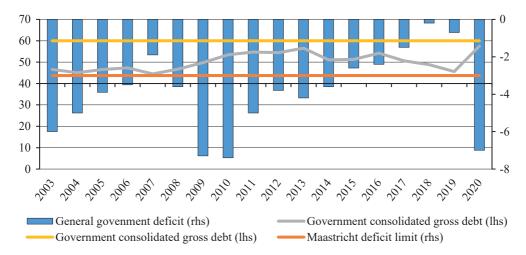


Fig. 5. Fiscal stance of Poland vs. Maastricht Criteria Source: AMECO, Chapter 16 (General Government).

Even if Poland met the Convergence Criteria, political polarisation would render the adoption of the euro unlikely in the foreseeable future as this would require amending the Polish constitutional law, which is unfeasible with the current distribution of votes in Parliament.³ This would involve the votes of most MPs representing the ruling majority – the United Right (ZP, Zjednoczona Prawica), in power since 2016, which definitely opposes joining the euro zone. Its leader, Jarosław Kaczyński, stated that Poland will not join the euro area "until the level of income will catch up to the standards of the 'Old' EU" (Business Insider, 2019).

The results of political calculus reflect public sentiment. The Global Financial Crisis (GFC) and its consequences considerably weakened public support for the euro. At the time of the most intense tensions in the peripheral countries of the euro area dealing with the debt crisis, the share of Poles opting for the common currency dropped to a quarter, the proportion reversed compared to the time before EU accession. In 2002 almost two-thirds of Poles supported joining the euro area, even outnumbering supporters of EU accession (CBOS, 2013). That being said, the public support for the common currency has rebounded recently. The percentage of opponents to the introduction of the Euro (49%) still outweighs the share of its proponents (48%), but only marginally (European Commission, 2020b). The Russian invasion of Ukraine is likely to further increase the share of its proponents.

Most of the existing cost-benefit analyses suggest that adopting the euro should be beneficial for Poland (Borowski (ed.) 2004 and NBP 2009). However, these analyses do not account for the costs of credit boom-bust cycle which may come as a result of euro adoption – as was, for instance, the case of Slovenia. The NBP (2014) has addressed this gap and shows that countries with weak macroeconomic fundamentals may suffer from the surge of macroeconomic imbalances. Therefore, joining the euro area shall be perceived only as a potential opportunity to accelerate economic growth, which is by no means certain.

The article focuses on the issue of adopting the euro from the credit boom-bust cycle perspective. It approaches the issue in a general theoretical way. Nevertheless, if political conditions allowed Poland to join the euro area, then the paper could become a source of guidance for institutional changes necessary for the euro to have a positive effect on economic growth.

The article consists of five further sections, numbered from 2 to 6:

Section 2 briefly describes the extent to which Poland has benefited so far from integration with the European Union. The focus is on these mechanisms (trade, FDI, financial integration), which could be strengthened if Poland joined the euro area.

Section 3 refers to the existing cost-benefit analyses on adopting the euro in Poland and the other new member states of the EU, and concentrates on whether they take into account the risk of a credit boom-bust cycle which the adoption of the euro may result in.

Section 4 presents the sources of a credit boom-bust cycle and its costs. It compares the pre-crisis and post-crisis experience of Poland and other new member states of the

 $^{^3}$ Amending constitutional law requires collecting the supermajority – i.e. support of two thirds of voting MP's – at the quorum of 50%.

EU, with the similar experience of the euro area countries, placing emphasis on the factors behind the resilience of the Polish economy during the GFC. Based on this comparison the section outlines conditions under which adopting the euro may increase both the risk and costs of a credit boom-bust cycle.

Section 5 discusses the possible methods for mitigating the risk of boom-bust cycles after euro adoption and assesses their feasibility. The authors refer to Poland's experience with fiscal rules and macro prudential policies, and also discuss the ability of the Polish economy to smoothly reallocate capital and labour. Then the section deals with certain other challenges of adopting the euro, related to the legacy of the sovereign debt crisis and the completion of institutional reforms in the euro area. The section concludes with a discussion of some political consequences of Poland staying outside the euro area.

Section 6 summarises the main findings of the article. These are as follows:

- 1. Poland has become deeply integrated with the euro area, and certain links between Poland and the euro area are even stronger than among euro area members.
- 2. Potential benefits for Poland from euro adoption are related to a deepening of the integration.
- 3. The main risk is associated with a credit boom-bust cycle or, more generally, with a halt in catching-up (which may result not only from a boom-bust cycle, but also from undermined cost competitiveness or slow restructuring).
- 4. Theoretical solutions to mitigate the above risk are broadly available. Their feasibility, however, is questionable.
- 5. The feasibility problem might be overcome through delegating the power of undertaking macro prudential measures to the national central banks.
- 6. Euro adoption would resolve the problem of the 'difficult cohabitation' of monetary and macro prudential policies.

The article draws from various strands of the literature, starting from cost-benefit analyses of euro adoption, through the literature on determinants and costs of financial crises, and ending with research on finance and growth, and macro-prudential measures. The authors see the paper's main contribution in linking these strands of the literature in order to indicate the main risk related to adoption of the euro and a feasible solution to mitigate that risk.

2. Integration of Poland with the euro area

The past 32 years count among the most prosperous in Polish history, characterised by stable economic growth and convergence with Western Europe. In fact, the gap in income per capita between Poland and Western Europe is thought to be at its lowest levels since the 15th century (Piątkowski 2011). One of the crucial factors behind this success is ongoing integration with the European Union, and its core, i.e. the euro area. Joining the EU in 2004 facilitated the consolidation of broad institutional changes initiated in 1989. However, taking into account the magnitude of the

transformation of the Polish economy since the end of socialism, separating the benefits of European integration from ongoing transition is not an easy task. Furthermore, integration is a process, not a well-defined single event. On the one hand, certain benefits of EU membership were obtained even before accession, following the gradual harmonisation of the legal system and the inflow of foreign direct investment (FDI), based on the assumption that Poland would ultimately become an EU member. On the other hand, building economic links takes time, and thus certain benefits of integration have not fully materialised yet.

That being said, these links between Poland and other EU member states, in particular members of the euro area, have already become very strong. Trade with neighbouring Germany alone accounts for approximately 29% of Polish foreign trade⁴⁵, which in 2019 concentrated more on the euro area countries than the trade in the average euro area member, e.g. Spain (see Figure 6). Due to its size Spain can be regarded as a suitable benchmark for Poland.

Trade links have been enhanced by the massive inflow of FDI. The bulk of FDI in Poland originates from the euro-area countries. As of 2019, investment in Poland by euro area members accounted for 33% of Polish GDP. The analogous figure for Spain stood at 36% (see Figure 7).

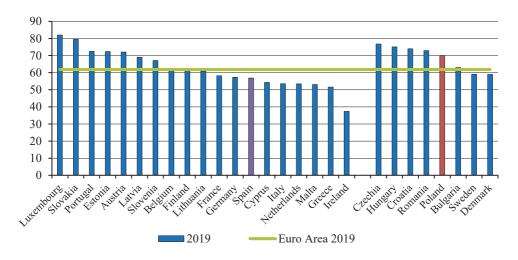


Fig. 6. Intra-EU trade in goods as a share of total trade in goods (2019)

Source: Eurostat. Series: Intra and Extra-EU trade by Member State and by product group.

⁴ Eurostat data, as of 2020.

⁵ Although it is not surprising that Germany is the main trading partner of Poland, it is also worth noting that Poland is a significant trading partner for Germany. As of 2019 (the last year not distorted by Covid-19) Poland was the 8th largest partner of Germany in terms of exports – ahead of countries such Belgium and Switzerland; in terms of imports Poland was Germany's 5th largest partner, ahead of countries like Italy, Czechia and Switzerland (data from Destatis).



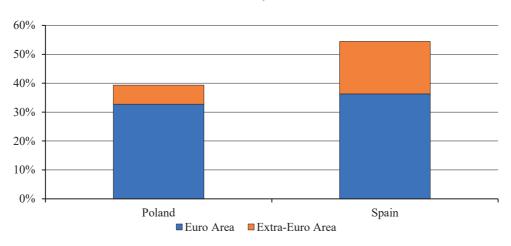


Fig. 7. FDI stock in reporting economy as % of GDP in 2019

Source: Eurostat, Series: EU direct investment positions, breakdown by country and economic activity.

Both the growing foreign trade and inflow of FDI, have allowed Poland to avoid the deindustrialisation that most euro area economies have suffered from. Polish companies often work as subcontractors for European companies, in particular German companies. The share of manufacturing in value added in Poland is quite similar to that of Germany. The two aforementioned factors have also helped Poland to move its export up the value chain. In 1995, labour- and resource-intensive products comprised 61% of Polish manufactured goods exports (see Figure 8).

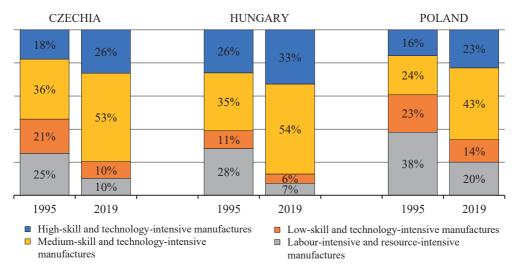


Fig. 8. Structure of Merchandise Exports in 1995 and 2019

Source: authors' elaboration, based on UNCTAD. Series: Merchandise trade matrix – exports of individual economies in thousands US dollars, annual Table summary).

By 2019, the share declined to 34%, as the result of rapidly growing exports of products that require medium to high technology to be manufactured.

The links are also strong in the financial sector. The Polish banking sector is largely foreign-owned, with approximately one-third owned by investors from the uro -area countries (see Figure 9). All this suggests that in the case of Poland, the risk of insufficient business cycle synchronisation is likely to be lower than for many Euro area members (cf. Fidrmuc and Korhonen, 2006; Rinaldi-Larribe, 2013).

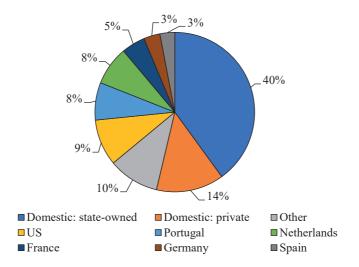


Fig. 9. Ownership structure of the Polish banking sector in 2019 (percent of assets)

Source: The Polish Financial Supervision Authority (KNF), 2019, p. 15.

The rapid development of tradable sectors that have gone through significant technological change has contributed to the fast catching-up of Poland with the euro area. The gap in terms of GDP per capita between Poland and euro area has narrowed by almost 22% since EU accession. Interestingly, it has narrowed even in the case of the worst performers among the New Member States (NMS) (see Figure 10). The available studies confirm that Poland (and other NMS) significantly benefited from joining the EU. For example Campo et al (2014), using the Synthetic Counterfactual Method, estimated that EU accession increased Polish GDP by approximately 6% (the average gain for all the NMS amounted to 14%6). Due to the way the method was implemented, the results should be deemed conservative or even the lower bound of the true benefits of integration (that is why the authors refer to that study instead of numerous others). By comparison, studies ordered by the Polish Ministry

⁶ 14% is the average for 2004 and 2007 enlargements. The average for all the enlargements since the 1970s was 12%. According to the authors, the only country that would be better off without joining the EU is Greece, which requires further studies.

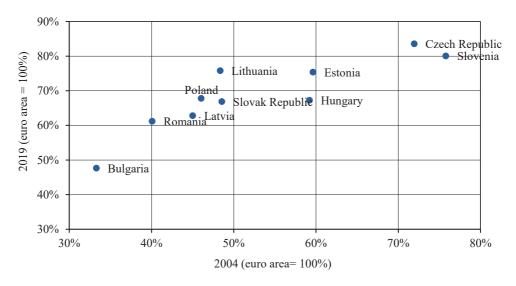


Fig. 10. GDP per capita of NMS vs. the euro area in 2004 and 2019

Source: IMF's World Economic Outlook 2021.

of Regional Development estimated that the cohesion policy only boosted the GDP of Poland by between 4.2% and 7.2% (as of 2011)⁷.

Poland has benefited from the EU membership mainly through institutional, trade and financial integration, and euro adoption should further deepen this integration. In particular, trade ties will be strengthened by the elimination of exchange rate risk, increased price (and cost) transparency and consequently easier price comparisons, and – albeit to a much lesser extent – a decrease in transaction costs.

The importance of falling transaction costs as a mechanism to deepen international trade is often overstated (see eg. Borowski [ed.], 2004). First, it is merely a revenue shift between the non-financial sector and the financial sector. Second, the development of online FX platforms has led to a significant reduction in exchange costs (Sławiński, 2014).

For specialised exporters or importers even the exchange rate risk or the lack of full price transparency are not barriers to develop international trade. They are able to hedge against exchange rate risk at low cost, and can even benefit from the lack of full price (and cost) transparency because it gives them an advantage over other economic agents in making relevant comparisons. Yet, the elimination of exchange rate risk and full price (and cost) transparency should make it easier for new players that previously operated only in the local market to engage in international trade.

⁷ The impact of the policy was estimated with the use of the CGE model developed by IBnGR (2012), the DSGE model by IBS and HERMIN model updated also by IBS (2012a, 2012b.).

International trade is an important source of technology transfer, which in small open economies explains, according to some estimates, up to 90% of technical progress. This transfer is facilitated not so much by exports (although they do force the learning of foreign standards), but primarily by imports. Imports give domestic companies access to more advanced technology, and components of lower price or higher quality (Keller, 2004).

In addition, the deepening of international trade as a result of membership in the euro area will be another impulse – after trade liberalisation at the beginning of the transition and accession to the European Union – strengthening the competitive pressure from abroad. The importance of this pressure for productivity growth in Poland is evidenced by much faster productivity growth in manufacturing than in other sectors less exposed to international trade than manufacturing. Manufacturing is also distinguished by an allocation efficiency ratio close to the highest in the euro area, while in other sectors it is clearly lower than in euro area countries (NBP, 2014).

The benefits for the new EU member states of the deepening of international trade as a result of euro adoption was the focus of the analysis by Schadler et al. (2005), which builds in particular on Frankel and Rose (2002) and Rose (2002). It shows that adoption of the euro could raise GDP per capita in Poland over 20 years in the range from 1% to 8%.

Nevertheless, a caveat is required that according to some studies, this effect should be clearly weaker (Podpiera et al., 2015). Havranek (2010) estimated it at 0% and Baldwin (2006) at 2% to 3%. These studies argue that it is not so much membership in the euro area, as the EU membership, that leads to a deepening of international trade. However, even if this were indeed the case, participation in the euro area could still be desirable as a way to consolidate the membership in the European Union.

3. Available estimates of the economic benefits and costs of euro adoption

Analyses of the potential economic benefits and costs of adopting the euro often focus on assessing the extent to which a country forms an optimal currency area with the euro area, whose main features were defined, in particular, by Mundell (1961), McKinnon (1963), and Kenen (1969).

In the literature on optimal currency areas, the benefits of a common currency are mainly seen in the reduction of the exchange rate (as well as terms of trade) volatility, which is expected to promote the deepening of international trade, and also in the integration of financial markets. It is further indicated that for countries without a long history of price stability, a common currency can be a way to import monetary policy credibility (see McKinnon, 2004; Tavlas, 1993).

The costs of the common currency are instead linked to the loss of autonomy in monetary policy and the abandonment of the floating exchange rate, which can no longer absorb shocks, but are emphasized as limited by the synchronisation of business cycles, facilitated by large international intra-industry trade (Frankel and Rose, 1998). However, since cycles within a currency area are never perfectly synchronised, it is argued that the construction of an optimal currency area requires prices and wages to be as flexible as possible, so that shocks are absorbed as much as possible by price adjustments not forced by quantity changes (in output and employment/unemployment). An additional mechanism for absorbing asymmetric shocks is freedom of labour flows between the countries forming a common currency area. It was also pointed out that the costs of such shocks can be dissipated by the geographical diversification of the income sources of the economic agents, enabled by the integration of financial markets, which facilitates investment in the assets from different countries (McKinnon, 2004).

Even a superficial analysis of the conclusions from the literature on the optimal currency areas suffices to conclude that joining the euro area should be beneficial for Poland, especially if it increases flexibility of the product and labour market. Poland is strongly economically integrated with the euro area, and companies that are part of the European value chain play an important role in Polish foreign trade (see the previous section), and Poles have full freedom to work in the euro area countries. Thus, the assessment of the balance of benefits and costs of euro adoption is much more complex. The literature on optimal currency areas and the reports based on it, which analyse potential benefits and costs of adopting the euro, largely ignore the risk of a boom-bust cycle.

The two most comprehensive analyses of benefits and costs of euro adoption for Poland were prepared by the National Bank of Poland (NBP). The first one, edited by Borowski, was published in 2004, followed by the second one in 2009. On the benefits side, both highlighted lower transaction costs and reduced risk premiums, which were to lead to higher investment and trade deepening. Moreover, better financial integration and a more competitive environment were indicated as possible benefits. On the cost side, both reports focused on the loss of sovereign monetary and exchange rate policies in the context of asymmetric shocks absorption, and the degree of synchronisation of business cycles. The first report was prepared before EU accession, and concluded that ongoing integration with the euro area would foster synchronisation of business cycles. The authors emphasised the insufficient flexibility of the Polish labour market, but concluded that opening the labour markets of the EU countries for employees from Poland might attenuate domestic rigidities. Five years later, when the second report was prepared, the Polish economy was more interlinked with the euro area (Germany in particular), which limited the problem of business cycles' synchronisation. Furthermore, the Polish labour market became more flexible. Unfortunately, between 2004 and 2009 there was no significant improvement in the fiscal policy. Both reports pointed to the problem of persistent structural deficit limiting fiscal space.

Borowski et al. (2004) estimated that due to the lower cost of capital, joining the euro area would increase the GDP growth rate by 0.2 p.p. annually, boosting Poland's GDP level by approximately 6% by 2030. Similar gains were expected due to increased FDI inflows. According to the report, joining the euro area in 2007 would boost GDP by approximately 12% by 2030, while the report from 2009 also concluded that joining the euro area would have a net positive impact on the Polish economy. As a result of euro adoption, Polish GDP was projected to grow by additional 7.5%, with the majority of results realised during the first ten years after accession. According to the authors, the ongoing GFC (the report was published in 2009) does not affect the long term benefits of euro area membership, but makes the short-term effects difficult to estimate and raises questions about the optimal euro adoption date.

Unlike the first NBP report, the second report recognised the risk of a boom-bust cycle due to adoption of the euro but concluded that the risk is limited. The report examined the experiences of Greece, Ireland and Portugal where such a cycle occurred, and assessed that these countries avoided a deterioration of the health of the banking sector. With the benefit of hindsight, it is clear that such an assessment was wrong, as all these countries later experienced significant problems in their banking sectors. In the case of Poland, the NBP simulations concluded that adopting the euro should not lead to a significant increase in private credit to GDP ratio, in spite of its low starting level.

Another NBP report was released in 2014. This publication, unlike the two previous, focused on the matter of optimal conditions for joining the euro area instead of carrying out the cost-benefit analysis. Special emphasis was put on the issue of the credit boom bust cycle.

According to the report, ECB interest rates could turn out to be too low for Poland. As long as there will be real convergence in Poland, the appreciation of the real exchange rate will continue. Without own currency, this appreciation would take the form of higher inflation and accelerated wage growth. Therefore, the ECB interest rates, nominally the same in each country, would be lower in real terms in Poland than in the euro area as a whole. On the one hand, too low interest rates may cause excessive credit growth and speculative bubble, while on the other, it may weaken the cost competitiveness of domestic enterprises, mainly due to wage growth spreading from the construction sector (where it would be fuelled by the growth of real estate prices) to the tradables sector.

The authors considered that the accumulation of the above-mentioned imbalances would be the main peril for the stability of the Polish economy after joining the euro area. Moreover, the NBP experts admitted that it would be much more severe than possible asymmetric shocks, i.e. the focus of the 2004 and 2009 reports.

It was stressed that dedicated preventive mechanisms would have to be created before accession to the Economic and Monetary Union (EMU). Otherwise, if the imbalances were allowed to cumulate, their subsequent reduction would require much time and cause significant costs. A macro-prudential policy was recommended as the core preventive mechanism, however it was stipulated that macro prudential measures cannot perfectly substitute autonomous monetary policy. In the case of those measures, both the length of the decision process and their leverage on the economy are much longer than in relation to the monetary policy.

The main conclusion from the 2014 report was that faster growth of Poland's economy after euro adoption cannot be taken for granted. Reaching those benefits will depend on how Poland will be prepared to operate within constraints set up by the ECB monetary policy. Accordingly, before euro adoption, a series of reforms should be implemented.

Reports on the effects of euro adoption conducted in other NMS also focused on the degree of business cycles synchronisation, responses to asymmetric shocks and fulfilment of the criteria of optimal currency areas. Only two of them explicitly mentioned the risk of an asset prices boom due to a decrease in interest rates. They were published by the National Bank of Hungary (Cssajbok and Csermely, 2002) and the National Bank of Slovakia (2006). The Hungarian report concluded that proper microeconomic prudential regulations can limit such risk. The Slovakian report had broader recommendations including not only forward looking financial supervision but also a proper insolvency regime, a slightly restrictive fiscal and monetary policy (before adopting the euro), a prudent wage policy and a flexible labour market.

It should be remembered that the majority of cost-benefit analyses of joining the euro area were conducted before the GFC. Since then, the euro area has undergone significant changes, and the process of reforms is not yet finished. Hence, further changes to the cost-benefit balance may be expected – the authors return to this issue in Section 5.

These include: Adopting the Euro in Hungary: Expected Costs, Benefits and Timing, by researchers from the National Bank of Hungary from 2002 (Cssajbok A., Csermely, 2002), Programme for ERM II entry and adoption of the euro. Joint programme of the Slovenian Government and the Bank of Slovenia, by the Bank of Slovenia and the Slovenian Government from 2003, Impact of Euro Adoption on the Economy of Latvia, published by the Bank of Latvia from 2004 (Bitans M., Kauzens 2004), The Effects of Euro Adoption on the Slovak Economy published by the National Bank of Slovakia from 2006 (Suster [ed.] 2006), Impact of Euro Adoption of the National Economy: an Overview of the Quantitative Assessment by the Central Bank of the Republic of Lithuania from 2013. Note that some of these documents were published as working papers, reflecting only the views of the authors, while others were official documents.

4. The credit boom-bust cycle and its costs

After 2007, 13 EU members fulfilled the quantitative criteria proposed by Laeven and Valencia (2008) to be classified as cases of banking crisis. This number seems to be underestimated, for an episode to qualify as a banking crisis according to Laeven and Valencia either (i) significant signs of financial distress in the banking system (as indicated by significant bank runs, losses in the banking system, and/or bank liquidations) occur, or (ii) significant banking policy intervention measures in response to major losses in the banking system are taken. In the case of countries such as Estonia, Lithuania and Bulgaria, the crisis defined in such a way, did not occur only due to support granted to local banks by their parent companies, which in turn was possible only due to the significant public support in their home countries. Thus, the crisis that started in the EU in 2008 can be classified as a banking crisis even to a larger extent than the strict use of definition by Laeven and Valencia would suggest.

It is generally agreed that recessions associated with banking crises are particularly deep and last longer than others (cf. Cerra et al., 2009, and Claessens et al., 2009). The costs of the crisis that hit the European Union in 2008 have been significant. In 2013, i.e. five years after the GFC outbreak (which is a time span usually long enough for an economy after shocks to return towards trend), GDP per capita in the member states was 18% below its pre-crisis trend. The gap in the most affected countries, such as Ireland, Greece and Latvia exceeded the costs of the previous banking crisis in developed countries, such as Japan and Finland, in the 1990s. Obviously, it can be argued that in some cases the pre-crisis growth rates were impossible to sustain, as the premium from catching up in converging countries would naturally decrease, so the cost of the crisis is overstated. However, taking as a benchmark the IMF forecasts from April 2008, yields results were of a similar magnitude – in 2013 GDP per capita of EU member states was on average 17% below the forecasted level (see Figure 11) – despite changes to the relative positions of the selected countries.

The size of the gap can be explained by three main factors: initial conditions, policies after the crisis and structural features of the economies (Laszek 2014). The larger the size of imbalances accumulated in economies as of 2007, the worse their performance after the outbreak of the crisis. The imbalances were reflected in low saving rates, high investment rates, structural deficits in public finances, high growth rate of credit before the crisis and worsening net investment position. Taken together, these factors account for up to 30% of variation in post-crisis performance. Apart from the initial imbalances, policy reaction also mattered. The notably larger deterioration in structural fiscal deficit between 2007 and 2009 resulted in worse performance in 2013. The initial imbalances can explain to some extent the decrease in general government revenue, even after the adjustment for cyclical factors. The increase in spending, however, was much more discretionary than the decrease in revenue. Euro area members (with easier access to financing than most EU countries from outside of the euro area) and EU countries with already unsustainable public

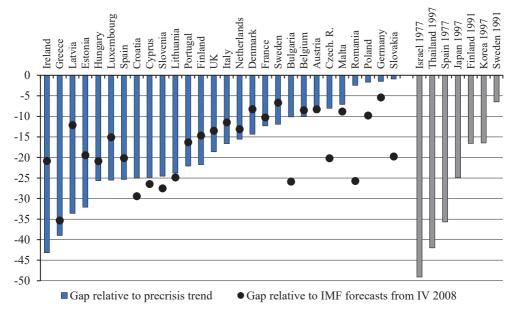


Fig. 11. Gap between actual GDP per capita in 2013 and pre-crisis trend/pre-crisis forecasts

Note: Trend fitted to 12 pre-crisis years 1995-2006, smoothed with HP filter (λ =6.25)

Source: IMF World Economic Outlook IV 2008, IMF World Economic Outlook IX 2013, AMECO.

finances⁹, were more eager to increase spending in the midst of the crisis. As far as the structural features of economies are concerned, countries with more flexible product market regulations fared better.

The importance of the initial imbalances in explaining the post-crisis performance of EU countries highlights the costs of the credit boom-bust cycle. The most extreme case were the Baltic states which, after growing at a rate approaching 10% in 2006 and 2007, recorded a decrease in GDP of approximately 15% in 2009 (-17.7% for Latvia). The story behind the boom and bust is documented by Bakker and Gulde (2010), who showed how the countries, lagging behind at the turn of the century, accelerated the pace of reforms, which resulted in higher growth rates. Robust economic growth and optimism, associated with EU accession, led to increased capital inflows further encouraged by the fixed exchange rate regime. Capital inflows, channelled through the banking sector, fuelled a lending boom and an even more rapid GDP growth. The lending was concentrated in the non-tradables sector. The growing wage pressure resulting from the boom eroded the competitiveness of countries in question. To some extent, a similar story regarding Ireland was documented by Whealan (2010). Fixing chronically ill public finances in the second half of the

⁹ These are countries for which the Ageing Report (European Commission 2009) was forecasting the largest increase in old age related spending.

1990s unleashed growth potential and led to fast convergence, however in the late 1990s, the initially healthy growth started to turn into an unsustainable bubble. Fuelled by over-optimism and low interest rates, it paved the way for the subsequent crash. It should be noted though, that the magnitude of the boom-bust cycles in NMS was much larger than in Ireland or other 'old' EU members (see Figure 12).

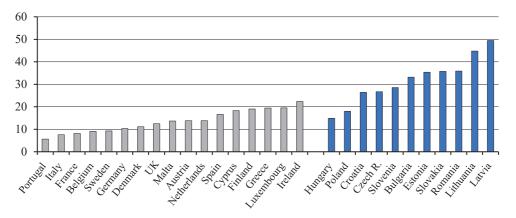


Fig. 12. Boom-bust magnitude. Cumulated GDP growth 2004-2008 minus cumulated GDP growth 2008-2010 (percentage points)

Source: Ameco, Chapter 6 (domestic product).

One of the reasons behind this might be uncertainty about the potential growth of the rapidly changing transition economies, which is visible in the magnitude of the revisions in the estimates of the output gap for 2007 (Figure 13).

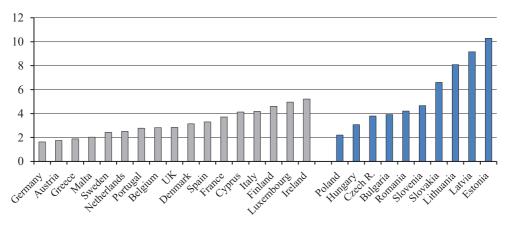


Fig. 13. Ex post revision of the output gap in 2007 (the difference between estimates from EC Spring Forecast 2014 and EC Autumn Forecast in 2007, %)

Source: EC Spring Forecast 2014 and EC Autumn Forecast 2007.

Although the magnitude of the boom-bust cycle in NMS was larger than in the Old Member States, Poland was among the few outliers and did not experience a bust, becoming the fastest growing economy during the crisis (see Figure 14). There are several factors behind the resilience of the Polish economy to the crisis. First, Poland, being the largest economy among the NMS, depends less on foreign demand. Second, 2009 was the year when the effective tax cuts enacted before the crisis were implemented, thus providing fiscal stimulus right after the outbreak of the crisis. Third, the stimulus was amplified by a large increase in public investment financed mostly by an inflow of EU funds. Thus, luck clearly matters for economic performance, however cautious policies are needed to take advantage of good luck. Poland was generally pursuing cautious policies before the crisis. Due to the tightening of monetary policy directly after EU accession, as well as the actions of financial supervision that limited the growth of loans denominated in foreign currencies (FX loans), the credit boom in Poland before the crisis was very short-lived. It started only in late 2006 and was over in 2008 after the Lehman Brothers collapse. These policies also helped the floating exchange rate to cushion a large part of the external shock in 2009. If the stock of FX loans in Poland had been larger, the floating exchange rate could have acted not as a damper, but as an amplifier of the shock. Note that the large volume of FX liabilities accumulated in NMS with fixed exchange rates during the boom phase made, abandoning the peg by those countries prohibitively costly.

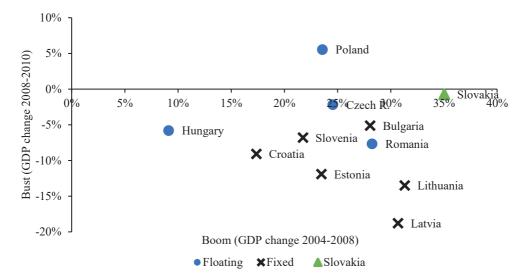


Fig. 14. Boom-bust in New Member States

Note: Although Slovakia adopted the euro in January 2009 and the Slovak koruna was in the ERM II from November 2005, it would be improper to classify Slovakia as a country with a fixed exchange rate, as the koruna exchange rate was adjusted twice: in March 2007 and in May 2008.

Source: Ameco, Chapter 6 (domestic product).

The above comparisons prove that adopting the euro may increase both the risk and costs of the credit boom-bust cycle under the conditions outlined below.

In a dynamically efficient economy interest rates exceed the growth rate of per capita income, otherwise it would be possible to take a loan to increase consumption in the current piod, next pay the interest with another loan, and then wait until the debt to income ratio decreases to zero. In other words, larger consumption today would not require lower consumption in the future (cf. Fischer and Easterly, 1990). Hence, in the standard DSGE model, natural interest rate is given by the following equation:

$$r_{t} = \sigma \left(y_{t+1}^{P} - y_{t}^{P} \right) + \left(1 - \beta \right) / \beta, \tag{1}$$

where r_i is natural interest rate, σ is the parameter of relative risk aversion of households (usually assumed to be larger than one), β is the household's subjective discount factor and $y_{i+1}^P - y_i^P$ is the growth rate of potential output.

It follows that for an economy that grows more rapidly than the euro area, adopting the common currency means a fall of interest rates below their natural level, unless measures introduced at the national level increase the price of credit or constrain its volume; these measures are referred to in the next section. With a given pace of economic growth, the decrease in interest rates is deeper, and the less monetary conditions before adopting the euro depend on the monetary conditions in the euro area. Therefore, the decline in interest rates is deepened by the greater previous freedom of the exchange rate to float, and reduced by increasing financial integration with the euro area.

Interest rates below their natural level contribute to the boom-bust cycle through various channels: the search for yield and underpricing of risk (Rajan, 2005), easing of credit standards by banks (e.g. Maddaloni and Peydró, 2010; Jiménez et al., 2009) and the increased likelihood of housing booms and bubbles (Sa, Towbin and Wieladek, 2011).

It is worth noting that even if such a cycle does not result in a financial crisis, it may still decelerate economic growth. During the boom phase, a country's cost competitiveness is undermined, which contributes to a distortion of sectoral composition of output. Tradables sectors lose their share in output for the benefit of non-tradables sectors (in particular the construction sector). Such a structural change impedes technology transfer from abroad and inhibits the diffusion of knowledge on how to produce more efficiently. In brief, when adjustment of the interest rate is constrained, then restoring economic equilibrium may require an adjustment in the natural interest rate, which may take the form of economic growth deceleration. Note however that contrary to the concerns of some economists (see in particular Kawalec and Pytlarczyk, 2016), a member of the euro area has the potential to regain competitiveness. This is allowed by fiscal devaluation, which is not just a theoretical peculiarity, known at least since the time of Keynes. The Baltic States and Ireland in particular, have used it frequently and with success (see Ciżkowicz et al., 2020).

As already mentioned, the costs of a credit boom-bust cycle depend on three main groups of factors: initial imbalances, policies after the crisis, and structural features of economies. Adopting the euro by an economy growing faster than the euro area may increase initial imbalances, by increasing the supply of and demand for credit and lengthening the period of unsustainable credit growth. Note, however, that imbalances' accumulation can be blocked (or amplified) by measures introduced at national level. Furthermore, these measures shape the two remaining factors determining the costs of the credit boom-bust cycle. If, during the bust period, policies force a quick restructuring of overdeveloped sectors with low productivity, the recession is short. The economy rapidly returns to its pre-crisis growth or even its growth accelerates, as was in the case of Sweden after the crisis at the beginning of the nineties (cf Borio et al., 2010). In turn, the more flexible an economy, the less costly the reallocation of production factors, which is necessary after the boom.

A caveat is required here. Adopting the euro softens governmental budgetary constraints. First, this softening facilitates hiding the costs of delaying reforms aimed at enhancing the flexibility of the economy, as demonstrated by the euro area periphery (Fernandez-Villaverde 2013). Second, it expands the possibilities to postpone necessary adjustments during the bust period (see, e.g. Gross and Alcidi, 2013). The comparison of post-crisis performance of the euro area periphery with the performance of the NMS that experienced a particularly strong pre-crisis boom (i.e. Bulgaria, Estonia, Latvia and Lithuania), is instructive on that score. The former group achieved worse economic results than the United States after the outbreak of GFC, whereas all the latter countries outperformed the United States (in terms of growth of per capita income) (Balcerowicz et al., 2013). In the former group, the adjustments, although ultimately impressive, were delayed and gradual. The latter countries managed or were forced to introduce sharp and deep adjustments already at the onset of the crisis.

5. The possible methods for mitigating the risk of boom-bust cycles after adopting the euro

In theory, in order to mitigate the risk of a credit boom-bust cycle after euro adoption, it is sufficient to:

- (i) increase government savings adequately,
- (ii) drive a wedge between the interest rate set by the ECB and credit costs (notably for mortgage loans¹⁰), or
- (iii) constrain the volume of credit appropriately.

Due to those solutions, a halt in convergence, which the boom-bust cycle may result in, should not be automatically treated as an argument against adopting the

¹⁰ Empirical studies suggest that mortgage loans can lead to housing bubbles (Sa, Towbin and Wieladek 2011), and in themselves are not necessarily supportive for growth (Beck et al., 2012).

common currency. Furthermore, sovereign monetary policy does not necessarily protect against credit boom-bust cycles. The pre-crisis experience of the United States demonstrates that even the most sovereign central bank managed by the most distinguished governor and hiring the most competent staff, may overlook accumulation of dangerous imbalances. Indeed, the transcripts of FOMC meetings in 2006, the last year under Alan Greenspan term of office, show an overwhelming impression of the perception of success and control.¹¹

The above solutions indicate areas that need enhancements before euro adoption. Solution (i) calls for continuous fiscal restraint. Solution (ii) may be achieved through either fiscal instruments (taxation) or macro prudential measures. Solution (iii) is a natural domain of macro prudential regulations and policy.

Note that the solutions themselves may have an impact on the pace of convergence. Solution (i) appears to be potentially most advantageous in these terms, although it also creates certain risks to the convergence process. If it includes cuts to social transfers for the working age population and to wages and salaries, it encourages households to increase labour supply, alleviates wage pressure, and thereby improves the cost competitiveness of domestic enterprises, as well as their ability and propensity to invest. In turn, larger corporate investment supports technological progress, as the latter is largely embodied by the new capital (cf. Geenwood, Hercowitz and Krusell, 1997). If it includes VAT increases, it lowers the profitability of non-tradables relative to tradables. Government savings also increase room for internal devaluation or, more generally, for reductions in most distortionary taxes. However, such a fiscal restraint may have an inappropriate composition for economic growth, i.e. it may be based on distortionary taxation or on cuts to potentially growthenhancing public expenditure (e.g. expenditure on infrastructure). Moreover, government purchases of assets or, more generally, its management over growing stock of savings, may significantly distort capital allocation.

The remaining two solutions may distort capital allocation and accumulation to an even higher extent. They are associated with the risk of over-taxation and over-regulation of the financial sector, respectively. The materialisation of that risk would undermine the capacity of the domestic financial sector to encourage private saving, and to allocate it to productive projects. ¹² Furthermore, in an economy which is open to capital flows, domestic credit could be replaced by loans taken abroad. In this case a credit boom could still occur. Thus, the main positive effect of solutions (i) and (ii)

¹¹ The overall mood was well captured by Janet Yellen at the last meeting chaired by Alan Greenspan in January 2006, when she said "the situation you're handing off to your successor is a lot like a tennis racquet with a gigantic sweet spot."

¹² Note that these solutions can prevent growth of the financial sector, and in particular of banking sector, to a size when it ceases to support economic growth, and may even inhibit it. Vast literature on finance and growth is surveyed e.g. by Levine (2005). For more on nonlinearity in the link between growth and financial sector's size see, e.g. Arcand, Berkes and Panizza (2012), Cecchetti and Kharroubi (2012), Cecchetti, Mohanty and Zampolli (2011), and Pagano (2012).

would be less frequent instances of forbearance lending during the bust (and thereby the faster restructuring of imbalances accumulated over the boom¹³). However, the negative aspect of less frequent forbearance during a bust is a sharper recession.

To address the risks of halting the development of the domestic financial sector and of substitution between domestic credit and foreign loans, regulation or taxation should be levied directly on borrowers rather than on domestic financial institutions. Moreover, to be effective, it should be very broadly based, even at the cost of being "too blunt". During the boom, the substitutability of various liabilities (assets) increases and in such an environment the narrow, targeted measures are likely to fail.

Unfortunately, all the aforementioned solutions are difficult to implement and, except for solution (ii)¹⁴, their adequate calibration is an even more complex issue.

The feasibility of the solutions is questionable primarily due to political reasons, however not exclusively. Political pressure is more likely the more successful the measures are (cf. Elliott, Feldberg, and Lehnert, 2013).

It is not by coincidence that very few countries managed so far to run surplus in public finances for a longer period of time (and the few that succeeded are mostly undemocratic). The effective implementation of solution (i) would require continuous increases in government surplus over the convergence period. The longer that period, the larger the necessary surplus. If the surplus ceased to increase in spite of economic growth in a given country exceeding that of the euro area, it would no longer protect the domestic economy against the credit boom-bust cycle. It is difficult for governments to convince their electorate that the benefits of adopting the euro should be saved instead of being spent immediately.

Even the less ambitious goal of building a fiscal space sufficient to absorb potential costs of credit boom-bust cycle appears to be infeasible for at least two reasons. First, the costs can be very large. The fiscal burden of rescuing financial institutions can exceed 30% of GDP, sometimes by a very large margin (as in the case of Ireland and Iceland after the GFC; see Laeven and Valencia's database on financial crisis). Second, the credit boom blurs the actual fiscal stance. On the one hand, it produces artificially large tax revenues. On the other hand, it encourages governments to introduce still new or more generous social schemes, whose full costs are not revealed until households have significant alternatives to social benefits. The stronger the boom, the seemingly healthier the fiscal stance. However, once the recession hits, even a large surplus in public finances may transform into a huge deficit (as shown by the experience of e.g. Ireland and Spain). Thus, it is not surprising that a financial crisis is often followed by a fiscal crisis (cf. Reinhart and Rogoff, 2009 and 2011) and that this pattern was also seen in the euro area periphery.

¹³ For more on costs of forbearance lending, see, e.g. Caballero, Hoshi and Kashyap (2008).

¹⁴ At least, if it takes the form of a tax on loan principal.

¹⁵ Moreover, tightening of fiscal policy should not only be continuous but also occur on time to effectively curb risk of a credit-boom bust cycle. If it lagged behind credit growth, it could hardly prevent a boom. The less economic agents remain credit-constrained, the more the fall in private saving offsets the increase in government saving (cf. Elmendorf and Mankiw, 1998).

As much as taxing loan principal is unpopular, there are many countries that offer generous tax breaks or direct subsidies for mortgage loans. The majority of countries offer tax incentives for financial leverage in the corporate sector. The outbreak of the GFC has not convinced governments to withdraw tax benefits for debt financing, they have been expanded rather than limited (see the case of the UK in particular).

From the perspective of the political economy, taxing the non-core liabilities of banks appears to be a more feasible way of implementing solution (ii), given the banks are still charged with the responsibility for the outbreak of the GFC. However, an increase in domestic credit costs, spurred on by the tax on those liabilities, may encourage domestic agents to pursue financing options abroad.

The GFC has greatly revived the debate on macro-prudential measures which could be part of the solution (ii) or (iii), or both. Most of the discussed and implemented measures, such as higher capital requirements, liquidity coverage, net stable funding ratio, and leverage ratio have a regulatory flavour. Yet, most countries are afraid of regulation arbitrage, which renders them reluctant to introduce/calibrate those measures unilaterally. Thus, economic knowledge on the effectiveness and the workings of macro-prudential measures is likely to remain limited in the foreseeable future (cf. Repullo and Saurina, 2011).

The political economy suggests that the feasibility of macro-prudential measures is not independent of fiscal policy. If there was no fiscal policy reaction to excessive credit growth, then the macro-prudential response would have to be more restrictive, however a decisive macro-prudential response from a hesitant government is unlikely, unless the decision belongs to an institution sufficiently independent of government.

That independence should be very deeply rooted, given that macro-prudential decisions would impact on the distribution of income (which would not be expected to expire over the business cycle, unlike those of e.g. monetary policy). Such effects inspire political pressures. Apart from independence, macro-prudential policy also requires systemic macroeconomic perspective, and both these requirements indicate the central bank as the appropriate institution for pursuing that policy.

It is worth noting that euro adoption would alleviate the problem of the difficult 'cohabitation' of monetary and macro-prudential policies (provided that macro-prudential measures would be decided at the national level). When the national central bank is primarily responsible for price stability, it is naturally tempted to subordinate macro-prudential actions to monetary policies. That temptation stems from the fact that inflation is observable and systemic risk is not. At the same time, the business cycle is much shorter than the credit cycle and, as a result, the risk of inflation's deviation from the target increases much more frequently than the risk of financial crisis. Furthermore, when credit begins to fuel a speculative bubble, inflation usually subsides (cf. Christiano et al., 2010).

For Poland, the importance of introducing a solution to effectively mitigate the risk of a credit boom-bust cycle is increased by the underdeveloped private rental

market (see Figure 15). This underdevelopment might exacerbate the responsiveness of house prices and residential investment to financing conditions, and thereby the magnitude of the boom-bust cycle.

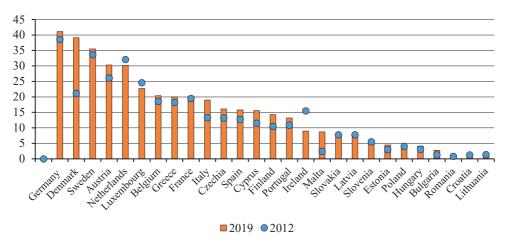


Fig. 15. The share of households living in houses rented in the private market across EU countries in 2012 and 2019

Source: Eurostat Series: distribution of population by tenure status, type of household and income group.

Poland's experience with fiscal discipline in general and fiscal rules in particular is mixed (at best). On the one hand, debt ceilings have helped to keep public debt below 60% of GDP before 2020, while on the other, the rules have encouraged fiscal discipline only during economic slowdowns. During booms, the deficit remained high, and except for 2007 and 2015-2019 it always exceeded 3% of GDP¹⁶. Fiscal restraint, when introduced, was not always conducive to economic growth in the long term (e.g. government outlays on infrastructure were cut and the capital pillar of the pension system has been marginalised). It was also often supplemented with changes in definition of public debt, which rendered public finances less transparent. Lastly, when in 2013 the debt ceiling became a hindrance for increasing the deficit, it was suspended. This precedent encouraged the next government to modify the most recent fiscal rule in Poland, i.e. the stabilising expenditure rule, whenever it interfered with projected expenditure. The major softening of the rule was carried out already in the autumn of 2015. The new government modified then the formula setting out the public spending ceiling by replacing inflation (then actually deflation) with the inflation target (2.5%). By 2019 just this one change raised the public

¹⁶ Before the reduction of the capital pillar albeit until recently, the deficit was largely offset by savings from mandatory pension funds.

spending ceiling by a total of about 45 billion PLN (2% of GDP). Despite such a dilution, the stabilising expenditure rule has been circumvented through inflating revenue allegedly from curbing tax evasion and tax avoidance. During the pandemic, numerous new off-budget funds not covered by the rule were created; meanwhile the rule has been suspended altogether.

The pressure to increase government spending is strengthened in Poland (and other NMS) by comparisons of the quality of public services in Poland and Western Europe. Adopting the euro would facilitate such comparisons, in particular with regard to various social benefits and wages. The average Pole would not accept the statement that "despite the booming economy and a budget surplus, slowing the pace of increases in pension and wages is necessary due to necessary restraint of the credit boom bust cycle". Therefore, even though enhancing fiscal discipline in general and fiscal rules in particular is necessary (aside from the matter of euro), it cannot be the only or even the main shelter from the credit boom bust cycle.

The Polish experience with macro-prudential measures seems more encouraging. Already before the outbreak of the GFC, Poland introduced some measures (in particular recommendation "S") aimed at curbing the growth of FX loans, which were very popular at the time. In August 2008, just before the collapse of Lehman Brothers and the most severe phase of the GFC, the share of FX mortgages in all newly issued mortgages exceeded 70%. This tendency has reversed since 2008, and over the subsequent few years the share of newly issued FX loans in Poland became negligible.

However, the more limited credit boom prior to the GFC than in most other New Member States appears to be related more to the sharp monetary policy tightening in 2004, which contributed¹⁷ to the interruption of the post-EU-accession boom. This tightening and, more generally, the success of the central bank in stabilising the economy, at least until recently (see Figures 16-19), suggests it can make a good use of its independence (cf. Ciżkowicz and Rzońca, 2015).

The NBP should be given wide competencies in the field of macro-prudential policy as soon as possible. The sooner it becomes responsible for this kind of measures, the more time it will have to learn how to use them. By the time of joining the euro area, the NBP will know how to adjust the effect of the ECB interest rates on Poland's economy if they are considered inappropriate; prevention against credit booms would then become its primary task. However, performing this task could be hindered by excessive harmonisation of the macro-prudential policy at EU level, signs of which can be seen in the CRDIV directive and CRR regulation (cf. NBP, 2014).

¹⁷ Jointly with the positive outcomes of the Hausner Plan.

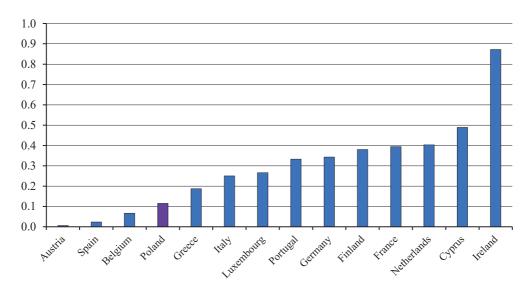


Fig. 16. Average deviation from the inflation target (01.2004-12.2019) in Poland and the euro area – 12 countries. Absolute values, percentage points.

Source: authors' elaboration, based upon Eurostat Series HICP monthly data (12-month average rate of change).

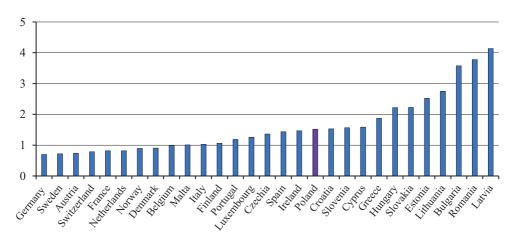


Fig. 17. HICP volatility in the EU (standard deviation, 01.2004-12.2019)

Source: authors' elaboration, based upon Eurostat. Series: HICP monthly data (12-month average rate of change).

Economic turbulence cannot be avoided entirely, and Poland should better prepare for its occurrence before joining the euro area. Improving resilience will require carrying out two kinds of actions.

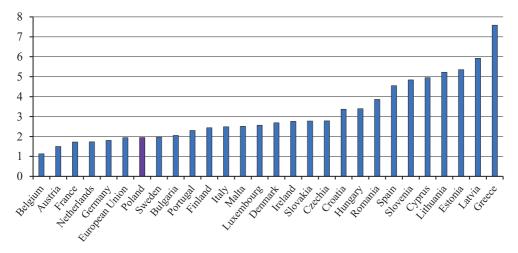


Fig. 18. Output gap volatility in the EU (standard deviation, 2004-2019)

Source: Ameco.

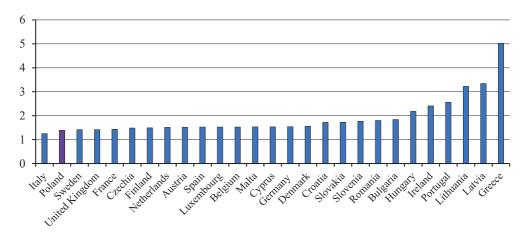


Fig. 19. Long-term interest rate volatility (2004-2019)

Source: Eurostat Series: EMU convergence criterion.

First of all, fiscal space to mitigate moderate-negative shocks should be created. To make this possible, the structural deficit has to decrease by at least 3% of GDP, otherwise it will remain far above the medium-term budgetary objective (MTO) adopted by Poland. The stabilising expenditure rule was designed to ensure the achievement of the MTO. However, as outlined before, this rule cannot play its role as long as it is circumvented.

Secondly, the economy's ability to restructure should be strengthened, and the costs of such adjustment to the shocks should be reduced. To accomplish this, labour

and capital reallocation must be enhanced. It has decelerated in Poland in recent years, e.g. flows into and out of the unemployment have become quite limited by European standards (see Figure 20)¹⁸. This may reflect the relatively flexible labour marker, facilitating wage adjustments, as well as the shortage of labour, encouraging labour hoarding (see Figure 21).

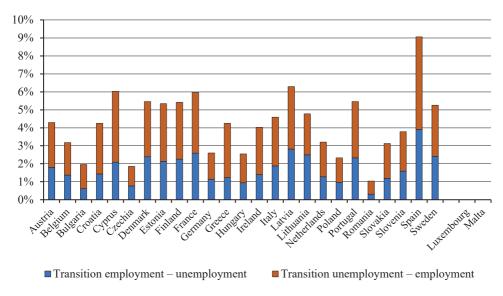


Fig. 20. Flows from employment to unemployment and opposite. Data from 2019.

Source: Eurostat Series: Labour market transitions.

On the one hand, Poland's economy flexibility is increased by an overdeveloped sector of micro-firms (hiring less than 10 employees). Across the EU, this was larger than in Poland only in Slovakia and in the Mediterranean countries: Cyprus, Spain, Portugal and Italy. Micro-firms may reduce the number of their poorly protected staff overnight or cut their wages, however they are also a cause of Poland's backwardness in relation to Western Europe. Labour productivity in micro-firms does not exceed a third of the productivity of their peers in the 'old' EU (apart from the peripheral states). In contrast, in small (10-49 employees) and medium (50-249 employees) enterprises, this amounts to three-thirds of the Western level, while in large firms it reaches 90% of that level (cf. Ciżkowicz, Łaszek and Rzońca, 2020).

¹⁸ That stays in stark contrast with the pace of labour reallocation directly after the GFC. Then the probability of a person changing employment status during a quarter was 12% in Poland, whereas in Italy 5%, in Germany less than 6%, while in France less than 8% (Bukowski, Kowal and Lewandowski, 2011).

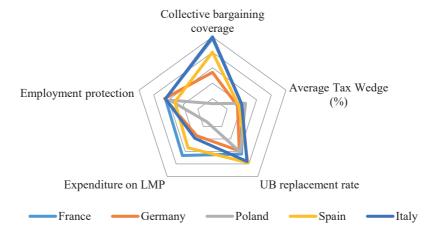


Fig. 21. Employment protection

Source: authors' elaboration based upon OECD Stat. Series: Collective bargaining coverage, Average Tax Wedge, Net replacement rate in unemployment, Public expenditure on LMP and Strictness of employment protection.

On the other hand, the flexibility of Poland's economy is much lower than for the OECD top performers, in particular as far as product market is concerned.¹⁹ This is due to the large sector of state-owned enterprises. State control is particularly strong in upstream sectors, impacting basically on the operational costs of each company. These sectors in Poland are more monopolised than on average in the EU or the OECD. Barriers to competition are especially acute in the gas and aviation industry. Moreover, the retail sector in Poland operates under tighter regulations than in most other EU countries; it accounts for about 20% of GDP and has a strong impact on the efficiency of suppliers (cf. McKinsey, 2006).

Since this flexibility is also fundamental for the pace of the convergence process, its enhancement is of crucial importance irrespective of when Poland joins the euro area. Indeed, Poland would benefit most in terms of growth if it deregulated its product market in line with OECD best practice (cf. Bourlès et al., 2010).

The authors conclude this section with a very brief discussion of some other challenges of euro adoption.

The euro area deals with the large public debt exacerbated by the outbreak of the pandemic (see Figure 22). The high level of public debt is detrimental to economic growth (cf. Cecchetti, Mohanty and Zampolli, 2011; Kumar and Woo, 2010; Reinhart, Reinhart and Rogoff, 2012; Reinhart and Rogoff, 2010), and requires fiscal adjustment

¹⁹ The already mentioned underdevelopment of the private rental market is another important sphere which requires far-reaching improvement. On top of the increasing amplitude of a potential boom-bust cycle, it decreases spatial labour mobility, and thereby hinders reallocation.

even if it is to be accompanied by output losses in the short run. Fortunately, evidence exists that when public debt is large (namely exceeds 60% of GDP), fiscal adjustment is not necessarily costly in terms of output in the short term (and is beneficial in the long run – cf. Ilzetzki, Mendoza and Vegh, 2013). At the same time, the public debt crisis in peripheral economies has confirmed that delaying fiscal adjustment, if feasible at all, could be very costly – both for countries which need this adjustment and for the euro area as a whole.

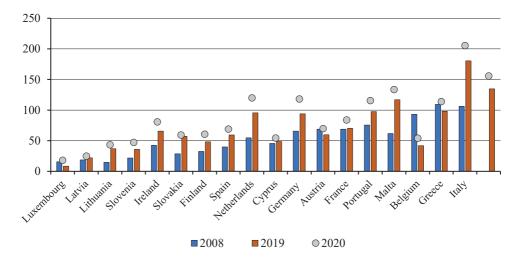


Fig. 22. General government debt across the euro area members (in % of GDP)

Source: Eurostat, National accounts indicator (ESA 2010) Government consolidated gross debt.

High public debt levels are not the only barrier to growth and a source of potential vulnerability which the euro area must face. The response to the GFC and public debt crisis in the euro area, and then to the pandemic, has too often consisted in policies that resulted in postponing deep restructuring. In particular, accommodative monetary policy pursued by the European Central Bank could discourage banks and enterprises from restructuring and weaken incentives of Euro area members to reform (cf. Balcerowicz et al., 2013).

Completing the institutional reforms is still another challenge for the euro area, which could considerably affect the cost-benefit analysis of adopting the euro. Questions of critical importance will remain unanswered for a long time: how effective will the Single Resolution Mechanism (SRM) be in preventing the build-up of risks in the banking system and reducing the costs of potential resolutions? How will the cooperation of different institutions involved in the resolutions work in practice? etc. However, the full balance of benefits and costs of euro adoption cannot ignore the political consequences of staying outside the euro area.

The first political argument in favour of Poland's accession to the euro area is associated with the radical reduction of the risk that Poland will leave the EU or that European integration will continue without Poland – only inside the euro area. A sign that further European integration is very likely to take place within that area is the European Commission's proposal that the new EU Multiannual Financial Framework for 2021-2027 should secure funds to be used exclusively by euro area members, or to accelerate preparations for euro area membership.

The second political argument for Poland's membership in the euro area concerns external security. Even if security is not breached in a given period, fears of economic agents of a significant external threat alone, can negatively affect economic growth. In contrast, the resolution of these fears promotes economic growth (see, for example, Landau, 1996; Baffes and Shah, 1998; Aizeman and Glick, 2003). The economic potential of Russia, Poland's aggressive and unpredictable neighbour, is small compared to the euro area. The largest economy, Germany, is two and a half times larger than Russia's. France, being the second largest economy in the euro area, is almost twice as large, while the entire euro area is about ten times as large. Naturally, Russia spends a much larger percentage of GDP on its army than any other euro area country. Even so, the difference in economic potential is so large to Russia's disadvantage that the combined national defence spending of France and Germany, just two euro area members, exceeds that of Russia by half. If the euro area countries combined their defence capabilities, they would be able to build a credible defence system against Russia without increasing their national defence spending (De Grauwe, 2018).

Concluding comments

Poland has become deeply integrated with the euro area, and some links (e.g. foreign trade) between Poland and the euro area are even stronger than among this area's members. The potential benefits for Poland from euro adoption would stem from deepening this integration.

By contrast, a decrease in cost of capital, considered to be a benefit of adopting the euro in the existing cost benefit analyses, appears to represent a source of the most significant threat. As long as Poland keeps growing faster than the euro area, the interest rates set by the ECB will be too low for the Polish economy. This might easily result in a credit boom-bust cycle, the risk and costs of which would be exacerbated by the underdeveloped rental market. Such a cycle might stop the process of convergence of the Polish economy. A halt in this process might result not only from the boom-bust cycle, but also from undermined cost competitiveness or slow restructuring. However, Ireland and the Baltic States have demonstrated that a member of the euro area can regain competitiveness through fiscal devaluation.

Theoretical solutions to mitigate the risk of a credit boom-bust cycle are broadly available. It suffices to increase the price of credit or constrain its volume adequately

through fiscal or macro prudential measures. However, the feasibility of these solutions is questionable, primarily due to political pressures.

The feasibility problem might be overcome through delegating the power of undertaking macro prudential measures to the National Bank of Poland. This institution is independent of political pressures and its track record with stabilising the economy (at least until recently) suggests that it could make good use of such power. The NBP should be assigned with macro-prudential competencies as soon as possible. Thereby, by the time of joining the euro area, it would already have the necessary experience and could correct the effects of ECB interest rates on the Polish economy. After adopting the euro, the NBP could focus on macro prudential measures. Hence, the problem of the 'difficult cohabitation' of monetary and macro prudential policy would be resolved.

Before joining the euro area, Poland should also improve its flexibility to reallocate labour and capital across companies and sectors as it lags far behind OECD top performers on that score.

References

- Aizeman, J., and Glick, R. (2003). Military expenditure, threats, and growth, FRBSF Working Paper, 2003-08.
- Arcand, J.-L., Berkes, E., and Panizza, U. (2012). Too Much Finance?. IMF Working Paper, 12/161.
- Baffes, J., and Shah, A. (1998). Productivity of Public Spending, Sectoral Allocation Choices, and Economic Growth. *Economic Development and Cultural Change*, 46(2), 291-303.
- Bakker, B. B., and Gulde, A.M. (2010). The Credit Boom in the EU New Member States: Bad Luck or Bad Policies? *IMF Working Papers*, 10/130.
- Balcerowicz, L., Rzońca, A., Kalina, L., and Łaszek, A. (2013). Economic Growth in the European Union. Brussels: Lisbon Council.
- Baldwin, R. (2006). The Euro's Trade Effects. ECB Working Paper, 594.
- Bank of Slovenia and Slovenian Government (2003). Programme for ERM II entry and adoption of the euro. Joint programme of the Slovenian Government and the Bank of Slovenia. Ljubljana: Bank of Slovenia and Slovenian Government.
- Beck, T., Büyükkarabacak, B., Rioya, F. K., and Valev, N. T. (2012). Who Gets the Credit? And Does It Matter? Household vs. Firm Lending Across Countries. B.E. Journal of Macroeconomics. 12(1), Art. 2.
- Bitans, M., and Kauzens, E. (2004). Impact of the Euro Adoption on the Economy of Latvia. *Bank of Latvia Working Paper*, 2/2004.
- Borio, C., and Drehmann, M. (2009). Assessing the risk of banking crises revisited. *BIS Quarterly Review*, Bank for International Settlements, March.
- Borio, C., Vale, B., and von Peter, G. (2010). Resolving the financial crisis: are we heeding the lessons from the Nordics? *BIS Working Papers* 311.
- Borowski, J. (ed.) (2004). Raport na temat korzyści i kosztów przystąpienia Polski do strefy euro. Warszawa: Narodowy Bank Polski.

- Bourlès, R., Cette, G., Lopez, J., Mairesse, J., and Nicoletti, G. (2010). The Impact on Growth of Easing Regulations in Upstream Sectors. *CESifo DICE Report*, 3/2010, 8-12.
- Bukowski, M., Kowal, P., and Lewandowski, P. (2011). *Modelowa analiza rynków pracy o różnej strukturze instytucjonalnej*. Warszawa: Instytut Badań Strukturalnych.
- Business Insider (2019). Kaczynski mówimy "nie" euro, mówimy "nie" europejskim cenom", 13.04.
- Caballero, R. J., Hoshi, T., and Kashyap, A. K. (2008). Zombie Lending and Depressed Restructuring in Japan. *American Economic Review*. 98(5), 1943-1977.
- Campos, N.F., Coricelli, F., and Moretti, L., (2014). Economic Growth and Political Integration: Estimating the Benefits from Membership in the European Union Using the Synthetic Counterfactuals Method. *IZA Discussion Paper*, 8162.
- CBOS (2013). *Obawy i nadzieje związane z wprowadzeniem euro w Polsce*. Warszawa: Fundacja Centrum Badania Opinii Społecznej.
- Cecchetti, S. G., and Kharroubi, E. (2012). Reassessing the impact of finance on growth. *BIS Working Paper*, 381.
- Cecchetti, S. G., Mohanty, M. S., and Zampolli, F. (2011). The real effects of debt. *BIS Working Paper*, 352
- Central Bank of the Republic of Lithuania (2013) *Impact of the Euro Adoption of the National Economy:* an Overview of the Quantitative Assessment. Vilnius: Central Bank of the Republic of Lithuania.
- Cerra, V., Saxena, S. C., and Panizza, U. (2009) International Evidence on Recovery from Recessions. IMF Working Papers. 09/183
- Christiano, L., Ilut, C., Motto, R., and Rostagno, M. (2010). Monetary Policy and Stock Market Booms. Paper prepared for the Federal Reserve Bank of Kansas City Annual Conference Jackson Hole, Wyoming. August 28.
- Ciżkowicz, P., Łaszek, A., and Rzońca, R. (2020). How big are labour productivity disparities in Poland? *Financial Law Review*, 20 (4), 1-21.
- Ciżkowicz, P., Radzikowski, B., Rzońca, A., and Wojciechowski, W. (2020). Fiscal devaluation and economic activity in the EU. *Economic Modelling*, 88(C), 59-81.
- Ciżkowicz, P., and Rzońca, A. (2015). Inflation Targeting and its Discontents: The Case of Poland. *Acta Oeconomica*, 65(supplement), 107-122.
- Claessens, S., M., Kose, A., and Terrones, M.E. (2009). What Happens During Recessions, Crunches and Busts. *Economic Policy*, 24(60).
- Cssajbok, A., and Csermely, A. (eds.) (2002). Adopting the Euro in Hungary: Expected Costs, Benefits and Timing. *NBH Occasional Papers*, 24.
- De Grauwe, P. (2018). Why Russia is politically and militarily strong while being an economic dwarf. *VOX*, 16 June.
- Elliott, D. J., Feldberg, G., and Lehnert, A. (2013). The History of Cyclical Macroprudential Policy in the United States. *Federal Reserve Board Divisions of Research & Statistics and Monetary Affairs. Finance and Economics Discussion Paper*, 2013-29.
- Elmendorf, D. W., and Mankiw, G. N. (1998). Government debt. *Paper prepared for Handbook of Macroeconomics*.
- European Commission (2007). Autumn Forecast 2007. Brussels: European Commission.
- European Commission (2009). The 2009 Ageing Report: Economic and Budgetary Projections for the 27 EU Member States (2008-2060). Brussels: European Commission.
- European Commission (2014). Spring Forecast 2014. Brussels: European Commission.

- European Commission (2020a). The Convergence Report. Brussels: European Commission.
- European Commission (2020b). Eurobarometer 487 Introducing the euro is seen as positive for the euro area countries. Brussels: European Commission.
- Fernandez-Villaverde, J., Garicano, L., and Santos, T. (2013). Political Credit Cycles: The Case of the Euro Zone. *NBER Working Paper*, 18899.
- Fidrmuc, K., and Korhonen, I. (2006). Meta-analysis of the business cycle correlation between the euro area and the CEECs. *Journal of Comparative Economics*, 34(3), 518-537.
- Fischer, S., and Easterly, W. (1990). The economics of the government budget constraint. *World Bank Research Observer*, 5(2), 127-142.
- Frankel, J. A., and Rose, A. K. (1998). The Endogeneity of the Optimum Currency Area Criteria. *Economic Journal*, 108(449), 1009-1025.
- Frankel, J. A., and Rose, A. K. (2002). An Estimate of the Effect of Common Currencies on Trade and Income. *Quarterly Journal of Economics*, 117(2), 437-466.
- Geenwood, J., Hercowitz, Z., and Krusell, P. (1997). Long-run implications of investment-specific technological change. *American Economic Review.* 87(3), 342-362.
- Gelain, P., and Lansing, K. J. (2014). House Prices, Expectations, and Time-Varying Fundamentals. *Federal Reserve Bank of San Francisco Working Paper*, 2013-03.
- Gros, D., and Alcidi, C. (2013). Country adjustment to a 'sudden stop': Does the euro make a difference? *European Commission Economic Paper*, 492.
- Havránek, T. (2010). Rose Effect and the Euro: Is the Magic Gone? *Review of World Economics*, 146(2), 241-261.
- IBnGR (2012). Wpływ realizacji polityki spójności na kształtowanie się głównych wskaźników dokumentów strategicznych NPR 2004-2006 i NSS 2007-2013. Raport półroczny 2012. Gdańsk, Warszawa: Prevision.
- IBS (2012a). Wpływ realizacji polityki spójności na kształtowanie się głównych wskaźników dokumentów strategicznych Narodowego Planu Rozwoju 2004-2006 i Narodowej Strategii Spójności 2007-2013 oraz innych wybranych wskaźników na poziomie krajowym i regionalnym, Raport półroczny 2012, Warszawa: Instytut Badań Strukturalnych.
- IBS (2012b). Wpływ realizacji polityki spójności na kształtowanie się głównych wskaźników dokumentów strategicznych Narodowego Planu Rozwoju 2004-2006 i Narodowej Strategii Spójności 2007-2013 oraz innych wybranych wskaźników makroekonomicznych na poziomie krajowym i regionalnym za pomocą modeli HERMIN (krajowego i regionalnych). Warszawa: Instytut Badań Strukturalnych.
- Ilzetzki, E., Mendoza, E. G., and Végh, G. C. A. (2013). How big (small?) are fiscal multipliers? *Journal of Monetary Economics* 60(2), 239-254.
- IMF (2014). World Economic Outlook April 2014, Washington D.C.: IMF.
- Jiménez, G., Ongena, S., Peydró, J. L., and Saurina, J. (2009). Hazardous Times for Monetary Policy: What do Twenty-Three Million Bank Loans Say About the Effects of Monetary Policy on Credit Risk-Taking? *Banco de España Working Paper*, 0833.
- Kawalec, S., and Pytlarczyk, E. (2016). *Paradoks euro. Jak wyjść z pułapki wspólnej waluty?*. Warszawa: Wydawnictwo Poltext.
- Keller, W. (2004). International Technology Diffusion. *Journal of Economic Literature*, 42(3), 752-782.
- Kenen, P. B. (1969). The Theory of Optimum Currency Areas: An Eclectic View. In Mundell R. A., Swoboda A. (eds.) Monetary Problems of the International Economy. The University of Chicago Press, Chicago.

- KNF (2020). Informacja na temat sytuacji sektora bankowego. Opracowanie: Departament Bankowości Komercyjnej i Specjalistycznej. Zespół Analiz Sektora Bankowego, Warszawa: Urząd Komisji Nadzoru Finansowego.
- Kumar, M. S., and Woo, J. (2010). Public debt and growth. IMF Working Paper, 10/174.
- Laeven, L., and Valencia, F. (2008). Systemic Banking Crises: A New Database. IMF Working Paper, 08/224.
- Landau, D.(1996). Is one of the 'peace dividends' negative? Military expenditure and economic growth in the wealthy OECD countries. *Quarterly Review of Economics and Finance*, 36(2), 183-196.
- Laszek, A. (2014). Wpływ kryzysów bankowych na długookresowy wzrost gospodarczy. Mimeo.
- Levine, R. (2005). Finance and Growth: Theory and Evidence, in: Aghion P., Durlauf S. N. (eds.) Handbook of Economic Growth. Volume 1A. Amsterdam: Elsevier North-Holland.
- Lünnemann, P., and Wintr, L. (2010). Downward wage rigidity and automatic wage indexation: Evidence from monthly micro wage data. *ECB Working Paper*, 1269.
- Maddaloni, A., and Peydró, J.-L. (2010). Bank Risk-Taking, Securitization, Supervision, and Low Interest Rates: Evidence from the Euro Area and U.S. Lending Standards. *Review of Financial Studies*, 24, 2121-2165.
- McKinnon, R. I. (1963). Optimum Currency Areas. American Economic Review, 53(4), 717-724.
- McKinnon, R. I. (2004). Optimum Currency Areas and Key Currencies: Mundell I versus Mundell II. *Journal of Common Market Studies*, 42(4), 689-715.
- Mundell, R. A. (1961). A Theory of Optimum Currency Area. American Economic Review, 51, 657-665.
- Mundell, R. A., and Swoboda, A. (eds) (1969), Monetary Problems of the International Economy. Chicago: University of Chicago Press.
- NBP (2009). Raport na temat pelnego uczestnictwa Rzeczypospolitej Polskiej w trzecim etapie Unii Gospodarczej i Walutowej. Warszawa: Narodowy Bank Polski.
- NBP (2014). Ekonomiczne wyzwania integracji Polski ze strefą euro. Warszawa: Narodowy Bank Polski.
- Pagano, M. (2012). Finance: Economic Lifeblood or Toxin? Paper prepared for the CEPR Chicago Fed Annual International Banking Conference on The Social Value of the Financial Sector: Too Big to Fail or Just too Big? November 15.
- Piątkowski, M. (2013). Poland's New Golden Age Shifting from Europe's Periphery to Its Center. World Bank Policy Research Working Paper, 6639.
- Podpiera, J., Wiegand, J., and Yoo, J. (2015). Euro Adoption in NMS: Macroeconomic Benefits and Challenges, in: Selected Issues Paper on Central and Eastern Europe: New Member States (NMS) Policy Forum, 2014. *IMF Country Report*, 15/98.
- Rajan, R. G. (2005). Has financial development made the world riskier? NBER Working Paper, 11728.
- Reinhart, C. M., Reinhart, V. R., and Rogoff, K. S. (2012). Debt Overhangs: Past and Present, *NBER Working Paper*, 18015.
- Reinhart, C. M., and Rogoff, K. S. (2009). *This Time is Different: Eight Centuries of Financial Folly*. Princeton: Princeton University Press.
- Reinhart, C. M., and Rogoff, K. S. (2010). Growth in a Time of Debt. *American Economic Review*, 100(2), 573-578.
- Reinhart, C. M., and Rogoff, K. S. (2011). From Financial Crash to Debt Crisis. *American Economic Review*, 101(5), 1676–1706.
- Rinaldi-Larribe, M.-J. (2013). Is economic convergence in New Member States sufficient for an adoption of the euro? *European Journal of Comparative Economics*, 5(2), 133-154.

- Rose, A. K. (2002). The Effect of Common Currencies on International Trade: Where Do We Stand? *University of California at Berkeley Occasional Paper*, 22.
- Sá, F., Towbin, P., and Wieladek, T. (2011). Low interest rates and housing booms: the role of capital inflows, monetary policy and financial innovation. *Bank of England Working Paper*, 411.
- Schadler, S., Drummond, P., Kuijs, L., Murgasova, Z., and van Elkan, R. (2005). Adopting the Euro in Central Europe: Challenges of the Next Step in European Integration. *IMF Occasional Paper*, 234. Sławiński, A. (2014). Abenomics to nie dla nas. *Forbes*, 2.
- Suster, M. (ed.) (2006). The Effects of Euro Adoption on the Slovak Economy. National Bank of Slovakia. Tavlas, G. S. (1993). The 'New' Theory of Optimum Currency Areas. *World Economy*, 16(6), 663-685.
- Whelan, K. (2010). Policy Lessons from Ireland's Latest Depression. *The Economic and Social Review, Economic and Social Studies* 41(2).

Received: January 2022, revised: April 2022