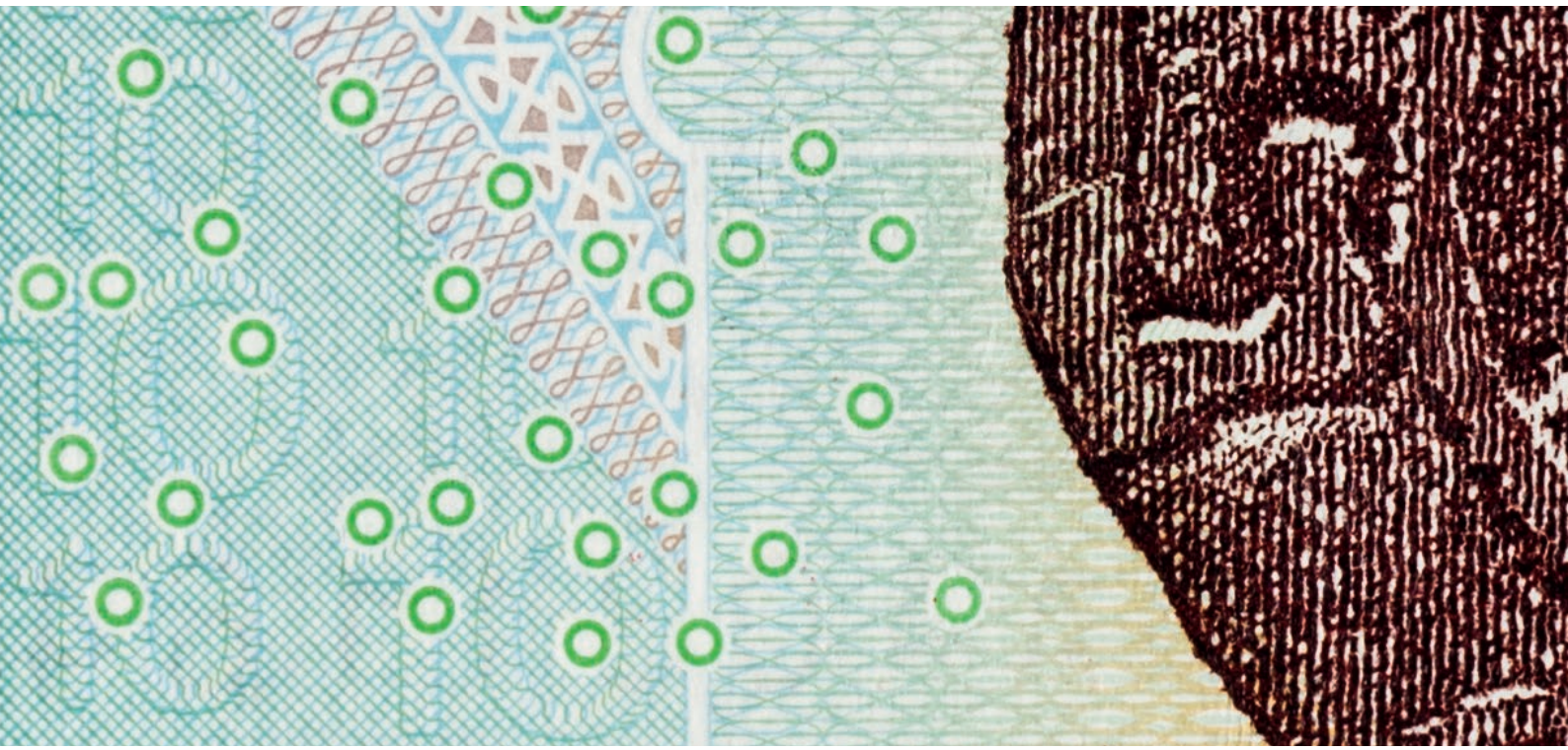
NBP Narodowy Bank Polski

No. 1/16 January 2016

Analysis of the economic situation in the countries of Central and Eastern Europe



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Analysis of the economic situation in the countries of Central and Eastern Europe

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Contents

In case of discrepancies between the Polish and the English versions of the Report, the Polish language version prevails.

Summary

The recovery in the countries of Central and Eastern Europe (CEE) accelerated in 2015 despite weakening global growth. This was related both to better economic conditions in the main trading partners as well as to strengthening domestic demand. CEE countries benefitted from the continuing recovery in the euro area, supported by ECB quantitative easing programme. At the same time, owing to the reduction of external and internal imbalances over recent years, they have become less sensitive to turbulences in global financial markets arising, inter alia, from Fed's announcements of monetary policy normalisation or a slowdown in emerging market economies.

Domestic demand, mainly private consumption, remained the major growth driver for CEE economies. Individual consumption continued to rise across the region, fostered by the growth in employment and nominal wages, particularly strong in the Baltic states. Households' purchasing power was also spurred by the decline in energy prices (which was also the main cause of persistent deflation across the region). Some countries (the Czech Republic, Slovakia, Lithuania, Poland, Romania) also experienced a dynamic growth in fixed capital formation, which was associated with the acceleration of public investment co-financed with EU funds. Moreover, in economies where banking sector liquidity and capital adequacy were solid and public debt level remained relatively low (the Czech Republic, Poland, Slovakia, the Baltic states), growth in domestic demand was fostered by bank credit. Fiscal loosening and accommodative monetary policy stance also contributed to growth in 2015.

Forecasts of international institutions point to a stabilisation of the pace and structure of the economic recovery in the CEE region in the forthcoming years. Improvement in terms of price competitiveness of CEE countries and the expected further gradual recovery in the euro area are expected to sustain relatively high exports' growth. Household consumption will be increasingly supported by the growth in wages and improving access to credit. In addition, consumers' disposable income will benefit from low, albeit positive, inflation. On the other hand, investment is expected to slow down due to lower inflow of EU funds. The main risks to the forecasts include a slowdown of global growth due to weakening economic situation in developing countries, mainly in Russia and China, interruptions in international trade associated with the reintroduction of internal border controls inside the Schengen area and potential adverse effects of the Volkswagen emission scandal.

The report also includes detailed analyses of important problems faced by CEE countries. These analyses refer to:

- estimation of the potential impact of the Volkswagen emission scandal on CEE economies,
- European countries' experience with the build-up of forex loans and approaches to solving the problem,
- assessment of the potential for increasing labour productivity in CEE countries through product market reforms.

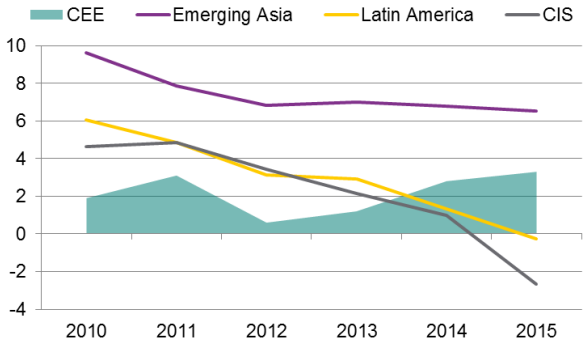
Countries of Central and Eastern Europe – macroeconomic outlook

Analysis of current economic situation

Economic growth in the CEE countries in 2015 accelerated, contrary to other emerging economies (Figure1.1). It was associated both with the improved economic conditions of main trade partners and with the dynamic growth of domestic demand.

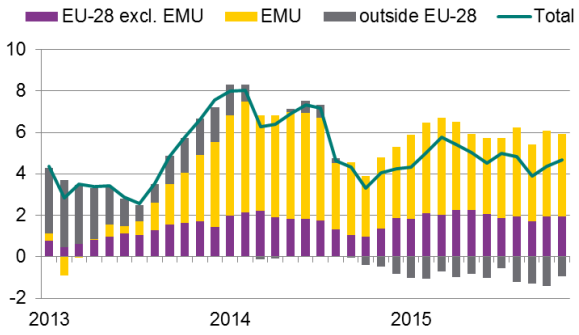
Despite the weakening global economic activity, the demand from CEE countries' major trade partners remained strong. Global GDP growth in recent quarters was declining, mainly due to slowdown in the emerging economies, especially China, Brazil and Russia. This trend was reflected by the decline in the CEE countries exports into non-EU markets (Figure1.2). The impact of the downturn in major emerging economies on the CEE region was limited by the relatively weak direct linkages (only the recession in Russia significantly affected the current economic situation in the CEE region, especially in the Baltic states, due to their strong trade and investment links to Russian economy (Figure1.3)). It was also mitigated by the continuing recovery in developed economies, especially in the euro area - the major trade partner of the CEE countries. Exports to EU markets, constituting almost 80% of the overall CEE countries exports, helped in maintaining a relatively high growth in sales into foreign markets. In 2015, exports of final goods, mainly consumer goods, to the euro area continued to grow. Moreover, the demand from the euro area and its trade partners, mainly the United States, fostered the intermediate goods exports, both into the euro area and among the CEE countries.

Figure1.1. GDP growth in the CEE region as compared to other groups of emerging countries (in %, y/y)



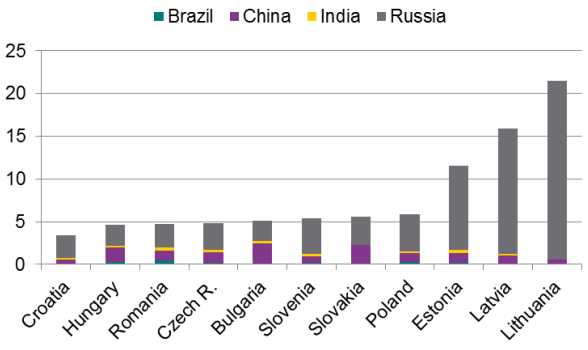
Source: Eurostat, IMF

Figure1.2. Exports by group of countries (in %, y/y)



Source: Eurostat

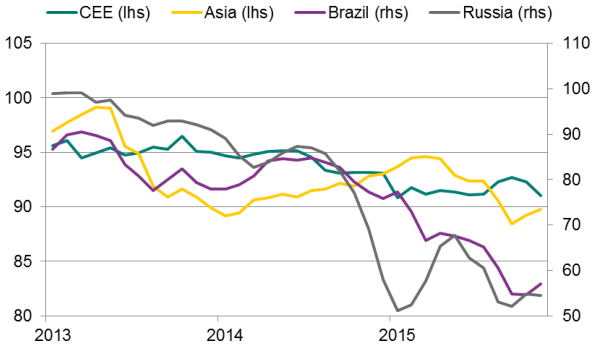
Figure1.3. Exports to BRIC countries in 2014 (% of exports)



Source: Eurostat

Temporary increase in global financial markets' volatility in 2015 did not significantly affect the economic situation in the region. Financial markets of the CEE countries remained relatively resistant to the turbulences caused by increasing risk of Greek exit from the euro area, growth of concerns related to the condition of the Chinese economy, or the expectations of Fed tapering. CEE countries experienced a much smaller declines in equity prices, credit risk growth, or depreciation of their currencies[1] (Figure1.4). Moreover, the Czech Republic, where bond yields fell below the level of German bonds (Figure1.5), central bank intervened on the foreign exchange market to prevent koruna appreciation against the euro. It seems that the Czech Republic became not only a regional most trusted market, but also an European "safe haven".

Figure1.4. Nominal effective exchange rates (2010=100)

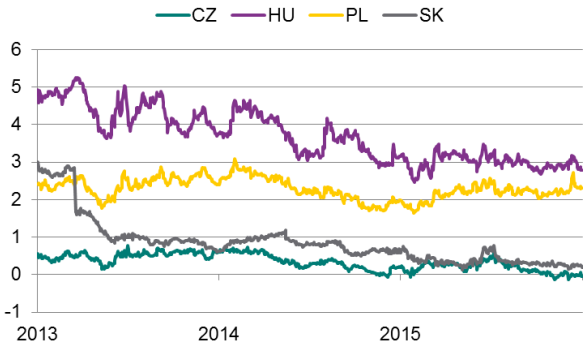


Source: BIS

Arithmetic means: CEE – Poland, the Czech Republic, Hungary, Romania; Asia – India, Indonesia, Philippines, Malaysia, Thailand

The relatively low vulnerability to global financial markets' turbulences may be associated with a clear reduction in imbalances. The CEE countries managed to reduce external imbalances in the post-crisis period. Most of them even recorded a current account surplus, which contributed to the improvement in the net international investment position to GDP ratio. Dependence of the banking sector on foreign financing was also reduced. Successfully implemented fiscal consolidation in the post-crisis period led to a decrease in the scale of fiscal imbalances. An additional factor limiting CEE countries' vulnerability to global financial markets turmoil was the initiation of the asset purchase programme by the European Central Bank, which contributed to the improvement in investors' sentiment towards the euro area and economies closely linked to it.

Figure1.5. 10Y bond yield spreads against German bonds (percentage points)



Source: Reuters

The decline in commodity prices had a positive impact on price competitiveness of the CEE countries' exports and supported domestic demand growth. The CEE countries are net exporters of

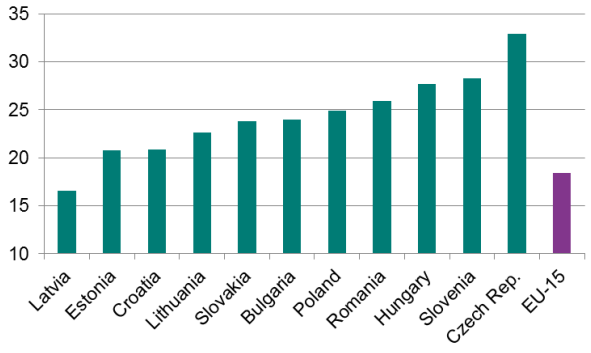
[1] Cf. International Monetary Fund, *Central, Eastern, and Southeastern Europe. Reconciling Fiscal Consolidation and Growth*, Regional Economic Issues, November 2015.

commodities, especially energy commodities. The high share of industrial production in GDP and exports of the CEE countries results in the relatively higher impact of the decline in commodity, especially energy, prices on the improvement of price and cost competitiveness of these economies. It was more pronounced that in the Western European economies, specialising in less commodity-intensive exports of services (Figure1.6). The comparison of developments in real effective exchange rates (REERs) deflated by export prices and unit labour costs indicate that in some CEE countries, in particular in the Baltic states, low commodity prices could have significantly mitigated the adverse impact of the increasing wages on exports competitiveness (Figure1.7). The decline in commodity prices in global markets also reduced the domestic inflation, inter alia, through the decrease in energy prices, which increased the purchasing power of households' disposable income and supported private consumption growth.

The growth in exports and favourable terms of trade developments helped to maintain a current account surplus. The decline in import prices in relation to export prices in the CEE countries was a significant factor influencing the noticeable improvement in the current account balance in 2015. (Figure1.8). This was a continuation of the successive decrease of external imbalances observed in the post-crisis period. In some countries (Slovenia, Hungary) even a significant surpluses in the current account appeared. This may suggest that shifts in the convergence model of the CEE countries, so far characterised by high external deficits and dependence on foreign capital flows, are taking place.

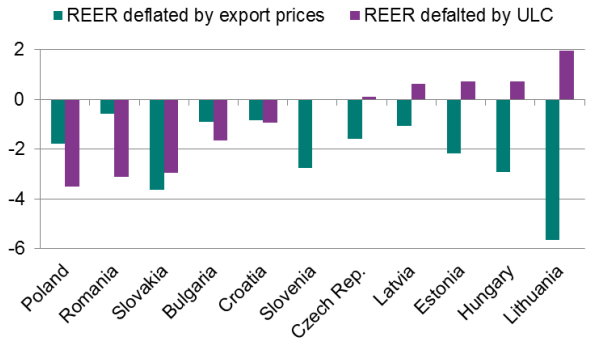
Strong external demand fostered industrial production. In 2015, production in the export oriented industrial sector continued to grow at a high rate. The highest growth was recorded in production of durable consumer goods, private means of transport in particular, mainly directed to the internal EU market. Therefore, the strongest growth

Figure1.6. Share of industry in value added in 2015 (in %)



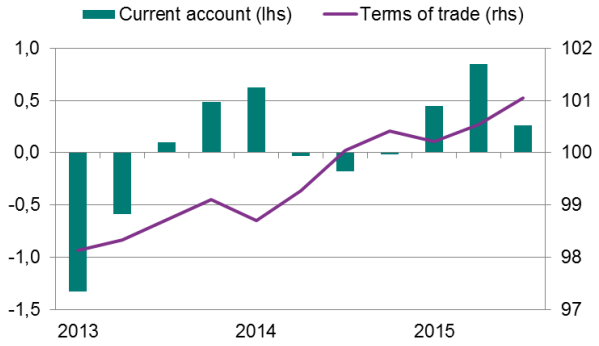
Source: Eurostat

Figure1.7. Real effective exchange rate deflated by exports prices and unit labour costs in manufacturing in 2015 Q3 (in % y/y – growth means appreciation)



Source: Eurostat

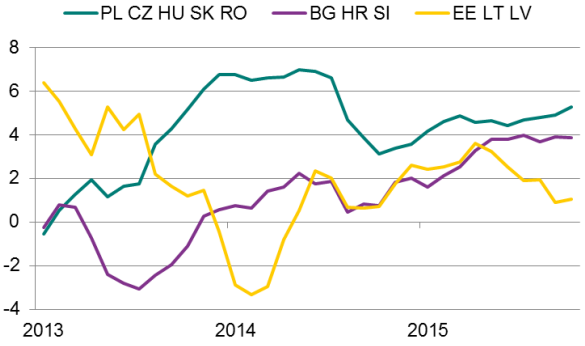
Figure1.8. Terms of trade and current account balance (% of GDP)



Source: Eurostat

in industrial production was observed in countries where the automotive sector is the strongest, i.e. in the Czech Republic, Poland, Romania, Slovakia and Hungary (Figure1.9). Business confidence indicators point at further production growth. Increasing number of new orders show that the favourable situation in the industrial sector continues. This means that the potential negative consequences of the "emissions scandal" in the Volkswagen group have not materialised so far, although it still poses a risk to the pace of future recovery. (see: Chapter on *Consequences of the Volkswagen excessive nitrogen oxide emission scandal*).

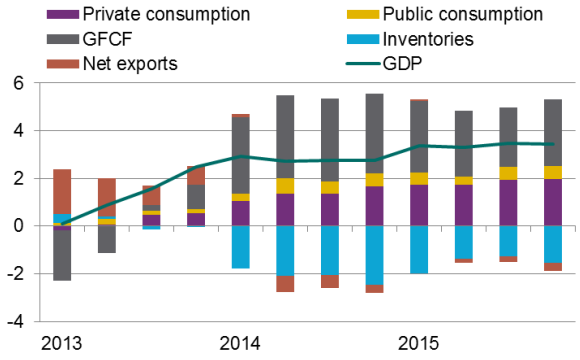
Figure1.9. Industrial production in groups of CEE countries (in %, y/y)



Source: Eurostat

Domestic demand remained the major growth driver in the CEE countries. Despite the fast growing exports, the contribution of net exports to economic growth in the CEE region was close to zero, and in some countries even negative. This resulted from the equally fast growing imports, driven by strong domestic demand. Domestic consumption and investment expenditures were almost entirely responsible for maintaining the stable rate of economic recovery in the CEE region in 2015 (Figure1.10).

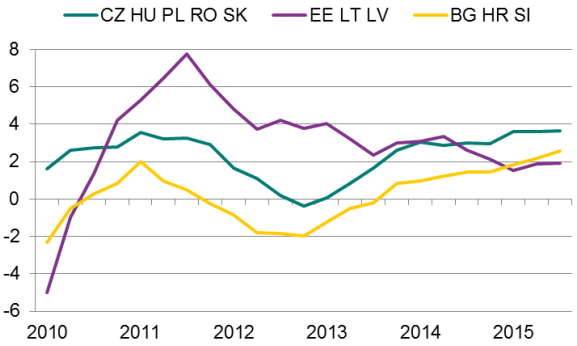
Figure1.10. Structure of GDP growth in the CEE region (in % and percentage points, y/y)



Source: Eurostat

The developments in domestic demand differed among individual CEE countries (Figure1.11). The Czech Republic, Poland, Romania and Slovakia were the fastest developing economies of the region in 2015. The underlying factor was the rapid growth in investment which, particularly in the case of the Czech Republic and Slovakia, was associated with the strong increase in EU funds absorption. In Romania, an additional important factor enhancing the GDP growth in 2015 was the reduction of taxes and increased expenditure on social benefits and public sector wages, fostering a continued high consumption growth rate. Growth in private consumption, particularly investment, in Croatia and Bulgaria was, on the other hand, hampered by the domestic problems observed in these economies for years (high debt of private and government sector, banking system instability). The

Figure1.11. GDP growth in individual groups of CEE countries (in %, y/y)



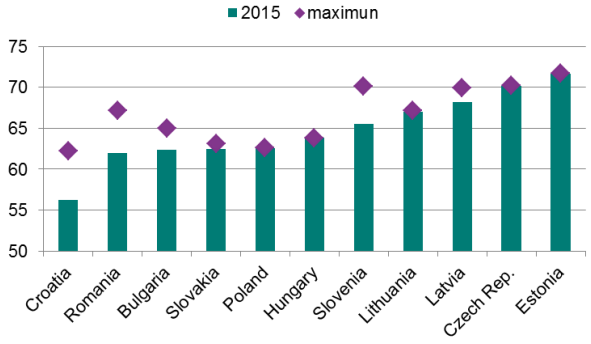
Source: Eurostat

gradual improvement of economic situation in these countries in 2015 mainly results from the growing exports. The decrease in investment growth due to the completion of large investment projects, including those co-financed by EU funds, negatively affected the growth rate in Hungary and Slovenia as compared to 2014. The Baltic economies, mainly Estonia and Lithuania, also recorded a slower growth rate. It , however, resulted from the deterioration of economic conditions in the export-oriented sectors due to prolonging recession in Russia and Finland, rather than from domestic factors.

Dynamic growth in consumption was fostered by the permanent, although slowing down, employment growth and increasing wages. In 2015, as in the previous year, unemployment rate in the CEE countries was falling and the number of the employed was increasing. Consequently, the employment rate in many economies reached or approached the highest levels in the post-transformation history (Figure1.12). It seems that employment growth could have been even higher if the supply of qualified workforce in the region had been sufficient. In 2015, the demand for employees expressed by the number of vacancies clearly increased, reaching its all-time highs, whereas the number of newly employed persons decreased as compared to the preceding year (Figure1.13). The increasing demand for labour was reflected in growing pressure on wages. The growth in wages in 2015 in the majority of countries accelerated. It was the highest in economies where the unemployment rate fell below its natural level (Figure1.14). The strong growth of wages in Estonia, in connection with the rapidly increasing real estate prices, prompted the EC to cover this country by an in-depth review under the Macroeconomic Imbalance Procedure.

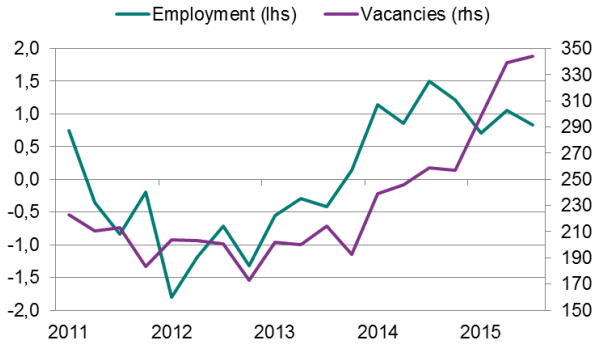
The decline in prices increased the purchasing power of households. The growth in households' real disposable income resulted not only from the

Figure1.12. Employment rate in 2015 against the all-time maximum (in %)



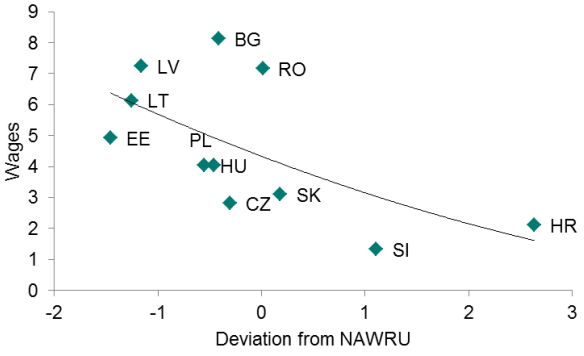
Source: Eurostat

Figure1.13. Employment (in %, y/y) and number of vacancies (in thousands)



Source: Eurostat

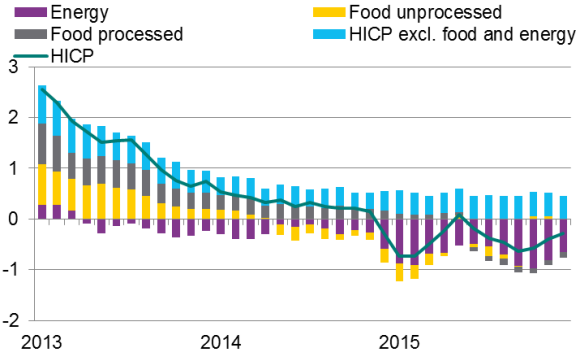
Figure1.14. Nominal wage (in %, y/y) and unemployment rates deviation from NAWRU (percentage points) in 2015



Source: Eurostat, AMECO

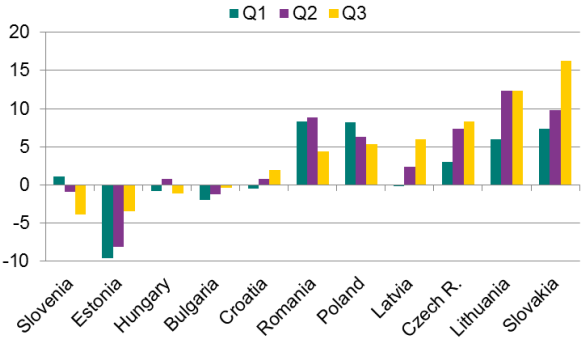
growth in nominal wages but also from the decline in consumer prices. The deflation which, at least temporarily, occurred in all of the CEE countries in 2015, was mainly the result of the decline in energy commodity prices in global markets, which translated into a fall in energy prices (Figure1.15). In addition, particularly at the beginning of 2015, the average level of consumer prices was reduced by the decline in food prices. The decline in prices was enhanced by numerous cuts in regulated prices. In Romania, a strong drop in inflation in mid-2015 (by over 3 percentage points) was the result of reduction in VAT rate on food from 24% to 9%. As a result of this decision, having formerly been a country of the highest inflation in the CEE region, Romania became the economy with the deepest deflation.

Figure1.15. HICP inflation and its components (in % and percentage points, y/y)



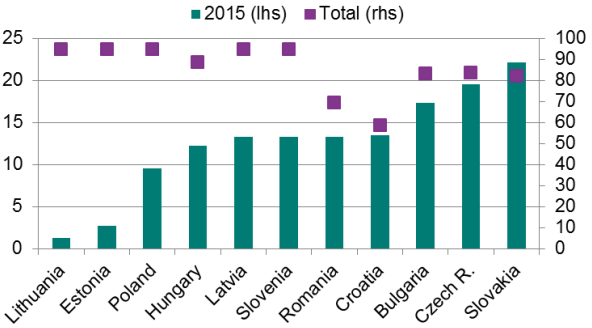
Source: Eurostat

Figure1.16. Gross fixed capital formation (in %, y/y)



Source: Eurostat

Figure1.17. Absorption of EU funds from 2007-2013 financial perspective (% of the total funds available)



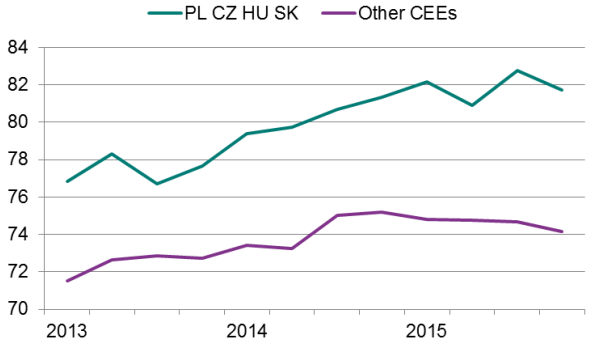
Source: Eurostat

Fixed capital formation also significantly contributed to the growth, however, not in all CEE countries. the CEE countries differed significantly in terms of fixed capital formation growth rate (Figure1.16). Public investment, co-financed by EU funds, contributed most to this diversification. In countries where the absorption of funds from the terminating EU financial perspective intensified in 2015 (mainly in the Czech Republic and Slovakia), the growth in public investment clearly accelerated (Figure1.17). On the other hand, in countries where the funds utilisation slowed down as compared to the previous years (in the Baltic states and in Hungary), in 2015 public fixed capital formation clearly decreased. In the case of corporate investment, the level of capacity utilisation (Figure1.18) and growth in lending constituted important factors diversifying the situation in the region. The highest growth in corporate investment among the CEE countries occurred in the Czech Republic, Slovakia as well as in Poland and Romania.

The low inflow of foreign direct investment limited the growth of fixed capital formation in the region. In 2015, as it had been happening since 2009, FDI inflow was decreasing (Figure1.19). It

seems that foreign investors, particularly European ones, are still not convinced that the recovery in Europe is sustainable; therefore, they not only refrain from investing in their home countries but also do not export capital to the CEE region. The automotive sector seems to be an exception. In response to the growing demand for cars, international automotive corporations decided to build or develop their plants in the CEE countries (inter alia, Volkswagen in the Czech Republic). Construction of a Jaguar Land Rover plant in Slovakia and a Daimler plant in Hungary is also planned.

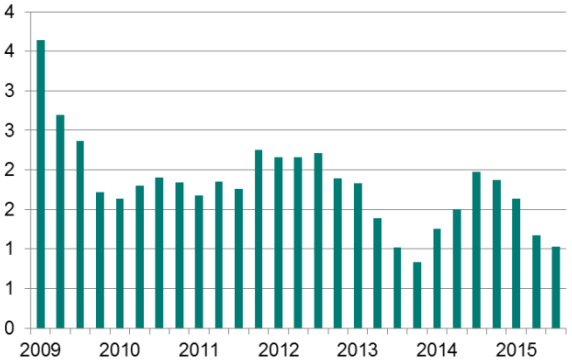
Figure1.18. Capacity utilisation in groups of CEE countries (in %)



Source: Eurostat

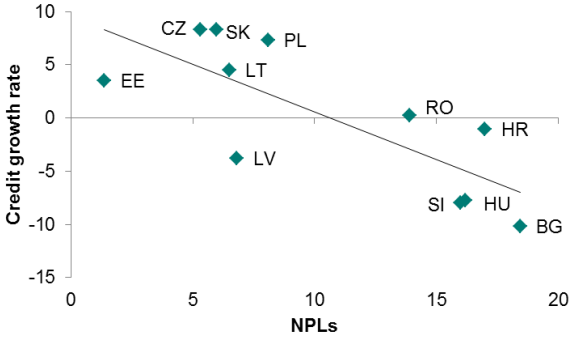
In countries with relatively stable banking sectors and low private debt, domestic demand growth was fostered by the increasing growth in lending. The increased demand for loans, accompanied by the easing of loan granting terms, was visible particularly in countries of the "north" of the region (Poland, the Czech Republic, Slovakia, the Baltic states). In countries of the "south" (Bulgaria, Croatia, Romania, Slovenia, Hungary) bank lending was impeded by the deleveraging process of enterprises and households as well as by the continuing high level of nonperforming loans (Figure1.20). In Croatia and Hungary the low supply of loans was also a consequence of burdens imposed on banks due to conversion of foreign currency loans (see: Chapter on *European countries' experience with the build-up of forex loans and approaches to solving the problem*). In the second half of 2015, however, only in countries of the "north", growth in corporate loans clearly accelerated, whereas in the earlier period, growth in lending resulted from the increasing volume of household loans (Figure1.21).

Figure1.19. Net inflow of foreign investment in the CEE region (in % of GDP, 4-quarter moving average)



Source: Eurostat

Figure1.20. Non-performing loans (in %) and growth of loans for the private sector (in %, y/y) in 2015



Source: Eurostat

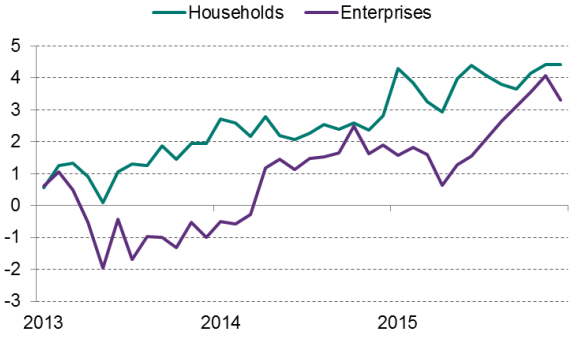
The scale of capital outflow from the banking sector abroad slowed down. Both the Bank for International Settlements data and the data on capital flow derived from the balance of payments indicate that a process of reduction in foreign liabilities of CEE banks is slowing down.. In some countries (Poland, the Czech Republic, Slovakia) foreign interbank loans and deposits again become a source of bank lending. However, it is only a supplement

to domestic deposits which still remain the major financing source of domestic credit.

Fiscal policy, supported by the high level of European Union funds utilisation, contributed to the acceleration of economic growth in the CEE region. In accordance with the latest forecasts of the European Commission, the extent of fiscal policy loosening, measured by the change in the primary structural balance in 2015, should amount to c.a. 0.5% of GDP (Figure1.22). Less restrictive fiscal policy, as compared to the preceding years, did not contribute to the general government balance deterioration, due to the favourable macroeconomic developments and the decreasing debt service costs. As a consequence, in 2015, the general government balance exceeded -3% of GDP in all countries, except Croatia. Moreover, in 2015, in some countries of the region, absorption of EU funds accelerated, since it was the last year in which projects financed under the 2007-2013 financial perspective could be implemented.

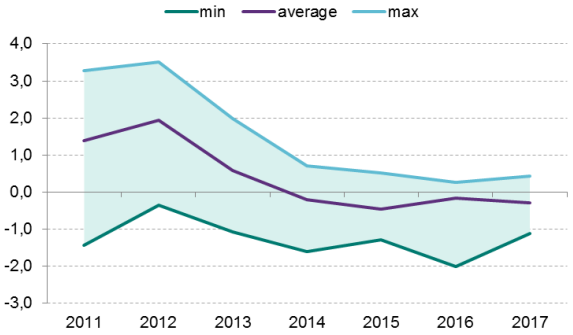
The accommodative monetary policy stance was maintained. The continuing low inflation leading to the decline in households' inflation expectations, as well as the extension of the ECB quantitative easing programme had an impact on maintaining the accommodative monetary policy stance in the CEE region. Central banks of Poland, Hungary and Romania continued a series of interest rates cuts in 2015, till all-time lows (Figure1.23). The Czech (CNB) and Hungarian (MNB) central banks additionally applied unorthodox instruments aimed at easing the monetary policy. CNB decided not to discontinue the use of the exchange rate as a monetary policy instrument before 2017. MNB continued on a programme aimed at supporting bank lending for small and medium-sized enterprises. However, MNB decided on the gradual phasing out of the *Funding for Growth Scheme* (FGS) programme and its replacement by the *Market-Based Lending Scheme* (MLS), aimed at offering assistance to banks in the recovery of lending based on market financing.

Figure1.21. Growth in households and corporate lending in the CEE region (in %, y/y)



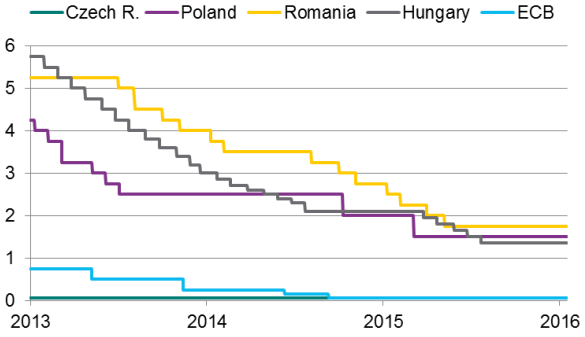
Source: Eurostat

Figure1.22. Restrictiveness of fiscal policy in the CEE region in 2011-2017, measured by the change in the primary structural balance (percentage points of GDP)



Source: Eurostat

Figure1.23. Central banks' main policy rates (in %)

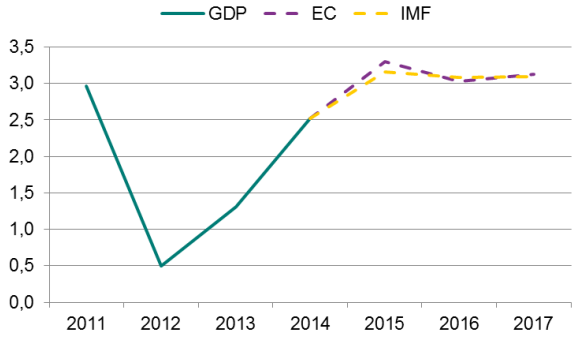


Source: Central banks

Forecasts

CEE countries are to continue their stable recovery although the forecasts for global GDP and trade growth are being reduced. International institutions (IMF, European Commission, OECD) expect that the economic growth rate in the CEE countries in 2016-2017 will be maintained (Figure1.24). The relatively high economic growth, as compared to the slowdown in the global economy, results from the geographical structure of CEE countries' exports. Relatively small direct exposure to developing countries limits the CEE economies' vulnerability to a downturn in those countries.

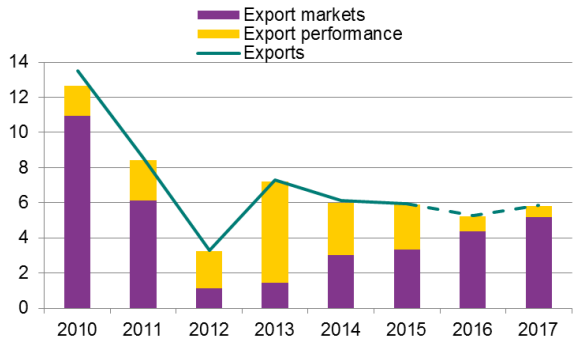
Figure1.24. GDP growth forecasts in the CEE region (in %)



Source: EC, IMF

Exports will be driven by the improving situation in the euro area and the expected increase in competitiveness. Further exports growth expected in 2017-2017 will mainly result from a growing foreign demand. The CEE countries will act as beneficiaries of the strengthening recovery in the euro area, arising, inter alia, from the ECB quantitative easing policy. Low commodity prices will further foster exports competitiveness. On the other hand, the relatively low investment in expanding production capacity over recent years, resulting from a decreased inflow of foreign direct investment, as well as the absence of large projects completion within the forecast horizon, will lead to gradual fading out of supply-side factors driving exports in the previous years (Figure1.25).

Figure1.25. Major factors affecting exports in the CEE region (in percentage points)

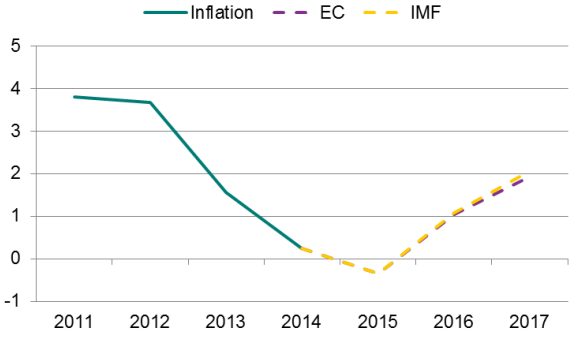


Source: EC

Growth in domestic demand will be more and more based on private consumption. The structure of economic growth in the CEE countries will be close to that observed in the last two years, i.e. growth will be based on domestic demand. The anticipated growth in households' consumption will result from the further improvements in labour markets. Employment should continue to grow. However, unemployment rates approaching natural levels indicate that its growth will be hampered by labour shortages. At the same time, further acceleration in wages is expected. In some countries it

will be enhanced by the planned increases in minimum wages (Estonia, Lithuania) and wages in the public sector (the Czech Republic). Growth in consumer prices will remain low due to the continuing low commodity prices, although inflation should return to positive territory already in 2016 (Figure1.26). Improvement in bank lending to households is also expected. Growth in private consumption in some CEE countries will additionally be fostered by fiscal expansion. It refers particularly to Romania (tax cuts) and Poland (increased expenditure). However, region-wide, its scale will be smaller than in 2015.

Figure1.26. Inflation forecasts in the CEE region (in %)



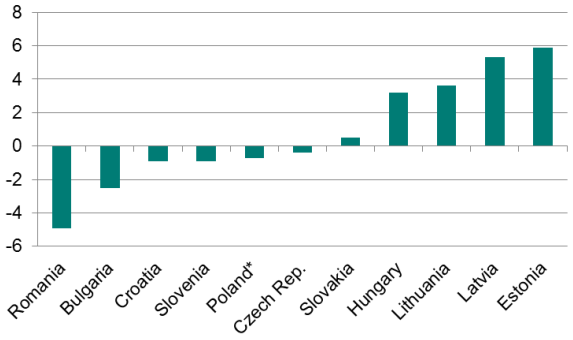
Source: EC, IMF

Growth in fixed capital formation will decline as a result of slowdown in public investment. The overlapping of two EU financial perspectives will result in temporary slowdown in infrastructural investment co-financed from EU funds. It would be noticeable particularly in 2016. The slowdown in public investment will be partly compensated by growth in private investment. Strong domestic demand and expected growth in the number of orders from the euro area should have a positive impact on business sentiment, increasing corporate propensity to invest. In the CEE countries, particularly in countries of the "north" of the region, further easing of lending conditions is expected. In view of the continued accommodative monetary policy stance, it means easier access to bank financing. Acceleration in private fixed capital formation is expected particularly in the automotive sector (inter alia, the announced investment in Slovakia and Hungary), which seems to be the greatest beneficiary of the growing demand from the euro area and its exports markets.

The major risks to the recovery are associated with the possible exports slowdown. The limitation of the free movement of goods inside the Schengen area, as a potential consequence of the migration crisis and terrorist attacks, may have an adverse effect on exports and manufacturing production in the CEE region. The Czech Republic,

Slovakia and Hungary, which are both the most trade-open and the most strongly involved in the European production chains economies, may be the most significantly affected. In the case of these three economies, the emergence of adverse consequences of the "emissions scandal" is also a non-negligible risk. Manufacturing plants owned by the Volkswagen group in the Czech Republic, Slovakia and Hungary are the largest enterprises operating in these countries (see Chapter on *Consequences of the Volkswagen excessive nitrogen oxide emission scandal*). The continuing and deepening recession in Russia resulting from the weakening economic situation in commodity markets seems to pose an additional threat to the Baltic states. These economies may also suffer as a result of loss of exports competitiveness in connection with the rapidly growing labour costs, clearly exceeding the productivity growth (Figure1.27).

Figure1.27. Nominal unit labour costs in 2015 Q3 (In %, y/y)



Source: Eurostat

*2015 Q1

Consequences of the Volkswagen excessive nitrogen oxide emission scandal[2]

Summary

Since 2014, the Volkswagen AG group has been the biggest car manufacturer worldwide (10 million cars, i.e. 11% of global production). Its subsidiaries in Germany, Spain and some CEE states belong to the largest private employers in those countries, responsible for the substantial part of industrial output and exports. In September 2015 it was made public that approximately 11 million diesel-powered cars had software installed which distorted the value of the emissions of harmful substances. Volkswagen's problems may reduce the economic growth rate in the aforementioned countries. The objective of the analysis is to assess the potential impact of the scandal on the operations of the corporation and on economic growth in the EU countries. The company's financial situation seems to be strong enough to cover expenses arising from potential fines imposed by regulators, civil claims and costs of vehicle repairs. The decline in the market share of Volkswagen AG group may have a greater impact on the real economy. Still, although no significatnt EU-wide impact on GDP, investment and employment is expected due to substitution effects, the effect may be clearly negative for Hungary, Slovakia and the Czech Republic. According to the EI NBP estimates, among the countries where Volkswagen AG production is located, the least significant impact of the scandal outbreak on economic growth should be expected in Poland. Even a very strong decline in the sales of Volkswagen engines and vehicles produced in Poland would reduce the annual GDP growth by less than 0.1 percentage points.

Introduction

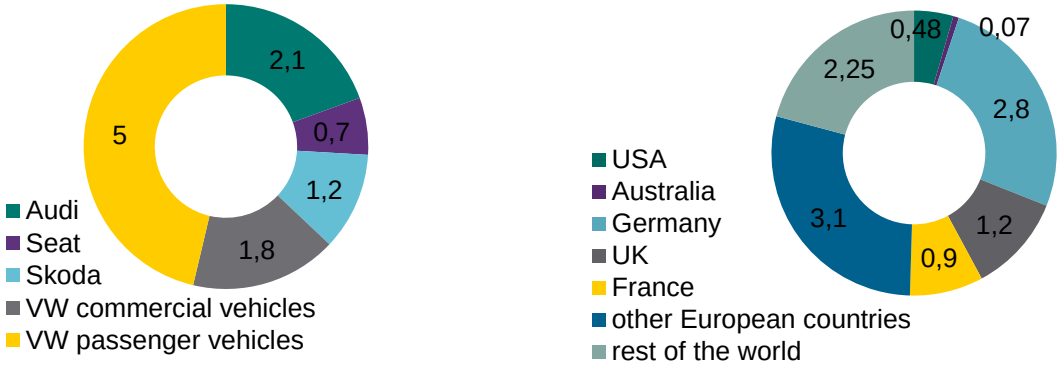
On 18 September 2015 the American Environmental Protection Agency (EPA) made public that the actual emission of nitrogen oxides (NO_x) in the diesel engine equipped vehicles of Volkswagen AG group deviated from laboratory test results, significantly exceeding the allowable standards for the United States[3]. Representatives of the Volkswagen AG group admitted that the software had also been installed in cars destined for the European market. It means that most probably those vehicles also did not meet the standards applicable in the EU. The problem refers to cars produced until the end of August 2015, not to currently manufactured vehicles[4]. The software falsifying emissions for the purposes of technical tests was installed in approximately 11 million passenger and commercial vehicles produced in 2008-2015 by VW, Audi, Skoda and Seat, mainly for the European market (Figure 2. 1).

[2] This chapter was completed on 26th October 2015.

[3] The difference between the NOx emission under road and laboratory conditions resulted from the installation of software controlling engine performance, detecting the fact of the test and reducing engine power and emission at that time. Accordingly, it was possible to obtain the approval in the USA for cars using the NOx trap (NOx Storage Catalyst Converter, NSC), i.e. the same exhaust gas treatment system as in the EU, where a less stringent Euro 5 Standard was binding from September 2009 to August 2015.

[4] In vehicles currently produced by the Volkswagen AG group meeting the new Euro 6 standard, a more effective SCR type exhaust gas treatment system (*Selective Catalytic Reduction*) is used.

Figure 2. 1 Number of cars where software falsifying emission tests was installed (million) according to manufacturer and sales location



Source: Volkswagen AG, press information

Impact on operations of the Volkswagen AG corporation

The first effect of the scandal disclosure is the need for the manufacturer to modify vehicles in order to comply with the environmental standards[5]. In case of some cars, such modifications will result in reduced comfort of car use. This refers mainly to premium class cars[6]. The Volkswagen AG group is currently working on the remedying plan and no details of it has been disclosed to the public. The provision of EUR 6.5 billion for costs of repairs was put aside. The preliminary estimate of EI NBP indicates that the total cost of vehicles' modification may reach EUR 11 billion[7]. The modification process of the vehicles in the US will start at the beginning of 2016 whereas in Europe in September 2016.

The company could face high financial fines and private claims. The maximum amount of fines which may be imposed by the American regulator is estimated at approximately EUR 16 billion, and in the case of the Australian regulator – at approximately EUR 6.7 billion. Decisions of national regulators from the EU countries, where the majority of vehicles with excessive NO_x emission were supplied will be of key importance. However, in view of the still unexplained exceeding of the Euro 5 standard and the high importance of the corporation for some EU countries, the total amount of fines should be moderate. Costs of private claims due to loss of health and life as well as the decline in the cars' value should be added to fines imposed by regulators. The most probable solution is an arrangement where the payment of state fines and private claims will be divided into instalments repayable over several or even several dozen years.

[5] According to the most probable scenario, in the majority of cases, the corporation will decide to replace the engine controlling software. However, in some premium models the modification of equipment will be necessary.

[6] Following the change of the software, slight reduction in vehicle performance or increase in combustion is probable, whereas in cars where the SCR system is to be installed, regular "refuelling" with the AdBlue liquid (aqueous urea solution) will be necessary.

[7] The cost of software replacement should not exceed several dozen euros, however, according to experts' opinion, the replacement of the NOx Storage Catalyst Converter by the SCR type exhaust gas treatment system in a finished car may reach approximately three thousand euros (in countries with high labour costs).

In the short run, a decline in sales is anticipated due to reputational damage and the temporary ban on sales and imports of selected diesel-powered models introduced by successive countries. Such restrictions have been so far introduced by Belgium, the Netherlands, Spain, Switzerland, Romania, the United Kingdom and Italy. At that point, it should be stressed that the ban on sales refers only to existing vehicles, not to the currently produced ones. The number of cars with EA189 engine produced and not registered so far amounts to 180 thousand, which makes for 3% of the overall company's stocks. Most probably, after the modifications, those vehicles will be sold at a considerable discount.

The net profit of the VW, including the reserves, covers the costs of repairs and modification in 2016-2017. If the fines and damages are to be divided for a period of 10 years, it will also be possible to pay them using current profits, assuming costs rationalization.. The authorities of the company announced a review and reduction of expenditure, including capex, in the forthcoming years. Analysts indicate that there is significant room for cutting the operating costs. VW currently employs approximately 1/3 employees more than Toyota (producing a similar number of vehicles) and its research and development expenditure far exceeds those of their competitors[8]. However, at the same time, no specific plans related to redundancy or suspension of investment projects have been announced so far. According to the statements of the company authorities, jobs in the main factory in Wolfsburg and the investment plan in Spain, worth over EUR 4 billion, are not at risk. Audi confirmed the former production and investment plans in Hungary. Therefore, plants focusing on production for the American market, located in Mexico and the US, currently seem to be first targets for redundancies and investment cuts.

Impact on economic growth in selected EU countries

In the next few years, the decline in demand for Volkswagen AG group cars powered by diesel engines and , in consequence, lower share seem to be the biggest threat to the real economy. Due to reduced comfort of modified vehicles' use, some owners of these cars may turn into VW competitors or purchase vehicles powered by gasoline or hybrid engines as their next cars. Considering the production time of cars with EA 189 engines and assuming an 8-year cycle of cars replacement in Europe and a 6-year cycle in the US, it is possible that a weaker demand for cars of the Volkswagen AG group will continue at least until the end of the decade. On the other hand, in the short run, i.e. before the beginning of repairs, some temporary decline in the Volkswagen cars sales is probable due to reputational damage and the bans on some car models.

About 90% of cars sold in Europe is also produced in Europe. The potential decline in the sales of VW, Audi, Skoda and Seat should though be compensated by the growth in the sales of other European manufacturers. However, in the American market, where the scandal was detected and premium class cars accounted for significant share of sales, this replacement rate is lower. In Europe,

[8] According to the PWC data (*Innovation 1000 Study*), the Volkswagen AG group spent USD 13.5 billion on research and development in 2013 (5% of the revenue), i.e. the highest amount worldwide. By comparison, Toyota's R&D expenditure amounted to USD 9.1 billion (3.9% of the revenue), and that of General Motors – to USD 7.2 billion (4.6% of the revenue).

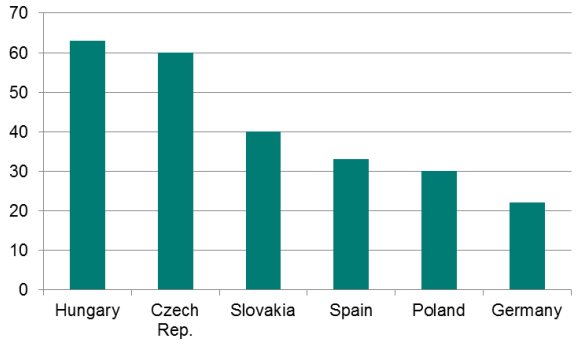
potential beneficiaries of the scandal may include, besides other German carmakers, mainly the manufacturers from France and the United Kingdom. In the US, the scandal creates opportunities for American, Japanese and, to a lesser extent, other German manufacturers of premium class cars.

The effects of the scandal outbreak on the growth of individual economies depend mainly on:

- the Volkswagen AG group's importance in the domestic production of cars and engines,
- the share of diesel car and engine production in exports and GDP,
- the main directions of exports and the segment of cars produced by Volkswagen AG.

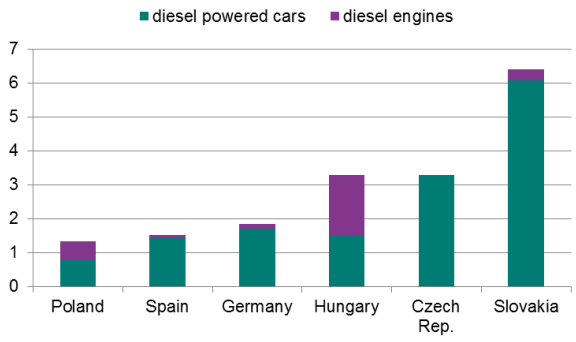
Production of Volkswagen AG and its subsidiaries in Europe is concentrated in Germany, Spain and in Visehrad Group countries. In this context, the Czech Republic and Hungary, where Skoda and Audi, respectively, account for over a half of the total car output, are in a particularly unfavourable situation. The corporation also has a high share in production in Slovakia and Spain, whereas in Poland and Germany the structure of the output is more diversified (Figure 2. 2). Moreover, the share of exports of cars with a diesel engine and the engines themselves in GDP indicates the highest risk for Slovakia, the Czech Republic and Hungary (Figure 2. 3). Production in Poland is concentrated on the segment of inexpensive commercial vehicles, for which the comfort of use is of lesser importance. On the other hand, in Hungary and Slovakia premium class cars produced for the American market have a significant share in the production of vehicles.

Figure 2. 2. Share of Volkswagen AG group in production of cars in selected EU countries (approximate data)



Source: Manufacturers' data

Figure 2. 3. Share of exports of diesel powered cars (excluding trucks) and diesel engines in GDP in selected EU countries (average, 2010-2014)



Source: Eurostat

EI NBP estimates indicate that the decline in demand for Volkswagen AG group cars would translate, to the largest extent, into slower growth in Hungary, Slovakia and in the Czech Republic. Those estimates are based on the assumption that demand for premium class diesel engine powered cars produced by Volkswagen AG will fall by 20% in 2016-2017 and by 10% in 2018. A fall in demand for other cars powered by diesel engines will amount to 10% in 2016-2018. The aggregate impact of those shocks on the GDP growth was calculated by approximating the value of diesel cars and engines' production using the data related to their exports and the data on the production of individual

models in 2014[9]. The results suggest that the GDP growth rate in Hungary and Slovakia could be lower by 0.3 percentage points in 2016 and by 0.2 percentage points in 2017-2018, in the Czech Republic – by 0.2 percentage points in 2016 and by 0.1 percentage points in 2017-2018[10]. In Germany and Spain the foreseen impact should be clearly lower, to amount to approximately 0.05-0.1 percentage points per annum in 2016-2018.

Among the EU countries where the Volkswagen AG production is located, the least significant impact of the emission scandal on economic growth should be expected in Poland. Taking into account the aforementioned assumptions, the decline in demand for Volkswagen vehicles produced in Poland by 10% per annum in 2016-2018 would reduce the GDP growth rate by approximately 0.04 percentage points per annum.

[9] Due to the lack of data, an equal share of the value added in all car models was assumed.

[10] The preliminary estimates of the Hungarian government indicate a potential decline in GDP growth by 0.3-0.5 percentage points in 2016, and those provided by the Czech government – an impact in the range of 0.1-0.2 percentage points in 2016.

European countries' experience with the build-up of forex loans and approaches to solving the problem

Summary

Foreign currency loans became common in the developing European countries at the beginning of the 21st century. Their popularity resulted from their increased supply related to the expansion of Western European banks into new markets as well as their lower cost compared to loans denominated in domestic currency. However, forex loans generate threats to macroeconomic stability through for example a decline in the effectiveness of domestic monetary policy, transfer of exchange rate risk to banks' clients and, as a consequence, an increase in credit risk for banks. In order to reduce the scale of the problem associated with forex loans, especially in times when domestic currencies depreciated against the most popular currencies in which the loans were denominated (mainly the CHF), some countries decided to undertake mitigating measures. The most extensive action was taken in Hungary, where forex lending to households was practically eliminated in 2010-2015. Some mitigating measures were also taken by the authorities of Croatia, Ukraine and Montenegro.

Introduction

The objective of this report is to present the problem of household foreign currency loans (foreign currency loans) in the European countries and attempts aimed at its resolving. In the first part, reasons for the growth in foreign currency bank lending are explained, followed by the description of challenges associated with this type of loans. In the final part, countries' measures aimed at reducing the scale of the problem associated with foreign currency loans and their consequences are described.

Characteristics of foreign currency loans and reasons for their popularity in the European countries

Foreign currency loans – i.e. loans granted in currencies other than the domestic currency, or granted in the domestic currency but indexed to foreign currencies – **appeared in the developing European countries at the beginning of the 2000s**[11]. In some countries, they became more popular than domestic currency denominated loans. Foreign currency loans were the most popular in the Baltic states, Balkan states and in Hungary, where they amounted to 60-90% of the total loans. Foreign currency loans were mainly loans for households which did not have adequate collaterals in the form of income in foreign currency. They predominantly included housing loans, however, in the Baltic states and in Hungary also consumer loans. Base currencies of such loans differed across countries. In the Baltic and Balkan states, Romania and Iceland, euro denominated loans were most popular. In Russia, Tur-

[11] Loans denominated in foreign currencies for the non-financial sector have been present in developed countries at least since the 1980s. At that time they appeared in Asian countries (loans in dollars) and in Australia (loans in the Swiss franc), as well as in some European countries (in Sweden, where they are now forbidden, and subsequently in the 1990s in Austria, Cyprus and Greece, but also in the United Kingdom). Nevertheless, in the majority of countries activities associated with foreign currency loans constituted a minor part of the financial sector and the economy.

key and Ukraine – those denominated in the US dollar, whereas in Poland and in Hungary – in the Swiss franc (Table 3.1).

Growing popularity of foreign currency loans originated from both the supply side and the demand side factors. The first of them was the **liberalisation of capital flows** associated with the accession of the CEE countries to the European Union, which facilitated the expansion of foreign, mainly European banking groups into those markets. The opening to the CEE markets created new opportunities for foreign banking groups. Households (and enterprises) were relatively unindebted and the rates of return were definitely higher than in developed countries. The global liberalisation of capital flows enabled domestic banks access to foreign currency used for local credit expansion, as well as access to transactions hedging against currency risk, also in case of non-European Union member states. In addition, in some of those countries, it was possible to finance foreign currency loans through deposits in foreign currency. This concerned dollarized Eastern European economies (Russia, Ukraine) and Turkey, as well as strongly euroized Southern European economies (Croatia, Serbia).

Table 3.1. Scale of foreign currency loan problem in selected countries and their characteristics

	PL	HU	RO	BG	HR	EE	LT	LV	SI	AT	KY	GR	IS	RS	RU	UA	TK
Share of foreign currency loans in 2010 (% of total corporate and household loans)	22.7	67.5	61.9	61.3	74.6	89.9	72.8	92.3	4.9	38.8	23.0	9.1	40.0	69.5	11.8	60.2	59.5
Share of foreign currency loans at present (% of total corporate and household loans)	18.2	1.8	51.2	57.0	69.3	1.5	0.9	5.0	3.6	27.8	24.1	8.9	20.2	70.8	10.2	58.9	42.6
Leading currency of the loan	CHF	CHF	EUR	EUR	EUR	EUR	EUR	EUR	CHF	CHF	USD	no data	EUR	EUR	USD	USD	USD
Leading sector to which foreign currency loans were granted	HH	HH	E	E	HH	HH	HH	HH	HH	HH	no data	E	HH	HH	E	HH	E
Leading purpose for which foreign currency loans were granted	H	H	I	no data	H	H	H	H	H	H	no data	no data	H	H	O	C	I

Source: own study based on data of central banks

Comments: H – housing loans, C – consumer loans, I – investment loans, O – operating loans, HH – households, E – enterprises
In the case of Croatia and Serbia, also loans classified as loans denominated in domestic currency indexed to foreign currency.
For Iceland – estimated data assuming the lack of changes in loan currency structure; for Hungary it has been assumed that the decline in housing loans without mortgage collateral at the end of 2011 resulted only from their currency conversion; for Serbia it has been assumed that the distribution of loans in foreign currency is the same as in the case of the overall loans.

Lower costs of foreign currency loan were also an important issue. They resulted from the substantial disparity between interest rates of loans denominated in the domestic and in foreign currencies. Long-term depreciation trend of some developed countries' currencies (US dollar, Swiss franc, Japanese yen), and in the case of countries of floating exchange rate regimes also the prospects of further appreciation of local currency, associated with the convergence process, additionally contributed to the growth of demand for foreign currency loans.

Challenges associated with foreign currency loans

Foreign currency loans are associated with a number of risks for the financial and macroeconomic stability as well as challenges for the domestic economic policy.

Foreign currency loans contribute to the increase in magnitude of the business cycle fluctuations. Before the global financial crisis the appreciation of domestic currencies arising from economic recovery (and the catch-up process) and the considerable disparity in interest rates triggered the additional property effect for borrowers in foreign currency and, as a consequence –- the growth in the demand for foreign currency loans contributing to the increase in the aggregated demand. On the other hand, the depreciation of domestic currencies after the global financial crisis and the decrease in the scale of foreign currency financing by foreign banks led to the reduction of bank lending and the growth in foreign currency denominated debt and in the result to the decrease of the aggregated demand[12,13].

Foreign currency loans may contribute to the reduction of domestic monetary policy effectiveness, by weakening the monetary policy transmission mechanism. Foreign exchange loans limit the effectiveness of domestic interest rate setting policy. Raising interest rates increases the relative attractiveness of such loans against loans denominated in domestic currency. Thus, it does not result in a reduction but even in an increase of lending and, as a consequence, strengthening of aggregated demand and mounting inflation pressure. Moreover, a central bank in a country where the share of foreign currency loans is significant, is also less willing to cut interest rates since this may result in the depreciation pressure on the exchange rate. It may lead to the growth in the servicing costs of foreign currency loans and in a consequence resulted in a decline in domestic consumption and investment, as well as in an increased risk of financial sector instability.

The significant share of foreign currency loans in lending poses a challenge to the financial system stability. Majority of foreign currency loans were granted to borrowers, especially households, who did not have the adequate collateral in the form of income derived from work or transfers denominated in the loan currency.

Banks also bear currency risk and interest rate risk associated with foreign currency loans. However, they are hedged against such risks. They have access to currency swaps, CIRS transactions and short-term (sometimes even single day) deposits from parent banks. However, it does not mean that the protection is permanent. In case of market sentiment deterioration, the liquidity in the swap market may significantly decrease, which in case of the lack of access to central bank instruments results in the growing costs of acquiring foreign currency financing and hedging, or. even makes it impossible. On the other hand, the financing of long-term mortgage loans by short-term deposits from parent banks results in the strong maturity assets-liabilities mismatch. Moreover, during the risk-off period

[12] Moreover, the macroeconomic risk is generated not only by foreign currency loans already incurred but also by incurring new foreign currency loans. A significant growth in new foreign currency loans may result in the appreciation of the real exchange rate of the domestic currency, which may enhance the scale of external imbalances. In the same way, a sudden reduction of lending in foreign currency results in additional depreciation pressure on the foreign currency exchange rate during recession.

[13] Moreover, studies with the use of the DSGE model for Poland indicate that foreign currency loans may negatively affect prosperity only if external turbulences translating into depreciation of domestic currency represent the dominating source of shocks in the economy. On the other hand, when domestic turbulences represent the dominating source of shocks in the economy, the fact of existence of foreign currency loans may contribute to the increase in prosperity (see more in: Brzoza-Brzezina et al. 2014).

or deterioration of parent banks' situation, domestic banks are exposed to the risk of loss of financing and hedging of their foreign currency loans.

In addition, credit risk for banks increase (failure of debt repayment by the borrower) **which in the case of foreign currency loans depends both on the borrower's income and the level of interest rates abroad as well as on foreign currency exchange rate fluctuations**. In the case of foreign currency loans there are additional factors, as compared to domestic currency loans. They may materialise when local currencies depreciate:

- growth in the level of loan instalments expressed in domestic currency and, consequently, increase in its non-repayment risk,
- growth in debt expressed in domestic currency, in relation to the collateral (higher LtV ratio).

Potential effects of systemic solutions to the problem of foreign currency loans

Conversion of currency loans has a multi-directional impact on the economy of countries where it took place. Its magnitude depends on solutions adopted in individual countries. Nevertheless, it is possible to identify several common transmission channels of loan conversion onto financial sectors and real economy.

Conversion of foreign currency loans may have an impact on a higher consumption. It could, however, be reduced by the uncertainty about the future level of instalments as well as the real exchange rate fluctuations, especially in case of fixed interest loans. Nevertheless, the magnitude of consumer demand increase depends on the terms of loan conversion. When the conversion rate is below the market exchange rate[14], the value of liability decreases. Consequently, loan instalments may decrease, unless the growth in interest rate compensates that effect. On the other hand, if the conversion is carried out at the market rate, or even a preferential rate, however, stronger than the rate applicable on the day of loan was taken, and clients are reimbursed for losses arising from exchange differentials, the effect of loan currency conversion will most probably be less significant. The reason is that the value of the liability will not decrease and, at the same time, its interest rate may be higher in the future as compared to the interest rate of the foreign currency loan. This results in a higher level of loan instalments and a deterioration of household's balance sheet. As a consequence, although the reimbursement for losses arising from exchange rate differentials may have an impact on higher consumption in the short term, this effect may be reduced over time by the relatively higher level of instalments[15]. Moreover, the growth in consumption may be anyway limited by slower lending. In the case

[14] In the majority of countries analysed households incurred loans at a definitely higher rate than the rate observed in 2014-2015.

[15] It seems that within a short period currency conversion of loans will have the highest impact on consumption growth in Hungary (due to the accompanying plan of decreasing burdens for borrowers). In Croatia and Montenegro, the cumulated effect of currency conversion in a long and medium term may be higher than in Hungary (particularly due to the fact that the loans are converted into loans denominated in euro, which bear a lower interest rate than loans denominated in the currencies of developing countries). In the case of Ukraine the consumption effect will depend on the level of interest rates and the exchange rate of hryvnia on the conversion day.

of imposing foreign currency conversion costs on commercial banks and deterioration of their profits, they may be less willing to grant new loans, focusing on capital reserves recovery instead.

The growth of consumer demand as a result of foreign currency loan conversion may be accompanied by a reduced public spending, resulting from a decline in banks' tax revenue. Losses of the banking sector associated with conversion comprise covering abovementioned exchange rate differentials and, additionally, costs of the hedge. However, in relation to individual countries' budgets revenues, the scale of losses should not be significant (0.8-1.2% in Croatia and Hungary).

Conversion of foreign currency loans strengthens of the monetary policy transmission mechanism. Their elimination increases the transmission mechanism of the central bank's interest rate on lending[16].

Conversion of foreign currency loans may result in a reduction of official foreign exchange assets and decrease in their adequacy level. It may result directly from a decision to use reserves to cover banks' demand for foreign currency as they close open positions (Hungary) or from the need for intervention in case that increased demand for foreign currency lead to excessive foreign currency depreciation, particularly if the exchange rate stabilisation is a significant element of the monetary policy strategy in a given country (Croatia, Ukraine).

Banking sector losses in the, lower general government revenues, regulatory changes and reduced adequacy of foreign-exchange reserves may result in the increase of reputational risk of the country. This may lead to the currency depreciation, reduced inflow of direct and portfolio investment and a decline in the prices of Treasury bonds and shares. The fall in share prices may be deepened by losses of the banking sector, whereas the decline in bond prices by closing positions hedging against exchange rate risk[17].

On the other hand, conversion of foreign currency loans can lead to a reduction of external debt, which may have an impact on increasing a country's credibility. It is associated with a decline in domestic banks' demand for foreign financing. For example, an earlier decision on the conversion of foreign currency loans could have mitigated the depreciation of the Hungarian forint after the SNB's decision on abandoning the exchange rate floor. Empirical data indicate that the influence of loans conversion on the prices of financial assets is limited to the moment of announcing the intention to introduce such measures and its legislative process. The strongest impact is noted for the stock market. However, it should be stressed that conversion has been conducted so far in countries with the fixed rate regime

[16] In addition, elimination of foreign currency loans may increase the level of central bank's control over the currency exchange rate since it will be shaped to a lesser extent by transactions associated with the financing of foreign currency loans. However, the presence of transactions hedging against the foreign exchange risk, used by banks in the period when foreign currency loan granting was possible, shall limit the strength of this channel of impact.

[17] This results from the currency swap mechanism used in hedging transactions. Foreign currency funds of a given country received by banks in exchange for foreign currency are usually allocated for investment in domestic Treasury bonds. Consequently, closing currency swaps may cause a reduction of foreign banks' demand for domestic Treasury bonds, which is conducive to a decline in the prices of bonds and a growth of their yield.

(Croatia) or with the use of complementary tools aimed at limiting the scale of foreign currency depreciation and increase in Treasury bond yields (Hungary).

Examples of solutions aimed at mitigation of the problem of existing foreign currency loans for households

In order to counteract risks arising from foreign currency loans which increased during the global financial crisis, some countries, particularly those with the floating exchange rate, undertook a number of measures, initially only regulatory, aimed at reducing the scale of granting new foreign currency loans. The process culminated in 2009-2011. The measures comprised both those in the scope of monetary policy and those in the area of financial supervision regulations (Table 2). The majority of those measures were oriented towards reducing foreign currency lending through creating additional costs for banks, associated with maintaining assets and liabilities in foreign currency in their balance sheets.

Initially, in many cases, those measures proved ineffective. The main reason was the continuing difference in the interest rate of loans denominated in domestic currency and in foreign currency. In some countries, lending in foreign currency slowed down only after the introduction of the requirement related to income in loan currency (Hungary, Poland), or even a total ban on granting such loans (Ukraine, Iceland[18,19]).

In the consecutive years, the application of regulatory tools decreased, although some countries have reached for systemic tools with the aim to reduce the level of liabilities in foreign currencies. The introduction of the exchange rate floor by the SNB, which significantly limited the risk of substantial depreciation of domestic currency against the Swiss franc, reduced the costs of servicing for loans denominated in this currency. As a consequence – in view of the limitation or total elimination of new foreign currency loan – the introduction of new solutions was not necessary. **Hungary was an exception**, where the conversion of almost all foreign currency loans took place already in 2014, as a part of the governmental strategy aiming at reducing the country's foreign debt and strengthening the domestic financial market.

Besides Hungary, systemic solutions limiting the level of foreign currency loans in banks' portfolios were introduced only after the decision of the SNB to abandon the exchange rate floor. The strong appreciation of the Swiss franc raised concerns related to potential losses of banks and even to their insolvency in case of problems with loan repayment by the majority of borrowers. The systemic solutions adopted by individual governments were aimed at reducing the foreign currency loan level

[18] In Iceland the Supreme Court recognised foreign currency loans as illegal, which resulted in the cancellation of their major part and currency conversion of the remaining loans into the domestic currency, consequently reducing their level significantly.

[19] Introduction of diversification between the minimum reserve rate on liabilities in domestic currency and foreign currency limited the growth scale of foreign currency loans in Romania and Croatia, however, in a longer term, domestic loans (mainly for enterprises) were replaced by loans acquired directly from parent banks, resulting in the continued growth of liabilities of the non-financial sector in foreign currencies.

through their obligatory conversion or decreasing their servicing costs (stabilisation of the exchange rate or freezing of loan repayment rate). The systemic solutions consisting in the currency conversion of foreign currency loans were highly diversified in terms of cost distribution, conversion rate and loan interest rate after conversion, as well as presence of complementary measures of the central bank aimed at limiting imbalances arising from currency conversion.

Examples of systemic solutions to the foreign currency loan problem are presented more comprehensively below.

1. Hungary

Following the EU accession, the share of foreign currency loans in the portfolio of banks operating in Hungary was increasing rapidly. Whereas these currency loans were hardly noticeable in 2004, its share exceeded even 70% at the beginning of 2009. The main currency in which foreign currency loans to households were granted was the Swiss franc (Figure 3. 1). However, the concentration of foreign currency loans did not only refer to the mortgage loan sector, but also to other loans, including consumer loans (Figure 3. 2). Another characteristic feature of Hungarian foreign currency loans was the method of applying the interest rate, which was determined by banks on an arbitrary basis and was not in any way indexed to market interest rates.

Figure 3. 1. Loans for households in Hungary according to currency (HUF billion)

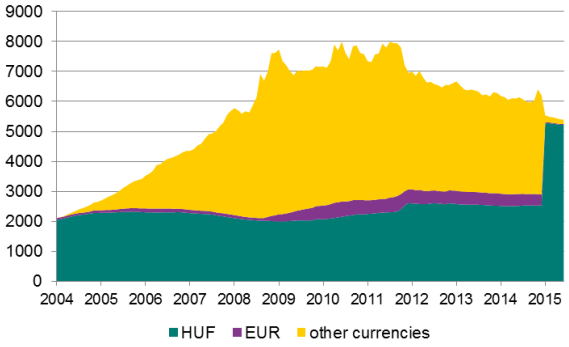
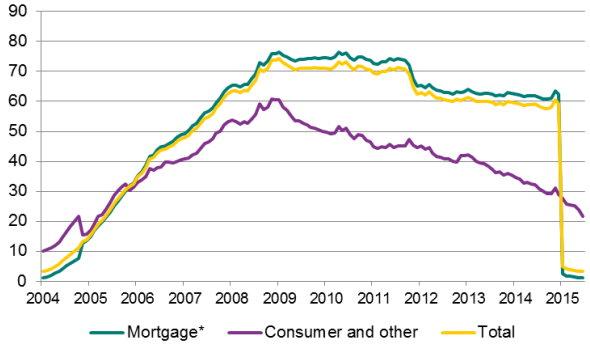


Figure 3. 2. Foreign currency loans according to their purpose (share, percentage)



Source: MNB

Note: Mortgage loans include housing and non-housing mortgage loans

In 2010-2015 the government of Hungary together with the National Bank of Hungary (MNB) introduced a number of regulations which have consequently led to the elimination of the foreign currency loan problem for households in this country.

The first stage was the limitation of supply of new loans. The Parliament of Hungary adopted the decision preventing drawing new foreign currency loans in August 2010. Such loans could be granted

only to persons who were able to prove regular income in the currency of the loan which, additionally, exceeded 15 times the value of the minimum wage in Hungary.

The next step as part of the support for households indebted in foreign currency was the Act of September 2011. The Act enabled them to repay the whole remaining value of their mortgage foreign currency loans i at a preferential exchange rate, approximately 25% lower than the market rate (180 forints for the Swiss franc, 250 forints for euro and 2 forints for the Japanese yen), provided that at the moment of loan drawing such exchange rate was not higher than that defined in the Act. The earlier repayment of foreign currency debt could be refinanced by a forint loan. Households could use this possibility until the end of 2012 Q1. Approximately 180 thousand borrowers decided on earlier repayment, which represented ca. 25% of the total nominal value of foreign currency loans (HUF 1.45 trillion out of HUF 5.6 trillion).

In 2014, two consecutive Acts concerning households' foreign currency debt in due to housing loans appeared. In July 2014 the Parliament of Hungary passed the Act amending the terms and conditions of existing foreign currency loan contracts. The authorities of Hungary recognised that banks had used unfair and unjustifiably high interest rates on foreign currency loans (determined by management boards of banks and not linked with interest rates on the interbank market) and exchange rate spreads unfavourable to clients. As a consequence, banks were committed to reimburse clients for the cumulated value of these differences for 2004-2014, through reducing the value of existing debt.

In November 2014 the Parliament of Hungary adopted the Act aimed at the full elimination of households foreign currency mortgage loans. It assumed almost obligatory conversion of loans from foreign currencies into forints, at a market rate as at November 7, 2014[20]. The actual conversion started on February 1, 2015. The method of interest rate calculation was also changed. A floating interest rate was introduced. It was linked to a 3-month BUBOR rate, with a fixed margin ranging from 1.0-4.5 percentage points (1.0-6.5 percentage points for mortgage loans for non-housing purposes), although maintaining a loan bearing a fixed interest rate was also possible. The value of the margin or the fixed interest rate was to remain unchangeable over a period of 5 years (the remaining length of a loan over 16 years), 4 years (6-16 years) or 3 years (3-9 years). The aforementioned value of the too high interest rates and the unfavourable exchange rate spreads was deducted from the newly formed loan contracts.

In September 2015 the authorities in Hungary decided to resolve the overall problem of foreign currency loans for households by conversion of remaining loans (e.g. for car purchase and consumption loans). Such conversion took place on December 1, 2015. In the case of loans denominated in the Swiss franc the conversion was performed at a rate approximately 10% lower than the market

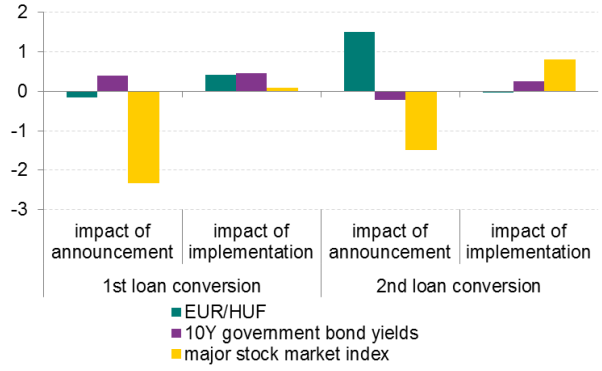
[20] In order to maintain a foreign currency loan, the borrower had to fulfil one of the following conditions: (1) the borrower gains regular income in foreign currency in the amount ensuring loan instalment repayment, (2) the loan instalment shall not exceed 10% of the income, (3) the loan agreement expires in 2015, (4) the interest rate on the loan after the changes introduced by the MNB is higher than before 19 July 2014.

rate, in the case of loans in Euro – at a rate close to the market rate. Costs associated with this operation were incurred by banks, although they may deduct half of them from the transaction tax due.

The abovementioned measures implemented by the Hungarian government were accompanied by the MNB programmes which purpose was to facilitate loan currency conversion and to mitigate its negative impact on the exchange rate and the Treasury securities market.

In order to ensure banks' access to foreign currency enabling them to close open currency positions, the MNB decided to provide to the Hungarian banking system the foreign currency needed to phase out household foreign currency loans through FX swap and CIRS transactions, both during the first and the second conversion. During the first conversion, transactions with the MNB satisfied c.a. 60% of banks' demand for foreign currency. The remaining 40% was provided by foreign parent banks. During the second conversion the MNB made the major part (25%) of its foreign currency reserves available, however, the demand for this type of operations proved lower than expected[21], and its substantial part (1/3) was covered from other sources, inter alia, from parent banks funds. The second conversion did not result in any significant costs for the banking sector since it was conducted at the market rate and it was not associated with the reimbursement of costs for households.

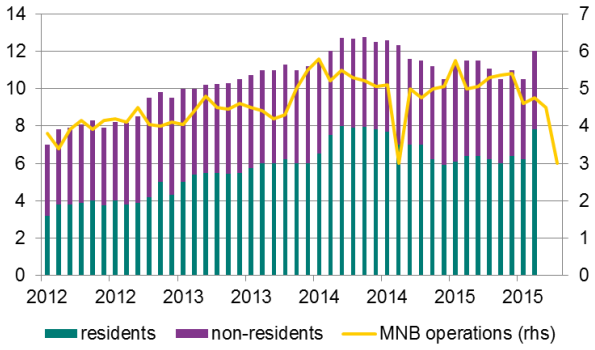
Figure 3. 3. Impact of conversion of foreign currency loans in Hungary on the foreign currency market (decline means depreciation), stock market (in percentage) and bond market (in percentage points)



Source: NBP own calculations based on Bloomberg data

Comment: based on an event-study around the main events associated with currency conversion of foreign currency loans – announcement of changes, submission to the Parliament, entry into force and implementation, 2-days window.

Figure 3. 4. Exposure of non-residents and residents in the Hungarian Treasury securities market and use of the MNB instruments (HUF trillion)



Source: NBP own calculations based on AKK data

Comments: August 2015 – EI estimates based on AKK data.

[21] The MNB made EUR 9 billion available, including EUR 7.83 billion purchased by banks through auctions.

In order to mitigate the impact of conversion on the Treasury bond yields, the MNB launched a programme supporting the domestic demand for those financial instruments (the s*elf-financing programme*). Under this programme, the MNB conducts activities limiting the use of own instruments which, in combination with complementary measures, may lead to growth in domestic demand for Hungarian Treasury bonds. Within the framework, MNB offers interest rate swap to banks, enabling the exchange of deposits in the central bank to Treasury bonds with the maturity of up to 10 years. Moreover, the MNB extended the maturity of the main monetary policy instrument to the period corresponding to the shortest maturity of Hungarian bonds (3 months), as well as reduced the rate of minimum reserves. The activities of the MNB could limit the scale of forint depreciation and growth of Treasury bonds yield arising from loan currency conversion, which was insignificant and observed only during the work on the solutions (Figure 3. 3). MNB's activities helped to balance the decline of non-residents' exposure in the Hungarian bond market, which decreased by 15% in 2015 (Figure 3. 4).

According to MNB's estimates, the costs of the first stage of housing foreign currency loans conversion amounted to approximately HUF 300 billion, i.e. 10% of banking sector equity. However, a part of those costs (1/3) could be deducted from the financial transaction tax applicable since 2010. The costs incurred by banks due to conversion had an impact on the significant deterioration of their financial result in 2011 and led to a large decline in stock prices. In some cases (inter alia, Raiffeisen Bank International) capital injection by their parent companies was necessary. **According to the available estimates, the cost of reimbursement of clients for unjustly high interest rates and exchange rate swaps amounted to HUF 600 billion.** Losses incurred by banks due to those operations will have an adverse effect on general government balance. It is estimated that the general government revenues in 2014 may have decreased by 0.8% due to lower revenues from CIT.

2. Croatia

In January 2015, as a response to the SNB's decision and strong appreciation of the Swiss franc against the Croatian kuna, the government of Croatia decided to freeze the CHF/HRK exchange rate for the needs of repayment of loans at a level before the SNB's decision, i.e. approximately 20% lower than the market rate at that time. This decision was important for mortgage borrowers, as 35% of housing loans in Croatia were indexed to the Swiss franc. In the case of consumer loans the share of loans denominated in the Swiss currency was insignificant (Figure 3. 5 and Figure 3. 6). According to the estimates of the Croatian National Bank (HNB), the cost of this operation for the banking sector would amount to HRK 400 million. The freezing of the exchange rate was to be temporary, applicable over a period of 12 months, which would give time for creating a systemic solution for Swiss franc loans.

Figure 3. 5. Housing loans for households in Croatia according to currency (HRK million)

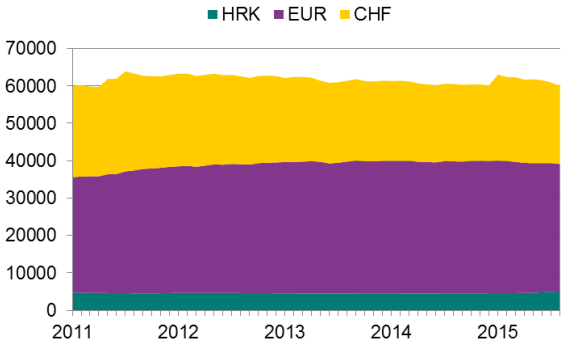
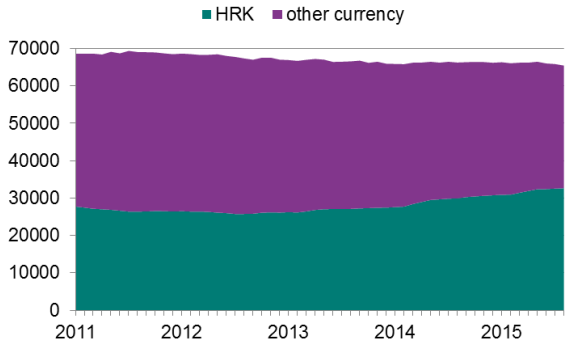


Figure 3. 6. Consumer and other loans for households in Croatia according to currency (HRK million)



Source: HNB

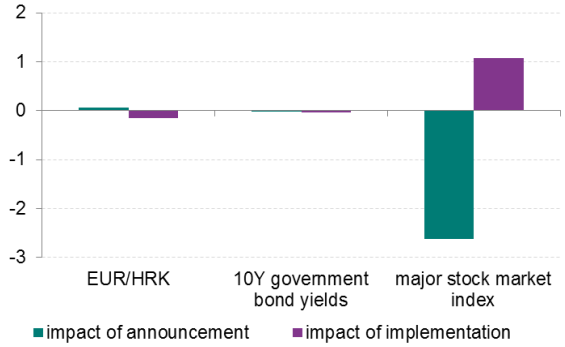
In September 2015 the Parliament adopted the Act converting loans Swiss franc denominated loans into euro loans[22]**.** The choice of the euro as the target currency was determined by the considerable euroization of this country (approximately 60% of deposits is denominated in the euro, and the major part of deposits in the domestic currency is also indexed to the euro) and *de facto* fixed exchange rate of kuna against the euro (accordingly, the exchange rate regime in Croatia is classified as the *crawling peg agreement*). As a consequence, the currency risk in the case of the euro denominated loans i is much lower in this country than in many other European countries and the need to finance such loans using external financing is lower.

The conversion is to be performed according to the exchange rate effective on the day of signing loan contract[23]**. The interest rate of the loan is to be changed into the interest rate applicable to euro denominated loans at that time.** A part of the loan repaid so far shall be also converted into the euro according to exchange rates as at the days of repayment of individual instalments. In connection with those arrangements, the schedule of repayments and the level of instalments paid by borrowers shall also change. In addition, if the value of instalments paid so far is higher than it would result from the new repayment schedule, such surplus shall be deducted from the amount of consecutive payments. Otherwise (in case of underpayment) such a difference will be settled between the client and the bank.

[22] In October 2015 three commercial banks appealed to the Croatian Constitutional Court for checking the legality of the Act.

[23] On the other hand, the instalments already repaid will be converted at a rate determined for persons repaying a loan in the euro as at the instalment repayment day.

Figure 3. 7. Impact of conversion of foreign currency loans in Croatia on the foreign currency market (decline means depreciation), stock market (in percentage) and bond market (in percentage points)



Source: NBP own calculations based on Bloomberg data

Comment: based on an event-study around the main events associated with currency conversion of foreign currency loans – announcement of changes, submission to the Parliament, entry into force and implementation, 2-days window.

The estimates of the Croatian government indicate that the total cost of the Swiss franc loans conversion will amount to HRK 6 billion. The HNB's estimates indicate a higher amount of HRK 8.52 billion (EUR 1.1 billion, i.e. the equivalent of a three-year profit of the banking sector in Croatia). The capital adequacy ratio for the banking sector may decline by 3.8 percentage points (from 23.5% to 19.7%), however, it will still be a level far exceeding the required minimum, which should not pose a threat to the stability of the banking sector. According to the NBP EI estimates, the decline in the profit of the banking sector may reduce the general government revenue in Croatia by 1.2%.

Similar to Hungary, the impact of currency conversion on the exchange rate and Treasury bonds yields was limited (Figure 3. 7)**.** In the case of the exchange rate it resulted from the Croatian currency exchange regime as well as from conversion from one foreign currency to another.

3. Ukraine

Foreign currency loans constituted the major part of loans for households (almost 60%) as early as in the middle of the first decade of the 21st century. In the consecutive years this share increased even more, to over 70% in 2009. The share of foreign currency loans grew rapidly both in the case of housing loans, reaching almost 90%, and consumption loans, with the share exceeding 60% in 2009 (Figure 3. 9). The US dollar was definitely the most popular lending currency. (Figure 3. 8). In 2006-2015 share of USD loans amounted to 95% of foreign currency loans in Ukraine.

The first attempt aimed at limiting the number of foreign currency loans in Ukraine was undertaken in 2009. It was the response to the strong depreciation of the Ukrainian hryvnia (UAH) as a result of the global crisis outbreak which led to the growth of instability of the banking sector. Ukrainian authorities prohibited banks from granting foreign currency loans to individuals, excluding loans for medical treatment or education abroad. As a consequence, the share of foreign currency loans for households was successively decreasing, to 33% at the end of 2013.[24]

[24] As a result of the strong UAH depreciation which occurred from the beginning of 2014, the share of foreign currency loans increased again to approximately 50%.

Figure 3. 8. Loans for households in Ukraine according to currency (UAH million)

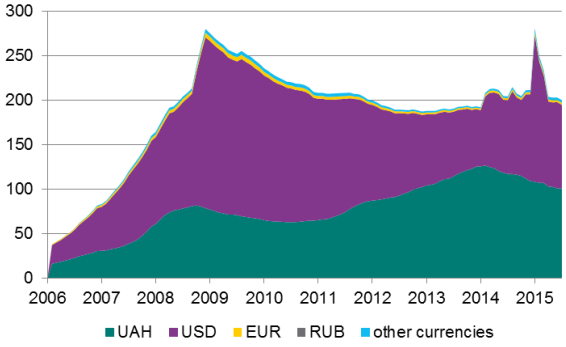
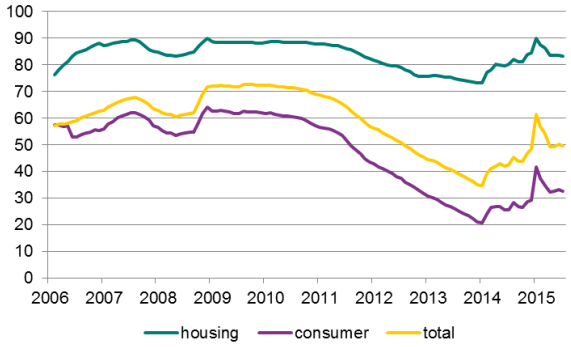


Figure 3. 9. Foreign currency loans according to their purpose (share in %)



Source: NBU

In July 2015 the Parliament of Ukraine passed an Act requiring banks to convert foreign exchange loans to loans in UAH at the exchange rate of their drawing. If the majority of such loan agreements was signed before 2009, when the UAH exchange rate against major currencies was definitely stronger (inter alia, the USD/UAH exchange rate amounted to 5.05 against 23 in December 2015), the value of the newly created liabilities would be over four-fold lower than before the conversion. Costs associated with the loss of assets value would be fully incurred by banks.

The National Bank of Ukraine (NBU) presented its critical opinion on the decision of the Parliament in an official statement. According to the NBU's estimates, the cost of conversion for the banking sector would amount to approximately UAH 100 billion. It would pose a serious threat to the stability of the financial sector in this country, especially during the period of elevated macroeconomic instability. At the same time, the NBU, in cooperation with the Independent Association of Banks of Ukraine and with the support of the IMF, is developing its own project on the restructuring of foreign currency loans, imposing fewer burdens on the banking sector.

The entry into force of the Act on foreign currency loan conversion in Ukraine is questionable. In December 2015 the President vetoed the Act and suggested its rejection.

4. Montenegro

In August 2015 the Parliament of Montenegro adopted an Act requiring banks to convert Swiss franc denominated loans into euro loans[25]. The conversion was to be performed at a rate applicable as at the day of incurring the liability. The loans are to bear a fixed interest rate (8.2%), corresponding to the maximum interest rate of euro denominated loans in the period when the loan agreements covered by the Act were concluded. **The problem of loans denominated in the Swiss franc in Montenegro, due to its limited range, does not seem to pose a real threat to the stability of the economy.** It concerns approximately 500 clients of a single bank (Hypo Alpe Adria Bank).

[25] In Montenegro the euro is the legal currency although the country is not a member of the euro area (official euroization).

5. Romania

Problem of foreign currency loans in Romania seems to be significant for the financial system stability due to the currency risk associated with the floating exchange rate regime. However, until October 2015 no official measures were undertaken in order to mitigate the risk connected with the already existing foreign currency loans. As in other new EU member states, foreign currency loans in Romania started to appear in the period of EU integration. However, contrary to other countries, their share in the portfolio of loans for households was increasing until 2013 (Figure 3. 11). The main currency of loans in Romania was euro (approximately 85% of all foreign currency loans for households). The share of the Swiss franc denominated loans was much lower (approximately 10%) (Figure 3. 10). In 2008-2012 the National Bank of Romania (NBR) introduced a number of regulations aimed at reducing the supply of new foreign currency loans (inter alia, regulatory changes, changes in the minimum reserve requirements). On the other hand, no measures aiming to resolve the problem of the existing foreign currency loans were undertaken, although the NBR signals such a possibility. The NBR suggests that any potential measures will be addressed to borrowers hardest hit by increasing instalments. However, such measures should not induce moral hazard or pose a threat to the financial system stability. The following potentially applicable solutions are mentioned: conversion of foreign currency loans at a rate close to the market rate, temporary reduction of loan's interest rate, state aid for households with the lowest income.

Figure 3. 10. Loan for households in Romania according to currency (RON million)

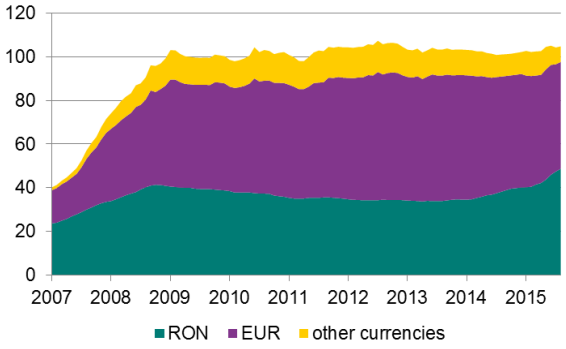
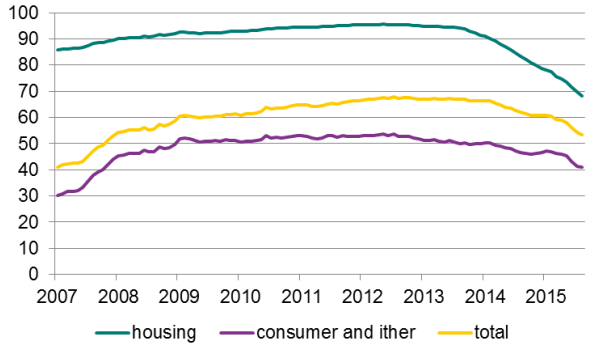


Figure 3. 11. Foreign currency loans according to purpose type (share, percentage)



Source: NBR

Annex:

Table 3. 2. Measures aimed at mitigating the foreign currency problem in selected countries

	PL	HU	RO	BG	HR	EE	LT	LV	ME	SI	AT	KY	GR	IS	RS	RU	UA	TK
Monetary Policy																		
Raising the minimum reserve rate for liabilities in foreign currency			04, 05, 06		04-08										x		11	
Accession to the monetary union*						11	14	15										
Stabilising the exchange rate/ fixed rate			x	x	x	x	x	x								98-14	09-13, 15	
Limitation of capital inflow														08-15			15	
Recommendations of financial supervision																		
Higher risk weights	08	08, 09																
Limitation of the LtV ratio for foreign currency loans																		
Limitation of the DtI ratio	10, 11		08															
Quantitative limitations			05									x						
Requirement of income in the currency of the loan or other criteria for borrowers, or a total ban on granting such loans	13	10												10			11	09
Other recommendations for banks or clients	06, 11, 12							07, 08	07	06, 07	03, 08	06	07					
Systemic solutions																		
Voluntary currency conversion of loans		11							15						15			
Obligatory currency conversion of loans		14			15												15	
Support for banks case-by-case															15			
Freezing of exchange rate for borrowers		11			15													
Partial debt cancellation, direct support in loan servicing	08, 15													13				
Commitment to reduce loan instalments or margin															15			

Source: Own study based on information from central banks.

CON/2014/59, CON/2014/72 and CON/2014/76

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Do product market regulations in CEE countries support productivity growth?

Summary

This analysis aims to answer the question to what extent product market regulations and characteristics support, and to what extent they limit, productivity growth in CEE countries. GDP growth in the region is highly likely to slow down in the medium and long term relative to the one observed in the preceding decades, inter alia, as a result of a natural decline in the pace of convergence with falling distance to wealthier EU countries and rising demographic pressures. The adverse impact of these factors on the economic growth in CEE may be mitigated with measures enhancing productivity growth. A comparative analysis of the efficiency and characteristics of product markets in CEE countries, as well as regulations affecting them, indicates that:

1. *despite a high number of newly established companies, as compared to EU15 countries, the development of enterprises in CEE is hampered by unfavourable product market characteristics, including regulation. This refers, in particular, to the service sector;*
2. *a low efficiency of allocation and high margins in the service sectors suggest that productivity growth in CEE countries is hindered by insufficient competitive pressure;*
3. *in services, a significant share of resources is employed in low-productivity micro-enterprises with weak development perspectives;*
4. *an insufficient level of competition in markets for intermediate goods in CEE may be a barrier to further growth of companies' involvement in international activity;*
5. *a stable growth of highly productive enterprises and increase in innovation may be hampered by low, relative to the EU15, effectiveness of commercial courts (enforcement of contracts and bankruptcy proceedings).*

Introduction

Long-term perspectives of economic growth in CEE seem currently less favourable than before the outbreak of the global financial crisis. The factors underlying the expected slower productivity growth include, first of all, the reduction in the efficiency gains along the decreasing distance to wealthier countries – a natural phenomenon in the convergence process. Over the last 25 years, reforms aimed at making the economies of the CEE countries similar to the economies of the EU15 were an important source of that convergence. The results of those reforms were (*inter alia*): unlocking small business, privatisation and subordinating enterprises to economic targets, better access to education, absorption of technologies unavailable in the planned economy period, changes in management practice, reducing the barriers in the movement of goods, capital and technology. The gains arising from them, in the form of additional productivity growth, have been gradually exhausted. Economic growth in the CEE countries will also be more and more limited by population ageing. Those processes overlap with the negative consequences of the financial crisis. Due to the fact that a substantial part of new technologies implemented in CEE is generated in the EU15, it may be expected that the decline in the potential GDP growth rate in Western Europe will lead to a slowdown of productivity growth

in our region. Additionally, in the next few years, a lower inflow of capital in form of foreign direct investments is expected and in the consecutive decade- also a lower inflow of the EU structural funds, which will have an adverse effect on the pace of capital accumulation and, most probably, also on the productivity dynamics.

Regulatory reforms in the product market may significantly increase the productivity and investment growth in the CEE countries. Regulations of the product market not only affects the ease of conducting business and enterprises' development, but also the effectiveness of managing the available labour and capital resources, as well as the pace of absorption and diffusion of new technologies and the best management practices. As a consequence, friendly and effective regulations of the product market enable the development of "national champions', capable of competing in foreign markets.

The term "regulations of the product market" refers to the collection of macroeconomic policies shaping the conditions for conducting business activity. In a narrow sense, this term should be understood as:

- **the general rules of commencement and termination of economic activity** as well as non-tax obligations of an enterprise towards the state (e.g. reporting),
- **competition policy** (anti-trust policy, rules of public aid and public procurement law, rules of operation of enterprises with a share of the public sector),
- **regulations related to conducting regulated economic activity** (licences, concessions, permitted legal form, price control).

In practice, the quality of product market regulation is considered taking into account the structural and institutional setup of the labour market, financial markets, trade policy, policy supporting entrepreneurship and innovation as well as the functioning of the civil, economic and administrative judiciary system.

The measurement of product market regulation effectiveness is performed through the analysis of legal acts and methods of institutions' operation (*de iure* indicators) and actual economic variables, illustrating the structure and dynamics of the enterprise sector (*outcome-based indicators*). In this material, the following datasets were used as the main source of *de iure* indicators: *Doing Business*, *OECD Indices of Product Market Regulation* (OECD PMR), *OECD Competition Law and Policy Indicators* (OECD CLP), and *OECD Indicators of Regulatory Management in Network Sectors*. Moreover, for the assessment of entrepreneurship and competition level in individual sectors, the outcome-based indicators were applied, derived from the OECD and Eurostat dataset *Structural and Demographic Business Statistics* (SDBS).

This chapter describes three channels by which effective and friendly product market regulations may contribute to an increase in productivity growth in the CEE countries[26]. They include, successively:

- creation of new enterprises and their growth rate,
- resources reallocation channel,
- adaptation and diffusion of innovation.

The impact of creation and growth of new enterprises on productivity

Newly created enterprises demonstrate a higher propensity for exploiting market niches, accordingly contributing to productivity growth through the development or adaptation of radical innovation. Contrary to their competitors with an established position, young enterprises must build their brand and client base from scratch within a short period of time. To that end they more often provide new types of goods to the market or search for more effective production methods[27].

The impact of newly created enterprises in individual markets is the combination of four factors: rate of entry, survival rate, initial size of companies and their growth rate in the first years of existence. In particular, the following factors may indicate the existence of barriers to entrepreneurship: (1) low rate of market entry (i.e. the ratio of the number of newly created enterprises to the number of existing companies)[28] and/or a large initial size of new enterprises, (2) high survival rate of low-productivity companies; and (3) low growth rate of young enterprises[29].

Regulations of the product market have a significant impact on the dynamics of new companies' creation. In particular, the rate of entry may be limited by licences and permits, difficult access to financing, or a high expected cost of potential liquidation of the enterprise.

Newly created enterprises may have a favourable effect on productivity either when they demonstrate a very rapid growth in the first years of their existence, enabling them to exploit the economies of scale, or when they are liquidated quickly (*up-or-out pattern*). As a rule, newly created enterprises are visibly smaller than the existing ones, whereas ability to exploit the economies of scale

[26] The comprehensive review of the impact of product market regulations on productivity is beyond the scope of this report. In this chapter, those product market regulations which are coordinated at the EU level as well as the issues related to interaction of product market with the financial market and labour market, have been omitted. Moreover, in some issues, lack of comparable data made the quantitative analysis impossible.

[27] According to the empirical literature, *start-ups* have a higher impact on productivity growth in dynamic service sectors (e.g. in sectors strongly using or producinginformation, communication and technological services), whereas their importance for the productivity growth is smaller in markets with higher natural barriers to entry (e.g. a higher threshold of minimum production profitability) and where the incremental innovations dominate over the radical ones.

[28] However, it should be kept in mind that a high number of newly created enterprises may also result from ineffective institutions. The number of newly created enterprises may be overestimated, for example, by apparent self-employment, being an attractive alternative to employment for tax reasons, or an excessively restrictive labour law.

[29] The growth rate of young companies should be considered taking into account the average size of existing enterprises. For example, in the sector where the majority of existing entities employ several hundred persons, even a very rapid growth of newly created microenterprises will have a limited impact on the market structure.

depends on their rapid growth in the first years of their existence[30]. In the light of research, a larger initial size of a new enterprise is not a success factor, on the contrary – it is negatively correlated with the subsequent growth and proves the inefficiency of the product market. Differences between countries in terms of the average initial size of new enterprises in a given sector may be affected by: the requirements related to the minimum level of equity, insufficient financing possibilities for small enterprises or high fixed costs of operation. Entrepreneurs starting a business may also be forced to gather larger initial resources due to inadequate competition protection, e.g. the use of price dumping by existing entities. Over a half of newly created enterprises are liquidated in the fifth year of operation at the latest, and the growth of young enterprises is strongly asymmetrical – a limited number of new companies account for significant part of newly created jobs. For the productivity growth within a sector it is thus essential that the probability of survival is correlated with productivity as highly as possible. Therefore, the existence of a large number of small but "old" companies, i.e. low-productivity companies with a limited growth potential may signal insufficient competitive pressure.

Creation and growth of new enterprises in the CEE

A higher intensity of new enterprises' creation in the CEE countries compared to the EU15 refers to industry and construction and, to a lesser extent, to the services. The rates of entry to all main sectors of the economy in the CEE countries are higher than in the EU15, with a similar number of existing enterprises per 1000 inhabitants. However, the intensity of enterprises' creation in CEE was higher than in the EU15 mainly in those sectors where the potential to introduce radical innovation is lower (industry, construction). Moreover, the difference in the rate of entry to: *Information and communication*, *Professional, scientific and technical activities* and *Administrative and support service activities*, between CEE and the EU15 was relatively limited, although it was in those sectors that a smaller number of enterprises per 1000 inhabitants carried out activity in the CEE countries. It should be added that the number of existing enterprises in some CEE countries is inflated by self-employment, more widespread than in the EU15.

After excluding enterprises that do not employ any personnel, the survival rate of enterprises in CEE was similar to that in the EU15. The comparison of survival of enterprises which initially employed more than 9 persons reveals that the probability of surviving the first five years in CEE was lower only in the accommodation and food service sector, professional and scientific services and, above all, in trade and repairs[31]. On the other hand, clearly higher rates of survival in CEE were observed in mining, energy as well as information and communication.

The prevalence of the CEE countries in terms of growth rate of the most dynamic young enterprises is the smallest in those sectors where the convergence in the size of enterprises is the most desirable. The size of companies in manufacturing in the CEE countries is close to the average size in the

[30] Newly created enterprises in the EU28 employed more than 4 employees in less than each tenth sector in the EU28, and the average size of new enterprises was four-fold lower than the average size of the existing companies.
[31] Breakdown into sectors according to NACE classification Rev. 2.

countries of Western Europe[32]. Medium and large manufacturing enterprises in the CEE region have a high share in the total employment and turnover, which resembles the structure of the German economy more than that of the Southern EA countries. However, in many CEE countries, a group of companies employing 10-19 employees is relatively less sizeable as compared to companies employing fewer than 10 persons. The difference in the average size of enterprises in relation to the EU15 is definitely bigger in services. In particular, companies employing more than 250 persons are much smaller than in Western Europe. The sector of services in the CEE countries is dominated by micro- and small enterprises, as in the South of the EA. At the same time, a much higher percentage of the so-called "gazelles" [33], i.e. very rapidly growing young companies, was recorded in industry in the CEE countries as compared to the EU15. On the other hand, the lowest difference in the share of "gazelles" in the population of young enterprises was recorded in sectors where enterprises from CEE are, on average, visibly smaller than their competitors from the EU15, i.e. in the following sections: *Information and communication, Professional, scientific and technical activities* and *Administrative and support service activities.*

Despite their generally smaller initial size, enterprises in the EU15 expand their size during the their first years of operations faster than companies in the CEE countries. Newly created companies have a comparable size in CEE and in the EU15 in the significant part of service sectors, whereas in industry, construction and information and communication, companies in CEE are, on average, bigger. However, new enterprises in the EU15 demonstrate a faster growth rate than companies in CEE. It is particularly visible in information and communication, construction, administrative and support service activities as well as in professional services. The transport sector is an exception, where initially approximately 20% smaller enterprises from CEE were by approximately 25% bigger than in the EU15 after five years. It is also worth noting that the initial prevalence in the size of new industrial companies started to decrease after 5 years. The combination of a clearly higher percentage of "gazelles" and a lower average growth rate of young companies in industry confirms that although a relatively large number of new companies in CEE increase their size, only their relatively small number manages to reach a size big enough to use the economies of scale to the full extent.

The analysis of indicators related to the creation and growth of new enterprises in the CEE countries suggests the existence of barriers to their development, particularly in the services. A higher share of young enterprises in employment, as compared to the EU, results, to a higher extent, from their more intensive creation rate and their bigger initial size, rather than from the actual capacity of CEE economies to create rapidly growing competitive enterprises. It makes the convergence in the size of enterprises in the CEE countries to the EU15 level more difficult. Considering the fact that productivity of microenterprises in the CEE countries is clearly lower than the efficiency of companies employing at least 9 persons (cf. section on *Reallocation of resources in CEE countries*), it may be assessed that the barriers of growth of young companies significantly reduce the potential for productivity growth in the region.

[32] The heterogeneity between countries of the region is visible. Manufacturing companies were, on average, quite large in the Baltic states, Romania and Slovakia, contrary to the Czech Republic and Slovenia.

[33] According to the OECD and Eurostat terminology, "Gazelles" are enterprises which managed to maintain at least 20-percent average annual growth in employment or turnover over the three preceding years.

The importance of the resource reallocation channel

The aggregated productivity of a population of enterprises may be considered as the sum of the average effectiveness level at which enterprises operate, and the effectiveness of the allocation of resources among them. Such a decomposition, proposed by Olley and Pakes (1996), makes it possible to estimate, to what extent the differences in productivity between the countries arise from different endowment in human and physical capital or technology, and to what extent from, inter alia, the business environment, affecting the effectiveness of allocation. The effectiveness of allocation may be intuitively understood as a high positive correlation between an enterprise productivity and its market share. The ineffectiveness of resource allocation in a given market is also signalled by excessive productivity dispersion (indicating the existence of groups of very low productivity enterprises, unable to adapt solutions used by market leaders) or a low percentage of rapidly growing enterprises (suggesting a slow rate of reallocation of resources).

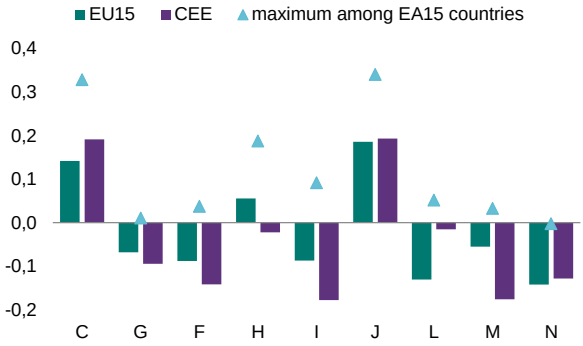
Economic literature has identified a number of structural and regulatory conditions which may hamper the flow of resources from low to high productivity companies. They include, inter alia:

- *inadequate level of competition or existence of mechanisms disrupting equal opportunities in the market (e.g. legal protection of some enterprises, mechanisms of subsidising unprofitable entities)*. Markets where the competitive pressure is low demonstrate high margins, a low number of entities and a high level of concentration. Enterprises with a considerable market force may maintain their market share at the expense of more productive but smaller entities, e.g. through the use of their dominant position and price dumping. Price fixing is another method of increasing profit at the expense of end customers.
- *difficulties in planning and financing investment, or disincentives to increase employment (e.g. high costs of redundancy), a low predictability of business environment*. Contract enforcement is one of the most important institutions for planning and development of companies. The possibility of not receiving payment for the goods and services delivered increases risk of conducting investment activity. In turn, the entrepreneurs have to create liquidity buffers or finance their activity by trade credit. The importance of effective enforcement of liabilities in the CEE economies is even bigger due to the fact that access to bank financing and other forms of debt financing in those countries is much more limited than in the EU15.
- *barriers to exit*. An example of a barrier to exit from the market is the ineffectiveness of bankruptcy proceedings. High costs of proceedings may reduce the propensity to use the bankruptcy process, which extends the time during which resources are located in an ineffective enterprise. Also, the excessive length of proceedings may slow down the pace of their reallocation.. In this case, out-of-court negotiations or an early restructuring of a distressed enterprise with the participation of all stakeholders is indicated as an effective solution.

Reallocation of resources in the CEE countries

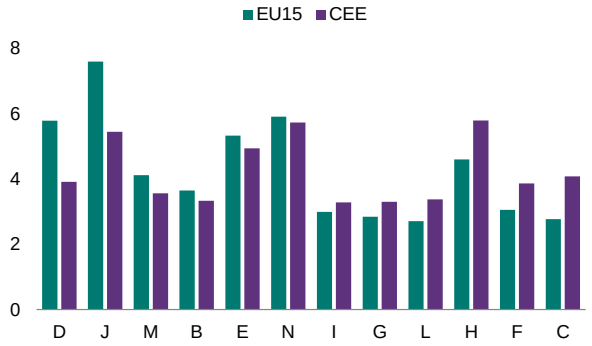
The efficiency of allocation in the CEE countries, measured by the Olley-Pakes indicator[34], not only clearly deviates from the highest levels in the EU28, but it is also lower than the average in the EU15 countries. The CEE countries score high compared to the other EU countries in terms of allocation effectiveness only in information and communication, manufacturing and real estate activities (Figure 4.1). In the last two sectors a clearly higher percentage of high-growth enterprises was also observed in CEE (Figure 4.2).

Chart 4. 1. The Olley-Pakes indicator in CEE and the EU15 according to selected sectors (2010)



Source: European Commission (2013), p. 19

Chart 4. 2. Percentage of high-growth enterprises in CEE and the EU15 (average, 2007-2012)



Source: Eurostat

Comments: Approximate value of the Olley-Pakes indicator in 2010, based on data in breakdown by size classes. Sectors according to NACE Rev. 2. classification: **B**- Mining and quarrying, **C**- Manufactuing, **D**- ELECTRICITY, GAS, STEAM AND AIR CONDITIONING supply, **E**- Water supply; sewerage and waste management and remediation activities, **F**- Construction, **G**- Wholesale and retail trade; repair of motor vehicles and motorcycles, **H**- Transportation and storage, **I**- Accommodation and food service activities, **J**- Information and communication, **L**- Real estate activities, **M**- Professional, scientific and technical activity, **N**- Administrative and support service activities.

In the CEE countries, a significant part of resources in the majority of sectors is "captured" in low productivity enterprises. This increases the initial gap in the average productivity with respect to the EU15, arising from the lower equipment with technology, know-how or capital. The allocation of resources in service sectors, less effective than in the EU15, was accompanied by clearly higher margins of enterprises as compared to the EU15. This suggests that the reallocation of resources may be curbed by the inadequate competitive pressure.

The potential for significant improvement of allocative efficiency in the CEE countries exists also in those sectors where the value of the Olley-Pakes indicator is relatively high. In all sectors except mining, the difference between the productivity of the most and least effective enterprise groups was higher than in the EU15. For example, in manufacturing as well as in *Information and communication* where productivity is positively correlated with the size of companies, a higher discrepancy between the productivity of microenterprises (employing up to 9 persons) and the productivity of the largest

[34] The Olley-Pakes indicator expresses a percentage difference of aggregated productivity as compared to the situation in which market shares of all companies are equal. Thus, the value of the indicator above zero means allocation more effective than random.

companies, as compared to the EU15, was observed. The gap in the productivity of microenterprises is particularly visible in Poland. In addition, the largest manufacturing enterprises in Hungary dominate in productivity over the smaller entities, which may be attributed to the foreign-owned companies operating there. At the same time, in *Information and communication* in CEE as compared to the EU15 the following patterns were observed: significantly higher margins (Figure 4.3), a lower percentage of high-growth enterprises and a very high dispersion of productivity (Figure 4.4).

Chart 4. 3. Average level of price-costs margins according to sectors in CEE and the EU15 (2012)

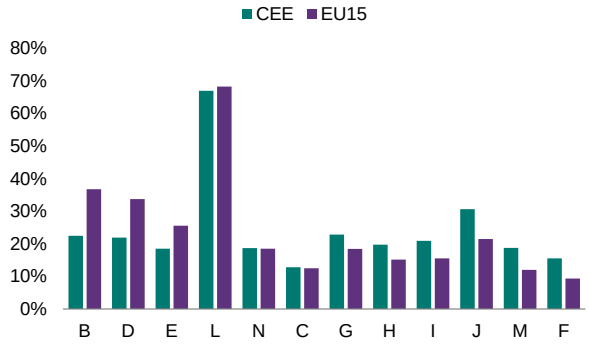
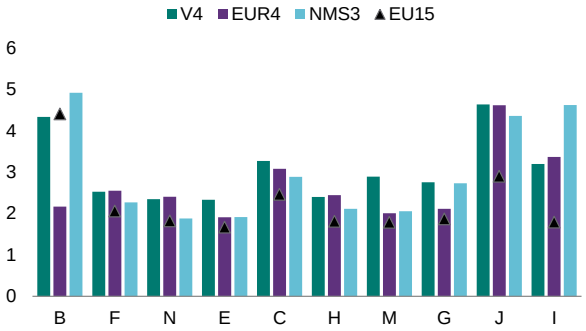


Chart 4. 4. Dispersion in productivity of various enterprise size classes in CEE and the EU15 (2012)



Source: NBP own calculations

Comments: The average level of price-cost margin calculated as M= [gross value added - (total employment * employee's average wage)]/ production.
The productivity dispersion indicator is the ratio of the average productivity in the most and least productive class of sizes (0-9 employees, 10-19, 20-49, 50-249 and 250 and more employees). Sectors according to NACE Rev. 2. classification: B- Mining and quarrying, C- Industrial processingManufactuing, D- ELECTRICITY, GAS, STEAM AND AIR CONDITIONING supplygeneration and supply of electricity, gas, steam and air conditioning, E- Water supply; sewerage and waste management and remediation activities, F- Construction, G- Wholesale and retail trade; repair of motor vehicles and motorcycles, H- Transportation and storage, I- Activity associated with accommodation Accommodation and food service activities, J- Information and communication, L- Real estate Activity activitiesassociated with real estate market service, M- Professional, scientific and technical activity, N- Administrative and support service activities.

An analysis of competition protection institutions in the CEE countries indicates that improvement in the effectiveness of regulators' activities could increase the low efficiency of allocation in services. Although the rules applied by the competition protection authorities in CEE are similar to those used in the EU15[35], in some cases their implementation deviates from best practices. A comparison of OECD CLP indicators suggests a lower transparency in the operations of authorities granting permission for mergers, acquisitions and producers' agreements than in the EU15. In particular. the communication with the market, lower transparency and predictability of rules in CEE was observed. According to the indicators, the independence of the anti-trust authorities from the government in Hungary was smaller than in the other countries of the region. Moreover, in some CEE countries the effectiveness of regulators' activities was lower than in the EU15. In Slovenia and Bulgaria the anti-trust authorities managed to punish unfair enterprises relatively less frequently. Last, in Hungary and Slovakia the verdict of the authority was not always preceded by economic analysis.

[35] The general rules of the anti-trust law are regulated by the Community law whereas the European Commission supervises the equality of opportunities on the Single Market.

According to *Doing Business* indicators, the relatively low efficiency of allocation in the CEE countries may be also a result of the poor contract enforcement. Only the Baltic states and Hungary achieved higher efficiency of contract enforcement than the EU15-average (Figure 4.5). In the other CEE countries it was more time-consuming and costly than in the EU15. In particular, it refers to Poland, Slovenia and Slovakia. In some CEE countries also procedures deviated from best practices. The low level of courts' computerisation and automatism of their operation jeopardised efficient enforcement of liabilities in Hungary, Poland and Slovenia as well as in Bulgaria and Romania. On the other hand, in the Czech Republic, the low level of courts' specialisation and the unused potential of mediation were noteworthy.

The room for improvements in allocative efficiency in the CEE countries is also associated with the existence of significant barriers to exit in the form of ineffective bankruptcy proceedings. In the course of bankruptcy proceedings in the CEE countries it is possible to recover a much smaller part of liabilities than in the EU15. The only country of the region which scored better than the EU28 average was Slovenia (Figure 4.6). Despite the improvements in CEE in recent years, both the time and the cost of proceedings is higher than in the EU15. To a certain extent, it was driven by the lower quality of procedures in CEE. In Hungary, Latvia and Lithuania as well as in Croatia and Bulgaria, the law, as a rule, provides for sales of enterprise assets in parts, not in full (which is usually associated with a lower recovery rate of liabilities). On the other hand, the possibility of creditors' active participation in the proceedings is limited by procedures in Poland, Slovakia as well as in Hungary and Lithuania.

Chart 4. 5. Effectiveness of contract enforcement in CEE and the EU15 (2015)

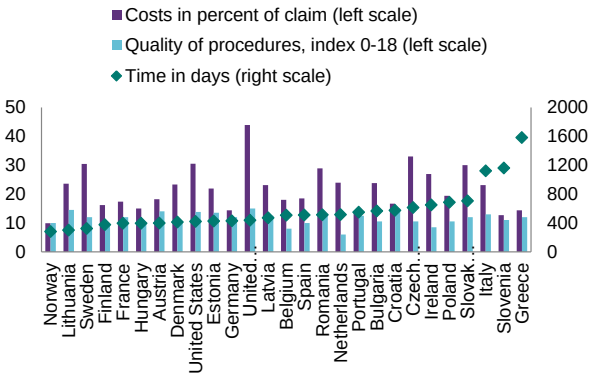
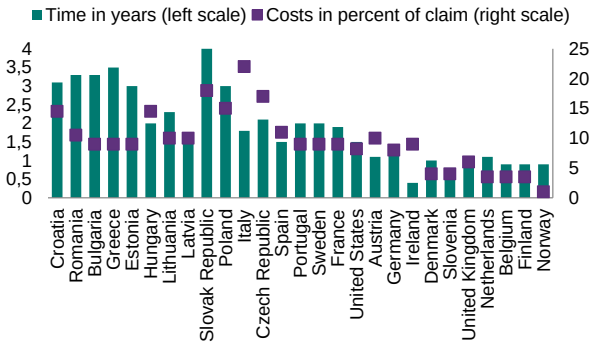


Chart 4. 6. Effectiveness of insolvency proceedings in CEE and the EU15 (2015)



Source: *Doing Business*

Importance of innovation adaptation and diffusion for productivity growth

The third channel through which the product market setup affect productivity is the pace of innovation adaptation and diffusion. According to the recent research, new technologies introduced by the global frontier are first adopted by the national frontier, and only through them – by the remaining enterprises. Below we review the key product market institution affecting these processes. At the same time, it should be stressed that the effectiveness of innovation adaptation and diffusion depends

on the ability of the economy to create competitive enterprises and on the existence of conditions promoting the most efficient entities, discussed in detail in the preceding sections.

The level of enterprise involvement in international activity influences the probability of propagation of best global practices of production and management. Considering the existence of the minimum profitability threshold of production for foreign markets, it is recommended, inter alia, to avoid progressiveness in tax and non-tax burdens for enterprises of various sizes, or reduce costs of international activity (e.g. transport or bureaucracy). A system of chambers of commerce providing legal assistance, trade contacts or the possibility of insuring transactions may be an additional support[36].

In some sectors, opening to foreign competition on the domestic market may have an impact on the growth of the propensity of domestic companies to undertake innovative activity. As noted by Aghion et al. (2009), the entry of foreign competitors that employ thebest global practices contributes to increased involvement of domestic enterprises in research and development activity in branches close to the global technological frontier, striving to maintain their market shares.

The effectiveness of intermediate goods markets (upstream sectors) – the level of competition affecting prices of intermediate goods in particular – has a direct impact on the profitability of exporters[37]. Ensuring the optimum level of competition in some upstream sectors is the responsibility of specialised sectoral regulators. Their effectiveness depends, inter alia, on their legal status and independence as well as on available resources. The level of competition in intermediate goods sectors is also affected by regulations related to the activities of professional corporations. Professional associations (chambers) with excessive powers may set the legal requirements for a specific activity higher than optimum.

The literature indicates the significant role of rules underlying bankruptcy proceedings for enterprises' innovativeness. The bankruptcy law less oriented to sanctions against entrepreneurs increases the motivation to undertake consecutive attempts, increasing entry to market. It is particularly important in activities in more dynamic sectors, burdened with a higher risk of failure. Moreover, the right balance between the protection of creditors' and debtors' rights may encourage entrepreneurs to explore new market niches instead of concentrating on safer but less profitable activity. In this context, the most important elements of the bankruptcy law include the protection of company assets after filing a motion for bankruptcy and the right of the former management board to participate in the restructuring process.

Cooperation between suppliers and producers, affected by the legal system, can also influence structural competitiveness. Ineffectiveness of contract enforcement weakens mutual trust, jeopardising the build-up of long-lasting business relationships. In such conditions, the suppliers would produce easily disposable and standardised rather than specialised intermediate goods, which in turn

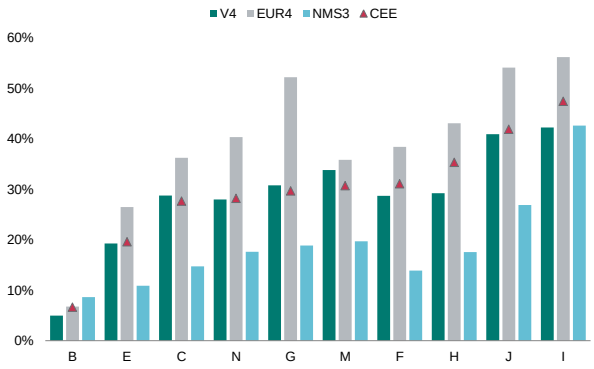
[36] The elements listed in this paragraph are omitted in the further analysis due to the lack of comparable data.

[37] As compared to the sector of final goods, sectors of intermediate goods usually demonstrate lower effectiveness of allocation and competition. The contributing factors include, inter alia, the natural barriers to entry to the network sectors (e.g. energy industry), regulation of some types of services in order to ensure their minimum quality (e.g. legal services) or the specific nature of the sector decreasing the competitive pressure from abroad.

makes it harder for producers of final goods to deliver complex goods and services (Nunn, 2007), i.e. ones tailored to clients' needs, with a lower price flexibility of the supply and a higher share of the domestic value added.

Product market institutions in the CEE countries and the diffusion of innovation

Chart 4. 7. Ratio of productivity of the most productive CEE enterprises to the most productive EU15 enterprises (2012)



Source: NBP own calculations

Comments: The value for the CEE is the average productivity of the most productive size classes of enterprises. The value for the EU15 is the average productivity of the most productive class of enterprises in the most productive EU15 country. V4 - the Czech Republic, Poland, Slovakia, Hungary; EUR4- Estonia, Lithuania, Latvia. Estonia; NMS3- Bulgaria, Croatia, Romania. Sections of economy according to NACE classification Rev. 2.: **B**- Mining and quarrying, **C**- Manufacturing, **D**- Electricity, gas, steam and air-conditioning supply, **E**- Water supply, sewerage, waste management and remediation, **F**- Construction, **G**- Wholesale and retail trade; repair of motor vehicles and motorcycles, **H**- Transportation and storage, **I**- Accommodation and food service activities , **J**- Information and communication, **L**- Real estate activities, **M**- Professional, scientific and technical activities, **N**- Administrative and support service activities.

The analysis of the distance to the global technological frontier indicates that a higher openness to foreign competition may be potentially beneficial for innovation in some sectors of the CEE countries. In particular, relatively high margins are observed in CEE in sectors operating at the closest distance to the global technological frontier, i.e. in information and communication, transport and construction (Figure 4.7). In those branches, deregulation and reduction of entry barriers for foreign entities may help to increase the propensity of domestic leaders to conduct research and development activity, e.g. by limiting the "excessive" transposition of the EU law (*gold-plating*) and pursuing the development of the Single Market of Services.

Insufficient competition in some upstream sectors may have an adverse impact on the competitiveness of exporters from CEE. Restrictive regulations contribute to very high margins in construction and professional services. For example, in the architect's profession and engineering professions in the CEE countries, competition is impeded by higher entry barriers than in the EU15; freedom of establishment is also more limited for accountants and lawyers (Figures 4.8-4.9). On the other hand, in telecommunications, the market structure may affect the high level of margin in CEE: a clearly higher role of state-owned companies than in the EU15 and a lower number of operators. Those problems are particularly visible in Slovenia as well as in Lithuania and Slovakia.

Chart 4. 8. Indicators of regulation of accountant and lawyer profession in CEE and the EU15 (2013)

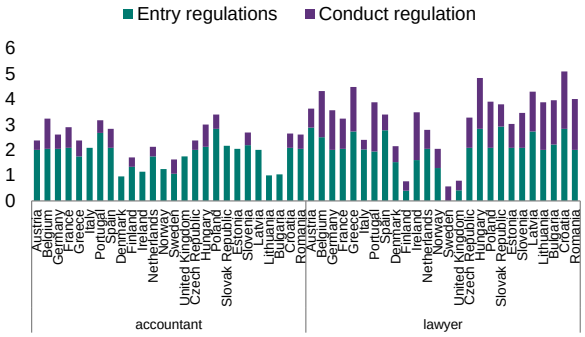
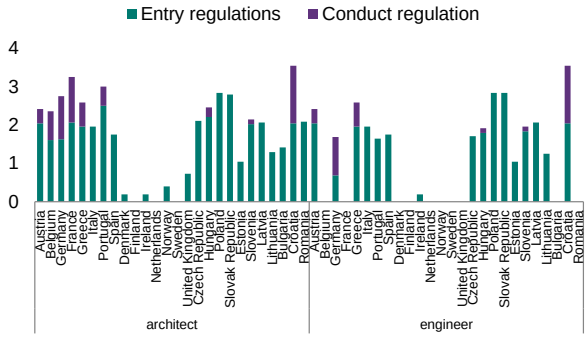


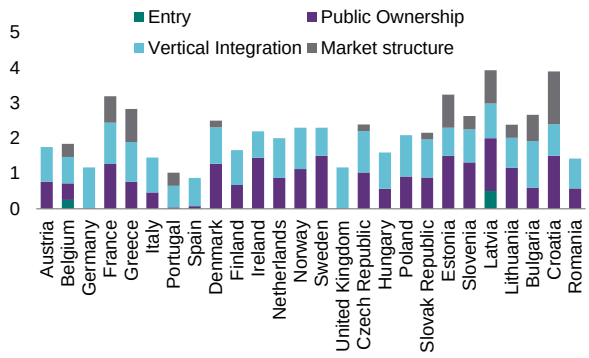
Chart 4. 9. Indicators of regulation of architect and engineer profession in CEE and the EU15 (2013)



Source: OECD PMR

Comments: The higher the indicator, the more restrictive the regulation.

Chart 4. 10. Indicators of electricity market regulation in CEE and the EU15 (2013)



Source: OECD PMR

Comments: The higher the level of the indicator, the more restrictive the regulation.

Inefficiency of energy sectors in CEE is reinforced by market regulation. The unfavourable structure of the electricity and gas market, characterized by a high level of vertical integration and domination of a single entity, often controlled by the state, is noteworthy (Figure 4.10). Accordingly, in some CEE countries disruption of market mechanisms may occur. The reason is that a high market share of state-owned companies is not always accompanied by an accordingly higher independence of the regulator. On the electricity market such a situation occurs in Croatia, Estonia, Slovenia and Latvia and in the case of the gas market – in Bulgaria, Poland, Slovenia and Slovakia.

In the CEE countries regulations focus strongly on the protection of lenders' and creditors' rights at the expense of debtors, which increases sanctions against an entrepreneur in case of failure of an investment activity, including innovation. According to the *Doing Business* indices, Bulgaria, Croatia, Latvia and Slovakia belong to countries where creditors' rights are particularly strong and assets protection is the weakest in bankruptcy proceedings. In the majority of the CEE countries, however, the synthetic indicator of lenders' rights protection is markedly higher than in the EU15.

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Statistical Annex

1. National accounts

Table 1. Gross domestic product (in %, y/y)

	2013	2014	2014 Q3	2014 Q4	2015 Q1	2015 Q2	2015 Q3
Bulgaria	0.9	1.7	1.6	1.8	2.6	2.6	2.9
Croatia	-0.9	-0.4	-0.4	0.2	0.2	1.5	2.7
Czech Republic	-0.9	2.0	2.3	1.3	4.1	4.6	4.5
Estonia	0.8	2.1	2.9	3.2	1.4	1.8	0.7
Lithuania	3.3	2.9	2.7	1.6	1.4	1.4	1.7
Latvia	4.1	2.4	2.2	2.2	1.9	2.7	3.3
Poland	1.6	3.4	3.3	3.7	3.6	3.5	3.7
Romania	3.5	2.8	2.9	2.6	3.8	3.8	3.6
Slovakia	0.9	2.4	2.5	2.8	3.0	3.3	3.6
Slovenia	-1.1	2.6	3.6	2.5	3.0	2.6	2.1
Hungary	-1.1	3.6	3.6	3.2	3.1	2.4	2.3

Source: Eurostat, seasonally adjusted data, constant prices of 2010, for Slovakia – seasonal non-working days adjustment.

Table 2. Private consumption (in %, y/y)

	2013	2014	2014 Q3	2014 Q4	2015 Q1	2015 Q2	2015 Q3
Bulgaria	-2.3	2.0	2.2	2.0	-0.1	0.0	1.2
Croatia	-1.2	-0.7	-1.1	-0.1	0.2	0.5	1.5
Czech Republic	0.1	1.7	1.4	2.0	2.8	3.0	2.9
Estonia	4.2	4.1	3.5	5.2	5.5	5.7	4.6
Lithuania	4.7	5.6	3.1	4.8	4.6	4.9	5.6
Latvia	5.4	2.3	1.6	2.4	2.7	3.4	4.7
Poland	0.8	3.0	2.8	3.2	3.3	3.2	3.1
Romania	1.3	4.5	3.9	4.4	5.2	4.9	6.5
Slovakia	-0.1	2.2	2.3	2.7	1.8	2.2	2.5
Slovenia	-2.7	0.3	1.0	0.1	0.6	1.0	1.3
Hungary	0.3	1.6	1.7	2.7	3.0	2.4	3.0

Source: Eurostat, seasonally adjusted data, constant prices of 2010, for Slovakia – seasonal non-working days adjustment.

Table 3. Gross fixed capital formation (in %, y/y)

	2013	2014	2014 Q3	2014 Q4	2015 Q1	2015 Q2	2015 Q3
Bulgaria	-0.3	2.8	3.0	-0.1	-1.9	-1.2	-0.4
Croatia	-1.3	-4.0	-3.7	-4.0	-0.5	0.8	2.0
Czech Republic	-3.5	4.5	2.7	1.9	3.0	7.4	8.3
Estonia	1.1	-2.8	-10.4	-10.6	-9.6	-8.2	-3.4
Lithuania	12.8	8.0	3.3	1.5	6.0	12.4	12.4
Latvia	-4.3	1.3	-0.5	-0.1	0.0	2.4	5.7
Poland	-0.2	9.2	9.9	10.6	8.2	6.3	5.4
Romania	4.9	-17.5	-1.3	2.4	8.3	8.9	4.4
Slovakia	-4.3	5.7	3.3	3.4	7.4	9.8	16.2
Slovenia	0.2	4.8	6.5	-3.3	1.1	-0.9	-3.9
Hungary	5.8	11.7	10.1	3.8	-0.8	0.8	-1.1

Source: Eurostat, seasonally adjusted data, constant prices of 2010, for Slovakia – seasonal non-working days adjustment.

Table 4. Exports of goods and services (in %, y/y)

	2013	2014	2014 Q3	2014 Q4	2015 Q1	2015 Q2	2015 Q3
Bulgaria	8.9	2.2	-2.1	3.9	13.6	5.2	5.8
Croatia	-1.2	6.3	5.0	5.8	7.2	10.1	8.1
Czech Republic	0.2	8.8	7.8	7.5	7.1	7.1	8.2
Estonia	1.8	2.9	4.1	4.5	1.7	-0.9	-3.3
Lithuania	10.3	3.4	4.4	3.3	3.6	0.8	-0.7
Latvia	1.0	2.2	2.9	3.8	3.1	1.7	2.0
Poland	4.6	5.7	4.9	7.5	7.5	5.2	4.3
Romania	13.5	8.1	8.4	6.8	8.0	5.7	-1.0
Slovakia	4.5	4.6	2.2	-0.4	5.0	6.1	7.4
Slovenia	2.9	6.3	6.4	6.7	6.1	6.2	3.5
Hungary	5.3	8.7	7.3	6.6	10.2	9.3	7.7

Source: Eurostat, seasonally adjusted data, constant prices of 2010, for Slovakia – seasonal non-working days adjustment.

Table 5. Imports of goods and services (in %, y/y)

	2013	2014	2014 Q3	2014 Q4	2015 Q1	2015 Q2	2015 Q3
Bulgaria	5.7	3.8	-2.8	5.5	6.6	4.7	3.3
Croatia	-2.0	3.0	5.1	0.8	5.7	6.6	8.0
Czech Republic	0.6	9.5	8.3	8.3	8.6	8.1	9.1
Estonia	2.6	2.5	1.0	3.5	-0.8	-2.6	-3.3
Lithuania	10.3	5.7	3.0	3.4	10.2	9.0	5.3
Latvia	-1.7	1.6	-1.3	2.6	0.9	2.6	5.4
Poland	1.2	9.1	10.3	10.1	7.2	5.0	2.8
Romania	2.4	7.7	7.1	6.1	9.9	10.8	4.2
Slovakia	2.9	5.0	2.1	-1.3	4.8	7.3	10.0
Slovenia	1.3	4.1	5.7	2.8	5.9	3.9	1.0
Hungary	5.3	10.0	9.7	6.6	8.2	7.4	6.8

Source: Eurostat, seasonally adjusted data, constant prices of 2010, for Slovakia – seasonal non-working days adjustment.

2. Business cycle and economic activity indicators

Table 6. Industrial production (in %, y/y)

	03.2015	04.2015	05.2015	06.2015	07.2015	08.2015	09.2015	10.2015
Bulgaria	3.0	2.3	4.2	5.4	3.5	4.0	1.5	0.7
Croatia	3.4	1.3	4.4	1.6	3.8	3.0	5.4	6.3
Czech Republic	3.9	4.3	5.0	6.3	7.3	7.5	3.6	6.4
Estonia	1.1	-0.3	-2.0	-2.9	-5.8	-2.9	-4.0	-2.1
Lithuania	4.7	3.5	3.4	7.1	6.0	5.0	0.7	6.4
Latvia	8.6	7.3	4.3	4.0	5.3	4.1	2.1	1.7
Poland	5.8	2.7	5.2	5.2	3.7	3.8	4.4	4.8
Romania	2.7	3.9	2.6	2.8	3.0	3.7	3.3	2.8
Slovakia	6.5	3.5	3.4	4.4	7.0	2.6	6.7	4.2
Slovenia	4.6	4.7	6.1	3.6	2.8	5.2	6.1	3.4
Hungary	8.6	6.0	6.3	5.6	3.4	6.6	7.8	12.6

Source: Eurostat

Table 7. Retail trade turnover (in %, y/y)

	03.2015	04.2015	05.2015	06.2015	07.2015	08.2015	09.2015	10.2015
Bulgaria	1.7	1.9	2.4	2.2	0.1	-1.2	-1.4	-0.6
Croatia	4.6	5.4	6.5	5.7	7.3	4.1	6.5	6.5
Czech Republic	0.9	3.5	4.5	2.4	5.9	2.6	1.6	4.1
Estonia	3.6	1.7	5.0	4.8	6.9	4.7	4.2	6.4
Lithuania	4.8	3.9	5.2	6.4	5.4	5.7	6.0	6.1
Latvia	6.7	3.2	5.7	7.0	4.7	5.6	4.8	5.2
Poland	8.6	6.4	9.5	7.9	4.7	3.8	4.9	5.6
Romania	0.6	7.4	4.6	7.7	8.5	8.7	11.1	12.7
Slovakia	1.1	0.4	2.1	2.5	1.7	1.8	2.1	1.6
Slovenia	0.2	-0.7	2.9	1.8	0.1	-0.1	-0.1	0.6
Hungary	4.9	4.8	5.6	6.3	6.7	5.4	5.2	4.8

Source: Eurostat

Table 8. Consumers' confidence indicator

	04.2015	05.2015	06.2015	07.2015	08.2015	09.2015	10.2015	11.2015
Bulgaria	-32.8	-29.4	-32.4	-33.3	-29.3	-30.6	-28.7	-29.9
Croatia	-32.5	-34.0	-28.7	-27.3	-26.3	-26.3	-27.9	-25.1
Czech Republic	1.6	1.1	2.9	1.3	0.5	-0.9	0.7	2.9
Estonia	-3.8	-8.8	-7.3	-8.4	-7.4	-5.9	-5.2	-5.6
Lithuania	-5.8	-6.0	-8.3	-8.7	-8.0	-10.4	-7.5	-7.3
Latvia	-4.0	-5.5	-9.1	-7.0	-7.0	-11.5	-8.3	-8.9
Poland	-10.1	-13.5	-12.0	-14.6	-14.3	-15.6	-13.4	-11.5
Romania	-17.5	-17.3	-16.2	-17.5	-16.6	-16.8	-15.2	-17.8
Slovakia	-7.7	-17.2	-14.3	-17.0	-14.8	-15.3	-10.6	-12.5
Slovenia	-10.8	-9.7	-6.2	-12.5	-4.2	-5.2	-9.3	-11.2
Hungary	-23.6	-21.1	-25.2	-23.8	-21.4	-26.1	-17.5	-17.9

Source: European Commission, CNB

Table 9. Business confidence indicator

	04.2015	05.2015	06.2015	07.2015	08.2015	09.2015	10.2015	11.2015
Bulgaria	1.2	0.2	1.4	1.0	1.0	-0.5	-0.4	1.1
Croatia	10.0	10.0	13.0	13.0	13.0	22.0	22.0	22.0
Czech Republic	3.6	3.9	5.2	4.9	3.0	3.1	1.2	1.1
Estonia	-3.1	-2.4	-4.9	-2.0	-4.5	-4.6	-1.6	-1.6
Lithuania	-3.6	-11.1	-13.0	-14.2	-13.8	-7.3	-3.7	-1.5
Latvia	-5.4	-6.2	-7.7	-6.5	-4.4	-6.8	-5.4	-7.1
Poland	-11.5	-12.0	-12.9	-12.7	-11.3	-11.8	-11.1	-11.5
Romania	-0.2	1.6	-0.8	0.7	1.0	-0.3	-0.1	0.0
Slovakia	6.9	-1.3	5.3	-0.2	4.6	-0.7	7.4	-0.6
Slovenia	5.0	5.5	4.5	5.6	8.6	5.2	8.6	7.0
Hungary	6.8	2.8	6.0	5.6	5.9	7.6	6.4	6.5

Source: European Commission, OeKB

3. Prices

Table 10. HICP (in %, y/y)

	04.2015	05.2015	06.2015	07.2015	08.2015	09.2015	10.2015	11.2015
Bulgaria	-0.9	-0.3	-0.6	-1.0	-0.8	-0.9	-1.2	-0.9
Croatia	-0.1	0.0	0.1	-0.2	-0.1	-0.5	-0.5	-0.4
Czech Republic	0.5	0.7	0.9	0.4	0.2	0.2	0.2	0.0
Estonia	0.4	0.5	0.3	0.1	0.2	-0.3	0.0	0.5
Lithuania	-0.6	-0.1	-0.2	-0.2	-1.0	-0.8	-0.4	-0.5
Latvia	0.6	1.2	0.7	-0.2	0.2	-0.4	-0.1	0.0
Poland	-0.9	-0.6	-0.6	-0.5	-0.4	-0.6	-0.6	-0.5
Romania	0.6	1.3	-0.9	-1.4	-1.7	-1.5	-1.4	-0.9
Slovakia	-0.1	-0.1	-0.1	-0.2	-0.2	-0.5	-0.5	-0.4
Slovenia	-0.7	-0.8	-0.9	-0.7	-0.6	-1.0	-1.1	-0.9
Hungary	0.0	0.6	0.7	0.5	0.1	-0.1	0.2	0.6

Source: Eurostat

Table 11. HICP – food (including alcohol and tobacco) (in %, y/y)

	04.2015	05.2015	06.2015	07.2015	08.2015	09.2015	10.2015	11.2015
Bulgaria	1.4	1.6	0.9	-0.2	0.6	1.1	0.6	0.6
Croatia	0.9	0.8	1.0	0.7	1.0	0.4	1.0	0.6
Czech Republic	1.6	1.8	2.6	1.4	1.1	1.6	1.2	0.9
Estonia	1.7	1.5	1.6	2.3	2.2	1.6	1.4	1.8
Lithuania	0.9	0.5	-0.3	-0.9	-1.0	-0.6	0.4	0.2
Latvia	-0.8	0.2	-1.2	-1.2	-0.2	-0.6	0.2	0.5
Poland	-1.4	-1.2	-0.9	-0.9	-0.2	0.1	0.5	0.4
Romania	0.9	1.9	-4.4	-5.5	-5.4	-4.5	-4.5	-3.9
Slovakia	0.4	0.3	0.4	-0.1	0.1	0.4	0.5	0.3
Slovenia	1.6	1.0	0.8	1.2	1.4	0.8	0.8	0.7
Hungary	0.9	1.6	1.9	1.6	1.5	1.5	2.2	2.4

Source: Eurostat

Table 12. HICP – energy (in %, y/y)

	04.2015	05.2015	06.2015	07.2015	08.2015	09.2015	10.2015	11.2015
Bulgaria	-5.3	-2.9	-2.1	-4.3	-5.1	-8.4	-10.1	-8.7
Croatia	-4.7	-3.5	-4.0	-5.5	-7.0	-8.0	-8.0	-6.6
Czech Republic	-2.0	-1.6	-1.6	-2.5	-2.9	-3.8	-4.3	-4.4
Estonia	-4.4	-3.5	-5.6	-7.3	-7.5	-9.2	-9.5	-8.6
Lithuania	-12.4	-8.5	-7.7	-7.2	-11.5	-12.9	-13.5	-14.2
Latvia	-0.9	-0.1	-0.3	-2.6	-4.1	-5.9	-6.3	-5.0
Poland	-4.5	-4.0	-3.4	-3.4	-4.3	-6.0	-6.5	-5.2
Romania	-3.5	-2.2	-2.2	-1.5	-3.4	-4.5	-4.1	-2.3
Slovakia	-2.8	-2.9	-2.9	-3.1	-3.6	-5.6	-5.7	-5.1
Slovenia	-7.2	-5.8	-6.3	-7.4	-7.2	-9.2	-9.6	-9.9
Hungary	-7.4	-5.2	-4.8	-5.3	-7.3	-9.1	-8.6	-6.5

Source: Eurostat

Table 13. HICP – excluding energy, food, alcohol and tobacco (in %, y/y)

	04.2015	05.2015	06.2015	07.2015	08.2015	09.2015	10.2015	11.2015
Bulgaria	-1.0	-0.7	-1.0	-0.6	-0.6	-0.3	0.1	0.1
Croatia	0.7	0.7	0.7	0.8	1.2	1.1	0.8	0.7
Czech Republic	0.6	0.8	0.6	0.7	0.6	0.6	0.8	0.6
Estonia	0.9	1.1	1.1	0.9	1.0	0.9	1.6	2.2
Lithuania	1.7	1.9	1.7	2.0	1.7	2.1	2.4	2.5
Latvia	1.7	2.1	2.0	1.1	1.6	1.3	1.4	1.1
Poland	0.4	0.4	0.4	0.6	0.5	0.5	0.5	0.4
Romania	1.5	1.8	2.0	1.6	1.4	1.4	1.5	1.5
Slovakia	0.4	0.5	0.5	0.5	0.5	0.4	0.4	0.5
Slovenia	-0.1	-0.2	-0.3	0.3	0.2	0.3	0.1	0.6
Hungary	1.8	1.9	1.7	1.7	1.6	1.8	1.9	1.7

Source: Eurostat

4. Balance of payments

Table 14. Current account balance (in % of GDP, 4-quarter moving average)

	2013 Q4	2014 Q1	2014 Q2	2014 Q3	2014 Q4	2015 Q1	2015 Q2	2015 Q3
Bulgaria	1.8	2.4	1.2	1.3	1.2	1.7	1.3	1.4
Croatia	1.0	0.7	0.5	0.4	0.8	1.4	2.2	4.7
Czech Republic	-0.5	1.0	0.4	0.4	0.6	0.8	1.1	1.2
Estonia	-1.0	-1.7	-1.5	-0.9	-0.2	0.4	1.4	1.6
Lithuania	1.5	1.5	1.3	3.0	3.6	2.6	0.9	-1.1
Latvia	-2.4	-2.3	-2.4	-2.0	-2.0	-1.6	-1.7	-1.8
Poland	-1.3	-1.3	-2.0	-2.3	-2.0	-1.3	-0.4	-0.5
Romania	-1.1	-0.9	-1.5	-1.2	-0.5	-0.2	-0.2	-0.3
Slovakia	2.0	1.3	0.4	0.1	0.1	0.2	-0.4	-1.4
Slovenia	5.6	5.6	5.8	6.4	7.0	6.8	7.1	7.8
Hungary	4.0	3.9	3.2	2.8	2.3	2.9	3.7	4.2

Source: Eurostat, central banks, calculations of EI NBP

Table 15. FDI balance (in % of GDP, 4-quarter moving average)

	2013 Q4	2014 Q1	2014 Q2	2014 Q3	2014 Q4	2015 Q1	2015 Q2	2015 Q3
Bulgaria	-3.0	-2.8	-2.4	-1.3	-2.0	-2.7	-3.0	-4.1
Croatia	-1.9	-1.1	-2.0	-2.8	-3.0	-3.1	-2.4	-1.5
Czech Republic	0.2	-0.8	-2.2	-3.0	-3.2	-2.3	-1.0	0.0
Estonia	-0.5	-1.6	-0.9	-1.7	-2.8	-2.6	-0.1	0.0
Lithuania	-0.6	-0.2	-0.9	-0.2	0.4	0.2	0.4	-0.3
Latvia	-1.6	-1.3	-1.2	-1.4	-1.0	-1.9	-2.1	-2.3
Poland	-0.8	-1.5	-1.3	-2.1	-2.0	-1.6	-1.1	-1.4
Romania	-2.0	-1.8	-2.3	-2.4	-1.8	-1.8	-1.9	-2.0
Slovakia	0.3	0.0	-0.3	0.6	0.2	-1.0	-0.8	-0.8
Slovenia	-0.1	0.0	-1.9	-2.6	-1.6	-2.8	-1.2	-0.5
Hungary	-1.0	-1.5	-0.9	-2.7	-2.6	-1.4	-1.5	-0.9

Source: Eurostat, central banks, calculations of EI NBP

Table 16. International investment position (in % GDP, end of quarter)

	2013 Q4	2014 Q1	2014 Q2	2014 Q3	2014 Q4	2015 Q1	2015 Q2	2015 Q3
Bulgaria	-73.6	-79.2	-79.3	-76.7	-76.2	-72.0	-63.5	-63.9
Croatia	-88.4	-91.3	-92.9	-88.4	-88.5	-89.8	-89.2	-77.4
Czech Republic	-39.6	-36.3	-36.5	-37.0	-35.5	-30.8	-30.3	-31.9
Estonia	-46.9	-47.4	-46.6	-44.6	-42.7	-40.0	-39.3	-38.7
Lithuania	-47.0	-47.0	-47.0	-46.6	-46.2	-48.4	-47.6	-47.5
Latvia	-65.1	-66.2	-64.6	-64.4	-60.9	-61.7	-60.0	-
Poland	-69.8	-69.6	-68.7	-69.4	-67.2	-68.6	-65.7	-64.0
Romania	-61.5	-59.0	-59.3	-58.2	-57.0	-54.7	-53.3	-52.6
Slovakia	-63.6	-66.4	-68.2	-68.2	-69.9	-70.8	-69.1	-
Slovenia	-45.8	-47.1	-46.2	-44.7	-43.7	-42.3	-40.3	-
Hungary	-91.3	-89.3	-88.1	-83.3	-79.8	-81.8	-75.0	-72.0

Source: Eurostat, central banks, calculations of EI NBP

Table 17. Official reserve assets to foreign debt ratio* (in %, end of quarter)

	2013 Q4	2014 Q1	2014 Q2	2014 Q3	2014 Q4	2015 Q1	2015 Q2	2015 Q3
Bulgaria	39.1	37.4	38.3	40.4	42.2	48.1	54.0	58.6
Croatia	28.1	25.9	26.6	26.0	27.2	28.8	28.1	28.6
Czech Republic	40.9	42.6	43.0	42.6	43.6	46.3	47.7	48.7
Estonia	1.3	1.5	1.7	2.0	1.9	2.2	1.7	1.9
Lithuania	23.9	22.1	24.6	25.1	27.9	3.5	7.4	7.0
Latvia	19.0	8.4	7.9	7.8	7.9	8.5	8.7	9.1
Poland	27.7	27.0	26.1	27.3	28.2	29.5	30.3	29.4
Romania	36.1	36.3	36.2	36.4	37.5	37.0	37.0	36.4
Slovakia	2.6	3.0	2.5	2.6	3.2	5.2	3.6	-
Slovenia	1.6	1.9	1.9	1.8	1.8	1.9	2.0	1.9
Hungary	28.2	30.0	29.4	29.6	29.0	29.2	28.3	27.6

**Official reserve assets according to central banks statements*

Source: Eurostat, central banks, calculations of EI NBP

5. Financial markets and financial system

Table 18. Central banks' policy rates (end of period)

	05.2015	06.2015	07.2015	08.2015	09.2015	10.2015	11.2015	12.2015
Czech Republic	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Poland	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Romania	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75
Hungary	1.65	1.5	1.35	1.35	1.35	1.35	1.35	1.35

Source: Central Banks, Reuters

Table 19. 3m interbank rates (average)

	05.2015	06.2015	07.2015	08.2015	09.2015	10.2015	11.2015	12.2015
Bulgaria	0.55	0.53	0.51	0.52	0.52	0.49	0.49	0.43
Croatia	0.69	0.74	0.85	1.22	1.65	1.41	1.07	0.92
Czech Republic	0.31	0.31	0.31	0.31	0.29	0.29	0.29	0.29
Estonia	-0.01	-0.01	-0.02	-0.03	-0.04	-0.05	-0.09	-
Lithuania	0.18	0.18	0.18	0.18	0.18	0.18	0.18	-
Latvia	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
Poland	1.68	1.72	1.72	1.72	1.73	1.73	1.73	1.72
Romania	1.27	1.35	1.32	1.50	1.50	1.18	1.07	1.02
Slovakia	-0.01	-0.01	-0.02	-0.03	-0.04	-0.07	-0.11	-0.13
Slovenia	-0.01	-0.01	-0.02	-0.03	-0.04	-0.07	-0.11	-0.13
Hungary	1.54	1.41	1.36	1.36	1.35	1.35	1.35	1.35

Source: Reuters

Table 20. REER (in %, y/y – growth means appreciation)

	04.2015	05.2015	06.2015	07.2015	08.2015	09.2015	10.2015	11.2015
Bulgaria	-5.2	-3.6	-2.9	-3.8	-1.8	-0.2	-1.3	-2.6
Croatia	-5.4	-4.2	-3.8	-4.0	-2.3	-1.7	-1.9	-2.7
Czech Republic	-6.5	-5.0	-3.4	-3.1	-0.1	0.6	0.2	-0.9
Estonia	-4.8	-3.7	-2.4	-2.7	-0.4	0.3	-0.4	-2.0
Lithuania	-4.6	-3.4	-1.8	-1.7	-0.5	0.6	0.0	-1.5
Latvia	-2.7	-1.5	-0.5	-1.0	1.4	1.0	0.5	-1.0
Poland	-3.5	-3.9	-5.7	-5.5	-3.7	-3.1	-3.6	-4.9
Romania	-3.8	-3.8	-6.5	-5.9	-4.0	-2.9	-2.8	-3.8
Slovakia	-5.6	-4.5	-3.4	-3.7	-2.3	-1.4	-1.8	-3.1
Slovenia	-5.2	-4.3	-3.4	-3.3	-1.9	-1.2	-1.8	-2.5
Hungary	-4.4	-5.5	-5.6	-4.6	-2.2	-1.9	-2.6	-4.3

Source: BIS, EI NBP calculations

Table 21. Private sector credit (in %, y/y)

	04.2015	05.2015	06.2015	07.2015	08.2015	09.2015	10.2015	11.2015
Bulgaria	-9.2	-9.8	-10.7	-10.2	-10.2	-10.0	-10.1	-10.2
Croatia	0.9	0.8	1.1	0.9	-0.2	-1.0	-0.5	-1.0
Czech Republic	4.1	4.3	4.8	5.6	6.7	7.9	8.4	8.3
Estonia	2.7	2.6	3.0	2.8	4.2	3.6	3.7	3.5
Lithuania	-0.1	1.0	1.1	1.3	3.5	3.7	3.5	4.5
Latvia	-5.1	-5.0	-4.3	-4.3	-4.1	-4.1	-4.3	-3.8
Poland	7.4	6.1	7.2	7.6	7.3	7.0	6.8	7.3
Romania	-3.6	-3.7	-1.8	-0.5	-0.8	0.1	0.4	0.2
Slovakia	7.8	7.5	8.1	8.7	7.7	7.4	8.2	8.3
Slovenia	-11.6	-12.0	-11.7	-11.1	-11.4	-11.2	-11.6	-8.0
Hungary	-6.7	-6.9	-5.9	-8.3	-8.4	-9.1	-9.3	-7.7

Source: Central banks

6. Labour market

Table 22. Employment (in %, y/y)

	2013 Q3	2013 Q4	2014 Q1	2014 Q2	2014 Q3	2014 Q4	2015 Q1	2015 Q2
Bulgaria	-0.4	-1.0	1.0	1.0	1.4	1.9	1.8	1.0
Croatia	0.1	0.5	1.9	1.6	1.9	1.9	1.6	1.4
Czech Republic	0.4	0.7	0.7	0.2	0.9	1.3	1.2	1.4
Estonia	-0.1	0.4	-0.8	-0.2	1.0	1.9	2.3	1.4
Lithuania	1.2	2.1	1.9	1.0	2.9	1.7	1.6	1.6
Latvia	0.9	0.3	0.3	0.1	-2.4	-1.5	0.1	0.8
Poland	-0.7	-1.9	0.5	1.7	-0.5	0.3	0.5	0.5
Romania	-0.8	-0.5	1.0	0.4	1.4	0.8	-1.4	0.5
Slovakia	-0.4	0.5	0.1	1.1	1.7	2.6	2.4	2.5
Slovenia	-1.8	-0.7	-0.6	0.6	1.1	1.1	1.8	0.7
Hungary	1.4	2.7	7.1	4.9	5.4	4.5	2.0	3.0

Source: Eurostat

Table 23. Unemployment rate (in %, of labour force)

	04.2015	05.2015	06.2015	07.2015	08.2015	09.2015	10.2015	11.2015
Bulgaria	10.0	9.9	9.6	9.2	9.0	8.7	8.7	8.8
Croatia	16.6	16.4	16.3	16.3	16.3	16.2	16.5	16.6
Czech Republic	5.3	5.1	5.0	5.0	4.8	4.8	4.7	4.6
Estonia	6.5	6.4	6.1	5.8	5.8	6.0	6.3	-
Lithuania	9.5	9.5	9.5	9.1	9.0	9.0	8.9	8.4
Latvia	9.5	9.7	10.1	10.1	10.0	9.9	9.9	10.0
Poland	7.6	7.6	7.5	7.5	7.5	7.4	7.3	7.2
Romania	6.8	6.8	6.8	6.8	6.8	6.9	6.8	6.7
Slovakia	11.7	11.5	11.4	11.4	11.4	11.3	11.1	10.8
Slovenia	9.4	9.5	9.4	9.1	9.0	8.8	8.7	8.6
Hungary	7.1	7.0	6.9	6.8	6.5	6.5	6.4	-

Source: Eurostat

Table 24. Nominal wages (in %, y/y)

	2013 Q3	2013 Q4	2014 Q1	2014 Q2	2014 Q3	2014 Q4	2015 Q1	2015 Q2
Bulgaria	5.1	6.5	5.2	4.6	6.7	8.2	8.0	8.2
Croatia	1.1	-2.1	0.1	0.1	-0.2	2.7	3.0	0.6
Czech Republic	-0.5	2.8	2.2	0.8	2.8	3.2	2.7	2.6
Estonia	7.2	6.6	7.6	5.5	5.8	3.9	5.0	5.8
Lithuania	5.9	4.1	5.6	4.3	4.8	6.3	5.0	7.0
Latvia	5.4	6.1	9.5	6.5	7.3	7.2	6.8	7.6
Poland	5.4	4.5	4.0	3.0	2.2	5.4	2.6	4.1
Romania	3.0	6.2	6.0	6.2	8.7	7.1	7.6	6.8
Slovakia	-0.3	4.3	7.3	6.4	4.9	3.8	2.9	2.6
Slovenia	2.6	3.4	3.0	2.4	1.4	2.4	2.5	-0.9
Hungary	4.0	3.3	4.1	3.4	2.4	3.9	4.0	4.2

Source: Eurostat

Table 25. ULC (in %, y/y)

	2013 Q3	2013 Q4	2014 Q1	2014 Q2	2014 Q3	2014 Q4	2015 Q1	2015 Q2
Bulgaria	1.4	2.2	6.0	4.3	4.4	6.8	7.4	6.3
Croatia	2.6	2.6	0.2	2.2	2.4	1.5	4.1	2.9
Czech Republic	-2.0	-1.2	1.4	0.2	-0.7	2.8	0.3	-0.4
Estonia	6.2	5.5	3.3	4.1	3.6	4.4	4.9	4.7
Lithuania	2.6	3.8	3.9	6.7	6.8	7.4	7.5	7.1
Latvia	2.2	3.2	2.1	2.4	-0.5	1.0	4.5	3.1
Poland	-1.3	-1.6	0.7	1.6	-1.3	-1.9	-0.6	-0.5
Romania	-2.2	-2.2	3.4	4.1	4.7	6.9	1.7	4.2
Slovakia	-1.8	-1.8	2.1	5.8	5.5	4.7	3.1	2.1
Slovenia	1.5	2.6	1.6	1.4	0.5	0.8	4.2	0.7
Hungary	1.7	3.1	6.7	4.9	5.3	3.7	2.4	4.4

Source: Eurostat, EI NBP calculations

7. Public finance

Table 26. General government balance (ESA'95) (in %, of GDP)

	2010	2011	2012	2013	2014	2015p	2016p	2017p
Bulgaria	-3.2	-2.0	-0.6	-0.8	-5.8	-2.8	-2.7	-2.7
Croatia	-5.9	-7.8	-5.3	-5.4	-5.6	-4.9	-4.7	-4.1
Czech Republic	-4.4	-2.7	-4.0	-1.3	-1.9	-1.9	-1.3	-1.1
Estonia	0.2	1.2	-0.3	-0.1	0.7	0.2	0.2	0.1
Lithuania	-6.9	-8.9	-3.1	-2.6	-0.7	-1.0	-1.1	-0.2
Latvia	-8.5	-3.4	-0.8	-0.9	-1.5	-1.5	-1.2	-1.1
Poland	-7.5	-4.9	-3.7	-4.0	-3.3	-2.8	-2.8	-2.8
Romania	-6.9	-5.4	-3.2	-2.2	-1.4	-1.2	-2.8	-3.7
Slovakia	-7.5	-4.1	-4.2	-2.6	-2.8	-2.7	-2.4	-2.0
Slovenia	-5.6	-6.6	-4.1	-15.0	-5.0	-2.9	-2.4	-2.0
Hungary	-4.5	-5.5	-2.3	-2.5	-2.5	-2.3	-2.1	-2.0

p – European Commission forecasts of November 2015

Source: Eurostat, European Commission

Table 27. Public debt (ESA'95) (in %, of GDP)

	2010	2011	2012	2013	2014	2015p	2016p	2017p
Bulgaria	15.5	15.3	17.6	18.0	27.0	31.8	32.8	33.6
Croatia	57.0	63.7	69.2	80.8	85.1	89.2	91.7	92.9
Czech Republic	38.2	39.9	44.7	45.2	42.7	41.0	41.0	40.5
Estonia	6.6	5.9	9.5	9.9	10.4	10.0	9.6	9.2
Lithuania	36.2	37.2	39.8	38.8	40.7	42.9	40.8	42.5
Latvia	47.5	42.8	41.4	39.1	40.6	38.3	41.1	37.6
Poland	53.3	54.4	54.0	55.9	50.4	51.4	52.4	53.5
Romania	29.9	34.2	37.4	38.0	39.9	39.4	40.9	42.8
Slovakia	40.8	43.3	51.9	54.6	53.5	52.7	52.6	52.2
Slovenia	38.2	46.4	53.7	70.8	80.8	84.2	80.9	78.3
Hungary	80.6	80.8	78.3	76.8	76.2	75.8	74.5	72.6

p – European Commission forecasts of November 2015

Source: Eurostat, European Commission

8. Forecasts

Table 28. GDP forecasts (in %, y/y)

	2014	European Commission			IMF		
		2015	2016	2017	2015	2016	2017
Bulgaria	1.7	1.7	1.5	2.0	1.7	1.9	2.0
Croatia	-0.4	1.1	1.4	1.7	0.8	1.0	1.7
Czech Republic	2.0	4.3	2.2	2.7	3.9	2.6	2.6
Estonia	2.1	1.9	2.6	2.6	2.0	2.9	3.0
Lithuania	2.9	1.7	2.9	3.4	1.8	2.6	3.0
Latvia	2.4	2.4	3.0	3.3	2.2	3.3	3.7
Poland	3.4	3.5	3.5	3.5	3.5	3.5	3.6
Romania	2.8	3.5	4.1	3.6	3.4	3.9	3.4
Slovakia	2.4	3.2	2.9	3.3	3.2	3.6	3.6
Slovenia	2.6	2.6	1.9	2.5	2.3	1.8	2.0
Hungary	3.6	2.9	2.2	2.5	3.0	2.5	2.3

Table 29. Inflation forecasts (in %, y/y)

	2014	European Commission			IMF		
		2015	2016	2017	2015	2016	2017
Bulgaria	-1.6	-0.8	0.7	1.1	-0.8	0.6	1.2
Croatia	0.2	-0.1	0.9	1.7	-0.4	1.1	1.4
Czech Republic	0.4	0.4	1.0	1.6	0.4	1.5	2.0
Estonia	0.5	0.1	1.8	2.9	0.2	1.6	2.0
Lithuania	0.2	-0.8	0.6	2.2	-0.4	1.6	1.7
Latvia	0.7	0.2	1.4	2.1	0.4	1.8	2.3
Poland	0.1	-0.6	1.4	1.9	-0.8	1.0	2.0
Romania	1.4	-0.4	-0.3	2.3	-0.4	-0.2	2.5
Slovakia	-0.1	-0.2	1.0	1.6	-0.1	1.4	1.8
Slovenia	0.4	-0.6	0.8	1.4	-0.4	0.7	1.5
Hungary	0.0	0.1	1.9	2.5	0.3	2.3	2.9
GD	0.2	-0.4	1.0	1.9	-0.4	1.1	2.1

Sources for tables 28-29: European Commission (11.2015), IMF (10.2015)

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