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Macroeconomic stability as the condition for Bulgaria to join the euro area

JEL Classification: E61; E63; F33

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Abstract

Research background: The subject of research is the macroeconomic situation of Bulgaria in the context of the country's preparations for joining the euro area. In 2018, the Bulgarian government approved a plan of preparations covering the period until the end of June 2019, which assumes that the country will join the ERM II mechanism in July 2019, and the euro area on 1 January 2022. Bulgaria meets four nominal convergence criteria regarding inflation, long-term interest rate, budget deficit and public debt. The national currency is pegged to the euro under the currency board arrangement. Despite this, the implementation of this optimistic scenario may be difficult because since the 2007 crisis, the European institutions pay more attention to macroeconomic stability and the sustainability of convergence.

Purpose of the article: The aim of the article is to identify the factors destabilising macroeconomic equilibrium in Bulgaria, which are a potential obstacle to the adoption of the euro by Bulgaria on schedule.

Methods: The research was based on the changes in selected macroeconomic indicators, as well as on the method used by the European Commission to detect macroeconomic imbalances. The observation and analysis covered the 2007–2018 period.

Findings & Value added: The research results indicate that the low level of socio-economic convergence of Bulgaria and macroeconomic imbalances may delay its membership in the monetary union. Therefore, while respecting the country's aspirations to join the euro area, one cannot ignore the risk of another destabilisation of the euro area.

Introduction

Upon joining the European Union in 2007, Bulgaria committed to the adoption of the single currency. The Accession Treaty, however, did not specify the date of the introduction of the euro. After a decade, in 2017, the country declared its willingness to join the ERM II mechanism, aimed at stabilising the national currency's exchange rate. Although Bulgaria has not yet formally joined the exchange rate stabilisation mechanism, it has been using a currency board arrangement for over 20 years. By entering the ERM II, Bulgaria will fulfil the last formal criterion of the Maastricht Treaty. The remaining four nominal convergence criteria regarding inflation, long-term interest rate, budget deficit and public debt are already being met by the country.

In August 2018, the Bulgarian government approved a plan of preparations covering the period until the end of June 2019. It was assumed that Bulgaria will join the ERM II in July 2019, and the euro area on 1 January 2022. The implementation of this optimistic scenario may, however, be difficult, because since the 2007 crisis, which revealed weaknesses in the functioning of the euro area and the economic governance system, the EU institutions have started to pay more attention to macroeconomic stability and the sustainability of convergence. The low degree of economic convergence and macroeconomic imbalances in Bulgaria may contribute to the postponement of its membership in the euro area despite the fulfilment of nominal convergence criteria. The requirements for joining the monetary union have already been tightened, e.g. Bulgaria is now required to join the Banking Union as a condition for joining the ERM II mechanism. The clear aspirations of the poorest EU country to swiftly adopt the euro and the observed change in the attitude of the EU institutions towards the expansion of the euro area was encouraged to write this article.

The main aim of the article is to identify factors destabilising macroeconomic equilibrium in Bulgaria, which are a potential obstacle to the adoption of the euro by Bulgaria on schedule. The research was based on the changes in selected macroeconomic indicators, as well as on the method used by the European Commission to detect macroeconomic imbalances. The observation and analysis covered the 2007–2018 period.

Literature review

Macroeconomic equilibrium and the conditions for its achievement are the subject of theoretical disputes (Moździerz, 2015). The classical theory,

based on the causative power of market forces, believed that the economy would always strive for equilibrium. According to this approach, supply created demand, competition between manufacturers ensured full employment, and equilibrium was achieved at the level of production potential. In Keynesian theory, the state of general equilibrium was not conditioned by the full use of production factors (Keynes, 1936). In this approach, the balance between global demand and global supply depended on the equality of investment and savings in the economy, but it should be noted that these considerations were made under the assumption that the economy was closed. Monetarists, headed by Friedman (1970), attributed most of the observed manifestations of economic instability to the fluctuations in the money supply caused by the monetary authorities' policy. According to the monetary theory, money plays a cause-and-effect role in shaping the level of prices and nominal income (Snowdon *et al.*, 1994).

Nowadays, in the research of an open market economy, general equilibrium is defined as a state of simultaneous internal and external equilibrium (Moździerz, 2018, p. 17). The long-term general equilibrium in the economy does not exclude periodic disturbances, after which the economy returns to its initial state of equilibrium. According to Blaug (1997), equilibrium is stable when the system returns to equilibrium after each small shock. In mathematical terms, this means asymptotic stability, where all the trajectories coming from a point close enough to the equilibrium point move, as time passes, towards the equilibrium point.

The search for optimal relationships between factors determining macroeconomic stability is a challenge for economic policy. Ensuring macroeconomic stability in an economy consisting of a system of connected vessels is a difficult task even if it is limited to one country. When the achievement of macroeconomic stability concerns a grouping such as the Economic and Monetary Union (EMU), it becomes even more difficult. Achieving macroeconomic equilibrium and limiting the impact of factors destabilising it, are, as practice shows, challenges and dilemmas faced by national economic policy-makers, as well as by the EU institutions. The effectiveness of the stabilisation policy conducted with the use of fiscal policy instruments such as public spending and taxes is still the subject of empirical research (e.g. Chang *et al.*, 2019).

The model proposed by Kołodko (1993) i.e. the pentagon of macroeconomic stabilisation is useful in the assessment of the degree of economic policy coordination in achieving the objective of macroeconomic equilibrium. In this concept, the area of the pentagon is the sum of the areas of five triangles, whose vertices are determined by properly calibrated indicators of GDP growth, unemployment and inflation rates, and, respectively, the

budget balance and the current account balance to GDP ratios. The larger the area of the entire pentagon, shaped by interlinkages and feedback loops between categories, the better the overall situation in terms of sustainable economic development (Kołodko 2004, pp. 189–190).

The EMU debt crisis of the last decade has prompted to consider the conditions of macroeconomic stability in a situation where public debt becomes risky. According to analyses carried out by Bonam and Lukkezen (2019), in such a situation, macroeconomic stability is easier to achieve when a procyclical fiscal policy is pursued. Achieving the equilibrium when a countercyclical fiscal policy is being implemented is also possible, however, only when it is accompanied by a consolidation of public debt and/or an active monetary policy.

The changes introduced in the framework of the new economic governance in the EU to detect macroeconomic imbalances early are of particular importance for the subject of the research (Moździerz 2017, pp. 65–114). Early detection of imbalances or the risk of their occurrence is to allow preventive measures to be taken against another serious crisis threatening the European Union, and in particular the euro area.

The European Union understands “imbalances” as “any trend giving rise to macroeconomic developments which are adversely affecting, or have the potential adversely to affect, the proper functioning of the economy of a Member State or of the economic and monetary union, or of the Union as a whole” (Regulation (EU) No 1176/2011, Art. 2(1)). In 2011, the scoreboard contained 11 early warning indicators to monitor the situation of internal and external equilibrium and competitiveness. In 2012, this scoreboard was enlarged with an indicator enabling an initial assessment of the financial sector stability. In 2015, the scoreboard was expanded by further — in addition to the unemployment rate included previously — labour market indicators, such as economic activity, long-term unemployment and youth unemployment. The introduced mechanism for detecting macroeconomic imbalances and the procedure initiated in the event of excessive imbalances being detected are of particular importance for the proper functioning of the euro area. EU institutions have obtained tools to discipline countries that use the single currency, and at the same time, conduct sovereign economic policies (fiscal policies), whose effects may be detrimental to the functioning of the euro area (e.g. moral hazard).

Until the introduction of Macroeconomic Imbalance Procedure, macroeconomic stability was only assessed on the basis of nominal convergence criteria. Under the treaty provisions, membership in the euro area required achieving price stability, a stable situation of public finances, maintaining exchange rate fluctuations under the regime provided for in the European

monetary system (ERM II) for at least two years without devaluing against the euro. The sustainability of the convergence achieved by the member state, which is reflected in the levels of long-term interest rates, is another requirement. The assessment of price stability is made on the basis of a comparison of the average inflation rate in a given country during the year preceding the survey with inflation rates in three member states with the most stable prices.

The sustainability of public finances criterion is considered to be met if there is no excessive deficit in a given country, as identified by the EU Council decision under the excessive deficit procedure. Budgetary discipline requirements were determined by upper limits for the budget deficit (3% of GDP) and public debt (60% of GDP).

However, the enlargement of the euro area with countries that only meet the above-mentioned nominal criteria without taking due account of the degree of real convergence, poses a threat to the functioning of EMU.

The real convergence process usually takes place on the basis of equalisation of incomes and cyclical fluctuations (Próchniak & Witkowski, 2016, p. 11). In the analysis of the real convergence process, the dynamics of the process of movement of the economy towards equilibrium play a significant role, with the state of equilibrium being defined as the final state of the market equilibrium (Jóźwik, 2017, p. 19). In the case of EMU, it is therefore an equilibrium on the single European market. The convergence of business cycles is the metacriterion of the optimality of common currency areas (Bruzda, 2009, p. 10).

The general imbalances observed in the euro area during the recent crisis have resulted in changes in economic governance in the euro area and increased restrictiveness of the conditions for the adoption of the single currency by the EMU countries with a derogation.

Research methodology

The article analyses the research hypothesis that the low level of socio-economic development and lack of macroeconomic stability of Bulgaria should be taken into account when making a decision on the expansion of the euro area.

The analysis of the level of preparation of Bulgaria for the adoption of the single currency was initiated by the assessment of the extent to which the nominal convergence criteria have been met. The real convergence of Bulgaria was assessed using GDP per capita in PPS as well as at-risk-of-

poverty or social exclusion and income inequality indicators, and their changes were compared with those in the euro area.

The macroeconomic situation of the country was assessed on the basis of the selected indicators in 2007–2018, i.e. real GDP growth, inflation rate, and their relationship with the euro area was determined by means of a correlation coefficient. The factors destabilising the macroeconomic equilibrium were identified with the use of the macroeconomic imbalance detection mechanism, introduced in the EU in 2011 as part of the Macroeconomic Imbalance Procedure. This analysis was conducted on empirical data from the 2008–2018 period and divided into internal and external equilibrium.

The last research task was to determine whether the fiscal policy in Bulgaria in 2007–2018 favoured stabilisation of macroeconomic equilibrium. For this purpose, the method proposed by Alesina *et al.* (2015) was used. Identification of the type of fiscal policy was made on the basis of annual changes. The changes in the cyclically adjusted primary balance to the output gap ratio are presented on the coordinate system, in which each type of fiscal policy is assigned to a different quadrant: 1st quadrant — countercyclical fiscal tightening, 2nd quadrant — procyclical fiscal tightening, 3rd quadrant — countercyclical fiscal expansion, 4th quadrant — procyclical fiscal expansion.

Results

The degree of nominal convergence is subject to an annual evaluation by the EU institutions and the ECB on the basis of convergence programmes submitted by countries with a derogation. Table 1 presents the indicators of economic convergence in Bulgaria together with the reference values, taken from the last ECB report, from May 2018. The information provided in Table 1 shows that, in the adopted assessment period, Bulgaria met the nominal criteria for price stability, long-term interest rates and public finances. The Bulgarian currency has not yet participated in ERM II. In practice, however, the Bulgarian lev functions in a restrictive regime. Bulgaria adopted the currency board in 1998, pegging the national currency initially to the German mark and then to the euro. The national currency is pegged to the euro at the rate of 1.95583.

By adopting a fixed exchange rate system, Bulgaria has abandoned an independent monetary policy in exchange for lowering inflation and improving the credibility of its macroeconomic policy. It was a difficult decision and it coincided with unsuccessful attempts of the Bulgarian authori-

ties to fight the financial (currency, economic, fiscal) crisis that occurred in the 90s and resulted in high inflation (in March 1997 it reached 2040.4%). (IMF, 1999, p. 17 and 135). The currency board system was chosen by the Bulgarian authorities as a radical tool to restore internal and external stability (Żuchowska, 2012, p. 250). It should be noted that in the last decade, the price index in Bulgaria ranged from -1.7 to 12%. Moreover, in its latest report the ECB expressed concern regarding the sustainability of inflation convergence due to the observed increase in unit labour costs (EBC, 2018, p. 61). The second monetary parameter — long-term interest rate — was, in the observed period, lower than the reference value. This rate has been significantly reduced since the crisis, from 7% in 2009 to 1.4% in 2018.

The introduction of the currency board resulted in the loss of a sovereign monetary policy and, at the same time, in the need to strengthen fiscal discipline.

The fulfilment of the nominal convergence criteria does not mean, however, that Bulgaria has met all the adaptation requirements from the Treaty on the Functioning of the European Union. The European Central Bank (ECB, 2018, p. 62) indicates that the Bulgarian law does not meet all the requirements regarding the independence of the central bank, prohibition of public sector financing by the central bank, as well as legal compatibility with the Eurosystem. It should be noted, however, that Bulgaria was much less prepared for accession at the time of its joining the EU than the countries that participated in the large expansion in 2004 (Olejarz, 2009, p. 32). For this reason, the accession treaty contained a number of safeguard clauses regarding economic issues or the functioning of the internal market.

Despite the successes in achieving nominal convergence with the countries of the euro area, Bulgaria still demonstrates a low degree of real economic and social convergence. The country is the least wealthy in the EU. The GDP *per capita* in PPS in 2017 amounted to 49 (EU 28 = 100), with the value for the euro area (EA 19) at 106 (Eurostat). It should be emphasised that the low degree of economic convergence is even more glaring when compared with the most developed countries, i.e. Luxembourg (253), Ireland (181), the Netherlands and Denmark (128), Austria (127) or Germany (124). Moreover, over the last decade this index in Bulgaria increased by only 9 pp. In 2017, GDP *per capita* in current prices in Bulgaria amounted to EUR 5 100, with the average for the euro area at EUR 29 300. The economic growth of Bulgaria in the 1990s varied significantly. Since the commencement of accession negotiations, that is from 2000, high economic growth has stabilised, which has persisted until the global crisis in 2009. In 2000–2008, real GDP growth ranged from 3.8% to 7.3%. 2009 was the only year with negative GDP growth (-3%). In the last two years of

observation, the rate of growth was at approx. 4%. The high economic growth in the pre-crisis period resulted from an increase in domestic demand, stimulated by private consumption. Bulgaria, like other countries of Central and Eastern Europe that joined the EU, has been characterised, since the beginning of the 21st century, by a higher average level of consumption growth than in the EU15 countries. Despite this, there are still significant differences in the size and structure of consumption within the EU. The Nordic and Western European countries are characterised by high consumer spending, with a low share of spending on basic goods, and the group of new EU countries, including Bulgaria, are characterised by lower consumer spending, with a large share of spending on basic needs, i.e. food or housing expenses (Piekut, 2015, p. 60).

At the same time, the period of preparations for EU accession was characterised by increasing investments, which was an important factor sustaining economic growth up until 2008. During the crisis, the decrease in domestic demand resulted mainly from the decrease in fixed capital formation (a negative contribution to GDP growth in 2009–2011). The main factor determining domestic demand in the post-crisis period in Bulgaria was private consumption.

The data presented in Figure 1 allows to notice that the significant differences between the economic growth rate and inflation rate in Bulgaria and the euro area recorded in the first two years since the accession have been greatly reduced since the crises. The calculations showed calculations show that there was a greater synchronisation of business cycles than of changes in prices. The correlation coefficient of Bulgaria's GDP growth in relation to the euro area was 0.56, and in the case of inflation -0.21.

Integration with the European Union has unquestionably had a positive impact on the economic situation of Bulgaria. These benefits can be observed in various areas. Taking into account the subject of this research, it is worth to pay attention to the benefits that this country obtains from the membership in the EU in the form of inflow of direct investments. Figure 2 shows that a spectacular increase in this respect occurred after the accession treaty was signed in April 2005, and continued until Bulgaria's accession to the EU in 2007 and the outbreak of the global financial crisis. Attracting direct economic investment was at the time the key goal of Bulgarian economic policy (Petranow, 2003). The last global financial crisis was a test for this small open economy, and it resulted in the withdrawal of investors from the country considered too risky. During the crisis years, the stock of foreign direct investment (FDI) was still high, but its growth has weakened. In the 2008–2017 period, a year-on-year decline was recorded five times. Bulgaria's position was further undermined by its economic dependence on

the crisis-ridden Greece. However, it should be noted that the stock of FDI in Bulgaria remained high and in 2017 amounted to 84.1% of GDP.

Despite a very favourable tax system (PIT = 10%, CIT = 10%) the interest in investing in Bulgaria has been in decline due to administrative barriers and the level of corruption highest in the EU. The Transparency International report from 2018 ranks Bulgaria as the country with the highest corruption in the EU. Corruption Perceptions Index was provided for 180 countries, and Bulgaria ranked 77th, i.e. 10 positions below Greece.¹ Corruption is one of the reasons for the high level of shadow economy in Bulgaria. Bayar *et al.* (2018) demonstrated the empirical relationship between corruption, the shadow economy and the rule of law in the countries undergoing economic transition. The results of co-integration calculated on the basis of data for the 2003–2015 period indicate that the increase in the rule of law and anti-corruption policies has reduced the shadow economy. The shadow economy in Bulgaria decreased by about 5 p.p. (to 30.6% in 2015), which may be related to the impact of EU regulations on domestic law. In addition to institutional weaknesses, macroeconomic imbalances still persist in Bulgaria, although their number and scale is decreasing. Using the EU method for the detection of macroeconomic imbalances, two factors destabilising the external equilibrium were detected in 2017 against four identified in 2008 (Table 2). The low net international investment position and high growth of unit labour costs are persistent sources of instability. Since the crisis, Bulgaria has clearly improved its current account balance, recording high surpluses and reduced the fluctuations in the real exchange rate to safe levels. In the last two years, the excessive increase in property prices was the internal factor destabilising the equilibrium (Table 3).

In previous years, high indebtedness of the private sector and unemployment rates above the adopted thresholds were the sources of imbalances. After the analysis of Bulgaria's convergence programme for 2018 and reports from the European Commission, the EU Council indicated the need for a detailed assessment of the macroeconomic situation of this country. In addition to the above-mentioned imbalances in the internal and external market, the Commission identified other factors destabilising the equilibrium, despite the fact that they have not exceeded the adopted thresholds. In the Commission's assessment, the weaknesses of the financial sector are coupled with high indebtedness and non-performing loans in the corporate sector, and the adjustment on the labour market was incomplete (EC, 2018, p. 2). The data presented in Table 4 show that the instability in the labour

¹ <https://www.transparency.org/cpi2018> (02.01.2019).

market was caused by structural factors, i.e. low professional activity, long-term unemployment and youth unemployment.

An insufficient level of social convergence is a serious problem in Bulgaria. In order to assess the degree of social convergence, Table 5 provides information on the risk of poverty or social exclusion in Bulgaria in comparison with the euro area average. The data contained in this table show that in 2008–2013, twice as many Bulgarians were at-risk-of poverty or social exclusion than the average in the euro area, and the numbers range between 44.8% and 49.3%. In 2017, the index fell to 38.9% compared to 22.1% in the euro area. Integration processes (inflow of foreign direct investment, immigration, EU funds) contributed to this improvement. While a significant drop in the percentage of population at risk of poverty and social exclusion in the last several years is noteworthy (decrease of 22.4 pp.), it does not change the fact, however, that this indicator is still the highest in the EU. The problem of poverty in the Bulgarian society, low incomes and unemployment are the most important economic reasons for large-scale migration, which negatively affects the demographic structure (Dimitrova Dimitrova-Moneva, 2015, p. 42). The data included in Table 5 also allow us to notice the growing income inequality in the Bulgarian society, as evidenced by the quintile income distribution (S80/S20). While before the accession, the income of the 20% of the population with the highest income was 5.1 times higher than the income of the 20% of the population with the lowest income, in 2017 the ratio increased to 8.2. It is higher by 3.2 points than the average for the euro area and is the highest in the EU.

If the euro is adopted, the above-mentioned weaknesses of the Bulgarian economy may pose a potential threat of another destabilisation of the monetary union. The debt crisis in the euro area was a painful lesson and resulted in a thorough reconstruction of the economic governance system in the European Union. As far as Bulgaria is concerned, public debt is at a low level, but the large number of non-performing loans in the corporate sector is a problem. However, in the opinion of the EU Council (2018, p. 3), the reduction of private sector debt is slowed down by the ineffective domestic legal regulations on insolvency. At the same time, the EU Council (2018, p. 3) identified the risk to public finances in the fact that in good economic conditions, the financial results of state-owned enterprises were weak, compared to other countries in the region and the private sector. Meanwhile, payment arrears of these enterprises are contingent liabilities of the public sector.

One should also point out threats to public finances resulting from inefficient budgetary policy. The good fiscal situation observed in recent years

in Bulgaria, is, to a large extent, the result of better economic conditions rather than improvements in the tax collection system. The effectiveness of public spending has also been assessed negatively.

For several years, Bulgaria has been carrying out structural reforms concerning the financial sector, labour market, judiciary, health care, education and the business environment, but these efforts are still insufficient, which makes it difficult for Bulgaria to achieve a higher level of cohesion with countries of the euro area.

In Bulgaria, which does not conduct sovereign monetary policy, fiscal policy plays a fundamental role in pursuing macroeconomic stabilisation. Using the methodology of identifying changes in the fiscal policy stance i.e. analysing the changes in the cyclically-adjusted primary balance in relation to the output gap (Figure 3), described in the methodological part of the paper, it can be concluded that in the majority of the analysed period the fiscal policy in this country was of procyclical nature. Since the financial crisis, in as many as five years (2010, 2012, 2013, 2015, 2016), during a negative output gap, pro-cyclical fiscal consolidation was pursued. A procyclical fiscal expansion involving a deterioration of the CAPB during a positive output gap occurred before the crisis in 2007, as well as in 2011 and 2018.

Discussion

The threat of the break-up of the euro area as a consequence of the global financial crisis prompted the EU institutions to adopt new solutions, including the system of supervision over the macroeconomic equilibrium in the member states. The lack of effective supervision over the economic situation of the member states, which, before the crisis was limited to monitoring the budgetary situation, was one of the reasons for this crisis. The rules regarding the admission of individual countries to the euro area, limited to the nominal convergence criteria, have also proved to be insufficient. As far as the stability of the euro area is concerned, it is fully justified to tighten the criteria for countries aspiring to adopt the euro, as regards the macroeconomic situation and the sustainability of real convergence. Bulgaria, which is the subject of research in this article, is a small economy characterised by a high level of openness and a currency board system. The analyses show that, despite meeting the nominal convergence criteria, the country is not yet ready to participate in the monetary union. Hadjinikolov (2017, pp. 222–223) came to similar conclusions, when he carried out a study of Bulgaria's convergence with the EU, using, for this purpose, nine

indicators. He determined, among others, that the increase in convergence has occurred, even in 2008–2009. Nevertheless, differences in comparison with other countries remain significant. The results of an analysis of projected GDP per capita show that, assuming that the tendency from 2004–2015 is maintained (around 3% per year), Bulgaria needs another 53 years to reach the average EU level.

For Bulgaria, accession to the euro area is probably perceived as an opportunity for accelerated economic development, also observed in the period since the accession to the EU. For the euro area, admitting a country characterised by a low level of economic development, low degree of economic and social convergence, instability of macroeconomic equilibrium could mean bringing new threats to the euro area, while the work to improve its functioning is still ongoing.

Access to cheap capital, which is a benefit for a country entering the euro area, could be a potential threat to the euro area as a whole, as revealed by the EU debt crisis. As noted by Orłowski (2019, p. 434), the experience of the EMU shows that unrestricted access to cheap capital obtained by poorer countries of the euro area (Greece, Portugal) does not have to translate into the expected increase in profitable investments and accelerated GDP growth, but can be used for financing increased consumption, additional government expenditure or for inefficient investments that do not result in long-term GDP growth. The low degree of real convergence of the Bulgarian economy allows us — in the light of the experience of the poorest countries of the euro area — to predict that this country might follow the same path.

Conclusions

The analyses carried out in this paper made it possible to achieve its purpose and confirm the research hypothesis. On the basis of nominal criteria, it can be concluded that public finances in Bulgaria are stable, thanks to budget surpluses and the public debt is at a level significantly lower than the reference value. The observed numerous macroeconomic imbalances in Bulgaria in the period since the accession to the EU were not conducive to the process of real convergence. The process of bringing the economy into equilibrium can be lengthy, because it depends on the type of factors that cause imbalances. Józwick (2017, p. 20) rightly notes that in the case of the economies of Central and Eastern Europe and the European integration process affecting them, these imbalances result from the liberalisation of foreign trade, flows of factors of production, in-

ternational technology diffusion and monetary integration. Madrak-Grochowska (2009, pp. 30–31) stresses, in turn, that rapid trade liberalisation may expose a country that has adopted a currency board to unexpected external shocks, a rapid and unpredictable reaction of investors to foreign exchange crises in other countries.

The specific conditions of the Bulgarian economy require the Bulgarian authorities to pursue a prudent macroeconomic policy and find the optimal moment for joining the euro area. According to Todorov (2012, p. 51), Bulgarian macroeconomic indicators should be kept around the EA average in order to guarantee a fluent continuation of the process of nominal and real convergence. If the government's fiscal policy is stricter than required by EU regulations, it may reduce the growth potential of the economy.

I conclude that the current level of real convergence of Bulgaria and the occurring macroeconomic imbalances may delay its membership of the euro area. Therefore, while respecting the country's aspirations to join the euro area, one cannot ignore the risk of another destabilisation of the euro area related to its expansion to countries that do not meet the criteria of real, social and legal convergence.

References

- Alesina, A. Barbiero, O., Favero, C., Giavazzi, F., & Paradisi M. (2015). Austerity in 2009-13. *Economic Policy Journal*, July.
- Bayar, Y., Odabas, H., Unsal Sasmaz, M., & Faruk Ozturk, O. (2018). Corruption and shadow economy in transition economies of European Union countries: a panel cointegration and causality analysis. *Economic Research-Ekonomska Istraživanja*, 31(1). doi: 10.1080/1331677X.2018. 1498010.
- Blaug, M. (1997). *Economic theory in retrospect*. Cambridge: Cambridge University Press.
- Bonam, D., & Lukkezen, J. (2019). Fiscal and monetary policy coordination, macroeconomic stability, and sovereign risk premia. *Journal of Money, Credit and Banking*, 51(2–3). doi: 10.1111/jmcb.12577.
- Bruzda, J. (2009). Synchronisation of business cycles in Poland and the euro area – the wavelet domain approach. *Equilibrium. Quarterly Journal of Economics and Economic Policy*, 2(3). doi: 10.12775/EQUIL.2009.017.
- Chang, J. J., Guo, J. T., Shieh, J. Y., & Wang, W. N. (2019). Sectoral composition of government spending, distortionary income taxation, and macroeconomic(in)stability. *International Journal of Economic Theory*, 15(1). doi: 10.1111/ijet.12203.

- Council of EU (2018). Council recommendation of 13 July 2018 on the 2018 national reform programme of Bulgaria and delivering a Council opinion on the 2018 convergence programme of Bulgaria. *Official Journal of the European Union*, (2018/C 320/02), 10.9.2018.
- Dimitrova Dimitrova–Moneva, I. (2015). The continuing emigration and the possibility of a demographic collapse in Bulgaria. *Economics and Management, Faculty of Economics, South-West University "Neofit Rilski", Blagoevgrad*, 11(1).
- EBC (2018). Convergence report 2018. European Central Bank, May 2018.
- EC (2018). Recommendation for a Council recommendation on the 2018 national reform programme of Bulgaria and delivering a Council opinion on the 2018 convergence programme of Bulgaria. Brussels 31.05.2018, COM(2018)402 final.
- Friedman, M. (1970). A theoretical framework for monetary analysis. *Journal of Political Economy*, 78(2).
- Hadjinikolov, D. (2017). Bulgaria in the EU cohesion process. *Economic Alternatives*, 2.
- IMF (1999). Bulgaria: recent economic developments and statistical appendix. *IMF Staff Report*, 26.
- Jóźwik, B. (2017). *Real economic convergence of the European Union member states from Central and Eastern Europe. Transformation, integration and cohesion policy*. Warszawa: PWN.
- Keynes, J. M. (1936). *The general theory of employment, interest, and money*, Palgrave Macmillan. (Copyright 2018).
- Kołodko, G. W. (1993). *Squaring the pentagon. From economic recession to sustainable growth*. Warszawa: Poltext.
- Kołodko, G. W. (2004). *On repairing our finances*. Toruń: TNOiK „Dom Organizatora”.
- Madrak-Grochowska, M. (2009). Triangle of inconsistent system solutions and possible modifications of the Polish exchange rate regime during the preparation for the adoption of the euro. *Equilibrium. Quarterly Journal of Economics and Economic Policy*, 2(3). doi: 10.12775/EQUIL.2009.018.
- Moździerz, A. (2018). The paradigm of twin deficits and the experiences of Central and Eastern European countries. Warszawa: PWE.
- Moździerz, A. (2017). Fiscal supervision as an element of new economic governance in the European Union. In S. Owsiak (Ed.). *Public finances and the new economic governance in the European Union*. Warszawa: Wydawnictwo Naukowe PWN.
- Moździerz, A. (2015). Macroeconomic imbalances in the economies of former communist countries during the European integration. *Journal of US-China Public Administration*, 12(12). doi:10.17265/1548-6591/2015.12.004.
- Piekut, M. (2015). The rich North-west, the poor Middle-east – consumption in EU households. *Comparative Economic Research - Central and Eastern Europe*, 18(1). doi: 10.1515/cer-2015-0003.

- Olejarz, T. (2009). Bulgaria and Romania in the European Community. Legal and political aspects of the accession process. *Papers of the Institute of Central and Eastern Europe*, Lublin.
- Orłowski, W. (2019). Why should Poland adopt the euro? In E. Mączyńska (Ed.). *Economics and politics. Around the theory of G. W. Kołodko*. Warszawa: PWN.
- Petranov, S., (2003). Foreign direct investments to Bulgaria. *Working paper series, Agency for Economic Analysis and Forecasting*, 52003.
- Próchniak, M., & Witkowski, B. (2016). *Beta income convergence in theoretical and empirical terms*. Warszawa: Oficyna Wydawnicza Szkoła Główna Handlowa w Warszawie.
- Regulation (EU) No 1176/2011 of the European Parliament and of the Council of 16 November 2011 on the prevention and correction of macroeconomic imbalances, Dz. U. L.306 z 23.11.2011.
- Snowdon, B., Vane, H., & Wynarczyk, P. (1994). *A modern guide to macroeconomics. An introduction to competing schools of thought*. Edward Elgar Publishing Limited.
- Todorov, I. (2012). The Euro area membership of Bulgaria in the context of the debt crisis. *Medzinárodné vzťahy (Journal of International Relations) Faculty of International Relations, University of Economics in Bratislava*, 10(3).
- Żuchowska, D. (2012). *Exchange rate policy and inflation in the countries of Central and Eastern Europe*. Warszawa: CeDeWu.

Annex

Table 1. The degree of nominal economic convergence in Bulgaria

Country	2016	2017	2018 ^{a)}	Reference value
HICP	-1.3	1.2	1.4	1.9
Long-term interest rate	2.3	1.6	1.4	3.2
Currency participating in ERM II	No	No	No	
General government balance	0.2	0.9	0.6	-3.0
General government debt	29.0	25.4	23.3	60.0

Note: Data for 2018 on HICP and long-term interest rate and their reference values refer to the period from April 2017 to March 2018; on general government balance and debt - EC forecast from spring 2018.

Source: ECB convergence report. European Central Bank (2018, p. 45).

Table 2. Early warning indicators — external equilibrium

Items	Thresholds	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Current account balance (% of GDP, 3 years average)	-4/6%	-21.0	-18.1	-10.7	-3.2	-0.7	0.3	0.6	0.8	1.3	3.1
Net international investment position (% of GDP)	-35%	-93.9	-97.3	-91.9	-82.8	-77.9	-73.3	-72.4	-63.0	-49.2	-42.8
Real effective exchange rate ¹⁾ (3 years % change)	± 11%	18.5	18.3	9.7	1.9	-4.0	-0.9	-2.8	-4.2	-4.7	-3.3
Export market shares (5 years % change)	-6%	35.6	19.2	8.1	11.3	-1.0	-0.2	5.6	11.8	8.2	19.4
Nominal unit labour cost index (3 years % change)	12%	25.5	34.6	29.5	17.7	12.2	16.0	17.8	14.9	9.1	13.6

42 trading partners.

Source: Eurostat, MIP Procedure Statistical Annex.

Table 3. Early warning indicators — internal equilibrium

Items	Thresholds	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
House price index (2015 = 100;											
3 year % change)	6%	25.0	-20.4	-10.2	-5.5	-1.9	-2.2	1.4	2.8	7.0	8.7
Private sector credit flow, consolidated	14%	33.3	4.7	3.7	1.4	3.0	7.3	-1.1	-0.3	4.1	6.2
(% of GDP)											
Private sector debt, consolidated	133%	131.4	133.8	132.5	124.2	125.0	132.3	123.4	110.5	104.8	100.1
(% of GDP)											
General government debt	60%	13.0	13.7	15.3	15.2	16.7	17.1	27.1	26.2	29.6	25.6
(% of GDP)											
Unemployment rate (3 years average)	10%	7.2	6.4	7.6	9.5	11.3	12.2	12.2	11.2	9.4	7.7
Total financial sector liabilities, non-consolidated	16.5%	-0.8	1.3	-5.4	5.4	10.2	4.3	5.6	6.2	11.2	1.1
(1 year % change)											

Source: Eurostat, MIP Procedure Statistical Annex.

Table 4. Early warning indicators — labour market

Item	Thresholds	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Activity rate (15-64 years; 3 year change in pp)	-0.2 pp.	5.7	2.7	0.4	-1.9	-0.1	1.7	3.1	2.2	0.3	2.3
Long-term unemployment rate (% of active population in the same age group, % point change (t, t-3))	0.5 pp.	-3.1	-2.0	0.6	3.4	3.8	2.7	0.6	-1.2	-2.9	-3.5
Youth unemployment rate - % of active population in the same age group, % point change (t, t-3)	2 pp.	-9.1	-3.2	7.8	13.1	13.0	6.5	-1.2	-6.5	-11.2	-10.9

Source: Eurostat, MIP Procedure Statistical Annex.

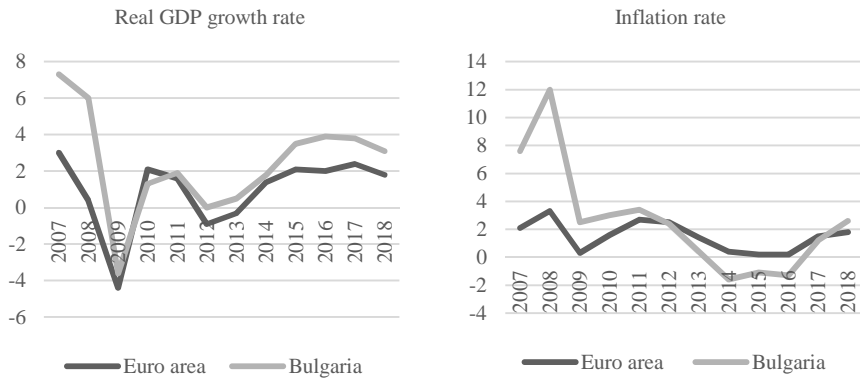
Table 5. Risk of poverty or social exclusion and income inequality in Bulgaria in comparison with the euro area

Items	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
People at risk of poverty or social exclusion (% of total)											
EA	NA	21.6	21.4	21.8	22.7	23.1	23.0	23.5	23.1	23.1	22.1
Bulgaria	60.7	44.8	46.2	49.2	49.1	49.3	48.0	40.1	41.3	40.4	38.9
Inequality of income distribution - S80/S20											
EA	4.8	4.9	4.9	4.9	5.0	5.0	5.1	5.2	5.2	5.2	5.1
Bulgaria	7.0	6.5	5.9	5.9	6.5	6.1	6.6	6.8	7.1	7.7	8.2

Note: NA – not available.

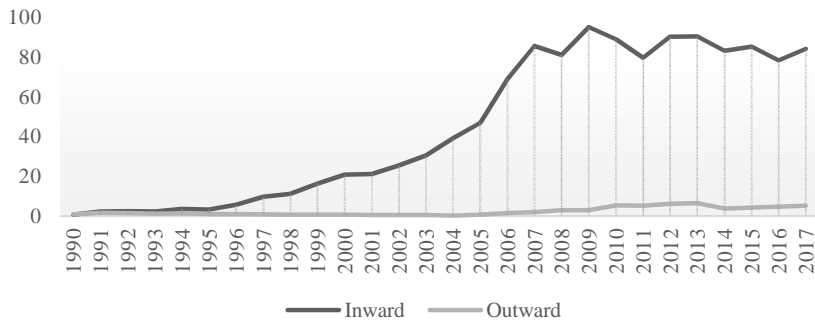
Source: Eurostat.

Figure 1. Real GDP growth rate and inflation rate in Bulgaria and the euro area



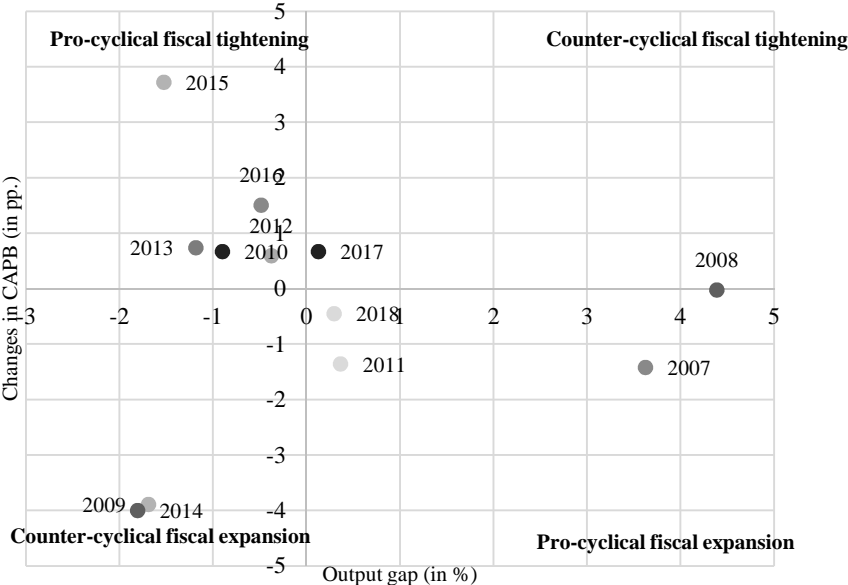
Source: Eurostat.

Figure 2. Changes in the FDI in Bulgaria (stock) as % of GDP



Source: UNCTAD Data Center <https://unctadstat.unctad.org>.

Figure 3. Types of fiscal policy in Bulgaria in 2007–2018



Source: own study based on AMECO database.