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Stability and Security.

Q2/17

This publication presents economic analyses and outlooks as well as analytical studies on macroeconomic and macrofinancial issues with a regional focus on Central, Eastern and Southeastern Europe.

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Call for entries: Olga Radzyner Award 2017

In 2000, the Oesterreichische Nationalbank (OeNB) established an award to commemorate Olga Radzyner, former Head of the OeNB's Foreign Research Division, who pioneered the OeNB's CESEE-related research activities. The award is bestowed on young economists for excellent research on topics of European economic integration and is conferred annually. In 2017, four applicants are eligible to receive a single payment of EUR 3,000 each from an annual total of EUR 12,000.

Submitted papers should cover European economic integration issues and be in English or German. They should not exceed 30 pages and should preferably be in the form of a working paper or scientific article. Authors shall submit their work before their 35th birthday and shall be citizens of any of the following countries: Albania, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, the Czech Republic, Estonia, FYR Macedonia, Hungary, Kosovo, Latvia, Lithuania, Moldova, Montenegro, Poland, Romania, Russia, Serbia, Slovakia, Slovenia or Ukraine. Previous winners of the Olga Radzyner Award, ESCB central bank employees as well as current and former OeNB staff are not eligible. In case of co-authored work, each of the co-authors has to fulfill all the entry criteria.

Authors shall send their submissions by e-mail to *eva.gehringer-wasserbauer@oenb.at*. Entries for the 2017 award should arrive by September 15, 2017, at the latest. Together with their submissions, applicants shall provide copies of their birth or citizenship certificates and a brief CV.

For detailed information, please visit the OeNB's website at *www.oenb.at/en/About-Us/Research-Promotion/Grants/olga-radzyner-award.html* or contact Ms. Eva Gehringer-Wasserbauer in the OeNB's Foreign Research Division (write to *eva.gehringer-wasserbauer@oenb.at* or phone +43-1-40420-5226).

Call for applications: Visiting Research Program

The Oesterreichische Nationalbank (OeNB) invites applications from external researchers (EU or Swiss nationals) for participation in a Visiting Research Program established by the OeNB's Economic Analysis and Research Department. The purpose of this program is to enhance cooperation with members of academic and research institutions (preferably postdoc) who work in the fields of macroeconomics, international economics or financial economics and/or pursue a regional focus on Central, Eastern and Southeastern Europe.

The OeNB offers a stimulating and professional research environment in close proximity to the policymaking process. Visiting researchers are expected to collaborate with the OeNB's research staff on a prespecified topic and to participate actively in the department's internal seminars and other research activities. They will be provided with accommodation on demand and will, as a rule, have access to the department's computer resources. Their research output may be published in one of the department's publication outlets or as an OeNB Working Paper. Research visits should ideally last between three and six months, but timing is flexible.

Applications (in English) should include

- a curriculum vitae,
- a research proposal that motivates and clearly describes the envisaged research project,
- an indication of the period envisaged for the research visit, and
- information on previous scientific work.

Applications for 2018 should be e-mailed to *eva.gehringer-wasserbauer@oenb.at* by November 1, 2017.

Applicants will be notified of the jury's decision by mid-December. The following round of applications will close on May 1, 2018.

Recent economic developments and outlook

Developments in selected CESEE countries

Solid economic momentum on the back of vivid consumption dynamics[1,2]

1 Regional overview

Supportive international economic environment despite challenging political developments

The international political environment of the CESEE countries is characterized by a high degree of uncertainty. A number of recent events have contested some of the building blocks of political order in Europe: Brexit was a setback for European integration and put an end to the move toward an "ever closer union." The high numbers of refugee arrivals in 2015 and early 2016 challenged the free movement of persons and thus one of the basic freedoms of the European Single Market. This might prove especially harmful for CESEE, as nationals of most CESEE countries have taken advantage of the possibility of free relocation within the EU. Furthermore, noncompliance with refugee allocation plans might impact future EU funding for the region. In addition, the election of Donald Trump as U.S. president might entail major disruptions in the global trade and security architecture. Finally, the 2016 coup d'état attempt in Turkey might cause a major setback in EU enlargement and necessitate the recalibration of the EU's neighborhood policy.

So far, however, these political events have not substantially impacted the international economic environment of the CESEE region. After a rollercoaster ride in the first half of 2016, financial market sentiment strengthened in the review period. In fact, equity prices in the advanced economies increased notably in recent months. In part, this rebound reflects expectations of a major fiscal stimulus in the United States, but also solid fundamentals: Sentiment brightened, initial Brexit concerns eased, global trade picked up speed, deflation fears ebbed and inflation concerns have not yet set in, and the economic outlook has improved. The second half of 2016 witnessed a rather broad-based economic recovery in the euro area. Average growth rates of 0.4% and 0.5% (quarter on quarter, seasonally adjusted) in the third and fourth quarters brought full-year euro area growth to a total of 1.8% in 2016.

Solid growth especially in the final quarter of 2016

Against this background, growth in the CESEE region was generally solid in the second half of 2016. After a temporary setback in the third quarter (mainly owing to lower growth contributions of net exports in some of the region's bigger markets), growth accelerated strongly in the final quarter of 2016. This recovery was broad based. Among the CESEE EU Member States, economic conditions were especially favorable in Slovenia, Poland and Romania: Growth rates of above 1% in the fourth quarter (quarter on quarter, seasonally adjusted) secured them a top position among the fastest growing countries in the EU. There are indications that GDP growth also picked up in Russia in the third and fourth quarters of 2016, putting an end to the recession that had started back in 2014. The Russian recov-

[1] *Compiled by Josef Schreiner with input from Stephan Barisitz, Elisabeth Beckmann, Sebastian Beer, Mariya Hake, Antje Hildebrandt, Mathias Lahnsteiner, Thomas Reininger, Caroline Stern and Zoltan Walko.*

[2] *Cutoff date: April 7, 2017. This report focuses primarily on data releases and developments from October 2016 up to the cutoff date and covers Slovakia, Slovenia, Bulgaria, Croatia, the Czech Republic, Hungary, Poland, Romania, Turkey and Russia. The countries are ranked according to their level of EU integration (euro area countries, EU Member States, EU candidate countries and non-EU countries). For statistical information on selected economic indicators for CESEE countries not covered in this report (Albania, Bosnia and Herzegovina, Kosovo, FYR Macedonia, Montenegro, Serbia and Ukraine), see the statistical annex in this issue.*

ery was driven mainly by positive impulses from the external sector, while negative growth contributions of domestic demand diminished.

Dynamics were especially pronounced in Turkey, however. Skyrocketing growth in the final quarter of 2016 was partly related to a weak third quarter: Rising political uncertainty in connection with the failed coup in mid-2016 and the strained security situation had a negative impact on capital formation and the tourism sector and sent the Turkish lira on a downward trend. Accordingly, GDP decreased by 0.2% (quarter on quarter). The strong acceleration of GDP growth in the final quarter of 2016 was driven especially by private consumption, which benefited from a surge in budget transfers to households. Future developments in Turkey will certainly be influenced by the outcome of the constitutional referendum of April 16, 2017, regarding the establishment of an executive presidency and by the possible impacts the result might have on Turkey's relations with the EU.

Table 1

Real GDP growth

	2015	2016	Q3 15	Q4 15	Q1 16	Q2 16	Q3 16	Q4 16
	Period-on-period change in %							
Slovakia	3.8	3.3	1.1	1.0	0.6	0.8	0.7	0.8
Slovenia	2.3	2.5	0.2	0.5	0.6	0.7	1.0	1.2
Bulgaria	3.6	3.4	0.9	0.9	0.8	0.9	0.7	0.9
Croatia	1.6	2.9	0.7	–0.2	0.8	0.9	1.2	0.6
Czech Republic	4.5	2.4	1.0	0.3	0.4	0.9	0.2	0.4
Hungary	3.1	2.0	0.6	0.9	–0.3	1.0	0.3	0.4
Poland	3.9	2.8	1.2	1.0	0.0	1.0	0.4	1.7
Romania	3.9	4.8	1.9	0.9	1.3	1.6	0.6	1.4
Turkey	6.1	2.9	1.3	0.7	0.8	0.2	–0.2	3.8
Russia	–2.8	–0.2	..	..	..	..	..	..
Euro area	2.0	1.8	0.3	0.4	0.6	0.3	0.4	0.5

Source: Eurostat, national statistical offices.

All CESEE countries except Russia outpaced the euro area in terms of growth in 2016. This means the region's catching-up process continued throughout the review period. It must be noted, however, that progress with catching up remains heterogeneous across the CESEE countries. For example, Croatia and Slovenia have not yet reached their precrisis output levels, while all other CESEE countries (and the euro area) did so several years ago. Furthermore, GDP per capita (at PPP) is still notably below euro area levels in all CESEE countries, ranging from 48.6% in Bulgaria to 79.4% in the Czech Republic.

Consumption thrives as labor market conditions improve

Private consumption remained the most important pillar of growth especially in the CESEE EU Member States. It benefited from two factors in particular: improving labor market conditions and rising real wages, which had a positive impact on consumer sentiment. Consumer sentiment as measured by the European Commission's Economic Sentiment Indicator (ESI) advanced by four points in the review period and reached a historical high in early 2017.

Unemployment rates have been falling consistently since early 2013 in most CESEE countries, in some of which substantially so. For example, Hungary's unemployment rate in seasonally adjusted terms declined from a peak value of

11.4% in February 2012 to 4.3% in January 2017, the lowest rate since recording started in 1996. The Czech Republic chalked up an unemployment rate of 3.4% in February 2017, the lowest rate in the EU. Positive labor market developments are also substantiated by several other indicators: Unemployment also declined among the most vulnerable age cohorts, namely young persons (below 25 years) and older persons (above 50 years). Very recently, a positive and rather broad-based trend was observable in long-term unemployment. Employment expanded strongly especially in Slovakia, Hungary and the Czech Republic. It stagnated in Poland and declined somewhat in Romania and Bulgaria, however. These three countries are also the countries that reported a notable decline in the labor force, which suggests that outward migration might still play a role for some CESEE labor markets. At the same time, especially skilled labor is becoming increasingly scarce, contributing further to the tightening of labor market conditions.

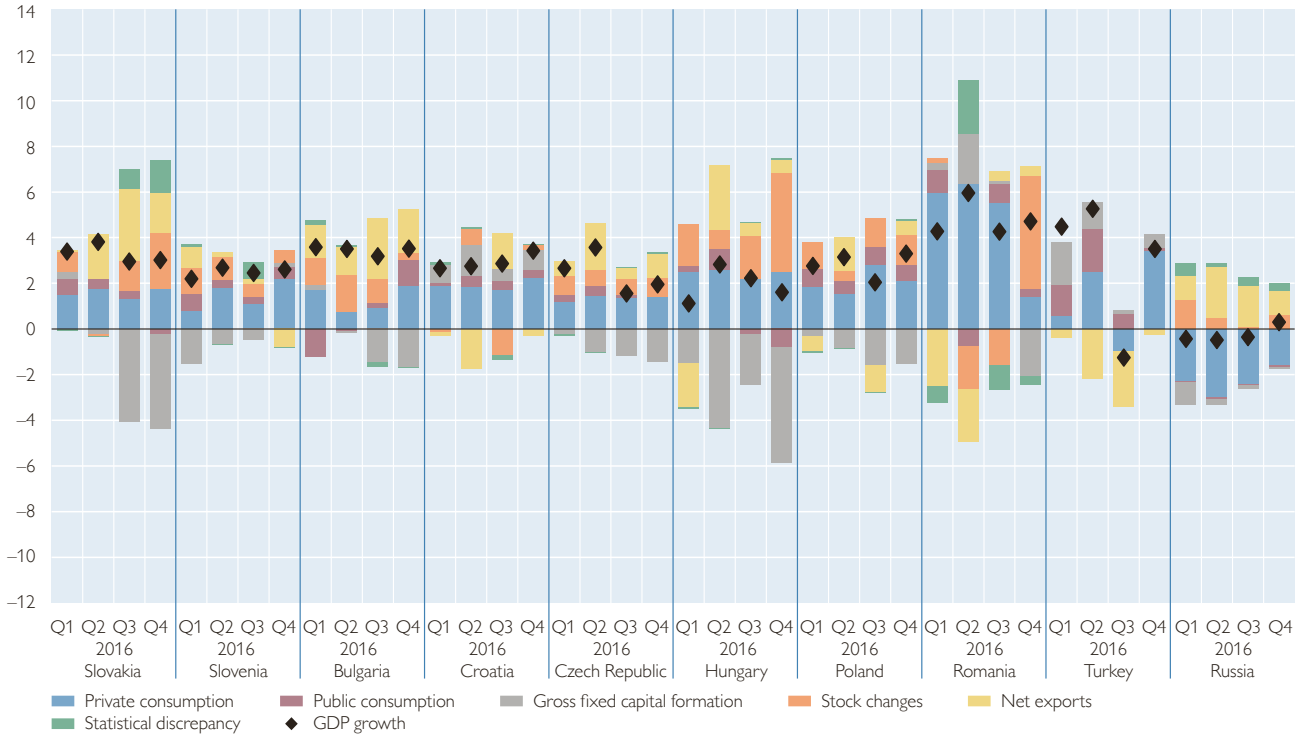
Nominal wages rose powerfully in the review period, going up by around 6% per annum, on average, in the second half of 2016 from 4.5% in the first half. Romania even reported double-digit wage increases (caused by a minimum wage hike, among other things). Slowly rising inflation rates somewhat cut into purchasing power in the fourth quarter of 2016. Nevertheless, real wages advanced by some 5% in late 2016. Strong wage inflation has already caused competitiveness in several countries to deteriorate and might also be a sign of overheating in some.

Gross fixed capital formation continued to affect general economic dynamics in the review period. This was especially true for the EU Member States in the

Chart 1

GDP growth and its main components

Percentage points, GDP growth in % (year on year)



Source: Eurostat, national statistical offices.

sample, where the contraction of investment intensified to an average of –6.7% in the second half of 2016 (–1.8% in the first half). However, outcomes showed a wide dispersion, with growth rates ranging between +4.6% in Croatia and –19.6% in Hungary in the fourth quarter of 2016. The general drop in investment was related to the end of the final year of overlapping programing periods for the disbursement of EU funds in 2015. Against this background, public investment and investment in construction suffered in particular. At the same time, stock changes contributed positively to GDP growth in all EU Member States, with inventory buildup signaling positive sentiment and expectations for the future.

Low EU fund disbursements continue to hamper investment

In Turkey, investment growth weakened, too, and turned negative (year on year) in the third quarter of 2016. Capital formation has been softening for several quarters against the background of political uncertainty and security risks in the country. By contrast, the contraction of investment in Russia moderated in the review period.

External sector supports growth despite weakening price competitiveness

The external sector's contribution to growth was positive but minor in most countries under observation. Exports benefited from robust external demand and accelerated somewhat throughout the year. At the same time, import demand was strong, given the dynamic development of private consumption. Notable growth contributions from net exports were only reported for Slovakia, Bulgaria and Russia. Slovakia and Bulgaria managed to keep import growth in check, while in Russia imports even contracted against the background of still weak domestic demand.

The external sector performed reasonably well given the fact that unit labor costs (ULCs) in manufacturing (measured in euro) deteriorated throughout most of the region. This development was driven by pronounced increases in labor costs, reflecting tightening labor market conditions. Except in Slovenia, productivity advances were not sufficient to counteract these wage rises. As most regional currencies traded at a broadly stable rate against the euro in the review period, this translated into a loss of price competitiveness vis-à-vis the euro area. Some more pronounced depreciation, however, helped bolster competitiveness to a certain extent in Poland and Turkey. Positive export developments in connection with declining price competitiveness as measured by ULCs suggest that CESEE export sectors were successful in improving non-price competitiveness factors.

High-frequency and sentiment indicators point toward continued solid growth

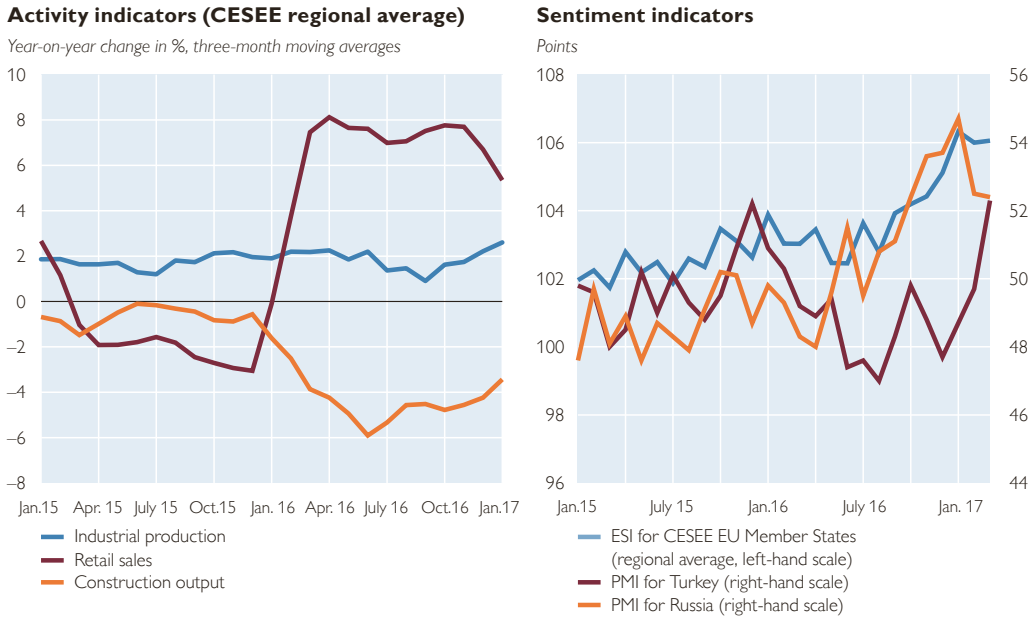
The picture derived from high-frequency activity indicators is mixed but generally positive. Industrial production has displayed a favorable trend since summer 2016. Output growth accelerated during recent months, and industrial production in CESEE expanded by 2.6% on average in January 2017 – the highest reading since mid-2014. Industry sales figures show that most of this growth was fueled by foreign demand.

Mirroring the dynamics of industrial output, output in construction also recovered from its trough in mid-2016. Its growth rate accelerated from –5.9% in June 2016 to –3.4% in January 2017. Construction production, however, is still hampered by reduced disbursements of EU funds and continued to decline in the review period. It should pick up speed once new projects have been submitted and decided upon for EU co-financing.

The growth of retail sales decelerated notably in the review period, coming down from around 8% in October 2016 to 5.3% in January 2017. Weakening dynamics were observed especially in the larger CESEE markets (Russia, Turkey

Chart 2

Leading indicators



Source: Eurostat, wiiw, European Commission, Markit.

and Poland), which strongly impacted on the regional average. Nevertheless, retail sale growth was positive in all CESEE countries except Turkey.

Economic sentiment developed favorably in general, especially in the CESEE EU Member States, thus mirroring robust economic dynamics. The ESI (average for the CESEE EU Member States) stood at levels substantially above its long-term average throughout the review period. In January 2017, it even peaked at above 106 points, and it remained at this elevated level in February and March 2017, recording the highest reading since early 2008. Increases in the index were led by sentiment in construction and consumer sentiment. All other components of the index, however, developed positively, too. The Purchasing Managers' Index (PMI) for Russia corroborates the improving state of the Russian economy. It increased to above 50 points (the threshold indicating an expansion) in August 2016 and remained above this threshold until the end of the review period.

Negative sentiment readings were only reported for Turkey. The PMI remained below 50 points between March 2016 and February 2017 before – somewhat surprisingly – jumping to above 52 points in March 2017. Lately, the ESI for Turkey also increased, but this increase was much less pronounced than that of the PMI. The ESI advanced to 93.7 points in March 2017 and remained far below its long-term average. The improvement was driven mainly by industry and construction.

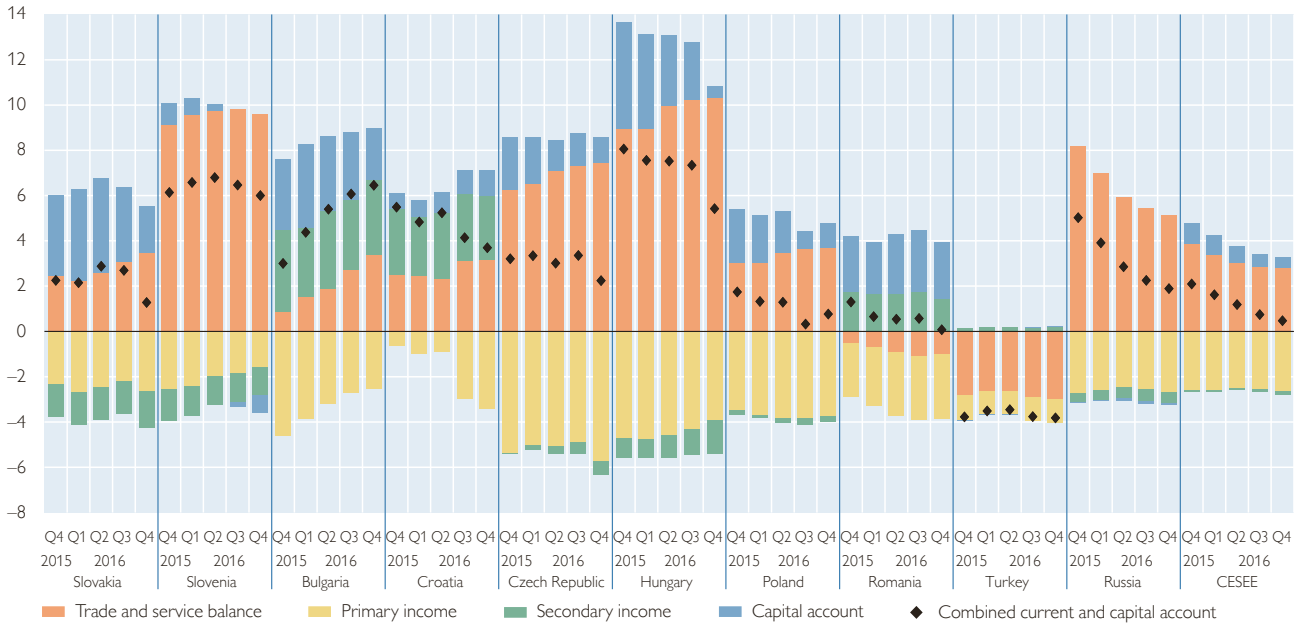
Lower capital account surplus weighs on CESEE's external surplus

The combined current and capital account balance for CESEE as a whole deteriorated somewhat in the review period, decreasing from a surplus of 1.2% of GDP in the second quarter of 2016 to 0.5% of GDP in the fourth quarter of 2016 (four-quarter moving sums). This development was mainly driven by a lower surplus in the capital account related to lower EU funds flowing into the region.

Chart 3

Combined current and capital account balance

% of GDP, four-quarter moving sum



Source: Eurostat, IMF, national central banks.

While the trade and service balance was also somewhat lower than in the first half of 2016, the other components of the current account remained broadly unchanged.

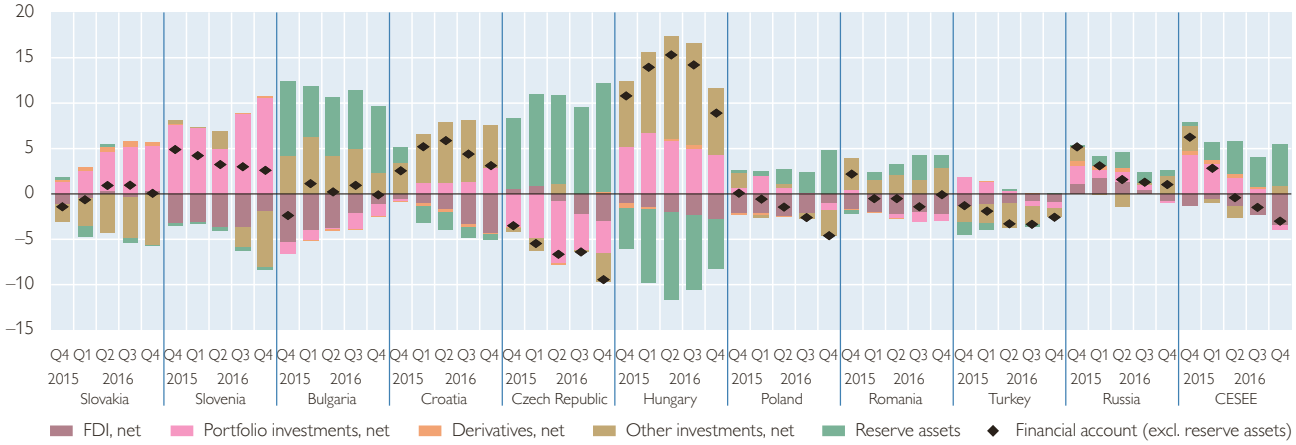
With the exception of Bulgaria, all countries of the region reported a lower surplus in the combined current and capital account. This development was most pronounced in Hungary, followed by Slovakia and Croatia. In Hungary and Slovakia, capital account dynamics sufficiently explain the development of the combined current and capital account. Croatia reported an increasing deficit in the primary income balance (comprising factor income such as income from loans and investments) as profit repatriations of foreign-owned companies shot up. Bulgaria's favorable performance was above all related to a rising surplus in the goods and services balance, which reflected positive terms of trade developments as well as an exceptionally good tourism season. Furthermore, the deficit in primary income contracted notably as a result of lower outflows under the dividend and distributed profit subitem.

The aggregate financial account balance (i.e. the difference between the net acquisition of assets and the net incurrence of liabilities, excluding reserves) of the ten CESEE countries as a whole declined from –0.5% of GDP in the second quarter of 2016 to –3% of GDP in the fourth quarter of 2016. Accordingly, their net acquisition of assets was markedly lower than their net incurrence of liabilities. This development was driven by FDI and portfolio investments. In both categories, the CESEE region is a net debtor vis-à-vis the rest of the world. At the same time, the balance of other investments turned positive, implying a net buildup of other investment assets. The financial account deteriorated especially in Hungary, Poland, Croatia and the Czech Republic. In the other CESEE countries, the finan-

Chart 4

Financial account balance

% of GDP, four-quarter moving sum



Source: National central banks.

cial account balance remained broadly stable in the review period, with changes ranging between –0.9% of GDP in Slovakia and +0.7% of GDP in Turkey.

Deflationary period ends

Inflation rates displayed a clear upward trend in CESEE throughout the review period. The only exception from this pattern was Russia, where price rises came down from rather high levels as the Russian ruble appreciated in recent months and food price inflation stabilized against the background of a bumper harvest.

After a prolonged period of deflation, prices started to increase in the CESEE EU Member States, mainly on the back of rising energy prices. The other HICP components generally did not add much to price developments. Only the Czech Republic, Croatia and Slovakia reported stronger pressure from food prices. Against this background, inflation ranged from 0.5% in Romania to 2.9% in Hungary in February 2017. This corresponds to an average increase in inflation of about 2 percentage points since the third quarter of 2016 throughout CESEE.

At the same time, core inflation (excluding energy and unprocessed food) increased only by around 0.5 percentage points on average to reach levels of between –0.3% in Bulgaria and 2.3% in the Czech Republic in February 2017. With this, core inflation remained below headline inflation in most CESEE countries, indicating that wage rises have not yet fed through substantially to the general price level.

In Turkey, inflation came to 9.9% in February 2017. This was the highest reading since April 2012 and reflects a strong increase in price pressures as inflation had amounted to only 7% in November 2016. The weakness of the Turkish lira and rising energy prices are mainly responsible for this development.

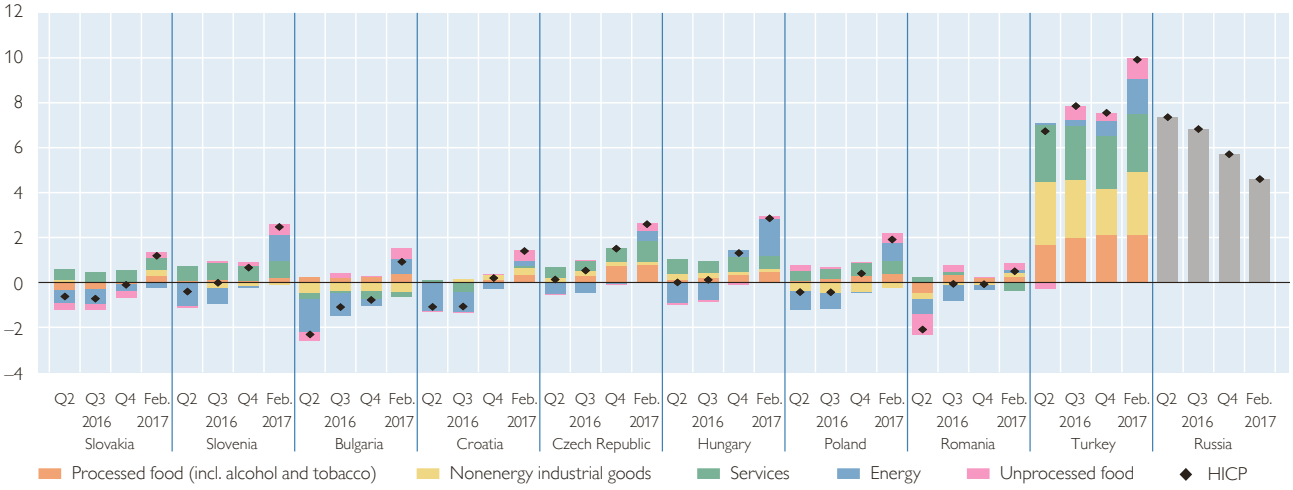
Monetary policy adjustments in Turkey and the Czech Republic

The Czech and Turkish central banks reacted to increasing price pressures in the review period. The Turkish central bank (CBRT) adjusted policy rates upward in an attempt to stabilize the currency. In November 2016, it raised its main policy rate, the one-week repo lending rate, by 50 basis points to 8% and its overnight lending rate by 25 basis points to 8.5%. In January 2017, it increased its overnight lending rate by a further 75 basis points to 9.25%. Furthermore, the late liquidity window lending rate was hiked in two steps by a total of 175 basis points to 11%.

Chart 5

HICP inflation and its main drivers

Percentage points, contribution to year-on-year change in HICP; HICP in %



Source: Eurostat.

Note: Russia: CPI. No breakdown according to COICOP available.

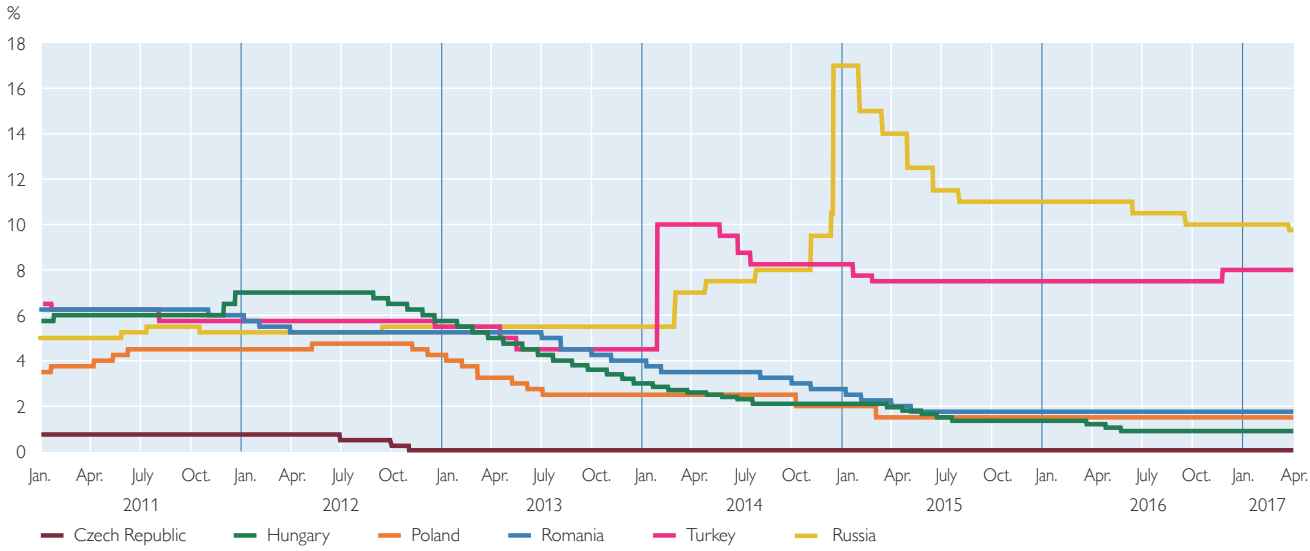
The CBRT also attempted to tighten monetary policy through alternative methods, mainly by shifting its market funding by forcing capital through higher-rate instruments. This led to an increase in the average rate of CBRT funding from around 7.8% in October 2016 to 11.3% in late March 2017.

The Czech National Bank (CNB) officially discontinued the observance of an exchange rate floor against the euro in early April 2017 as inflation reached the 2% target. The floor had been in place since November 2013 to prevent the exchange rate of the Czech koruna from appreciating to levels below CZK 27 per EUR 1. It was installed as an additional instrument to ease monetary conditions after the CNB's policy rate had reached "technically zero." Euro purchases to defend the exchange rate target went up strongly throughout 2016 and peaked at EUR 14.5 billion in January 2017. A further purchase of EUR 8.1 billion in February 2017 brought total CNB interventions to EUR 56 billion. The immediate reaction after the removal of the exchange rate floor was an appreciation of the Czech koruna against the euro by around 1.9% to around CZK 26.5 per EUR 1. In the following days, the Czech koruna depreciated again, reaching a level that was very close to that of the original exchange rate floor. This altogether very moderate reaction of the Czech koruna was not least related to the CNB's commitment to use its instruments to mitigate potential excessive exchange rate fluctuations if needed.

Against the background of moderating inflation, the central bank of Russia (CBR) lowered its policy rate by 25 basis points to 9.75% in March 2017. The CBR stated that disinflation was broadly facilitated by the appreciation of the Russian ruble amid higher-than-expected oil prices, external investors' persistent interest in investing in Russian assets and a drop in the sovereign risk premium.

Chart 6

Policy rate developments in CESEE



Source: National central banks.

Credit growth to finally gain speed throughout CESEE

Growth of domestic credit to the private sector (nominal lending to the non-bank private sector adjusted for exchange rate changes) finally gained speed in the review period, reflecting solid general economic conditions in an environment of low interest rates, monetary accommodation in the euro area and ample global liquidity.

Among the CESEE EU Member States, credit growth was highest in the Czech Republic and Slovakia in February 2017 at 9.1% and 12% in annual terms, respectively. While credit growth remained broadly stable throughout most of 2016, some acceleration was observed in recent months as corporate credit growth gained speed.

Solid credit developments in both countries were supported by the above-mentioned factors but also benefited from their healthy banking sectors: Nonperforming loan (NPL) ratios are low, profitability is sound, credits can be fully funded by local deposits, competitive pressure is high and loans denominated in foreign currency do not play a big role in either country.

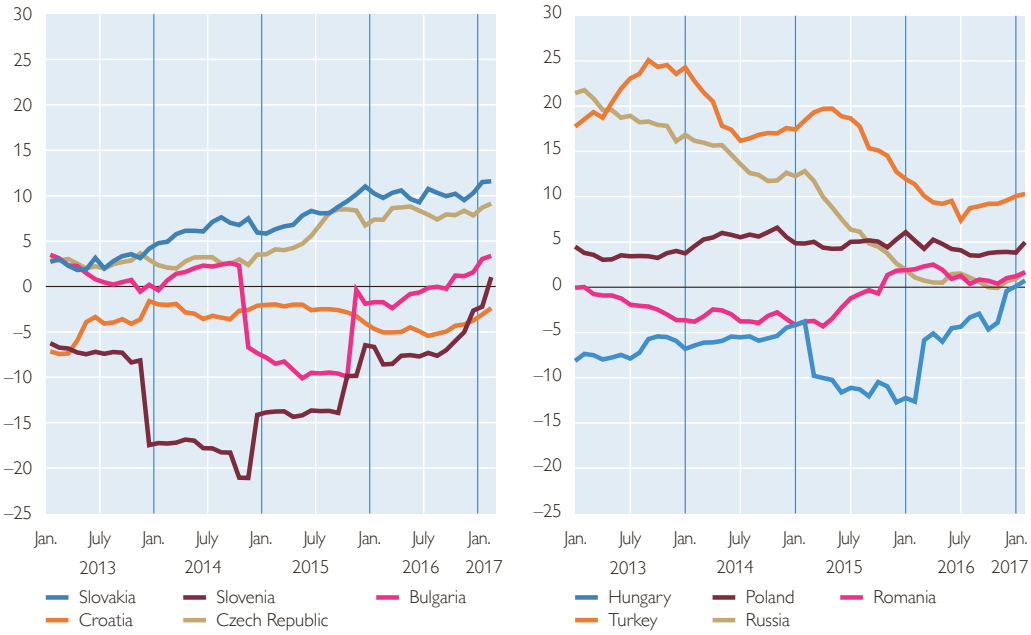
Credit growth was also rather swift in Poland. Nevertheless, credit growth dynamics fell short of those recorded in the Czech Republic and Slovakia. This might in part be related to heightened levels of uncertainty regarding institutional (mainly legal and tax) changes that have been detrimental to investing in Poland. In fact, corporate credit growth decelerated notably throughout 2016. Furthermore, Poland still reports a substantial share of foreign currency loans (especially denominated in Swiss franc) in total loans.

In Romania, credit growth accelerated from a standstill in August 2016 to 1.7% in February 2017. Especially household credit developed robustly, while corporate credit remained a drag on credit growth. Progress has been achieved in shoring up the banking sector in recent years; NPLs have been reduced and the loan-to-deposit ratio has been lowered. Furthermore, banking sector uncertainty declined following court rulings concerning the conversion of Swiss franc loans

Chart 7

Growth of credit to the private sector

Year-on-year percentage change, adjusted for exchange rate changes



Source: National central banks.

and a law allowing retail mortgage borrowers to return real estate collateral to banks in exchange for writing off their loans.

Bulgaria, Slovenia and Hungary reported a turnaround in credit developments: After a prolonged period of decline, credit started to expand again in the review period. Loan developments benefited from robust and broadening GDP growth and a notable decline in nonperforming banking sector assets in all three countries. In Bulgaria, credit dynamics also reflected intensified bank lending in the wake of the completion, in August 2016, of an asset quality review in the banking system. Furthermore, credit expansion was fueled by central bank measures in Hungary (e.g. Funding for Growth Scheme, Growth Supporting Programme). In Slovenia, household credit accelerated while corporate credit continued to decline (at decreasing rates, however). Corporate credit growth was still hampered by low demand from corporates against the background of an increasing use of internal resources and nonbank resources in corporate financing.

Croatia was the only country where the credit stock continued to decrease in the review period. The rate of decrease, however, moderated notably. This development was mainly attributable to some recovery in household credit, reflecting an improvement of the general economic environment and labor market conditions. Furthermore, banking sector trends are promising with NPLs on a clear downward path and banking sector profitability going up. Credit aggregates, however, are still burdened to a certain extent by the impact of the conversion of loans to households indexed to the Swiss franc into euro and a partial write-off of such loans that was completed in mid-2016. In early April, Croatia's constitutional court rejected a request by local banks to assess whether loan conversion was in line with the constitution.

Credit growth in Turkey and Russia reached a trough in mid- and late 2016, respectively, before gaining speed in recent months. Loan growth came to 10.3% in Turkey and 1.6% in Russia in February 2017. In Turkey, this was related to accommodative macroprudential policies, the CBRT's liquidity measures and government incentives. Consumer loans in particular performed strongly. In Russia, the incipient recovery fueled loan demand, especially of households.

Lending surveys indicate a continued strength in demand for credit in the CESEE region. The most recent CESEE Bank Lending Survey of the European Investment Bank (EIB) found that demand for loans improved across the board in the second half of 2016. This marked the seventh consecutive semester of favorable developments. All factors influencing demand made a positive contribution. Working capital and investment accounted for a good part of the strengthening in demand, while debt restructuring started to be less relevant. This is a further indication of an improving and stabilizing macroeconomic and financial environment, which seems to be more conducive to investment. Access to funding also continued to improve in CESEE, supported by easy access to domestic sources (mainly retail and corporate deposits).

Aggregate supply conditions remained basically neutral over the second half of 2016. Across the client spectrum, credit standards eased slightly only for corporates while they tightened on mortgages and remained broadly unchanged for consumer credit. Changes in regulation and banks' capital constraints are perceived as key factors that adversely affect supply conditions. Moreover, the EIB survey also consistently indicates NPLs as a drag on credit supply.

In the period ahead, banks foresee a pickup in expected credit demand and an easing of expected supply conditions. Debt restructuring, working capital, investment, consumer confidence, housing and non-housing-related expenditures are all expected to make a positive contribution to credit demand. Aggregate supply conditions are expected to ease, and the easing is expected to be broader-based than before. However, the gap between credit demand and supply positions seems to be widening further: Optimism on the demand side continues not to be fully met by the development of aggregate conditions on the supply side.

Country-level bank lending surveys conducted by national central banks broadly corroborate these findings: Aggregate demand for credit increased and is expected to do so also in the near future. At the same time, most countries reported some tightening in lending standards at least in certain segments. For example, banks in the Czech Republic tightened their credit standards for loans to households for house purchase and consumer credit as a new consumer credit act entered into effect and the CNB gave recommendations on loan-to-value limits. Furthermore, the Czech Republic was the first EU country to introduce a countercyclical capital buffer of 0.5% of total risk exposure as of January 1, 2017. Slovakia will follow and set into effect a similar buffer of 0.5% in August 2017. In both countries, these decisions were made in response to strong loan growth.

Analyzing the operation of international banking groups in the region, the EIB survey found that 27% of banking groups continued to reduce their total exposure to CESEE, thereby contributing to a further moderate decline of aggregate exposure in the review period. However, this deleveraging trend seems to be bottoming out, as more and more banking groups expect exposure to stabilize over the first half of 2017. While cross-border banking groups continue to discriminate

between countries of operation as they reassess their country-by-country strategies, they are also increasingly signaling their intentions to expand operations selectively across the region. The survey also found that roughly two-thirds of banking groups describe the profitability of CESEE operations as outperforming the profitability of the respective banking group as a whole.

Solid economic dynamics support budgetary consolidation

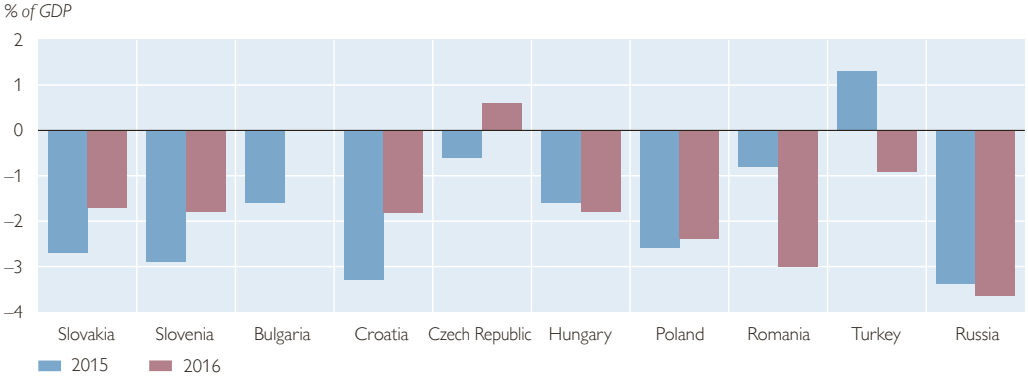
Solid economic dynamics and – in the case of the CESEE EU Member States – lower public investment expenditure amid the slow transition to the new cycle of EU fund programing had a positive impact on the budget balance in most CESEE countries. Deficits decreased most strongly in Croatia and Bulgaria (by 1.5% and 1.6% percentage points of GDP, respectively). In Croatia, deficit reduction was achieved through a combination of windfall revenues stemming from stronger-than-expected economic growth and expenditure restraints facilitated by the presence of caretaker governments with no legislative powers during much of the year. In Bulgaria, tax revenue increases and public investment reductions were the key drivers of fiscal adjustment in 2016, with tax revenues benefiting from improved tax collection among other things. Notable deficit reductions were also achieved in the Czech Republic, Slovakia and Slovenia (by 1.2%, 1.0% and 0.9% percentage points of GDP, respectively).

Higher deficits were reported especially for Romania and Turkey. In Romania, a cut in the standard VAT rate and public wage hikes weighed on the budget. In Turkey, the government significantly stepped up its expenditure in the course of 2016 to offset part of the slump in domestic demand. The further moderate increase in Russia's budget deficit was related to the further decline of the (average) oil price in 2016.

Budget balances ranged from 0% of GDP in Bulgaria to –3.7% of GDP in Russia. The Czech Republic was the only country to report a budget surplus (+0.6% of GDP). No CESEE EU country reported a deficit higher than 3% of GDP. Croatia remains the only country still subject to an excessive deficit procedure (EDP). The target date for a correction of the excessive deficit stands at 2016. Given the improvement in Croatia's general government balance to a deficit of 1.8% of GDP in 2016, the EDP might be abrogated in June 2017.

Chart 8

Development of general government deficits



Source: Eurostat, European Commission, wiiw.

Box 1

Western Balkans:[1] resilient growth despite high and rising political risks

Economic recovery continued in the second half of 2016 in the Western Balkan economies with notable accelerations of GDP growth in Albania and Serbia, thus compensating for the GDP slowdown in Montenegro and the former Yugoslav Republic (FYR) of Macedonia. Accordingly, following a prolonged period of sluggish expansion, if any, in recent years, GDP growth in Serbia expanded by 2.8% in 2016 – the highest growth rate since 2008. Similarly, Albanian GDP edged up by 3.2%. In contrast, on the back of increased political uncertainty weighing inter alia on investments, economic growth slowed down markedly to 2.4% in 2016 in FYR Macedonia, while GDP growth declined to 2% on an annual basis in Bosnia and Herzegovina. Also in Montenegro and Kosovo, growth softened somewhat, albeit from a high level, to reach 2.7% and 3.6%, respectively.

In contrast to 2015, the contribution of domestic demand to GDP growth has been robust across all Western Balkan economies (see chart 1). Underpinned by higher employment, robust credit activity but also moderate real wage growth in most of the countries, private consumption accelerated in particular. After several years of consolidation, private consumption benefited from fiscal measures in Serbia. On a negative note, stagnating remittances (especially in Albania, Bosnia and Herzegovina, and Kosovo) were less supportive in 2016 compared with the previous year. On the back of delayed infrastructure projects (e.g. in Bosnia and Herzegovina, and Montenegro), the contribution of investment activity declined but remained positive. Only in FYR Macedonia, investment suffered a strong blow and declined, mirroring prolonged political instability. In contrast, both private and public capital formation along with FDI contributed positively to growth in Serbia and Albania. In Albania, these three factors constituted the primary source of economic growth.

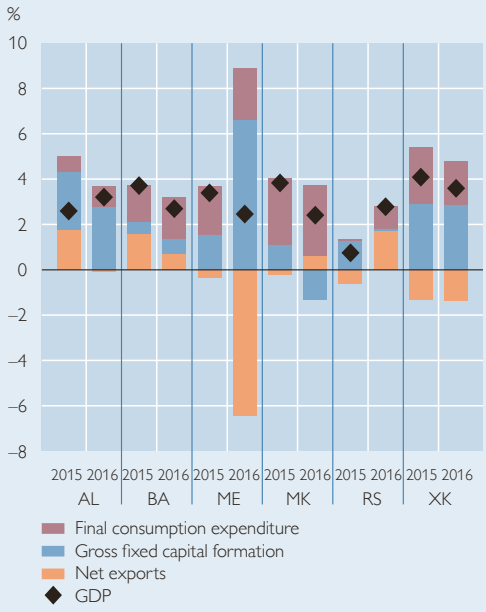
Net exports became less supportive of GDP growth in 2016. A strong and positive contribution was recorded in Serbia and in Bosnia and Herzegovina on the back of the strong dynamics in manufacturing exports. In Serbia, this was partly the result of reforms aimed to broaden the export base. In Albania, the trade deficit widened due to increased investment-related imports (+8.2% year on year) and still subdued commodities exports. Also in Kosovo, commodity exports performed modestly. In contrast, strong construction-related imports dwarfed exports and thus propelled the negative contribution of net exports to growth to the highest levels since 2009 in Montenegro despite an exceptional tourist season.

Labor market conditions in the Western Balkan countries remained strained overall, but the ongoing economic recovery as well as recent reforms in some countries fed through to the decline of unemployment rates. Unemployment (Labour Force Survey methodology) declined in the Western Balkans as of end-2016 despite increased labor participation rates. The declines were strongest in Serbia and Albania (down to 13% and 14%, respectively), thus hitting the lowest levels of the past ten years. Only in Montenegro, unemployment edged up to 18%, which was allegedly attributable to policy measures weighing on female labor force participation. Overall, unemployment reduction went hand in hand with an increase in employment except in Bosnia and Herzegovina, where it stagnated in 2016. The increase was strongest in Serbia and Albania, where the employment rate (measuring employed persons relative to the total population) moved up by 3 percentage points to slightly above 55% – the highest rates in the region but still well below the average euro area employment rate (almost 64%).

[1] *The Western Balkans comprise the EU candidate countries Albania (AL), FYR Macedonia (MK), Montenegro (ME) and Serbia (RS) as well as the potential candidate countries Bosnia and Herzegovina (BA) and Kosovo (XK). The designation "Kosovo" is used without prejudice to positions on status and in line with UNSC 1244 and the opinion on the Kosovo Declaration of Independence.*

Chart 1

GDP growth and its main components in 2016



Source: Eurostat, wiiw, World Bank.

Mirroring exchange rate stability as well as low commodity prices, consumer price inflation in the Western Balkans in the second half of 2016 remained subdued, overall, and even hovered in negative territory in FYR Macedonia (–0.1% year on year) and Bosnia and Herzegovina (–0.8% year on year). On an annual basis, consumer price inflation remained broadly flat at an average of 0.5%. Only in Kosovo, energy and food prices induced a turnaround to an average of 1.3% in the second half of 2016. The acceleration of economic activity fed through to inflation toward the end of 2016 and the first months of 2017, and all countries posted positive inflation rates in February 2017. With inflation climbing to 1.2% in Bosnia and Herzegovina in February 2017, this appears to have ceased the prolonged deflationary trend that had started in mid-2013.

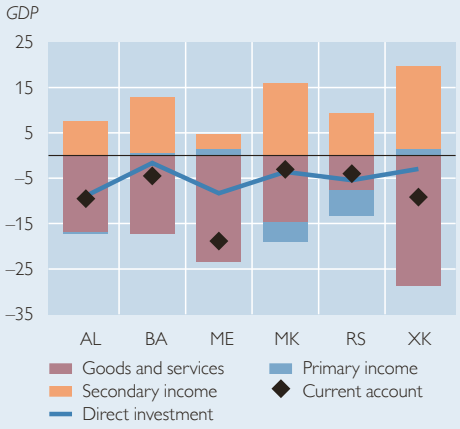
Both inflation-targeting countries – Albania and Serbia – undershot the lower bound of their inflation targets in the second half of 2016. However, prices climbed up in the last quarter of 2016 and in the first two months of 2017. Albania registered an inflation of 2.3% in February, which was above the lower bound of the Bank of Albania's inflation target, which lies at 3% with a tolerance band of ±1 percentage point. In Serbia, inflation accelerated sizeably, reaching 3.2% in February, which for the first time since mid-2014 is within the inflation bound, which has been lowered as from January 2017 to 3% ±1.5 percentage points. The National Bank of Serbia (NBS) has maintained its key policy rate at a historical low of 4% since July 2016, while the Bank of Albania has left its policy rate at 1.25% since May 2016. The central bank of FYR Macedonia lowered its benchmark interest rate between December and February by a cumulative 75 basis points to 3.25%, countering increases implemented in the wake of deposit outflows in 2016. The Albanian lek has remained fairly stable against the euro over the last half year. As for the Serbian dinar, the NBS intervened frequently on the foreign exchange market to reduce exchange rate volatility vis-à-vis the euro, thus limiting the depreciation of the Serbian dinar to close to 1% between October 2016 and March 2017.

On the back of resolution mechanisms put in place in some Western Balkan countries in 2016, bank asset quality gradually improved and supported credit growth although NPL ratios remained well above precrisis levels. In December 2016, Albania and Serbia still recorded the highest NPL ratios in the region at 18.3% and 17%, respectively. At the same time, provisions to write off old NPLs in FYR Macedonia almost halved to 5.5% of total loans on an annual basis. Although an NPL resolution mechanism in still not in place, Kosovo has the lowest NPL share in total loans in the Western Balkans, which even declined to 4.7% at end-2016.

The ongoing process of cleaning up banks' balance sheets, more favorable lending conditions and elevated domestic demand fed through on credit dynamics in most countries although the second half of 2016 was marked by more moderate credit growth. As a common feature among all Western Balkan countries, lending to households has been growing stronger than loans to corporates. Overall, bank lending to the private sector expanded most strongly in Kosovo (10% year on year) and Serbia (5% year on year), while in FYR Macedonia it remained positive but was on a declining path during the last months of 2016 (2.1% year on year). Despite accommodative monetary policy and eased credit standards, lending in Albania was sluggish and still held back by the slow resolution of high NPL stocks.

Chart 2

Current account and direct investment



Source: IMF, national central banks, World Bank.

With respect to the fiscal stance, robust revenue growth supported the narrowing of fiscal imbalances in most of the Western Balkan economies in 2016. On a negative note, the overall underexecution of capital expenditures turned out to be equally supportive of the decline in fiscal deficits. This was particularly relevant for FYR Macedonia, where the deficit declined to 2.6% of GDP, which is significantly below the 4% target announced in the second budget revision. Montenegro posted the highest fiscal deficit in the region in 2016; however, its deficit had still almost halved on an annual basis to 3.9% of GDP, which is well below the target of 7.2% of GDP. On the back of reforms of state-owned enterprises (SOEs) but also due to a rationalization of current spending, the budget deficits of Albania and Serbia declined to 2.2% and 1.4% of GDP, respectively. In line with the country's fiscal rule, the budget deficit edged down to 1.3% of GDP in 2016 in Kosovo, reflecting increases in excise and VAT revenues. The fiscal stance in Bosnia and Herzegovina turned slightly expansionary. The fiscal balance turned negative in 2016 (–0.9% of GDP) and the fiscal situation remains challenging not least because of upcoming elevated refinancing needs and a delay in the payment of a tranche under the current IMF program. On a positive note, for the first time since 2009, favorable fiscal deficit developments but also faster GDP growth helped stabilize public debt or even bring the stock of public debt onto a declining path in 2016 in most of the Western Balkan economies. Accordingly, public debt declined in Albania and Serbia, although still scoring the highest levels in the region (71.6% and 74% of GDP, respectively). In FYR Macedonia, the annual increase in public debt was the most pronounced throughout the region (3.4 percentage points), which was partly attributable to higher state guarantees to SOEs.

Since the first quarter of 2017, four of the Western Balkan countries have participated in programs with the IMF. While Albania successfully completed its 36-month Extended Fund Facility (EFF) program with the IMF in February 2017, the first review under the EFF program with Bosnia and Herzegovina (initially approved in September 2016) was postponed in April 2017 due to delays of agreed reforms, thus withholding a tranche of EUR 80 million. Serbia successfully concluded the sixth review under the precautionary stand-by arrangement (SBA) with the IMF, thus making available (accumulatively) nearly three-quarters of the total sum of EUR 1.2 billion. In Kosovo, the IMF Board completed the combined second and third reviews under the current SBA, enabling a disbursement of around EUR 100 million. At the same time, the program has been extended by nearly three months to the beginning of August 2017 to allow sufficient time for structural reforms to progress.

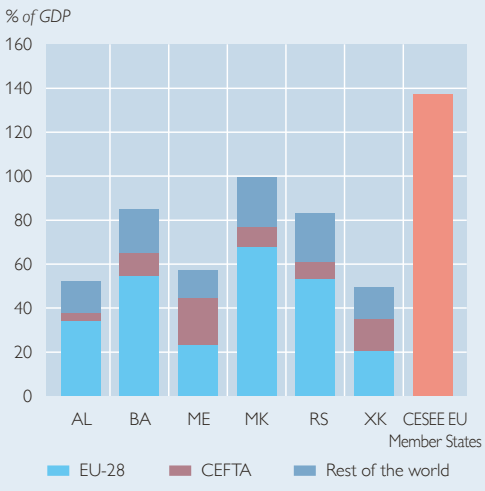
Spotlight: taking stock of external vulnerabilities and trade integration of the Western Balkan countries

External imbalances constitute a major and lasting vulnerability of the Western Balkan economies. On a positive note, in 2016 private sector-oriented reforms and higher external demand, among other things, contributed to the narrowing of external deficits to all-time lows in some countries of the region. The improvement was most sizeable in Albania, Bosnia and Herzegovina, and Serbia (down to 9.6%, 4.5% and 4% of GDP, respectively), driven by a lower trade balance deficit (see chart 2). In contrast, in Montenegro, the country with the highest current account gap in the region, the deficit rose markedly to 19.2% of GDP in 2016 (2015:

13.3% of GDP). FDI remained the main source of external financing in the Western Balkans, but its importance edged down on an annual basis in 2016. Still, at an average of 3.7% of GDP in 2016, FDI coverage of the current account deficit amounted to some 78% on a regional average, with the notable exception of Serbia and FYR Macedonia, where FDI provided full coverage.

Chart 3

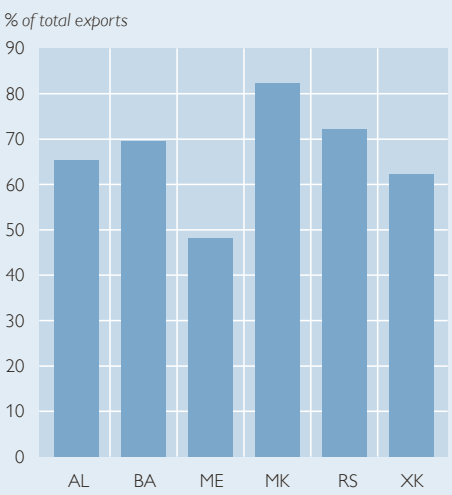
Trade openness in 2015



Source: IMF, NCB, World Bank.

Chart 4

Share of manufacturing in total exports



Source: wiiw.

Overall, all Western Balkan countries show stubbornly high trade deficits, which could be related to the overall narrow export base in the region but which are also explicable by a high dependence on imports for both consumption and investments.[2] In fact, trade integration within the region but also with the rest of the world is below potential when taking into account the countries' level of development, geographical location and size. The region's trade openness (i.e total imports and exports as a share of GDP) amounted to 71% of GDP in 2015, which is still well below the level of the CESEE EU Member States (see chart 3). The main trading partner of the Western Balkan countries is the EU with shares of up to 70% in total trade (e.g. in FYR Macedonia). At the same time, regional trade remains subdued and, on average, only 12% of total trade is conducted with other CEFTA[3] countries (see chart 3).

In fact, the comparatively low level of trade of the Western Balkan countries is rooted also in the structure of goods traded. Overall, the average share of manufacturing in total exports in the region is well below that in the CESEE EU Member States (see chart 4). It ranges from 48% in Montenegro to close to 90% in FYR Macedonia, with the share being relatively high in FYR Macedonia because of policies that fostered FDI inflows in previous years. As confirmed also by recent EBRD research, the region still lacks sufficient integration into European supply chains. Moreover, the countries are only integrated in the final stages of international supply chains in industries, e. g. the food, beverages and tobacco as well as the textiles and clothing industries.

Finally, as shown by recent results of the World Bank's Doing Business survey, particularly high non-tariff barriers to trade have been pointed out to be a major obstacle to the improvement of trade integration. Thus, key challenges are rooted in the cost and time it takes to export, which are often twice as high in the Wester Balkans than in the CESEE EU Member States.

[2] *A recent European Commission initiative as well as a joint statement by the Western Balkan countries as laid out at a Western Balkan summit in Sarajevo on March 16, 2017, highlighted the pressing need for the Western Balkan economies to foster regional economic integration.*

[3] *The aim of the Central European Free Trade Agreement (CEFTA) is to facilitate trade among the participating countries (as of 2017: Albania, Bosnia and Herzegovina, FYR Macedonia, Montenegro, Kosovo, Serbia and Moldavia), eliminate trade barriers, increase investment flows and foster better integration into global supply chains.*

2 Slovakia: EU funding cycle shapes growth composition

Export industry supports solid growth

With real GDP growing at an annual rate of 3%, Slovakia's economy expanded swiftly during the second half of 2016. The expansion was largely the result of exports, which grew by 4.5% and 6.3% year on year in the third and fourth quarters, respectively. By contrast, capital investments dropped sharply (by –17% and –15% year on year, respectively) due to a sluggish start of drawdowns of EU funds in the new programing period. Given the substantial import content of Slovakia's capital investments, this contraction implied a slowdown in import growth, thus contributing to Slovakia's trade surplus. Investments are expected to gain momentum as the funding cycle extends. The capital stock will further benefit from a new automotive plant, the construction of which started in 2016. Cars are expected to boost exports as from 2018.

Private consumption benefits from sustained labor market dynamics

On the back of beneficial labor market and moderate price dynamics, private consumption increased by 2.5% and 3% year on year in the third and fourth quarters, respectively. Slovakia's unemployment rate has been declining for several quarters, reaching 8.6% in February 2017. At the same time, employment growth reached a post-crises record high. As a consequence, the private sector has started to perceive shortages in skilled labor, which are likely to add to recent wage dynamics. These developments contribute to increases in nominal disposable income. The persistently low level of commodity prices fostered real incomes by driving the robust rise of domestic consumption. According to the National Bank of Slovakia, surging labor market demand has started to attract supply from abroad, suggesting that private sector wage growth will maintain its dynamics. The government has been increasing teachers' salaries at an annual rate of 5% between 2012 and 2015, and by 6% in 2016. This fuels wage growth in the public sector and further highlights the importance of private consumption for future real economic activity.

Inflation seems to have bottomed out at last

Inflation remained subdued in the second half of 2016. Given a reduction in administered gas and electricity prices, energy continued to become less expensive, notwithstanding the recent rise in global energy prices. By extending the basket of items qualifying for a reduced VAT rate, the government furthermore contributed to negative food price developments. Food prices had already been under pressure because of high-yielding global grain harvests. The recent decision of the Regulatory Office for Network Industries to lower gas and electricity prices further is expected to drag on overall inflation in the near future. Nevertheless, food prices have started to accelerate recently, bringing inflation to 1.3% in February 2017. At the same time, strong wage growth is becoming visible in an increase in core inflation. This suggests that after three consecutive years of negative price developments, owing to both domestic and global dynamics, inflation is set to finally turn positive.

Private indebtedness is rising

The euro area's low interest rate environment has boosted private indebtedness more in Slovakia than in other comparable countries. Mortgage-backed loans have been increasing at double-digit rates since 2010, and continued to grow by 10% in the second half of 2016. As a result, house prices have picked up considerably (by almost 10% since 2014). To strengthen financial stability, the National Bank of Slovakia has introduced several macroprudential measures since 2014, which have since been progressively tightened. Public debt is still high from a historical perspective but consolidation efforts have reduced its level since 2013. In 2016, the budget deficit decreased to 1.7% of GDP on the back of vivid revenue growth.

Table 2

Main economic indicators: Slovakia

	2014	2015	2016	Q3 15	Q4 15	Q1 16	Q2 16	Q3 16	Q4 16
	Year-on-year change of the period total in %								
GDP at constant prices	2.6	3.8	3.3	3.9	4.6	3.4	3.8	3.0	3.0
Private consumption	1.4	2.2	2.9	2.4	2.4	2.6	3.1	2.5	3.2
Public consumption	5.3	5.4	1.6	6.5	6.0	3.6	2.5	2.1	–1.0
Gross fixed capital formation	1.2	16.9	–9.3	20.7	21.9	1.8	–1.1	–17.0	–15.0
Exports of goods and services	3.7	7.0	4.8	7.2	9.2	0.3	7.8	4.5	6.3
Imports of goods and services	4.4	8.1	2.9	9.8	10.4	0.3	5.9	0.8	4.5
	Contribution to GDP growth in percentage points								
Domestic demand	3.0	4.6	0.9	5.7	5.4	3.4	1.9	–1.1	–0.1
Net exports of goods and services	–0.5	–0.7	1.8	–1.8	–0.8	0.0	1.9	3.2	1.8
Exports of goods and services	3.4	6.4	4.5	6.1	8.5	0.3	7.3	3.8	6.0
Imports of goods and services	–3.9	–7.2	–2.7	–7.9	–9.3	–0.3	–5.4	–0.7	–4.2
	Year-on-year change of the period average in %								
Unit labor costs in the whole economy (nominal, per person)	0.7	1.2	0.9	1.1	2.0	1.0	–0.1	0.3	2.1
Unit labor costs in manufacturing (nominal, per hour)	1.6	–1.8	2.6	–4.4	–2.5	2.8	–0.4	4.5	3.3
Labor productivity in manufacturing (real, per hour)	2.4	6.3	1.4	8.7	7.8	0.6	3.6	0.2	1.0
Labor costs in manufacturing (nominal, per hour)	4.1	4.5	3.9	3.9	5.1	3.4	3.1	4.7	4.4
Producer price index (PPI) in industry	–3.5	–3.0	–4.0	–2.4	–3.2	–4.2	–5.1	–4.3	–2.3
Consumer price index (here: HICP)	–0.1	–0.3	–0.5	–0.3	–0.5	–0.5	–0.6	–0.7	–0.1
EUR per 1 SKK, + = SKK appreciation	..	..	..	..	..	..	..	..	..
	Period average levels								
Unemployment rate (ILO definition, %, 15–64 years)	13.2	11.5	9.7	11.3	11.0	10.4	9.7	9.6	9.2
Employment rate (%, 15–64 years)	61.0	62.7	64.9	63.0	63.5	64.1	64.9	65.1	65.3
Key interest rate per annum (%)	0.2	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0
SKK per 1 EUR	..	..	..	..	..	..	..	..	..
	Nominal year-on-year change in the period-end stock in %								
Broad money (including foreign currency deposits)	4.9	11.1	5.4	10.7	11.1	9.3	8.8	8.2	5.4
	Contributions to the year-on-year change of broad money in percentage points								
Net foreign assets of the banking system	4.9	6.2	10.3	10.6	1.8	–2.2	2.9	5.4	7.6
Domestic credit of the banking system	7.9	24.9	26.5	14.2	17.3	13.5	12.4	10.8	8.3
of which: claims on the private sector	10.5	13.2	16.1	6.4	7.8	6.5	5.7	7.2	7.5
claims on households	9.8	11.6	13.1	6.1	5.9	5.8	6.1	6.4	6.5
claims on enterprises	0.7	1.6	3.0	0.3	1.9	0.7	–0.4	0.8	1.0
claims on the public sector (net)	–2.6	11.7	10.4	7.8	9.6	7.0	6.7	3.6	0.8
Other assets (net) of the banking system	–1.7	–14.6	–19.7	–14.1	–8.1	–2.0	–6.6	–7.9	–10.5
	% of GDP								
General government revenues	39.3	42.8	40.0	..	..	..	..	..	..
General government expenditures	42.0	45.6	41.6	..	..	..	..	..	..
General government balance	–2.7	–2.7	–1.7	..	..	..	..	..	..
Primary balance	–0.8	–1.0	0.1	..	..	..	..	..	..
Gross public debt	53.6	52.5	51.9	..	..	..	..	..	..
	% of GDP								
Debt of nonfinancial corporations (nonconsolidated)	49.7	48.8	..	..	..	..	..	..	..
Debt of households and NPISHs (nonconsolidated)	32.6	35.1	..	..	..	..	..	..	..
	% of GDP (based on EUR), period total								
Trade balance	3.8	2.3	3.0	0.8	0.8	4.2	4.0	2.2	1.8
Services balance	0.1	0.1	0.5	0.3	–0.4	0.3	0.6	0.7	0.2
Primary income	–2.2	–2.3	–2.6	–3.4	–0.3	–3.6	–2.6	–2.4	–2.0
Secondary income	–1.6	–1.4	–1.6	–1.4	–1.2	–1.7	–1.4	–1.6	–1.8
Current account balance	0.1	–1.3	–0.8	–3.8	–1.1	–0.8	0.6	–1.0	–1.8
Capital account balance	1.0	3.5	2.1	4.0	6.9	3.4	2.4	0.6	2.1
Foreign direct investment (net)	0.2	–1.1	0.4	0.1	–3.5	–1.3	6.0	–2.7	–0.3
	% of GDP (rolling four-quarter GDP, based on EUR), end of period								
Gross external debt	88.8	85.6	91.1	86.7	85.6	85.4	87.8	90.0	91.1
Gross official reserves (excluding gold)	1.5	2.1	2.0	2.5	2.1	2.0	2.0	2.0	2.0
	Months of imports of goods and services								
Gross official reserves (excluding gold)	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
	EUR million, period total								
GDP at current prices	75,946	78,686	80,958	20,768	20,343	18,524	20,242	21,256	20,936

Source: Bloomberg, European Commission, Eurostat, national statistical offices, national central banks, wiiw, OeNB.

3 Slovenia: output, credit and prices on the rise

Consumption becomes growth driver in 2016

GDP growth in Slovenia held steady during the second half of 2016, resulting in an annual average growth rate of 2.5%. Economic expansion relied heavily on domestic consumption, the growth rate of which strongly picked up in 2016. Private consumption was backed by rising real wages, strong consumer sentiment and the accelerating growth of household credit. Public consumption also grew more strongly than in 2015, which was presumably linked to the gradual lifting of crisis-related fiscal savings measures. The contraction of investment activity gradually moderated in the second half of 2016. The slowdown of EU fund inflows was mirrored in the slump of government investments. Investments in the private sector expanded moderately, in particular in machinery and equipment, reflecting high and rising capacity utilization rates, strong business sentiment and slowly but steadily improving corporate credit growth. Net real exports were roughly neutral for the overall GDP growth rate in 2016, while stock changes added a relatively high 0.8 percentage points to the GDP growth rate. The European Commission's winter forecast expects GDP growth to accelerate to 3% in 2017. Private consumption should remain a major pillar of growth, supported by rising employment and increasing wages, while investments are expected to bounce back and net exports to remain neutral. High-frequency indicators for the beginning of 2017 are a mixed bag, with a further improvement of economic sentiment and accelerating retail sales on the one hand and slowing industrial and construction output on the other.

Fiscal consolidation supported by economic recovery

The general government deficit decreased to 1.8% of GDP in 2016, from 2.9% in 2015. Healthy economic growth, showing in higher-than-expected tax revenues, lower-than-expected subsidies and a large decline in public investments, contributed to the improvement. The European Commission expects the deficit to be cut further to 1.7% of GDP in 2017 (and 1.4% of GDP in 2018), mainly on the back of contained public investments, a reduction in interest expenditure and buoyant tax revenues and notwithstanding a projected moderate rise in public sector wage and pension expenditure. However, the European Commission expects a loosening of the fiscal stance, adjusted for cyclical factors, especially in 2018 and has recently called for structural measures to reduce the structural deficit. According to the European Commission's in-depth review under the 2017 European Semester, Slovenia continues to experience imbalances despite the progress achieved throughout 2016. In particular, further policy action is required with regard to corporate indebtedness and the business environment, remaining weaknesses in the banking sector and long-term fiscal challenges.

Inflation back in positive territory

After an extended period of deflation, year-on-year price changes turned positive again in the final months of 2016. Inflation climbed to 2.5% by February 2017 as prices for energy and unprocessed food went up. Nonbank private sector deleveraging slowed further during the reporting period. The growth of loans to households has accelerated markedly since the third quarter of 2016, while the year-on-year decline in lending to nonfinancial corporations has moderated continuously. However, the improved lending activity failed to translate into an improvement in banks' net interest revenues in 2016 as the decline was steeper in lending than in deposit interest rates. Nevertheless, the reduction in impairment and provisioning costs, which reflected the higher quality of banks' credit portfolio, led to a marked improvement in banks' profitability despite the low interest rate environment in the euro area. Furthermore, banks are well capitalized and have access to sufficient liquidity.

Table 3

Main economic indicators: Slovenia

	2014	2015	2016	Q3 15	Q4 15	Q1 16	Q2 16	Q3 16	Q4 16
	Year-on-year change of the period total in %								
GDP at constant prices	3.1	2.3	2.5	2.0	2.8	2.2	2.7	2.5	2.6
Private consumption	2.0	0.5	2.8	1.1	0.6	1.6	3.5	2.1	4.0
Public consumption	–1.2	2.4	2.6	3.2	3.4	3.9	2.0	1.7	2.8
Gross fixed capital formation	1.4	1.0	–3.1	–0.2	5.4	–7.7	–3.5	–2.5	0.9
Exports of goods and services	5.7	5.6	5.8	5.0	4.3	5.8	7.6	5.4	4.6
Imports of goods and services	4.2	4.6	6.4	5.1	4.7	5.2	8.4	5.9	6.3
	Contribution to GDP growth in percentage points								
Domestic demand	1.7	1.3	2.2	1.6	2.7	1.2	2.5	1.5	3.4
Net exports of goods and services	1.4	1.1	0.1	0.4	0.1	0.9	0.2	0.2	–0.8
Exports of goods and services	4.3	4.2	4.6	3.8	3.4	4.6	5.8	4.2	3.6
Imports of goods and services	–2.9	–3.2	–4.4	–3.4	–3.3	–3.6	–5.6	–4.0	–4.4
	Year-on-year change of the period average in %								
Unit labor costs in the whole economy (nominal, per person)	–1.3	0.3	1.7	0.2	0.4	2.0	2.5	1.2	1.3
Unit labor costs in manufacturing (nominal, per hour)	–0.1	–5.0	–5.0	–7.8	–3.7	–6.8	–6.5	–5.2	–1.6
Labor productivity in manufacturing (real, per hour)	3.8	5.7	8.7	6.3	4.1	7.8	8.0	8.5	10.6
Labor costs in manufacturing (nominal, per hour)	3.8	0.5	3.3	–2.0	0.2	0.5	1.0	2.8	8.8
Producer price index (PPI) in industry	–0.7	–0.2	–1.4	–0.4	–1.2	–1.9	–2.3	–1.3	–0.1
Consumer price index (here: HICP)	0.4	–0.8	–0.2	–0.8	–0.9	–0.9	–0.4	0.0	0.7
EUR per 1 SIT, + = SIT appreciation	..	..	..	..	..	..	..	..	..
	Period average levels								
Unemployment rate (ILO definition, %, 15–64 years)	9.9	9.1	8.1	8.7	8.5	9.0	7.9	7.5	8.1
Employment rate (%, 15–64 years)	63.9	65.2	65.9	66.7	65.2	64.2	66.2	66.4	66.6
Key interest rate per annum (%)	0.2	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0
SIT per 1 EUR	..	..	..	..	..	..	..	..	..
	Nominal year-on-year change in the period-end stock in %								
Broad money (including foreign currency deposits)	7.8	5.3	7.2	3.8	5.3	6.3	5.4	6.1	7.2
	Contributions to year-on-year change of broad money in percentage points								
Net foreign assets of the banking system	48.9	23.5	0.7	–0.7	–1.6	–6.4	1.5	7.0	2.2
Domestic credit of the banking system	–32.9	–10.7	12.6	3.0	7.8	11.6	3.8	–1.1	4.6
of which: claims on the private sector	–38.4	–20.7	–7.1	–12.4	–4.8	–8.0	–6.7	–5.7	–2.1
claims on households	–2.2	–0.3	1.6	0.0	0.4	0.0	0.3	0.6	1.1
claims on enterprises	–36.2	–20.4	–8.6	–12.4	–5.2	–8.0	–7.0	–6.3	–3.3
claims on the public sector (net)	5.5	10.0	19.6	15.4	12.6	19.6	10.4	4.6	6.7
Other assets (net) of the banking system	–7.9	0.8	–0.4	1.5	–0.9	1.1	0.1	0.1	0.5
	% of GDP								
General government revenues	44.7	45.2	43.6	..	..	..	..	..	..
General government expenditures	50.1	48.1	45.5	..	..	..	..	..	..
General government balance	–5.4	–2.9	–1.8	..	..	..	..	..	..
Primary balance	–2.1	0.4	1.3	..	..	..	..	..	..
Gross public debt	80.9	83.1	79.7	..	..	..	..	..	..
	% of GDP								
Debt of nonfinancial corporations (nonconsolidated)	79.6	68.2	..	..	..	..	..	..	..
Debt of households and NPISHs (nonconsolidated)	28.5	27.8	..	..	..	..	..	..	..
	% of GDP (based on EUR), period total								
Trade balance	3.2	3.9	3.9	4.3	3.5	5.1	4.4	3.7	2.4
Services balance	4.5	5.2	5.7	6.1	5.0	5.1	5.4	7.0	5.3
Primary income	–0.3	–2.5	–1.6	–2.9	–2.6	–0.8	–1.6	–2.3	–1.5
Secondary income	–1.1	–1.4	–1.2	–1.1	–1.3	–1.7	–0.9	–1.4	–1.0
Current account balance	6.2	5.2	6.8	6.5	4.7	7.7	7.3	7.1	5.2
Capital account balance	0.4	1.0	–0.8	1.3	1.4	–0.4	–1.1	–0.6	–1.0
Foreign direct investment (net)	–1.6	–3.2	–1.9	–2.2	–6.4	–3.5	–2.6	–2.4	0.8
	% of GDP (rolling four-quarter GDP, based on EUR), end of period								
Gross external debt	124.0	116.7	109.0	119.2	116.7	116.7	114.3	111.7	109.0
Gross official reserves (excluding gold)	2.0	1.8	1.5	1.9	1.8	1.7	1.7	1.5	1.5
	Months of imports of goods and services								
Gross official reserves (excluding gold)	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
	EUR million, period total								
GDP at current prices	37,332	38,570	39,769	9,931	9,831	9,245	10,152	10,197	10,175

Source: Bloomberg, European Commission, Eurostat, national statistical offices, national central banks, wiiw, OeNB.

4 Bulgaria: robust GDP development despite political woes

Higher-than-expected GDP growth in 2016

Economic activity in Bulgaria in 2016 turned out notably stronger than expected, with GDP growth reaching 3.4% year on year. In the second half of 2016, private and public consumption as well as exports contributed positively to economic growth at 2.3%, 4.3% and 7.2% year on year, respectively. However, investments dropped significantly in the second half of 2016 (–7.2%). In October 2016, the Bulgarian National Statistical Institute published significant revisions of GDP data for 2000 to 2016, addressing specific recommendations by Eurostat while taking into account new statistical data. Data for 2015 changed most significantly: GDP growth was revised upward by 0.6 percentage points to 3.6%. Exports accelerated in the second half of 2016, with the main export groups being intermediate and consumption goods. Exports of services also performed well in 2016, growing by 7.3%. With regard to services, Bulgaria's tourism sector profited from geopolitical tensions, especially those in Turkey. However, strong private consumption led to a concurrent increase in imports of goods and services, diminishing the positive effect of exports on the external sector's growth contribution. Private consumption benefited from relatively low unemployment levels (6.7% per year at end-2016), rising wage levels (8.2% in December 2016) and positive consumer sentiment. Investments, by contrast, dropped significantly in the second half of 2016, mainly because of delayed government projects and slower-than-expected EU fund absorption.

Headline inflation turned positive for the first time since August 2013

Headline inflation turned positive in early 2017, amounting to 0.4% in January and 0.9% in February 2017. These were the first positive inflation readings since August 2013. The main driver of this development were energy prices. Inflation in this component accelerated to 6.2% in February 2017. At the same time, core inflation advanced only very moderately and remained negative (–0.3% in February 2017).

NPL ratios decrease and credit growth turns positive again

Private credit growth rates have been positive since October 2016, after a prolonged period of credit stock contraction. In January 2017, loans to households increased by 4.1% and loans to corporates increased by 2.9% year on year. At the same time, the NPL ratio decreased from 10.4% in June 2016 to 9.0% in December 2016. Moreover, the banking sector's after-tax profits soared, going up by 41% year on year and thus boosting return on equity to 10.6%. The main profit drivers were reduced operating expenses (–12.8% year on year) and lower loan loss provisions (–22% year on year). Based on positive loan growth and a reduced NPL ratio, the coverage ratio increased to 75.4% at end-2016. Moreover, the total capital ratio remained stable (22.2% in December 2016).

Third parliamentary elections in four years

Bulgaria reported a balanced budget for 2016, a notable reduction by 1.6 percentage points of GDP compared to 2015. The driving factors behind this development were higher revenues and lower expenditures. While public finance performance was satisfactory, the review period was characterized by rising political uncertainty. Boyko Borisov stepped back as prime minister after the candidate backed by the opposition socialist party, Rumen Radev, won the presidential elections in November 2016. This caused early parliamentary elections, which were held on March 26, 2017. Boyko Borisov and his conservative GERB party received the relative majority of 32.6% of the votes, followed by the socialist party with 26.8%. Before the early parliamentary elections, the caretaker cabinet had held talks with different euro area countries with the intention of applying for participation in the European Exchange Rate Mechanism II (ERM II). These talks had remained without any results, however.

Table 4

Main economic indicators: Bulgaria

	2014	2015	2016	Q3 15	Q4 15	Q1 16	Q2 16	Q3 16	Q4 16
	Year-on-year change of the period total in %								
GDP at constant prices	1.3	3.6	3.4	3.8	3.6	3.6	3.5	3.2	3.5
Private consumption	2.7	4.5	2.1	6.4	7.5	2.5	1.2	1.6	3.0
Public consumption	0.1	1.4	0.6	2.0	3.6	–6.4	–0.6	1.4	7.1
Gross fixed capital formation	3.4	2.7	–4.0	3.4	7.4	1.4	–0.3	–6.9	–7.4
Exports of goods and services	3.1	5.7	5.7	1.9	2.1	3.0	4.6	7.9	6.4
Imports of goods and services	5.2	5.4	2.8	2.5	4.6	0.9	2.8	4.6	2.8
	Contribution to GDP growth in percentage points								
Domestic demand	2.7	3.5	1.6	4.1	5.3	1.9	2.2	0.8	1.6
Net exports of goods and services	–1.3	0.1	1.8	–0.2	–1.7	1.4	1.2	2.6	1.9
Exports of goods and services	2.0	3.7	3.6	1.3	1.2	2.1	3.1	5.3	3.6
Imports of goods and services	–3.4	–3.6	–1.8	–1.6	–2.9	–0.7	–1.8	–2.7	–1.7
	Year-on-year change of the period average in %								
Unit labor costs in the whole economy (nominal, per person)	4.5	2.3	0.4	0.4	4.1	2.4	1.0	–0.3	–2.0
Unit labor costs in manufacturing (nominal, per hour)	0.4	6.1	8.3	6.4	7.2	8.7	11.5	6.8	6.3
Labor productivity in manufacturing (real, per hour)	6.3	2.1	1.8	2.4	1.7	2.5	–0.9	3.1	2.5
Labor costs in manufacturing (nominal, per hour)	6.8	8.3	10.2	9.0	9.0	11.4	10.6	10.1	9.0
Producer price index (PPI) in industry	–1.2	–2.0	–3.1	–2.4	–4.2	–4.7	–5.2	–3.0	0.6
Consumer price index (here: HICP)	–1.6	–1.1	–1.3	–0.9		–1.1	–2.3	–1.1	–0.8
EUR per 1 BGN, + = BGN appreciation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Period average levels								
Unemployment rate (ILO definition, %, 15–64 years)	11.5	9.3	7.7	8.3	8.0	8.7	8.2	7.1	6.7
Employment rate (%, 15–64 years)	61.1	62.9	63.4	64.5	63.7	62.3	63.7	64.2	63.4
Key interest rate per annum (%)[1]	. .	. .	. .	. .	. .	. .	. .	. .	. .
BGN per 1 EUR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
	Nominal year-on-year change in the period-end stock in %								
Broad money (including foreign currency deposits)	1.1	8.8	7.6	2.1	8.8	6.1	8.9	8.7	7.6
	Contributions to year-on-year change of broad money in percentage points								
Net foreign assets of the banking system	15.7	18.3	21.7	11.3	8.3	11.0	14.1	13.7	12.3
Domestic credit of the banking system	–4.9	–5.7	–1.6	–8.4	1.7	–3.0	–2.5	–2.4	–3.1
of which: claims on the private sector	–6.7	–7.6	0.1	–7.7	–1.2	–1.8	–0.6	–0.1	1.2
claims on households	–0.5	–0.8	0.2	–0.4	–0.4	–0.4	–0.2	0.1	0.5
claims on enterprises	–6.2	–6.8	–0.1	–7.3	–0.9	–1.4	–0.4	–0.2	0.7
claims on the public sector (net)	1.8	1.9	–1.7	–0.7	2.9	–1.2	–2.0	–2.3	–4.3
Other assets (net) of the banking system	–0.6	–2.6	–3.0	–0.8	–1.3	–2.0	–2.7	–2.7	–1.6
	% of GDP								
General government revenues	36.6	39.0	35.5	. .	. .	. .	. .	. .	. .
General government expenditures	42.1	40.7	35.5	. .	. .	. .	. .	. .	. .
General government balance	–5.5	–1.6	0.0	. .	. .	. .	. .	. .	. .
Primary balance	–4.6	–0.8	0.8	. .	. .	. .	. .	. .	. .
Gross public debt	27.0	26.0	29.5	. .	. .	. .	. .	. .	. .
	% of GDP								
Debt of nonfinancial corporations (nonconsolidated)	108.9	98.3	. .	. .	. .	. .	. .	. .	. .
Debt of households and NPISHs (nonconsolidated)	24.9	23.6	. .	. .	. .	. .	. .	. .	. .
	% of GDP (based on EUR), period total								
Trade balance	–6.5	–5.8	–3.9	–3.9	–8.0	–3.6	–4.2	–2.5	–5.2
Services balance	5.9	6.6	7.3	13.6	3.1	4.0	6.4	14.7	3.1
Primary income	–3.1	–4.6	–2.5	–3.9	–3.2	–3.3	–2.3	–2.2	–2.5
Secondary income	3.8	3.6	3.3	2.6	1.0	5.1	5.6	1.6	1.8
Current account balance	0.1	–0.1	4.2	8.5	–7.1	2.2	5.5	11.7	–2.8
Capital account balance	2.2	3.1	2.3	2.5	3.1	5.7	2.2	1.4	0.6
Foreign direct investment (net)	–2.1	–5.3	–1.1	–7.4	–1.1	–2.1	–4.3	–1.2	2.5
	% of GDP (rolling four-quarter GDP, based on EUR), end of period								
Gross external debt	97.1	81.4	82.2	82.5	81.4	82.6	84.0	82.3	82.2
Gross official reserves (excluding gold)	35.6	42.3	47.5	41.7	42.3	43.5	45.4	46.9	47.5
	Months of imports of goods and services								
Gross official reserves (excluding gold)	6.5	8.1	9.5	7.9	8.1	8.5	9.0	9.3	9.5
	EUR million, period total								
GDP at current prices	42,762	45,287	47,364	12,207	12,605	9,816	11,403	12,954	13,191

Source: Bloomberg, European Commission, Eurostat, national statistical offices, national central banks, wiiw, OeNB.

[1] *Not available in a currency board regime.*

5 Croatia: robust growth on the back of private consumption

Steady increase in private consumption growth; investment growth improved as well

Economic growth again exceeded expectations in the second half of 2016, leading to an overall GDP growth of 2.9% in 2016. GDP growth was mainly fueled by private consumption and investment; public consumption also contributed positively to growth. Private consumption steadily accelerated throughout 2016, which was reflected in a strong increase in consumer optimism and attributable to the overall brighter economic climate, an increase in real disposable income as well as the record tourist season. In addition, unexpected Christmas bonuses in the public sector, where the government had decided on a pay freeze in 2014, boosted private consumption further. 2016 also marked a record growth of gross fixed capital formation at 4.6%. This acceleration had already started in 2015; the temporary deceleration in the third quarter of 2016 was likely to be related to political uncertainty surrounding the dismissal of Prime Minister Tihomir Oreškovic and the end of the coalition government. Net exports also made a positive contribution to growth in the second half of 2016, but for the whole of 2016 the contribution was mildly negative due to strong consumption-driven import growth.

Record tourist season supports current account surplus

The Croatian current account surplus reached 4.8% of GDP in 2015; this rise, however, was partly attributable to the temporary impact of primary income. Although the surplus decreased to 2.6% of GDP in 2016, its major determinants remained largely unchanged. Goods trade in the third quarter was relatively weak but picked up in the fourth quarter of 2016 – improvements were largely attributable to the exports of refined petroleum products. Most importantly, Croatia benefited from a record tourist season. The number of tourist arrivals grew by approximately 9% compared with 2015. Gross external debt declined to 91.4% of GPD on the back of higher-than-expected GDP growth and continued deleveraging by the government and banks.

Expansionary monetary policy continued

Inflation returned to positive territory in the fourth quarter of 2016. This trend has continued in 2017 and is related to increases in world market oil prices and VAT tax changes. The Croatian National Bank (CNB) continued its expansionary stance, and Croatian kuna liquidity in the banking sector was ample. Credit growth remained negative, however. The share of NPLs in total loans declined further, partially because of a more favorable tax treatment of debt write-offs. Results from the OeNB Euro Survey indicate that households' loan demand is recovering, with 6% of households planning to take out a loan in 2017 (the highest percentage since 2009). Despite domestic liquidity, the Croatian kuna appreciated moderately against the euro in 2016. In the second half of 2016, the CNB conducted three foreign exchange interventions, purchasing EUR 785.3 million from banks – the first purchase interventions since 2012, when the CNB purchased EUR 58.1 million.

Budgetary situation improved but some risks remain

The general government balance was negative but much better than expected at –1.8% of GDP, and well below the EDP target of 2.7%. The decline in the deficit is reflected in a drop in gross public debt to 84.1% of GDP. Confirming these favorable developments, Moody's recently changed the rating outlook for Croatia from negative to stable, following earlier upgrades by Standard and Poor's and Fitch. Recent news regarding the government's intention to buy back the stake of Hungary's mineral oil group MOL in the Croatian oil company INA and the debt crisis of Croatia's largest company Agrokor have led to some concerns about whether the government will be able to adhere to its budget plans, which are based on a growth projection of 3.2% for 2017.

Table 5

Main economic indicators: Croatia

	2014	2015	2016	Q3 15	Q4 15	Q1 16	Q2 16	Q3 16	Q4 16
	Year-on-year change of the period total in %								
GDP at constant prices	–0.5	1.6	2.9	2.8	1.8	2.7	2.8	2.8	2.8
Private consumption	–1.6	1.2	3.3	1.5	2.6	3.1	3.0	3.3	3.6
Public consumption	–0.8	–0.3	1.7	–0.2	–0.3	0.4	2.5	2.1	1.8
Gross fixed capital formation	–2.8	1.6	4.6	2.5	3.4	4.3	6.5	2.9	4.6
Exports of goods and services	7.6	10.0	6.7	7.9	10.9	7.2	4.0	6.3	9.7
Imports of goods and services	4.5	9.4	7.3	8.0	13.9	6.1	7.3	6.0	9.7
	Contribution to GDP growth in percentage points								
Domestic demand	–1.9	1.2	3.0	1.2	3.3	2.7	4.4	1.5	3.7
Net exports of goods and services	1.4	0.5	–0.1	1.6	–1.5	–0.1	–1.7	1.5	–0.3
Exports of goods and services	3.3	4.7	3.3	5.1	4.6	2.8	1.8	4.2	4.4
Imports of goods and services	–1.9	–4.2	–3.4	–3.4	–6.0	–2.9	–3.6	–2.7	–4.7
	Year-on-year change of the period average in %								
Unit labor costs in the whole economy (nominal, per person)	..	..	..	..	..	..	..	..	..
Unit labor costs in manufacturing (nominal, per hour)	–5.3	–3.9	32.6	–6.2	–6.2	27.6	30.3	40.1	33.3
Labor productivity in manufacturing (real, per hour)	5.4	6.3	–31.3	8.2	8.0	–26.4	–33.3	–34.3	–30.5
Labor costs in manufacturing (nominal, per hour)	–0.3	2.0	–8.7	1.4	1.3	–6.2	–13.1	–8.0	–7.3
Producer price index (PPI) in industry	–2.7	–3.9	–4.3	–4.1	–4.2	–4.7	–6.1	–4.6	–1.7
Consumer price index (here: CPI)	0.2	–0.3	–0.6	–0.3	–0.4	–0.5	–1.1	–1.1	0.2
EUR per 1 HRK, + = HRK appreciation	–0.7	0.3	1.1	0.6	0.6	0.8	0.9	1.1	1.3
	Period average levels								
Unemployment rate (ILO definition, %, 15–64 years)	17.5	16.4	13.3	15.6	16.3	15.6	13.0	11.0	13.5
Employment rate (%, 15–64 years)	54.6	56.0	56.9	57.5	55.8	55.0	57.4	58.4	56.8
Key interest rate per annum (%)	..	..	..	..	..	..	..	..	..
HRK per 1 EUR	7.6	7.6	7.5	7.6	7.6	7.6	7.5	7.5	7.5
	Nominal year-on-year change in the period-end stock in %								
Broad money (including foreign currency deposits)	3.2	5.1	4.7	4.6	5.1	3.4	4.6	4.3	4.7
	Contributions to year-on-year change of broad money in percentage points								
Net foreign assets of the banking system	10.9	11.5	10.8	4.7	6.5	3.7	5.9	5.4	4.1
Domestic credit of the banking system	–1.8	–0.2	–0.6	1.8	–0.3	–2.4	–2.6	–2.7	–0.4
of which: claims on the private sector	–2.5	–4.1	–5.5	–1.5	–2.4	–5.2	–4.8	–4.1	–2.9
claims on households	–1.3	–1.1	–3.2	–0.3	–0.7	–3.8	–3.4	–3.0	–2.4
claims on enterprises	–1.2	–3.0	–2.2	–1.2	–1.7	–1.4	–1.4	–1.1	–0.5
claims on the public sector (net)	0.7	3.9	4.8	3.3	2.2	2.8	2.2	1.3	2.5
Other assets (net) of the banking system	–1.8	–2.8	–0.1	–1.9	–1.1	2.1	1.3	1.6	1.0
	% of GDP								
General government revenues	42.9	43.6	44.3	..	..	..	..	..	..
General government expenditures	48.3	46.9	46.1	..	..	..	..	..	..
General government balance	–5.4	–3.3	–1.8	..	..	..	..	..	..
Primary balance	–1.9	0.3	1.6	..	..	..	..	..	..
Gross public debt	86.6	86.7	84.1	..	..	..	..	..	..
	% of GDP								
Debt of nonfinancial corporations (nonconsolidated)	101.2	100.8	..	..	..	..	..	..	..
Debt of households and NPISHs (nonconsolidated)	40.3	39.0	..	..	..	..	..	..	..
	% of GDP (based on EUR), period total								
Trade balance	–15.2	–15.9	–16.1	–14.8	–14.0	–17.4	–18.3	–15.3	–13.6
Services balance	17.1	18.4	19.2	41.7	6.2	3.7	18.4	44.2	6.3
Primary income	–2.0	–0.6	–3.4	2.8	0.0	–3.6	–3.4	–4.7	–2.0
Secondary income	2.1	2.9	2.9	2.3	3.6	1.6	4.2	2.4	3.2
Current account balance	2.1	4.8	2.6	32.0	–4.2	–15.6	0.9	26.6	–6.1
Capital account balance	0.2	0.7	1.1	0.5	1.3	0.6	1.2	1.0	1.7
Foreign direct investment (net)	–1.6	–0.6	–4.3	0.5	–0.2	–4.9	–2.5	–5.8	–3.9
	% of GDP (rolling four-quarter GDP, based on EUR), end of period								
Gross external debt	108.0	103.5	91.4	107.4	103.5	100.2	97.5	94.2	91.4
Gross official reserves (excluding gold)	29.5	31.3	29.7	30.8	31.3	29.9	29.0	28.9	29.7
	Months of imports of goods and services								
Gross official reserves (excluding gold)	8.1	8.1	7.6	8.1	8.1	7.7	7.5	7.4	7.6
	EUR million, period total								
GDP at current prices	42,982	43,861	45,571	12,120	10,957	10,156	11,332	12,614	11,469

Source: Bloomberg, European Commission, Eurostat, national statistical offices, national central banks, wiiw, OeNB.

6 Czech Republic: exports and private consumption remain key drivers of growth

Private consumption supports growth amid sluggish investment dynamics

The Czech Republic remained on a solid growth trajectory in the second half of 2016. Real GDP expanded more modestly when contrasted with the first half of the year, largely owing to a contraction in gross fixed capital investments, which are expected to regain momentum soon as disbursements from EU funds should increase and as capacity utilization remains high at around 85%. However, the subdued volume of public investments and higher-than-expected tax revenues, partly related to the introduction of an electronic sales registration, filled public coffers. The headline balance reached a surplus of 0.6% of GDP in 2016.

With growth rates of around 3% year on year in the third and fourth quarters, respectively, private consumption confirmed its stance as a key driver of economic activity. The expansion was fueled by various factors including positive consumer sentiment, accommodative monetary policies and a tightening labor market. Unemployment in the Czech Republic stands at a record low while the employment rate reached historical highs at end-2016. According to the latest business survey of the Czech statistical office, labor shortages are increasingly perceived to become a barrier to growth. Even if employment growth should have reached a climax, employees' bargaining power remains strong. Wage increases are thus increasingly expected to compensate for a potential slowdown in employment dynamics, with positive implications for households' disposable incomes. In the light of sluggish public consumption growth and declining capital investments, the formidable growth contribution of domestic demand (around 1 percentage point in the third and fourth quarters) is all the more surprising.

International trade contributed to overall growth in the second half of 2016, albeit to a lesser extent than in the first. While weaker external demand, primarily for products of the automotive industry, drove down export growth, imports grew even less strongly, owing to the sharp decline in investment spending, which is typically characterized by a high import content. As a consequence, net exports had a positive impact on GDP growth, contributing 1.1 percentage points to overall growth in 2016. Subdued commodity prices contributed to a solid surplus in the trade and services balance. A decrease in the primary income deficit further fostered the current account surplus. However, as commodity prices are slowly recovering and the Czech koruna has started to appreciate, the current account surplus is likely to decrease again.

Price dynamics are above target

Constrained by a zero lower bound, the Czech National Bank (CNB) introduced an exchange rate floor at 27 CZK per EUR in November 2013 to counter deflationary tendencies. In the second half of 2016, consumer prices eventually started to recover rapidly across Europe. The tightening labor market, recovering food prices and the introduction of electronic sales registration were the main drivers behind these dynamics in the Czech Republic. As the latest CPI indicator suggested that inflation was already above the 2% target at the beginning of 2017, the CNB removed the exchange rate floor soon after its "hard commitment" ended on March 31, 2017. As expected, the Czech koruna appreciated modestly (to around 26.5 CZK per EUR) on the same day. However, in the following days the Czech koruna again lost some value and traded at levels close to those of the original exchange rate floor. This was helped by the CNB's commitment to intervene in the foreign exchange market, also after the removal of the exchange rate floor, to mitigate exuberant fluctuations of the Czech koruna.

Table 6

Main economic indicators: Czech Republic

	2014	2015	2016	Q3 15	Q4 15	Q1 16	Q2 16	Q3 16	Q4 16
	Year-on-year change of the period total in %								
GDP at constant prices	2.7	4.5	2.4	4.2	4.3	2.7	3.6	1.6	2.0
Private consumption	1.8	3.0	2.9	2.4	2.9	2.5	3.1	2.9	3.0
Public consumption	1.1	2.0	1.2	3.3	1.9	1.5	2.4	0.9	0.2
Gross fixed capital formation	3.9	9.0	–3.7	10.1	9.5	–0.9	–4.1	–4.3	–5.0
Exports of goods and services	8.7	7.7	4.3	6.3	9.3	5.5	8.4	1.5	1.8
Imports of goods and services	10.1	8.2	3.2	6.8	8.4	5.3	6.4	0.9	0.5
	Contribution to GDP growth in percentage points								
Domestic demand	3.2	4.4	1.4	4.3	3.3	2.1	1.6	1.0	0.8
Net exports of goods and services	–0.5	0.1	1.1	0.0	1.1	0.7	2.0	0.5	1.1
Exports of goods and services	6.6	6.4	3.5	5.0	7.6	4.8	6.9	1.2	1.5
Imports of goods and services	–7.1	–6.3	–2.5	–5.0	–6.5	–4.2	–4.9	–0.7	–0.4
	Year-on-year change of the period average in %								
Unit labor costs in the whole economy (nominal, per person)	0.4	–0.5	3.2	–0.3	0.0	2.6	1.6	4.6	4.2
Unit labor costs in manufacturing (nominal, per hour)	–1.3	–1.2	1.2	–6.4	7.3	–3.3	3.3	8.2	–2.7
Labor productivity in manufacturing (real, per hour)	4.9	4.2	1.9	5.1	2.3	3.0	1.0	1.3	2.3
Labor costs in manufacturing (nominal, per hour)	3.6	3.1	3.2	–1.6	9.7	–0.4	4.3	9.6	–0.5
Producer price index (PPI) in industry	1.0	–2.5	–3.2	–3.1	–3.4	–4.0	–4.5	–3.0	–1.3
Consumer price index (here: HICP)	0.4	0.3	0.6	0.3	0.0	0.4	0.1	0.5	1.5
EUR per 1 CZK, + = CZK appreciation	–5.6	0.9	0.9	2.0	2.1	2.2	1.3	0.2	0.1
	Period average levels								
Unemployment rate (ILO definition, %, 15–64 years)	6.2	5.1	4.0	4.9	4.5	4.4	4.0	4.0	3.6
Employment rate (%, 15–64 years)	69.0	70.2	72.0	70.5	70.8	71.0	71.7	72.2	72.9
Key interest rate per annum (%)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
CZK per 1 EUR	27.5	27.3	27.0	27.1	27.1	27.0	27.0	27.0	27.0
	Nominal year-on-year change in the period-end stock in %								
Broad money (including foreign currency deposits)	5.9	8.0	6.5	8.8	8.0	9.4	9.5	8.4	6.5
	Contributions to year-on-year change of broad money in percentage points								
Net foreign assets of the banking system	5.8	7.2	14.8	3.5	6.7	6.4	8.0	8.1	7.5
Domestic credit of the banking system	12.1	10.2	2.7	5.5	2.0	1.7	1.1	1.2	0.7
of which: claims on the private sector	5.8	7.7	10.2	6.3	4.6	5.8	5.6	5.3	5.2
claims on households	2.5	4.0	5.7	2.2	2.8	2.8	2.4	2.6	2.7
claims on enterprises	3.3	3.7	4.5	4.1	1.8	3.0	3.2	2.7	2.6
claims on the public sector (net)	6.3	2.5	–7.5	–0.8	–2.6	–4.2	–4.5	–4.1	–4.6
Other assets (net) of the banking system	–5.7	–3.1	–2.5	–0.2	–0.8	1.4	0.4	–0.9	–1.6
	% of GDP								
General government revenues	40.3	41.4	40.5	..	..	..	..	..	..
General government expenditures	42.2	42.1	39.9	..	..	..	..	..	..
General government balance	–1.9	–0.6	0.6	..	..	..	..	..	..
Primary balance	–0.6	0.4	1.5	..	..	..	..	..	..
Gross public debt	42.2	40.3	37.2	..	..	..	..	..	..
	% of GDP								
Debt of nonfinancial corporations (nonconsolidated)	64.0	59.2	..	..	..	..	..	..	..
Debt of households and NPISHs (nonconsolidated)	30.1	30.7	..	..	..	..	..	..	..
	% of GDP (based on EUR), period total								
Trade balance	5.1	4.6	5.3	3.3	3.2	7.6	6.8	3.8	3.2
Services balance	1.3	1.6	2.1	1.7	1.5	2.2	2.1	2.3	2.0
Primary income	–6.0	–5.4	–5.8	–7.9	–2.6	–0.5	–8.9	–7.3	–5.9
Secondary income	–0.2	0.0	–0.6	–0.2	–0.9	0.6	–1.0	–0.7	–1.1
Current account balance	0.2	0.9	1.1	–3.1	1.2	10.0	–1.0	–1.9	–1.9
Capital account balance	0.7	2.3	1.1	0.7	1.2	1.7	1.8	1.0	0.1
Foreign direct investment (net)	–1.9	0.6	–3.0	1.2	1.8	0.9	–7.0	–4.3	–1.2
	% of GDP (rolling four-quarter GDP, based on EUR), end of period								
Gross external debt	69.6	70.8	74.9	73.2	70.8	70.5	71.2	72.4	74.9
Gross official reserves (excluding gold)	28.4	35.3	46.4	34.1	35.3	37.8	39.0	42.2	46.4
	Months of imports of goods and services								
Gross official reserves (excluding gold)	4.5	5.5	7.7	5.3	5.5	6.0	6.3	6.9	7.7
	EUR million, period total								
GDP at current prices	156,641	167,003	174,412	42,938	44,212	40,472	44,205	44,229	45,506

Source: Bloomberg, European Commission, Eurostat, national statistical offices, national central banks, wiiw, OeNB.

7 Hungary: GDP to accelerate in 2017 after slowdown in 2016

GDP growth slows to 2% in 2016

Hungarian GDP growth gradually slowed down during the second half of 2016 to 1.6% year on year in the fourth quarter. The growth pattern observed in the second half of 2016 was very similar to that of the first half. Private consumption remained the major growth engine, fueled by strong real wage growth, employment gains (leading even to labor shortages in some economic sectors), record-high consumer confidence and less negative credit developments. GDP growth was also supported by inventory rebuilding during the second half of 2016, contrasting the sharp destocking in the previous few years. By contrast, public consumption growth turned negative during the second half-year, which was also mirrored in very favorable budgetary developments until November 2016. Gross fixed capital formation saw a large contraction again in the second half of 2016 as EU fund inflows are yet to kick in. Both export and import dynamics slowed in the second half-year, with net exports contributing modestly to the overall GDP growth rate. Economic growth is expected to accelerate in 2017 and high-frequency indicators for the beginning of 2017, such as industrial output, construction or exports, already signal a strengthening.

Fiscal policy turning expansive

Following heavy government spending in the final month of 2016 aimed to consume the budgetary room created by fiscal developments earlier in the year, the general government deficit reached 1.8% of GDP in 2016, up from 1.6% of GDP in 2015, but still below the official deficit target of 2% of GDP. According to the European Commission, the deficit is set to rise further to 2.4% of GDP in 2017 (and 2.5% of GDP in 2018) owing to various tax cuts and expenditure-increasing measures. Adjusted for changes in the output gap, the fiscal loosening estimated by the European Commission could be even larger than in the case of the headline deficit (this would mean that the structural deficit would be up from 2.2% of GDP in 2016 to 3.4% of GDP in 2017 and 3.6% of GDP in 2018, i.e. it would be moving away from the country's medium-term objective of 1.5% of GDP). According to a recent assessment by the European Commission, the deterioration in the structural balance, in the absence of a subsequent correction, may jeopardize the goal of a steady reduction in public debt over the medium term.

Loose monetary conditions and economic recovery support lending and rekindle inflation

Over the review period, the Hungarian central bank (MNB) continued to gradually loosen monetary conditions by reducing the accepted volume in its main deposit facility for banks while keeping its key interest rates unchanged. Supported by the low interest rate environment and the MNB's lending supporting schemes for SMEs, lending to the corporate sector picked up gradually as from mid-2016, and by December 2016 the corporate credit stock had expanded (in year-on-year terms) for the first time in two years. There are also signs that the contraction in lending to households may have reached the bottom toward end-2016 and it is expected to pick up in 2017, in part because of the government's expanded housing subsidy program and rising house prices. Banking sector profitability improved substantially in 2016, supported by lower provisioning costs and the bank tax reduction. Banks are adequately capitalized and maintain a solid funding structure, while NPLs continued to decline and are well provisioned. Meanwhile, inflation has gradually accelerated since mid-2016, reaching 2.9% by February 2017 and thus coming close to the MNB's 3% medium-term target (with a ± 1 percentage point tolerance band). The rise in inflation was attributable to energy and processed food (including alcohol and tobacco) prices. In its February 2017 inflation report, the MNB expected inflation to fall back in spring 2017, before starting to rise again to reach the inflation target during the first half of 2018.

Table 7

Main economic indicators: Hungary

	2014	2015	2016	Q3 15	Q4 15	Q1 16	Q2 16	Q3 16	Q4 16
	Year-on-year change of the period total in %								
GDP at constant prices	4.0	3.1	2.0	2.6	3.4	1.1	2.8	2.2	1.6
Private consumption	2.5	3.4	5.0	3.1	3.8	4.8	5.2	4.6	5.2
Public consumption	4.5	1.0	0.1	2.6	3.4	1.3	4.8	–1.2	–3.9
Gross fixed capital formation	9.9	1.9	–15.5	–1.5	6.4	–10.2	–19.3	–9.9	–19.6
Exports of goods and services	9.8	7.7	5.8	6.6	8.8	4.6	10.3	5.2	3.1
Imports of goods and services	10.9	6.1	5.7	6.3	7.3	7.4	7.9	5.1	2.7
	Contribution to GDP growth in percentage points								
Domestic demand	4.2	1.3	1.4	1.8	1.7	3.0	0.0	1.7	1.0
Net exports of goods and services	–0.2	1.8	0.6	0.8	1.7	–1.9	2.8	0.6	0.6
Exports of goods and services	8.4	6.8	5.2	5.8	7.5	4.4	9.4	4.7	2.7
Imports of goods and services	–8.6	–5.0	–4.7	–5.0	–5.9	–6.3	–6.5	–4.1	–2.2
	Year-on-year change of the period average in %								
Unit labor costs in the whole economy (nominal, per person)	2.0	0.6	5.6	0.4	0.9	7.5	4.0	6.2	4.6
Unit labor costs in manufacturing (nominal, per hour)	–2.5	–0.1	8.5	–0.2	–0.4	8.6	6.6	10.5	8.4
Labor productivity in manufacturing (real, per hour)	5.9	4.1	–2.7	4.2	4.8	–3.2	–1.9	–3.7	–2.0
Labor costs in manufacturing (nominal, per hour)	3.4	4.0	5.6	4.0	4.3	5.1	4.6	6.4	6.2
Producer price index (PPI) in industry	–0.4	–0.9	–1.6	–0.6	–1.1	–1.5	–2.0	–2.5	–0.3
Consumer price index (here: HICP)	0.0	0.1	0.4	0.2	0.6	0.4	0.0	0.1	1.3
EUR per 1 HUF, + = HUF appreciation	–3.8	–0.4	–0.5	0.1	–1.3	–1.0	–2.4	0.3	1.1
	Period average levels								
Unemployment rate (ILO definition, %, 15–64 years)	7.8	6.9	5.2	6.5	6.2	6.1	5.1	4.9	4.5
Employment rate (%, 15–64 years)	61.8	64.0	66.5	64.8	64.8	65.1	66.4	67.1	67.5
Key interest rate per annum (%)	2.4	1.6	1.0	1.4	1.4	1.3	1.0	0.9	0.9
HUF per 1 EUR	308.7	309.9	311.5	312.1	312.6	312.1	313.3	311.1	309.4
	Nominal year-on-year change in the period-end stock in %								
Broad money (including foreign currency deposits)	5.1	6.3	6.9	4.1	6.3	5.0	5.4	4.2	6.9
	Contributions to year-on-year change of broad money in percentage points								
Net foreign assets of the banking system	14.5	8.9	5.0	–0.3	1.4	–1.2	–0.6	1.3	3.4
Domestic credit of the banking system	0.6	2.3	3.7	2.4	1.8	6.4	4.5	0.6	1.8
of which: claims on the private sector	–4.9	–8.1	–7.3	–6.1	–7.4	–3.3	–2.8	–2.0	0.1
claims on households	–3.0	–5.3	–5.3	–4.1	–4.4	–2.2	–2.0	–1.4	–0.8
claims on enterprises	–1.9	–2.8	–1.6	–2.0	–3.0	–0.9	–0.6	–0.4	1.2
claims on the public sector (net)	5.5	10.4	11.0	8.5	9.2	9.8	7.4	2.7	1.7
Other assets (net) of the banking system	–4.2	0.5	4.9	2.0	3.1	–0.2	1.4	2.3	1.7
	% of GDP								
General government revenues	46.9	48.5	45.6	..	..	..	..	..	..
General government expenditures	49.0	50.0	47.5	..	..	..	..	..	..
General government balance	–2.1	–1.6	–1.8	..	..	..	..	..	..
Primary balance	1.9	2.0	1.3	..	..	..	..	..	..
Gross public debt	75.7	74.7	74.1	..	..	..	..	..	..
	% of GDP								
Debt of nonfinancial corporations (nonconsolidated)	80.4	76.1	..	..	..	..	..	..	..
Debt of households and NPISHs (nonconsolidated)	25.1	21.1	..	..	..	..	..	..	..
	% of GDP (based on EUR), period total								
Trade balance	2.3	4.0	4.7	2.8	4.7	6.1	5.8	3.7	3.5
Services balance	4.7	4.9	5.6	6.5	2.9	4.9	6.4	6.8	4.5
Primary income	–4.2	–4.7	–3.9	–4.9	–5.6	–3.1	–4.3	–4.0	–4.2
Secondary income	–0.7	–0.8	–1.5	–0.8	–0.3	–1.7	–1.4	–1.2	–1.5
Current account balance	2.1	3.4	4.9	3.7	1.7	6.2	6.4	5.3	2.2
Capital account balance	3.8	4.7	0.5	2.6	7.7	1.0	0.6	0.4	0.2
Foreign direct investment (net)	–2.8		–2.8	–4.5	–2.4	–2.3	0.8	–5.5	–4.1
	% of GDP (rolling four-quarter GDP, based on EUR), end of period								
Gross external debt	114.9	107.5	96.1	109.3	107.5	105.1	104.7	98.6	96.1
Gross official reserves (excluding gold)	32.9	27.6	21.7	29.6	27.6	25.0	22.3	21.1	21.7
	Months of imports of goods and services								
Gross official reserves (excluding gold)	4.8	4.0	3.2	4.3	4.0	3.6	3.2	3.1	3.2
	EUR million, period total								
GDP at current prices	104,959	109,657	112,429	28,032	30,054	24,631	27,825	28,922	31,051

Source: Bloomberg, European Commission, Eurostat, national statistical offices, national central banks, wiiw, OeNB.

8 Poland: strong export growth and accelerating consumption growth

Continued risk of compulsory foreign currency loan conversion

GDP growth moderated to 2.8% in 2016, but accelerated in the fourth quarter. Total final demand growth remained at 4.6% as real exports rose by 8.4% and domestic demand by 2.8%, causing real imports to grow by 8.7%. Foreign demand contributed substantially more to GDP growth than domestic demand, while the net export contribution was close to zero. In 2016, the goods and services surplus increased to 3.7% of GDP and the current account deficit decreased to 0.3%, while the capital account surplus shrank by more than one-half to 1.1% of GDP owing to lower EU transfers. The main reason for the growth slowdown was the slump in fixed investment, caused by initially lower EU fund absorption under the new EU budget and affecting mainly public sector investment and enterprises owned by general government units. The strong inventory buildup could only partially offset this slack in fixed investment. Conditions for business investment remained supportive, given strong foreign demand, contained unit labor cost increases (with better figures in manufacturing for the final quarter of 2016 than for the annual average), stable profitability, a strong liquidity position, stable industrial confidence and rising export orders. Housing investment growth moderated, given a weaker investment focus of specific subsidies for the young. Real wage sum growth declined moderately to 5% due to weaker employment growth and smaller deflation, while real pension growth slowed more bitingly to only 2% and the income of many self-employed persons appears to have advanced by not more than this figure. Thus, private consumption expanded by less than the real wage sum did, although consumer confidence continued to improve. However, its growth accelerated in the second half of 2016, possibly reflecting disappearing deflation expectations and the lagged effect of higher child benefits. Currently, the Sejm discusses a draft law amending the civil code that rekindles the risk of a compulsory conversion (at historic exchange rates) of foreign currency loans to households with adverse financial stability implications.

Core inflation returned to positive territory

In manufacturing, labor costs continued to increase to around 4%, while labor productivity growth declined. The increase in unit labor costs was about 2 percentage points above the euro area average. However, the Polish zloty's euro value was about 4 percentage points lower than a year earlier. In the first quarter of 2017, the Polish zloty regained what it had lost in the fourth quarter. In February, annual headline inflation was positive (1.9% as measured by the HICP), while core inflation stood at 0.9%, with deflation in industrial goods and inflation in processed food and services. The Polish Monetary Policy Council (MPC) has been on hold since March 2015, as inflation stood below its target. The MPC expected inflation to stabilize at a moderate level, with only a gradual rise in inflationary pressure from improving domestic economic conditions.

Fiscal deficit expected to rise in 2017 by more than it declined in 2016

The gross general government deficit came to 2.4% of GDP in 2016 and was thus below the target of 2.6% of GDP envisaged in the government's Convergence Programme and below the deficit level observed in 2015 (2.6% of GDP), owing to a lower expenditure-to-GDP ratio. For 2017, the European Commission expects the headline deficit to rise to 2.9% of GDP and the structural deficit to rise to 3.1% of GDP from 2.6% of GDP in 2016 and 2.4% of GDP in 2015. General government gross debt is forecast to reach 54.5% of GDP at end-2017, after 51.1% of GDP at end-2015.

Table 8

Main economic indicators: Poland

	2014	2015	2016	Q3 15	Q4 15	Q1 16	Q2 16	Q3 16	Q4 16
	Year-on-year change of the period total in %								
GDP at constant prices	3.3	3.9	2.8	3.6	4.6	2.8	3.1	2.0	3.3
Private consumption	2.4	3.2	3.6	2.9	2.3	2.8	2.6	4.7	4.3
Public consumption	4.1	2.3	3.8	–0.5	7.4	4.5	3.0	4.4	3.5
Gross fixed capital formation	10.0	6.1	–5.5	5.5	4.5	–2.4	–4.8	–8.3	–5.5
Exports of goods and services	6.7	7.7	8.4	6.2	9.1	6.8	13.4	5.6	7.9
Imports of goods and services	10.0	6.6	8.7	4.9	7.7	8.6	11.2	8.4	7.0
	Contribution to GDP growth in percentage points								
Domestic demand	4.6	3.3	2.7	2.9	4.0	3.3	1.7	3.2	2.8
Net exports of goods and services	–1.3	0.6	0.1	0.7	0.7	–0.6	1.5	–1.2	0.6
Exports of goods and services	3.1	3.7	4.1	3.1	4.1	3.5	6.7	2.8	3.7
Imports of goods and services	–4.4	–3.0	–4.1	–2.4	–3.3	–4.1	–5.2	–4.0	–3.1
	Year-on-year change of the period average in %								
Unit labor costs in the whole economy (nominal, per person)	0.6	–1.2	..	–0.8	–1.1	–0.2	0.0	–0.1	. .
Unit labor costs in manufacturing (nominal, per hour)	2.0	1.1	3.0	2.0	0.5	3.4	2.6	4.1	2.0
Labor productivity in manufacturing (real, per hour)	2.5	2.8	1.0	2.7	1.5	0.2	0.5	–0.6	4.0
Labor costs in manufacturing (nominal, per hour)	4.7	3.9	4.1	4.8	2.1	3.6	3.1	3.5	6.2
Producer price index (PPI) in industry	–1.3	–2.1	–0.3	–2.3	–1.6	–1.5	–1.0	–0.2	1.6
Consumer price index (here: HICP)	0.1	–0.7	–0.2	–0.5	–0.5	–0.3	–0.4	–0.4	0.4
EUR per 1 PLN, + = PLN appreciation	0.3	0.0	–4.1	–0.3	–1.2	–4.0	–6.5	–3.5	–2.6
	Period average levels								
Unemployment rate (ILO definition, %, 15–64 years)	9.1	7.6	6.3	7.1	7.0	7.1	6.3	6.0	5.6
Employment rate (%, 15–64 years)	61.7	62.9	64.5	63.5	63.7	63.7	64.3	64.9	65.1
Key interest rate per annum (%)	2.4	1.6	1.5	1.5	1.5	1.5	1.5	1.5	1.5
PLN per 1 EUR	4.2	4.2	4.4	4.2	4.3	4.4	4.4	4.3	4.4
	Nominal year-on-year change in the period-end stock in %								
Broad money (including foreign currency deposits)	8.2	9.1	9.6	8.3	9.1	9.1	11.4	9.4	9.6
	Contributions to year-on-year change of broad money in percentage points								
Net foreign assets of the banking system	0.4	4.5	5.8	1.8	1.3	–1.1	4.3	2.7	4.1
Domestic credit of the banking system	18.2	20.1	19.4	8.1	9.9	11.5	10.8	8.7	8.7
of which: claims on the private sector	11.5	14.3	11.6	7.4	6.8	4.6	4.9	3.9	4.4
claims on households	6.1	7.2	6.9	3.6	3.7	2.5	2.7	2.8	2.9
claims on enterprises	5.4	7.0	4.8	3.8	3.1	2.1	2.2	1.1	1.6
claims on the public sector (net)	6.7	5.9	7.7	0.7	3.0	6.9	6.0	4.8	4.3
Other assets (net) of the banking system	–3.6	–6.7	–5.6	–1.6	–2.1	–1.3	–3.7	–2.0	–3.2
	% of GDP								
General government revenues	38.8	39.0	38.8	. .	. .	. .	. .	. .	. .
General government expenditures	42.3	41.6	41.3	. .	. .	. .	. .	. .	. .
General government balance	–3.5	–2.6	–2.4	. .	. .	. .	. .	. .	. .
Primary balance	–1.6	–0.8	–0.8	. .	. .	. .	. .	. .	. .
Gross public debt	50.2	51.1	54.4	. .	. .	. .	. .	. .	. .
	% of GDP								
Debt of nonfinancial corporations (nonconsolidated)	45.2	46.3	. .	. .	. .	. .	. .	. .	. .
Debt of households and NPISHs (nonconsolidated)	34.9	35.4	. .	. .	. .	. .	. .	. .	. .
	% of GDP (based on EUR), period total								
Trade balance	–0.8	0.5	0.5	–0.7	0.9	1.0	1.5	–0.6	0.1
Services balance	2.2	2.5	3.2	2.5	2.2	3.0	3.7	3.2	3.1
Primary income	–3.4	–3.5	–3.7	–4.3	–3.6	–3.7	–3.9	–4.3	–3.2
Secondary income	–0.1	–0.2	–0.3	0.1	–0.4	–0.5	0.1	–0.3	–0.3
Current account balance	–2.1	–0.6	–0.3	–2.4	–0.8	–0.2	1.3	–2.0	–0.3
Capital account balance	2.4	2.4	1.1	4.4	0.7	2.5	0.0	0.0	1.7
Foreign direct investment (net)	–2.4	–2.1	–1.0	–2.5	–2.8	–3.3	–1.2	–1.3	1.1
	% of GDP (rolling four-quarter GDP, based on EUR), end of period								
Gross external debt	71.4	70.3	74.8	72.4	70.3	70.2	72.9	74.4	74.8
Gross official reserves (excluding gold)	19.3	19.5	24.6	20.6	19.5	19.8	22.4	22.6	24.6
	Months of imports of goods and services								
Gross official reserves (excluding gold)	5.0	5.0	6.1	5.3	5.0	5.1	5.7	5.7	6.1
	EUR million, period total								
GDP at current prices	410,921	429,663	424,521	105,006	119,446	98,115	102,792	104,529	119,085

Source: Bloomberg, European Commission, Eurostat, national statistical offices, national central banks, wiiw, OeNB.

9 Romania: expansionary fiscal and income policies continue

Growth structure changes in second half of 2016

Real GDP growth remained brisk in the second half of 2016, even though domestic demand moderated somewhat. After peaking in the second quarter of 2016, private consumption growth decelerated despite continued strong real wage growth and a falling unemployment rate. Gross fixed capital formation declined year on year after having recorded robust growth in the first half of the year. This development was partly related to one-off effects: Against the background of discussions about the giving-in-payment law, demand for housing loans under the government's first home program spiked in the first half of 2016. Although the government raised the guarantee ceiling in September and November, the bulk of loans under this arrangement were granted in the first half of the year. Moreover, EU-funded projects under the 2007–2013 programing period were completed in the first half of 2016 and the implementation of projects financed by EU funds under the 2014–2020 programing period has not picked up sufficiently to sustain the momentum so far. Slowing domestic demand growth resulted in markedly lower import growth, counterbalancing the overall impact on GDP growth. As exports performed remarkably well, the contribution of net exports turned positive.

Fiscal policy remains expansionary, triggering warnings from European Commission and IMF

The budget deficit increased to 3% of GDP in 2016 (inter alia due to a VAT tax cut and increases in public wages). The new government's budget plan, which is based on a rather optimistic GDP growth forecast of 5.2% for 2017, envisages the deficit to reach 2.99% in 2017. While a further VAT tax cut (to 19% from 20%) became effective in January 2017, the government opted for a further rise in the minimum wage, public wages and pensions after parliamentary elections in December 2016. The European Commission stressed the risk that Romania might exceed the 3% limit for budget deficits in 2017 and 2018 in a letter to the Romanian finance minister. Moreover, IMF staff raised concerns regarding the country's fiscal policy during the Article IV consultations in March 2017.

It is worth noting that the constitutional court ruled that the giving-in-payment law must respect the civil code, meaning i.a. that in case of a default, debtors must prove that they entered into default because of unpredictable circumstances. Moreover, the constitutional court decided that the law on the conversion of Swiss franc loans was unconstitutional. Both laws had been adopted by parliament in 2016.

External debt ratio ceases to decline

The current account deficit widened only slightly in the second half of 2016. Yet, unit labor costs in the manufacturing sector continued to rise noticeably, as considerable labor cost increases outpaced modest productivity gains by a wide margin. As the Romanian leu only depreciated marginally against the euro, external price competitiveness weakened further. While the capital account surplus declined as a result of lower EU fund flows, net FDI inflows fell below the levels seen in the first half of the year. All in all, the deterioration in the basic balance prevented the external debt ratio from preserving its downward trend.

Inflation turns positive

Annual CPI and HICP inflation rates hovered around zero since autumn 2016 and ended up in slightly positive territory in early 2017. The Banca Națională a României (BNR) has kept its policy rate unchanged at 1.75% since May 2015. The BNR pointed to new disinflationary supply-side shocks that emerged from November 2016 to February 2017 (price cuts for compulsory motor third-party liability insurance policies and the scrapping of non-tax fees and charges, which add to the 1 percentage point VAT reduction). It expects inflation to re-enter the target variation band of 2.5% ±1 percentage point toward the end of 2017.

Table 9

Main economic indicators: Romania

	2014	2015	2016	Q3 15	Q4 15	Q1 16	Q2 16	Q3 16	Q4 16
	Year-on-year change of the period total in %								
GDP at constant prices	3.1	3.9	4.8	3.8	4.0	4.3	6.0	4.3	4.8
Private consumption	4.5	5.9	7.5	6.2	7.2	9.1	10.4	6.7	4.5
Public consumption	0.9	0.2	5.1	1.5	–1.5	–0.4	1.9	1.8	14.6
Gross fixed capital formation	3.8	7.2	–2.2	1.5	17.1	1.0	6.0	–1.0	–14.2
Exports of goods and services	8.3	5.3	8.1	4.0	1.1	5.3	8.6	7.9	11.2
Imports of goods and services	8.1	9.4	10.1	9.9	6.5	10.1	13.7	7.7	8.7
	Contribution to GDP growth in percentage points								
Domestic demand	3.4	5.5	5.5	5.1	3.8	7.5	5.9	4.8	4.5
Net exports of goods and services	–0.3	–1.6	–0.7	–1.9	–0.9	–2.5	–2.3	0.4	0.7
Exports of goods and services	3.2	2.2	3.4	1.4	0.8	1.7	4.0	3.3	4.2
Imports of goods and services	–3.5	–3.8	–4.1	–3.3	–1.7	–4.2	–6.2	–2.9	–3.5
	Year-on-year change of the period average in %								
Unit labor costs in the whole economy (nominal, per person)	3.7	–3.6	5.6	–2.3	–5.9	4.9	8.6	2.1	6.4
Unit labor costs in manufacturing (nominal, per hour)	–0.6	6.9	9.9	8.0	6.9	10.1	12.6	9.2	7.7
Labor productivity in manufacturing (real, per hour)	5.8	–0.3	–0.2	–1.1	0.2	–2.3	–1.7	1.2	1.8
Labor costs in manufacturing (nominal, per hour)	5.3	6.6	9.7	6.7	7.1	7.7	10.7	10.6	9.7
Producer price index (PPI) in industry	–0.1	–2.2	–1.8	–2.6	–2.3	–2.9	–2.6	–1.9	0.1
Consumer price index (here: HICP)	1.4	–0.4	–1.1	–1.5	–1.0	–2.0	–2.1	–0.1	–0.1
EUR per 1 RON, + = RON appreciation	–0.6	0.0	–1.0	–0.3	–0.5	–0.9	–1.2	–0.8	–1.1
	Period average levels								
Unemployment rate (ILO definition, %, 15–64 years)	7.1	7.1	6.1	6.8	6.8	6.8	6.1	5.9	5.6
Employment rate (%, 15–64 years)	61.0	61.4	61.6	63.2	61.4	59.8	61.8	63.1	61.6
Key interest rate per annum (%)	3.3	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8
RON per 1 EUR	4.4	4.4	4.5	4.4	4.5	4.5	4.5	4.5	4.5
	Nominal year-on-year change in the period-end stock in %								
Broad money (including foreign currency deposits)	8.4	9.3	9.7	8.4	9.3	9.9	13.1	12.2	9.7
	Contributions to year-on-year change of broad money in percentage points								
Net foreign assets of the banking system	26.6	17.8	17.3	4.4	5.5	7.0	11.3	13.7	10.8
Domestic credit of the banking system	–10.9	0.7	2.4	3.3	5.4	2.8	2.7	–1.4	–2.7
of which: claims on the private sector	–6.3	0.0	3.5	0.5	2.5	2.4	1.0	1.0	0.9
claims on households	–1.1	1.9	4.2	1.5	2.2	2.2	2.1	2.5	1.8
claims on enterprises	–5.2	–2.0	–0.7	–1.0	0.3	0.2	–1.1	–1.5	–0.9
claims on the public sector (net)	–4.7	0.7	–1.1	2.7	2.9	0.4	1.8	–2.3	–3.6
Other assets (net) of the banking system	2.3	0.0	0.2	0.6	–1.5	0.2	–1.0	–0.1	1.6
	% of GDP								
General government revenues	33.5	35.0	31.7	..	..	..	..	..	..
General government expenditures	34.9	35.8	34.7	..	..	..	..	..	..
General government balance	–1.4	–0.8	–3.0	..	..	..	..	..	..
Primary balance	0.2	0.8	–1.5	..	..	..	..	..	..
Gross public debt	39.4	38.0	37.6	..	..	..	..	..	..
	% of GDP								
Debt of nonfinancial corporations (nonconsolidated)	44.7	43.1	..	..	..	..	..	..	..
Debt of households and NPISHs (nonconsolidated)	17.9	17.2	..	..	..	..	..	..	..
	% of GDP (based on EUR), period total								
Trade balance	–4.2	–4.9	–5.5	–4.7	–5.8	–5.7	–5.8	–5.0	–5.5
Services balance	3.9	4.3	4.5	4.4	3.7	5.6	4.9	4.1	3.8
Primary income	–1.3	–2.4	–2.8	–2.2	–1.9	–2.4	–4.8	–2.3	–2.1
Secondary income	1.1	1.8	1.4	1.3	2.1	1.7	1.5	1.7	1.0
Current account balance	–0.4	–1.1	–2.4	–1.2	–1.9	–0.9	–4.2	–1.6	–2.8
Capital account balance	2.6	2.4	2.5	2.0	1.8	4.0	3.2	2.5	1.0
Foreign direct investment (net)	–1.8	–1.7	–2.3	–2.2	–0.4	–4.1	–3.1	–1.1	–1.5
	% of GDP (rolling four-quarter GDP, based on EUR), end of period								
Gross external debt	61.8	56.5	54.6	56.8	56.5	55.3	54.6	54.6	54.6
Gross official reserves (excluding gold)	21.3	20.2	20.2	18.5	20.2	19.4	19.3	20.0	20.2
	Months of imports of goods and services								
Gross official reserves (excluding gold)	6.2	5.8	5.7	5.3	5.8	5.5	5.5	5.7	5.7
	EUR million, period total								
GDP at current prices	150,488	159,978	169,567	44,540	47,429	32,594	39,733	46,453	50,787

Source: Bloomberg, European Commission, Eurostat, national statistical offices, national central banks, wiiw, OeNB.

10 Turkey: economic growth wanes in the wake of political fragility

Sizeable and broad-based deceleration of GDP growth

Following a robust expansion by 4.9% in the first half of 2016, Turkish GDP growth slipped into negative territory in the third quarter of 2016 (–1.3%) for the first time since 2008. On a positive note, a rebound of economic growth by 3.5% in the fourth quarter of 2016 still kept the decline of GDP growth in check. Yet, on an annual basis GDP growth more than halved to 2.9% in 2016. Private consumption edged up by 2% in the second half of 2016 on the back of robust retail credit activity and frontloaded consumer spending owing to an expected further currency depreciation and planned tax hikes on fuel and despite a spike in the unemployment rate to 12.2%. At the same time, government spending, although slowing down during the second half of 2016, posted the highest expansion (3.2%) of all GDP components. By contrast, private investment growth remained modest at best, held back by the deceleration of corporate credit activity and currency depreciation, which weighed on corporate balance sheets.

The fiscal stance turned expansionary in 2016. The government's budget balance slipped into negative territory in the second half of 2016, resulting in a deficit of 0.9% of GDP in 2016. Gross public debt slightly declined to 26.4% of GDP in 2016 although refinancing costs were on the rise as political uncertainty increased.

External imbalances reversed their narrowing trend

Unlike in previous years, net exports exerted a drag on GDP growth in the second half of 2016. Export growth dug further into negative territory (–3.5%) despite the partial lifting of sanctions with Russia and the continuous economic recovery in the EU, which was not able to balance off the slump in tourist arrivals in Turkey. At the same time, imports surged, spurred by a pickup in consumption and real effective exchange rate appreciation. The current account deficit widened moderately to 3% of GDP in the period from July to December 2016 (compared with the same period of 2015), but remained flat at 3.8% of GDP for 2016 on an annual basis. Net FDI inflows amounted to 1.2% of GDP in the second half of 2016, thus covering only 32% of the current account deficit. Accordingly, the Turkish economy continued to be highly reliant on more volatile portfolio inflows and loans, which turned partially negative during 2016. Gross external debt is on a steady upward trend and stood at 50.6% of GDP at end-2016. Gross external financing needs remain elevated and are projected to come close to 30% of GDP in 2017.

Inflation shot up, driven by strong depreciation of Turkish lira

The rate of depreciation of the Turkish lira rocketed, coming to 18.6 % against the U.S. dollar (16% against the euro) between end-September 2016 and end-March 2017. The risks for a further depreciation are high, given geopolitical and domestic uncertainty and slowing economic growth. In the fourth quarter of 2016, annual inflation (CPI) increased somewhat due to higher unprocessed food prices in parallel to continuously mounting energy and oil prices, recent tax hikes, particularly of fuel, as well as exchange rate pass-through effects. CPI edged up to 8.5% on an annual basis in December 2016, which was well above the year-end target of 5%, and most recently spiked to 9.9% in February 2017.

CBRT started to tighten monetary stance

With the view to countering strong depreciation pressures, the Central Bank of the Republic of Turkey (CBRT) started tightening its monetary stance in November 2016 by raising its policy rate, i.e the one-week repo rate, by 50 basis points to 8%. By March 2017, it had lifted the marginal funding rate in two steps (by 75 basis points) to 9.25% and the late liquidity window lending rate in three steps (by 175 basis points) to 11.75%. In January 2017, the CBRT announced an upward revision of the inflation forecast for 2017 to 8%; the year-end inflation target remains unchanged at 5%.

Table 10

Main economic indicators: Turkey

	2014	2015	2016	Q3 15	Q4 15	Q1 16	Q2 16	Q3 16	Q4 16
	Year-on-year change of the period total in %								
GDP at constant prices	5.2	6.1	2.9	5.9	7.4	4.5	5.3	–1.3	3.5
Private consumption	3.0	5.5	2.3	3.7	5.4	0.9	4.1	–1.7	5.7
Public consumption	3.1	4.1	7.3	0.9	11.6	10.5	14.4	5.6	0.8
Gross fixed capital formation	5.1	9.2	3.0	9.1	10.4	6.6	3.8	0.5	2.0
Exports of goods and services	8.2	4.2	–2.0	4.7	5.2	1.4	–1.9	–9.3	2.3
Imports of goods and services	–0.4	1.7	3.9	0.5	0.4	2.7	7.2	2.1	3.3
	Contribution to GDP growth in percentage points								
Domestic demand	3.7	6.5	3.3	4.8	8.1	3.8	5.6	–0.2	4.2
Net exports of goods and services	1.8	0.5	–1.3	0.9	1.0	–0.4	–2.1	–2.4	–0.3
Exports of goods and services	1.7	0.9	–0.4	1.0	1.1	0.3	–0.4	–2.0	0.5
Imports of goods and services	0.1	–0.4	–0.9	–0.1	–0.1	–0.7	–1.7	–0.4	–0.7
	Year-on-year change of the period average in %								
Unit labor costs in the whole economy (nominal, per hour)	..	..	..	..	..	..	..	..	..
Unit wage costs in manufacturing (nominal, per hour)	12.9	10.6	14.9	12.0	7.9	13.9	15.4	17.4	12.9
Labor productivity in manufacturing (real, per hour)	1.3	4.1	2.9	4.4	5.5	5.4	2.8	0.3	3.5
Gross wages in manufacturing (nominal, per hour)	14.3	15.0	18.2	16.9	13.8	20.1	18.5	17.7	16.8
Producer price index (PPI) in industry	10.2	5.3	4.3	6.3	5.6	4.7	3.2	2.9	6.4
Consumer price index (here: HICP)	8.9	7.7	7.7	7.4	8.2	8.5	6.7	7.9	7.6
EUR per 1 TRY, + = TRY appreciation	–12.9	–3.8	–9.6	–9.8	–11.3	–14.6	–9.8	–3.9	–10.2
	Period average levels								
Unemployment rate (ILO definition, %, 15–64 years)	10.1	10.5	11.1	10.3	10.6	11.0	9.6	11.4	12.2
Employment rate (%, 15–64 years)	49.5	50.2	50.7	51.1	50.0	49.4	52.0	51.1	50.1
Key interest rate per annum (%)	8.7	7.6	7.5	7.5	7.5	7.5	7.5	7.5	7.7
TRY per 1 EUR	2.9	3.0	3.3	3.2	3.2	3.2	3.3	3.3	3.5
	Nominal year-on-year change in the period-end stock in %								
Broad money (including foreign currency deposits)	11.8	16.2	17.8	20.4	16.2	13.2	12.0	7.7	17.8
	Contributions to year-on-year change of broad money in percentage points								
Net foreign assets of the banking system	–10.8	–6.5	0.0	–2.8	–2.3	–0.1	1.5	0.6	1.9
Domestic credit of the banking system	57.7	48.6	47.4	27.9	24.3	19.1	16.2	11.9	19.9
of which: claims on the private sector	58.6	47.2	46.1	28.9	23.6	17.8	15.1	10.4	19.4
claims on households	11.4	5.7	6.4	3.4	2.9	2.2	2.1	1.9	3.0
claims on enterprises	47.2	41.5	39.7	25.5	20.7	15.6	13.0	8.4	16.3
claims on the public sector (net)	–0.9	1.4	1.3	–1.0	0.7	1.3	1.1	1.6	0.5
Other assets (net) of the banking system	–11.7	–12.2	–10.4	–4.7	–5.7	–5.8	–5.6	–4.8	–4.0
	% of GDP								
General government revenues	..	..	..	..	..	..	..	..	..
General government expenditures	..	..	..	..	..	..	..	..	..
General government balance	0.1	1.3	–0.9	..	..	..	..	..	..
Primary balance	..	..	..	..	..	..	..	..	..
Gross public debt	28.6	27.5	26.4	..	..	..	..	..	..
	% of GDP								
Debt of nonfinancial corporations (nonconsolidated)	..	..	..	..	..	..	..	..	..
Debt of households and NPISHs (nonconsolidated)	..	..	..	..	..	..	..	..	..
	% of GDP (based on EUR), period total								
Trade balance	–6.8	–5.6	–4.8	–5.5	–4.8	–4.4	–5.5	–4.8	–4.4
Services balance	2.9	2.8	1.8	4.9	2.1	0.9	1.4	3.2	1.5
Primary income	–0.9	–1.1	–1.0	–0.8	–0.9	–1.0	–1.2	–1.0	–1.0
Secondary income	0.2	0.2	0.2	0.1	0.2	0.3	0.2	0.1	0.3
Current account balance	–4.7	–3.8	–3.8	–1.2	–3.4	–4.1	–5.2	–2.4	–3.7
Capital account balance	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Foreign direct investment (net)	–0.6	–1.4	–0.9	–2.0	–1.0	–0.7	–0.4	–1.1	–1.3
	% of GDP (rolling four-quarter GDP, based on EUR), end of period								
Gross external debt	50.8	48.7	50.6	48.7	48.7	48.6	50.8	50.2	50.6
Gross official reserves (excluding gold)	12.4	11.1	11.3	11.8	11.1	11.0	11.9	11.5	11.3
	Months of imports of goods and services								
Gross official reserves (excluding gold)	5.4	5.1	5.4	5.3	5.1	5.1	5.6	5.6	5.4
	EUR million, period total								
GDP at current prices	705,229	771,556	773,618	199,011	202,775	172,811	193,547	200,056	207,204

Source: Bloomberg, European Commission, Eurostat, national statistical offices, national central banks, wiiw, OeNB.

11 Russia: from waning recession to weak recovery

GDP stagnates, inventory buildup and exports support economic activity

According to latest data revisions of the Russian statistical office (Rosstat), Russia's recession of 2015–2016 was milder than previously assumed: Thus, GDP in 2015 declined by 2.8% year on year (instead of an estimated 3.7%), and economic activity in 2016 eased by 0.2% (instead of an estimated 0.6%). Thus, GDP in 2016 effectively stabilized. Revised quarterly data show small economic contractions from the first to the third quarter 2016 year on year, while the fourth quarter is assessed to have registered weak growth. The revisions reportedly reflect an adjustment in the base year of calculations (2011 instead of the crisis year 2008) and better data on the operations of SMEs as well as on industrial production.

CBR's continued tight monetary policy and some transient factors bring inflation down

The decrease of private consumption and fixed investment continued to slow down, while the inventory cycle turned positive and stocks were built up again. Another positive contribution to economic activity was furnished by expanding real exports, while imports further contracted in real terms. Russia's economy stabilized in 2016 despite ongoing sanctions of Western countries and a further drop in the Urals grade oil price by about 18% on average over the previous year, which seems to reflect a degree of adaptation to the lower oil price environment. This adjustment was probably helped by the flexible exchange rate of the Russian ruble, which depreciated about 10% against the U.S. dollar in 2016. The Central Bank of Russia's (CBR) continued tight monetary policy (the CBR held the key repo auction rate at 10% from September 2016 to March 2017), the country's 2016 record harvest and the partial revaluation of the Russian ruble in recent months contributed to further reducing inflation to 4.3% in March 2017 – a five-year low. The CBR thus decided to slightly cut its key policy rate in mid-March to 9¾%.

Further oil price drop in 2016 erodes Reserve Fund

The further oil price decline in 2016 contributed to driving up the federal budget deficit to 3.4% of GDP that year (from 2.4% of GDP in 2015). As in 2015, the lion's share (about three-quarters) of the shortfall was covered by the Reserve Fund, whose level fell further to about 1.2% of annual GDP at end-February 2017. The remainder was financed on the domestic debt market and via privatization proceeds. The Reserve Fund could be exhausted in the course of 2017. By contrast, the assets of the National Wealth Fund, whose main purpose is to support the pension system, have remained stable over 2016 and early 2017 (around 5.4% of GDP at end-February).

Marked decrease in current account surplus accompanied by low capital outflows

The oil price-triggered further contraction of exports (valued in U.S. dollars) and the much slower contraction of imports combined to cut the current account surplus to 1.9% of GDP in 2016 (as against 5.0% in 2015). Net private capital outflows fell to USD 19 billion (1.5% of GDP), the lowest outflow for almost a decade. The strong shrinkage of net capital outflows is largely attributable to declining debt service payments and to the partial privatization of the oil company Rosneft in December.

NPLs remain high; bank profitability is improving

Given the further depreciation of the Russian ruble in 2016, the stagnation of the economy and the still high ratio of NPLs (18.9% at end-2016 based on a broad definition including doubtful loans), lending contracted by 7% in the twelve months to end-February 2017 (in real terms and exchange rate-adjusted), while deposits expanded by 6%. Recovering interest margins have helped banks' profitability to increase from a modest level. The country's international reserves (excluding gold) slightly expanded in 2016.

Table 11

Main economic indicators: Russia

	2014	2015	2016	Q3 15	Q4 15	Q1 16	Q2 16	Q3 16	Q4 16
	Year-on-year change of the period total in %								
GDP at constant prices	0.7	–2.8	–0.2	–2.7	–3.2	–0.4	–0.5	–0.4	0.3
Private consumption	2.0	–9.7	–4.5	–9.9	–11.3	–4.2	–5.9	–4.8	–3.2
Public consumption	–2.1	–3.1	–0.5	–3.1	–3.1	–0.4	–0.5	–0.5	–0.5
Gross fixed capital formation	–0.4	–9.9	–1.8	–13.1	–10.5	–7.0	–1.5	–0.8	–0.3
Exports of goods and services	0.5	3.7	3.1	–0.9	9.1	–0.4	4.9	4.2	3.7
Imports of goods and services	–7.3	–25.8	–3.8	–25.5	–21.4	–8.0	–4.6	–3.5	0.3
	Contribution to GDP growth in percentage points								
Domestic demand	–0.2	–8.6	–2.1	–7.4	–9.2	–2.1	–2.8	–2.5	–1.1
Net exports of goods and services	1.7	6.2	1.5	5.2	6.3	1.1	2.2	1.8	1.0
Exports of goods and services	0.1	1.1	1.0	–0.3	2.4	–0.1	1.5	1.2	1.1
Imports of goods and services	1.6	5.2	0.6	5.5	3.9	1.2	0.7	0.6	–0.1
	Year-on-year change of the period average in %								
Unit labor costs in the whole economy (nominal, per hour)	..	..	..	..	..	..	..	..	..
Unit labor costs in industry (nominal, per person)	5.6	7.3	5.5	5.8	6.2	5.2	3.7	7.1	5.9
Labor productivity in industry (real, per person)	3.5	0.8	3.4	0.9	1.2	3.9	3.6	3.1	3.1
Average gross earnings in industry (nominal, per person)	9.2	8.0	9.1	6.7	7.4	9.4	7.5	10.4	9.2
Producer price index (PPI) in industry	6.1	12.4	4.2	12.9	13.1	4.4	3.6	3.9	5.0
Consumer price index (here: CPI)	7.8	15.6	7.1	15.7	14.5	8.4	7.4	6.8	5.7
EUR per 1 RUB, + = RUB appreciation	–17.0	–25.0	–8.4	–31.8	–17.2	–13.8	–21.8	–2.3	6.5
	Period average levels								
Unemployment rate (ILO definition, %, 15–64 years)	5.2	5.6	5.5	5.3	5.7	5.9	5.7	5.3	5.4
Employment rate (%, 15–64 years)	..	..	..	..	..	..	..	..	..
Key interest rate per annum (%)	7.9	12.6	10.6	11.2	11.0	11.0	10.9	10.4	10.0
RUB per 1 EUR	51.0	68.0	74.2	70.5	72.4	82.5	74.4	72.1	68.0
	Nominal year-on-year change in the period-end stock in %								
Broad money (including foreign currency deposits)	14.8	19.7	–0.9	23.0	19.7	15.9	14.3	5.7	–0.9
	Contributions to year-on-year change of broad money in percentage points								
Net foreign assets of the banking system	24.0	39.3	5.4	27.4	18.2	15.4	12.5	–1.1	–10.7
Domestic credit of the banking system	42.1	40.4	23.4	22.4	16.7	15.6	14.8	10.9	5.6
of which: claims on the private sector	52.0	42.3	9.9	23.4	10.6	8.9	8.9	3.8	–0.6
claims on households	12.2	2.3	–1.4	–0.8	–1.6	–0.9	–0.3	–0.1	0.2
claims on enterprises	39.7	40.0	11.3	24.2	12.2	9.8	9.2	3.9	–0.8
claims on the public sector (net)	–9.9	–2.0	13.6		6.2	6.8	6.0	7.1	6.2
Other assets (net) of the banking system	–32.8	–42.2	–10.2	–26.8	–15.3	–15.2	–13.1	–4.1	4.2
	% of GDP								
General government revenues	33.8	32.3	32.2	..	..	..	..	..	..
General government expenditures	34.9	35.7	35.9	..	..	..	..	..	..
General government balance	–1.1	–3.4	–3.7	..	..	..	..	..	..
Primary balance	..	..	..	..	..	..	..	..	..
Gross public debt	13.0	13.2	12.9	..	..	..	..	..	..
	% of GDP								
Debt of nonfinancial corporations (nonconsolidated)	..	..	..	..	..	..	..	..	..
Debt of households and NPISHs (nonconsolidated)	..	..	..	..	..	..	..	..	..
	% of GDP (based on EUR), period total								
Trade balance	9.1	10.9	7.0	8.4	8.7	8.9	7.2	5.2	7.1
Services balance	–2.7	–2.7	–1.8	–3.5	–2.0	–1.8	–2.0	–2.0	–1.6
Primary income	–3.3	–2.7	–2.7	–2.0	–2.1	–1.5	–4.3	–2.4	–2.5
Secondary income	–0.4	–0.4	–0.5	–0.5	–0.4	–0.5	–0.4	–0.7	–0.4
Current account balance	2.8	5.0	2.0	2.3	4.2	5.1	0.6	0.1	2.6
Capital account balance	–2.1	0.0	–0.1	0.0	0.0	0.0	–0.4	0.0	0.1
Foreign direct investment (net)	1.7	1.2	–0.8	2.4	0.2	3.1	–0.1	–0.6	–4.1
	% of GDP (rolling four-quarter GDP, based on EUR), end of period								
Gross external debt	31.4	38.7	41.6	37.3	38.8	38.4	41.9	41.3	41.6
Gross official reserves (excluding gold)	17.9	23.9	25.7	22.5	23.9	24.1	26.2	26.3	25.7
	Months of imports of goods and services								
Gross official reserves (excluding gold)	10.4	13.9	15.0	12.8	13.9	14.2	14.9	15.1	15.0
	EUR million, period total								
GDP at current prices	1,558,123	1,230,279	1,172,299	311,775	315,617	228,146	274,771	315,170	354,212

Source: Bloomberg, national statistical offices, national central banks, wiiw, OeNB.

Box 2

Ukraine: new reform impetus needed to safeguard recovery

Economic activity sped up in the second half of 2016, bringing full-year growth to 2.3%. The modest recovery was driven by domestic demand (in particular gross fixed capital formation), which strengthened in the second half of 2016. In parallel, growth figures of external trade reversed. In the final quarter, gross exports went up year on year for the first time in six years. A bumper harvest with agricultural output at constant prices rising by 6% in 2016 and 18.4% year on year in the final quarter supported exports and overall GDP growth. However, as imports started to upsurge from mid-2016, net exports continued to contribute negatively to growth in the second half of 2016. Due to a widening trade deficit, the current account deficit climbed to 4.1% of GDP in 2016.

After falling to single digits in the course of 2016, inflation accelerated to 15.1% in March 2017, partly because of higher energy prices. Nevertheless, the National Bank of Ukraine (NBU) sees its inflation targets for 2017 and 2018 (8% ±2 percentage points and 6% ±2 percentage points, respectively) within reach. It had cut the key policy rate by 100 basis points to 14% in October 2016 and has left it unchanged since then. The budget deficit amounted to 2.3% of GDP in 2016 and was thus below the target of 3.7% agreed with the IMF under the Extended Fund Facility. Public debt remained relatively high (81% of GDP at end-2016), however. In line with the IMF program, parliament approved a budget for 2017 that envisages a deficit of 3.1% of GDP.

On April 3, 2017, the IMF Executive Board completed its third review of Ukraine's economic program under the Extended Fund Facility, enabling the disbursement of about USD 1 billion to Ukraine, bringing total disbursement to about USD 8.4 billion out of the available total of USD 17.5 billion. Rebuilding foreign currency reserves (USD 15.1 billion at end-March, i.e. before disbursement) remains critical in light of the still high gross external debt stock (USD 113 billion at end-2016). The nationalization of the largest Ukrainian bank (Privatbank) in December 2016 was a priority for the Ukrainian authorities and a required prior action for the completion of the third review. It is noteworthy that the NBU's governor resigned in April 2017. The IMF praised her for her work, inter alia for the progress made in cleaning up the banking sector. As Ukraine has missed several structural benchmarks (in particular regarding pension, land and state-owned enterprise reforms), the IMF wants to see material progress on the structural reform agenda in 2017. The IMF also called for further measures and concrete results in the fight against corruption.

The IMF Executive Board meeting on the third review of Ukraine's economic program under the Extended Fund Facility took place two weeks later than initially scheduled. In particular, IMF staff needed time to assess the negative economic impact of the Ukrainian government's decision to suspend trade with the non-government controlled area. The trade blockade and other largely interrelated events (blockage of rail lines, seizure of Ukrainian assets by separatists, recognition by Russia of identity cards issued in separatist areas, physical attacks on Russian state-owned banks in Ukraine) illustrate that the environment has remained shaky given the unresolved conflict in parts of Eastern Ukraine. On the ground, the OSCE special monitoring mission has continuously reported ceasefire violations along the contact line. Hardly any progress has been made regarding the overall conflict settlement package agreed in Minsk in February 2015.

Outlook for selected CESEE countries:

Investment-driven upswing in CESEE and comeback of growth in Russia[1,2]

The outlook for real GDP growth in the CESEE-6 countries[3] foresees an upswing to 3.4% per annum in 2017, followed by some moderation in 2018 and 2019. Our forecast for 2017 has been revised up by 0.3 percentage points for the CESEE-6 average, whereas our current projections for 2018 are largely in line with our autumn assessment. Notably, for 2017, upward revisions have been undertaken for all countries compared to the previous forecast round. For Bulgaria and Croatia, our outlook for 2017 now reflects the better-than-expected outcome for 2016. The strongest upward revision, however, has been made for Hungary: GDP growth is now expected to expand by 3.8% in 2017 and thus to be 0.8 percentage points stronger than forecast half a year ago. This is entirely due to new economic policy measures as discussed below.

Our forecast is largely in line with forecasts by other institutions, except as regards Hungary. Particularly for Hungary but also for Poland we expect expansionary economic policy measures to feed through strongly on economic performance. Over the projection horizon we see a clear improvement of investment growth in all CESEE-6 countries in correspondence with the EU funding cycle. Private consumption growth will remain an important growth driver – backed by rising real disposable incomes due to favorable labor market developments and somewhat stronger lending to households. Against this background, import growth will keep on growing robustly. Yet the contribution of net exports will be negative from 2017 onward in most countries. Overall, income convergence with the euro area will progress: The growth differential will rise to 1.6 percentage points in 2017 and will remain at this level until 2019.

For Russia, we expect annual GDP growth to come in at 1.5% in 2017. The projection has been revised upward due to climbing oil prices and stronger growth in 2016 than anticipated. GDP growth will continue at a similar pace also in the coming years, as the economy is already operating near full capacity and necessary structural reforms are not in sight.[4]

1 CESEE-6: private consumption and domestic investment recovery fuels economic growth

In 2016, economic growth in the CESEE-6 region expanded by 3.0% in line with our expectations. The 2016 outcome was noticeably lower compared to 2015 as the predicted slump in investments due to the phasing-out of the EU funding period

[1] *Compiled by Antje Hildebrandt with input from Stephan Barisitz, Elisabeth Beckmann, Sebastian Beer, Martin Feldkircher, Mathias Lahnsteiner, Thomas Reininger, Caroline Stern and Zoltan Walko.*

[2] *Cut-off date for data underlying this outlook: March 27, 2017. The projections for the CESEE-6 countries were prepared by the OeNB, those for Russia were prepared by the Bank of Finland in cooperation with the OeNB. All projections are based on the assumption of a continued recovery in the euro area in line with the March 2017 ECB staff macroeconomic projections for the euro area. This implies real annual GDP growth of 1.8% in 2017, 1.7% in 2018 and 1.6% in 2019.*

[3] *CESEE-6: Bulgaria, Croatia, the Czech Republic, Hungary, Poland, Romania.*

[4] *The oil price assumption used by the Bank of Finland is based on the ten-day average of Brent future prices as calculated on March 9, 2017.*

Table 1

OeNB-BOFIT GDP projections for 2017–2019 in comparison with other forecasts

	Eurostat/ Rosstat	OeNB/BOFIT forecasts (April 2017)			IMF forecasts (April 2017)			wiiw forecasts (March 2017)		
	2016	2017	2018	2019	2017	2018	2019	2017	2018	2019
	Year-on-year growth in %									
CESEE-6	**3.0**	**3.4**	**3.3**	**3.2**	**3.3**	**3.0**	**2.9**	**3.1**	**3.2**	**3.2**
Bulgaria	3.4	2.9	2.7	2.6	2.9	2.7	2.5	2.9	3.1	3.3
Croatia	2.6	3.1	2.7	2.6	2.9	2.6	2.5	2.8	2.9	3.0
Czech Republic	2.3	2.7	2.6	2.6	2.8	2.2	2.3	2.4	2.6	2.3
Hungary	1.8	3.8	3.5	3.0	2.9	3.0	2.6	3.3	3.4	3.1
Poland	2.8	3.4	3.4	3.3	3.4	3.2	3.0	2.9	3.0	3.1
Romania	4.8	4.2	3.8	3.8	4.2	3.4	3.3	4.0	4.0	4.0
Russia	–0.2	1.5	1.5	1.5	1.4	1.4	1.5	1.7	1.7	2.0

Source: Eurostat, IMF, OeNB-BOFIT April 2017 projections, Rosstat, wiiw.

Note: 2016 figures based on seasonally adjusted data.

clearly left its marks. Overall, we expect GDP growth to pick up to 3.4% in 2017, followed by some moderation over the projection horizon. With annual growth of around 4% in 2017, Hungary and Romania will be the front-runners. Domestic demand – dominated by private consumption and the revival in gross fixed capital formation – continues to be the main growth driver in all CESEE-6 countries.

Further tightening of labor markets

Significant improvements on the CESEE-6 labor markets will strongly impact economic performance over the projection horizon. Since our last forecast, unemployment rates have dropped further. Also vacancy rates have moved up, with the Czech Republic registering the top vacancy rate among all EU countries. The capacity utilization rate in the CESEE-6 region for the first quarter of 2017 increased marginally against the same period a year earlier. Notably, the Czech Republic recorded a utilization rate of almost 85%. Operating with a utilization rate of about 74% in the first quarter of 2017, Croatia managed to increase the rate by almost 2 percentage points compared to the same period in 2016. Against this background, real wages have been accelerating strongly in most CESEE-6 countries, particularly in Hungary and Romania, and are expected to increase even further. These developments are clearly supportive for private consumption growth over the forecast horizon but could also lead to a loss of competitiveness in the exporting sector due to higher unit labor costs.

Monetary policy will remain accommodative but may be challenged by rising inflation

Inflation is expected to gain momentum over the projection horizon driven by demand-pull factors and increasing energy prices. In the CESEE-6 region, inflation is expected to rise in 2017 and to accelerate further over the projection horizon. Only for Bulgaria, we expect inflation to be more subdued. However, for the inflation-targeting countries (the Czech Republic, Hungary, Poland and Romania), the risk that inflation will reach levels above the respective targets is rather limited. For the moment, higher inflation rates in most CESEE-6 countries and constant policy rates actually imply a lowering of real interest rates and hence a more accommodative monetary policy stance. After the Czech National Bank (CNB) abandoned the CZK/EUR exchange rate floor on April 6, 2017, the Czech koruna (CZK) appreciated by 1.5% and moved within a narrow range (CZK 26.6–26.9/EUR 1) thereafter. Lending activity has shown some improvement in several CESEE-6 countries. Over the projection horizon, positive credit dynamics will also be supported

by expectations of rising income and, on the supply side, by the cleaning-up of balance sheets, which will provide more room for bank lending.

Most CESEE-6 countries are on an expansionary fiscal path

Turning to impulses originating from government measures, most CESEE-6 countries can be said to be on an expansionary fiscal path. In view of the upcoming election in 2018, Hungary in particular is implementing several measures that are supportive to consumption growth. Similarly, the fiscal frameworks in Poland and Romania are on an expansionary track. For the Czech Republic and Bulgaria, the picture is rather mixed. Croatia is currently subject to an excessive deficit procedure triggered by the European Commission but aims to leave the excessive deficit procedure already this year; as it needs to implement fiscal consolidation measures under the EU's fiscal rules, it has prepared a tax reform with expected positive effects on consumption.

Domestic demand remains strongest growth driver over projection horizon

In almost all CESEE-6 countries, private consumption growth will pick up in 2017 compared to 2016 as the above-mentioned supportive economic conditions take effect. In Hungary, private consumption growth will accelerate by almost 6% in 2017, predominately lifted by generous public support measures. Only in Romania will there be some moderation of consumption growth, but from an elevated level.

The picture for public consumption growth is more mixed. In Bulgaria, the Czech Republic, and notably in Hungary, growth will become stronger in 2017 than in 2016, whereas in the remaining countries we expect growth to decline. Public consumption will add only marginally to GDP growth in most cases.

Turnaround in investment growth

EU funding strongly impacts investments in the CESEE-6 countries as witnessed in 2016. The CESEE-6 countries with the highest GDP levels – namely the Czech Republic, Hungary and Poland – were most strongly affected. The start of the new EU funding period, accompanied by new projects getting off the ground, will significantly boost investment growth in the CESEE-6 region over the current projection horizon. We expect the annual growth of gross fixed capital formation to turn positive, reaching 4.3% in 2017 and further accelerating to above 5% in 2018 and 2019. The turnaround is projected to be strongest in Hungary, where investment growth will jump from below –15% in 2016 to above 3% in 2017. In Croatia, by contrast, the investment cycle is different: Due to the country's more recent accession to the EU, a different funding period applies. Accordingly, investment growth is expected to remain robust at around 5% over the three-year horizon.

CESEE-6 export growth will remain solid in 2017 and beyond

CESEE-6 export growth will remain solid in 2017 and beyond, in line with strengthening signs of economic recovery in the euro area. However, export dynamics in some CESEE-6 countries will soften in 2017, for example in Croatia, largely because of a base effect, and in Poland, given strong dependence on German trade dynamics and an expected weakening of German import growth.

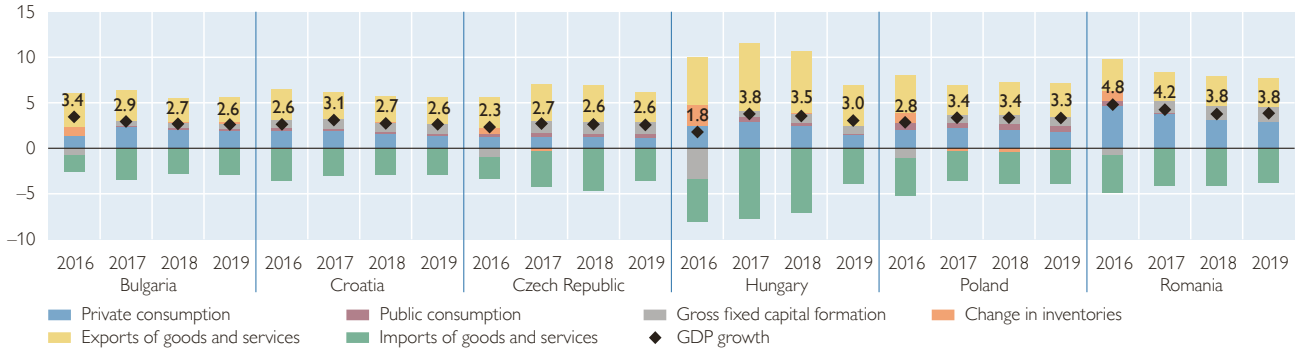
In line with vivid domestic demand, the imports of most CESEE-6 countries are expected to grow robustly over the projection horizon despite some moderation on an aggregate level in 2017 compared to 2016. This moderation is largely driven by lower import growth in Poland and Romania, which, in turn, is mostly attributable to a base effect in the case of Poland and to weaker consumption growth in Romania.

The contribution of net exports is expected to deteriorate in almost all CESEE-6 countries in 2017 compared to 2016 (unchanged in Croatia). Furthermore, all countries will be left with a negative contribution of net exports in 2017, with the exception of the Czech Republic and Poland. However, the contributions will be

Chart 1

GDP and GDP components (realized data for 2016, projections for 2017 to 2019)

Percentage points, year-on-year GDP growth in %



Source: Eurostat, OeNB.

close to zero. In Hungary and Romania, the negative contribution of net exports will be most pronounced (–0.4 to –0.9 percentage points). For the rest of the projection horizon, we do not see much of a change. Notably, in the Czech Republic, the contribution of net exports will turn negative from 2018 onward. For Hungary, we expect an opposite move into positive territory in 2019, given slowing import demand in line with a softening of private consumption as the effects of discretionary policy measures are fading out.

Downside risks to growth in the CESEE-6 countries have increased over the past months

Like other economic forecasts, our CESEE-6 forecast is overshadowed by incalculable political risks. First, the new U.S. president, who took office in January 2017, favors a shift toward more protectionism and changing trade rules. At this point it remains unclear what the new U.S. trade policy will exactly look like in practice, but all possible measures to support reshoring toward the U.S., such as higher import tariffs, would certainly negatively affect the CESEE-6 region either directly or indirectly through the impact on its main trading partner, the euro area. Second, Brexit is expected to be accompanied by noticeable repercussions for the region as discussed in our previous outlook. One of the strongest effects on the CESEE-6 region will likely emanate from a reduction of the EU budget, the U.K. currently being the second largest net payer. As became drastically clear in 2016, the CESEE-6 countries are strongly dependent on EU funds. Therefore, it can be expected that Brexit will leave its mark on investment activity in the region. However, it should be noted that the effects of Brexit are likely to materialize only in the next EU programming period and hence beyond the present forecast horizon. Another risk for CESEE-6 countries in the context of EU funding might arise from a cut of EU funds if CESEE-6 countries do not comply with refugee allocation plans. Furthermore, Brexit will bring changes in U.K. migration rules. It can be expected that the rules for entering the U.K. labor market will be tightened. There is also the risk that workers have to leave the country. This would impact the CESEE-6 labor markets significantly. For instance, around 800 000 Polish citizens are currently residing in the U.K. Beyond that, remittances going to the region would also be affected.

Aside from political risks, weaker growth in the euro area is considered as a key downside risk to our spring 2017 forecast. Risks to the recovery of euro area

growth arise, for instance, from growing banking and sovereign fragilities. Furthermore, confidence in the euro area could be challenged by political populism adversely affecting reforms of the euro area. In a similar vein, a deterioration of global growth and, accordingly, global trade would negatively affect the CESEE-6 countries.

Further external risks stem from geopolitical tensions in neighboring countries but also from unresolved conflicts in the Middle East. While such conflicts would be beneficial for tourist destinations in Bulgaria and in particular in Croatia, overall, unresolved conflicts clearly are dragging down the economic sentiment of households and investors in the CESEE-6 region and its main trading partner countries.

Inflationary pressure is noticeably rising in the CESEE-6 countries supported by rising wages and oil prices. This might lead to a less accommodative monetary policy stance in the CESEE-6 region. For the moment, we expect monetary policy to tighten only toward the end of the forecast horizon (if at all), which could drag down credit. In the short run, however, lower real interest rates due to higher inflation rates are considered an upside risk. Furthermore, the abolition of the exchange rate floor by the CNB could erode the price competitiveness of the Czech economy. Higher wage pressure might also lead to higher unit labor costs and a loss of external competitiveness over the forecast horizon, which could negatively affect export growth in the CESEE-6 countries.

Increasing political populism arising in the CESEE-6 region might possibly foster a wait-and-see attitude among domestic and foreign investors, which presents some risk to our growth outlook. However, increasing political populism can also be seen as an upside risk to CESEE-6 growth, at least in the short term, as it is commonly accompanied by rising fiscal expenditures to gain support from the population. Further upside risks are connected with stronger-than-expected growth in the euro area, which would certainly be beneficial to CESEE-6 growth.

2 Projections for Bulgaria, Croatia, the Czech Republic, Hungary, Poland and Romania

Bulgaria: slightly reduced but still robust GDP growth

The Bulgarian economy performed surprisingly well in 2016 with GDP growth of 3.4%. For the next years, we expect GDP growth to slow down somewhat because of slightly reduced exports; yet, economic momentum will remain robust as private consumption and investments will support GDP growth.

Grounded on a continuously positive employment environment, increasing wages and positive consumer sentiment, we expect private consumption to be the main determinant of economic growth. The unemployment rate hit its lowest level since 2009, falling to 7.7% at the end of 2016. At the same time, gross real wages grew by 9.1%. As regards government consumption, we expect that the new government in place after early parliamentary elections will stick to the budget consolidation path that has already been set. Therefore, we still expect a limited contribution to GDP growth from public consumption.

Investments made a negative contribution to GDP growth of –0.8 percentage points in 2016. However, we expect that EU fund absorption for the 2014–2020 EU programming period will accelerate swiftly and bring the growth contribution of investments into positive territory. Moreover, we see improvements in economic sentiment and positive signs in the banking sector, with decreasing nonperforming loan ratios and slightly positive loan growth rates. Consequently, we also expect private investments to make a somewhat positive contribution to GDP growth.

However, investors may assume a wait-and-see position in the first half of 2017 until the new government is formed following parliamentary elections.

Exports performed exceptionally well in 2016 also due to a significant increase in tourism revenues. In combination with higher imports due to strong private consumption, net exports will contribute increasingly negatively to economic growth over the projection horizon.

Croatia: recovery stronger than expected

Croatia's GDP growth in 2016 again exceeded expectations and came in at 2.6%. As a consequence, we have significantly revised up our GDP forecast for 2017, to 3.1% (compared to our September forecast of 2.3%). After 2017, the recovery is projected to somewhat decelerate in 2018 and 2019 given a slight moderation in private consumption growth. Yet, all components of aggregate demand are expected to contribute positively to growth over the projection horizon, public consumption only marginally so.

The surprisingly strong recovery of private consumption, which was driven by improvements in the labor market and higher salaries in 2016, is set to continue in 2017. Indicators of consumer confidence show a clear increase in confidence. This year consumption will benefit from tax cuts as well as further improvements in the labor market and expand by 3.3%. This effect will moderate over the projection horizon. Public consumption will continue to grow but decelerate. Croatia is likely to exit the EU's excessive deficit procedure in 2017 provided that there are no major disruptions related to the debt-crisis of the company Agrokor as the budget deficit has been significantly reduced and is expected to come in at 1.8% of GDP for 2016. The impact of the tax reforms will make a further reduction of the deficit unlikely in 2017, however, the boost to consumption will likely offset the impact on the budget. Overall, our projection assumes further gradual consolidation, which will constrain public consumption going forward.

Gross fixed capital formation saw a strong improvement in 2016. We expect this improvement to continue over the forecast horizon. The average surplus liquidity grew to a record high of HRK 16.4 billion in January 2017 from HRK 9.2 billion in December 2016. Strong liquidity boosted by expansionary monetary policy will bolster investment. Corporate investment will be supported by an expansion of credit, which was much more pronounced in 2016 than in previous years. Business confidence indicators point toward continued optimism at the beginning of 2017. An improved absorption of EU funds will further sustain gross fixed capital formation.

After a relatively weak third quarter, total exports increased significantly at the end of 2016 due to growth in exports of refined oil and petroleum as well as medical and pharmaceutical products. Geopolitical tensions in other Mediterranean tourist regions will likely continue to support tourism exports in Croatia. However, export market shares are likely to stabilize now, leading export growth to moderate over the forecast horizon. The growth in private consumption will reinforce strong import growth. Taken together, we expect a negative contribution of net exports to growth over the projection horizon.

Downside risks to our GDP forecast stem from the debt crisis of the company Agrokor, the largest Croatian company, which is now operating under a state-appointed administrator.

Czech Republic: domestic demand drives solid expansion

The Czech Republic will remain on a solid growth trajectory over the coming years. Real GDP growth is forecast to rise to 2.7% in 2017 and stabilize at 2.6% in

2018 and 2019, largely on the back of stable domestic demand. With inflation close to target, the CNB, on April 6, abandoned the CZK/EUR exchange rate floor that had been in place since 2013. In the medium term, this could potentially impair the price competitiveness of the exporting sector and further underscore the importance of domestic spending. We expect the growth contribution of net exports to turn negative, starting in 2018.

Growing at an average rate of 2.6% over the forecast horizon, private consumption remains a key driver of the Czech Republic's economic activity. A tightening labor market has supported positive wage dynamics in the past and will further strengthen employees' bargaining power in the future, notwithstanding the expected slowdown in employment growth. The positive impact on disposable income is increasingly countervailed by domestic price developments, however. According to the CNB's latest prediction, inflation will peak at slightly below 3% in the third quarter of 2017 and then return to target (a rate of 2%). We project private consumption growth to reach almost 3% in 2017 and around 2.5% in 2018 and 2019 each. Growth in government spending is expected to accelerate over the forecast horizon (to 2.3% in 2019), cushioning the decline in private spending somewhat.

Amid vivid price dynamics, the CNB's exchange rate commitment has come to an end. The swift expansion of foreign reserves indicated that investors expected an appreciation of the domestic currency, which amounted to 1.5% at the day after the abolishment of the floor. Further appreciation would weaken the growth benefits the Czech Republic has enjoyed through international trade in the past. We expect exports to increase by 6.8% and imports by 7.2% in 2017. Due to the excess in the level of exports over imports, the implied growth contribution will still be positive in 2017. However, our forecast indicates a subsequent contraction in the volume of net exports, which will dampen GDP growth by 0.2 percentage points in 2018 and by 0.3% in 2019.

Dynamics in gross fixed capital formation are expected to counterbalance, to some extent, the decline in net exports. In fact, these GDP components are directly related: an important share of projected gross fixed capital formation, which is foreseen to increase by around 5% in 2017 and by 4.8% thereafter, will be foreign-sourced. Despite a weakening trade balance, overall GDP growth will thus remain largely unchanged over the forecast horizon. The expansion of gross fixed capital formation will contribute to overall GDP growth at an annual rate of 1.2 percentage points, on average, throughout 2019.

Hungary: GDP growth to accelerate sharply in 2017

In Hungary, GDP growth in 2016 fell to 1.8% from 3.1% in 2015, in line with our projection from autumn 2016. We expect this trend to accelerate in 2017 mainly due to recently announced government measures. Along with a revival of investments, these measures will lead to a strong acceleration of output growth to 3.8%. According to our forecast, growth should gradually moderate in 2018 and 2019 with the fading-out of growth impulses generated by discretionary policy measures.

We expect private consumption to further accelerate in the wake of the sharp increase in the minimum wage (the effect of which on labor costs was mitigated by cuts in employers' social contributions). This increase should feed through into wage growth more generally, given rising labor shortages across the economy. A further round of substantial wage increases in various areas of the public sector, selective VAT rate cuts and the continued broadening of family tax benefits are

expected to additionally boost households' income. All-time high consumer sentiment and the expected revival of lending to households should also be ingredients of a consumption boom. However, we expect consumption growth to decelerate somewhat in 2018 (and more so in 2019) as wage and employment growth moderate and fiscal stimuli run out.

Given carry-over effects of the government's spending spree of December 2016 and the envisaged widening of the budget deficit in 2017, public consumption is likely to remain supportive to growth in 2017 and 2018, before slowing substantially in 2019.

We expect investment activity to pick up from 2017 as public sector investments start to grow from their very weak 2016 level. The inflow of EU funds is expected to accelerate and the government has indicated that it may frontload the use of funds in the current programming period. In addition, a further increase in the volume of housing subsidies should aid housing investments. The cut in the corporate income tax rate may also attract new companies and investments, especially given relatively high, albeit decreasing, capacity utilization rates in industry. Finally, lending to the corporate sector moved into positive territory in 2016, which should also support investment activity.

Stronger demand from EU countries should aid export growth in 2017. However, since rapid domestic demand growth and the strong import-export nexus will boost imports, we expect net real exports to become a drag on the overall growth rate in 2017. From 2018 onward, both export growth and import growth are likely to slow along with weakening external conditions and slowing domestic demand, turning the contribution of net real exports into a small plus by 2019.

Poland: rebound of investment leads to rebalancing of growth structure

In Poland, GDP growth will accelerate strongly, to 3.4% in 2017, and will maintain this pace in 2018. This acceleration will be fueled by stronger private consumption growth as well as a rebound of gross fixed capital formation. While the contribution of domestic demand to GDP growth will substantially increase in 2017, the contribution of exports will decline temporarily to slightly less than the domestic demand contribution, but gain in importance in 2018.

Private consumption growth will accelerate to 3.9% in 2017 as a result of the steep rise in households' real disposable income on the back of strong wage and gradually declining employment growth, and the impact of the large increase in child benefits, in particular for lower-income households. In addition, improved consumer sentiment (related to subsiding fears of unemployment according to a survey conducted by the Central Statistical Office of Poland) and higher consumer loan growth will underpin private consumption expenditure. The higher level of child benefits in 2017 represents an adverse base effect for 2018 that will contribute to a moderation of private consumption growth. Public consumption will post lower growth in 2017, reflecting budgetary plans, but show some growth acceleration thereafter.

Overall, we expect growth in gross fixed capital formation to rebound to 4.0% in 2017 and 5.5% in 2018. Private corporate fixed investment will benefit from stronger domestic consumption demand and solid foreign demand, the relatively high level of capacity utilization and the favorable financing situation with respect to both own funds (profitability) and external funds (low interest rates, no tightening of lending conditions). Moreover, because of the adverse impact of the bank tax levied since 2016, loan supply appears to be weaker than previously expected. Furthermore, the uncertainty with respect to the domestic economic policy stance seems to be less influential. Investment by both public enterprises and the public

sector itself will strongly rebound as a result of the increased absorption of funds under the new EU medium-term budget. Housing investment will continue to expand, as income growth and the state-subsidized housing program for young people remain supportive factors, but further tightening of supervisory regulations will dent the growth of mortgage investment. The inventory buildup is expected to decline from its peak in 2016, so that its contribution will be moderately negative in 2017 and 2018.

Growth of exports of goods and services will moderate in 2017 from the fast pace observed in 2016, given the assumed softening of German import demand and the anticipation of a further re-appreciation of the złoty. In parallel to German import demand, export growth is expected to accelerate modestly in 2018. Solid export growth, rebounding investment and accelerating consumption growth will keep the growth rate of imports of goods and services moderately above that of exports. Thus, the contribution of net exports to GDP growth will remain close to zero in 2017 and 2018.

Romania: decelerating but still relatively high growth

After reaching 4.8% in 2016, economic growth in Romania is expected to further decelerate over the forecast horizon. At the same time, we revise our projection upward, in particular for 2017, as additional stimulating fiscal and income policy measures have been taken since our last forecast. We now expect GDP growth to remain slightly above 4% in 2017 and to fall slightly below 4% in 2018 and 2019. GDP growth will be mainly driven by domestic demand, with private consumption growth slowing down from very high levels and gross fixed capital formation accelerating from still suppressed levels. In sum, domestic demand growth will decelerate somewhat over the forecast horizon.

On top of already planned measures such as the further decrease of the standard VAT to 19% from 20% effective from January 2017, additional steps have been taken that will ensure ample growth of real disposable income, which will in turn support private consumption: a further hike of the minimum wage, tax exemptions for pension income as well as pension and public sector wage increases. Tightening labor market conditions, as evidenced by a markedly falling unemployment rate, will support wage growth in the private sector. The upward trend in consumer loans represents a further supporting factor.

The improved lending capacities of banks (following the cleanup of bank balance sheets resulting in lower NPL ratios) also have the potential to contribute positively to the growth of gross fixed capital formation. Moreover, the inflow of foreign direct investments rose in 2016 and, as further investments are in the pipeline, in particular in the automotive industry, this trend might continue. Public investment will steadily recover, as the implementation of projects financed by EU funds under the 2014–2020 budgetary framework speeds up.

We expect continued robust export growth with a slight deceleration over the forecast horizon due to unfavorable unit labor cost developments. Alongside slowing domestic demand, import growth will also come down gradually from currently very high levels. The contribution of net exports will remain negative.

Downside risks to our forecast mainly emanate from the capacity to absorb EU funds and from fiscal policy. The IMF and the European Commission project the deficit to exceed the government's target of 3% by a considerable margin in 2017. Hence, possible budget revisions to temper the deficit during the fiscal year could weigh on growth.

3 Russia: reaching for modest growth

Our forecast for Russian GDP growth has been revised upward to 1.5% for 2017 as oil prices climbed considerably last autumn and realized growth in 2016 outperformed our growth projection of October 2016 by 0.8 percentage points – despite a slightly negative GDP growth rate of –0.2% per annum. Growth is expected to continue at a similar pace in the coming years, as the economy is already operating near full capacity and necessary structural reforms are not in sight.

This year, Russia's growth should be supported by higher oil prices. The markets currently expect oil prices to remain in the range of USD 50 to USD 55 until the end of 2019, implying that the average oil price this year will be about 30% higher than in 2016. In addition, preliminary figures show Russia's GDP shrank by just 0.2% last year, which was much less than anticipated based on the GDP figures for the first to third quarters of 2016. The estimate of GDP contraction in 2015 was also reduced. These revisions have surprised many observers, but Russia's recovery appears to have been faster than predicted, which also supports slightly higher growth this year.

Private consumption this year is finally expected to show a gradual recovery after contracting by a total of 14% over the past two years. Real incomes have begun to rise in recent months and consumer confidence has improved, supporting retail sales. Even so, the uncertain economic outlook restrains consumption growth and recovery is expected to be slow, but to continue in 2018–2019. Fixed investment is also expected to grow slightly in 2017 after having contracted for three years. Industrial production capacity is nearing full utilization and indicators of business confidence have improved. Investment demand is, however, still restricted by the weak growth outlook and the poor business environment, rendering the recovery of capital formation modest.

The impact of public sector spending on economic growth continues to wane. The approved 2017–2019 budget framework schedules only minor nominal increases in public sector spending. Given that inflation should amount to some 4% to 5%, as the Bank of Russia (CBR) expects to reach its target of 4% by late 2017, public sector spending and purchasing power are expected to contract in real terms. The CBR plans to continue its moderately tight monetary policy stance, which should help anchor inflation expectations and support economic stability.

The volume of Russian exports grew by over 2% last year on the back of high oil production, a good grain harvest and some support from a weak ruble in the first half of 2016. Export growth should slow as these effects fade. In contrast, the volume of imports, which has dropped by 35% over the past three years, should bounce back this year and continue to expand in 2018–2019. Imports are supported by the gradual recovery in domestic demand and the strong appreciation of the Russian ruble in recent months. If the ruble's real effective exchange rate remains at its February level until the end of 2017, the Russian currency will, on average, be about 25% stronger than in 2016. Import recovery is, however, hampered to some extent by the import restrictions imposed on several food items and public procurement.

Risks to the forecast for Russia

The biggest risk for the Russian growth outlook is the oil price. A higher oil price than projected would raise revenues, incomes and growth, while upward pressure on the Russian ruble could contribute to increasing import volumes. An oil price dive would quickly weaken the ruble, push up inflation and reduce real

incomes and growth. If the oil price substantially weakens against its level of early 2017 (the average oil price over the period January–February 2017 was USD 53.3), this could also impede or defer Russia's return to economic expansion. Import volumes would again come under pressure. Furthermore – disregarding the oil price – imports could recover more strongly than expected from the slump, which would weigh on GDP growth. Geopolitical tensions, which may intensify or ease, are considered as another risk factor.

On the upside, the approaching presidential elections in March 2018 could raise pressure to increase public spending. This could temporarily support growth, but heighten Russia's fiscal vulnerabilities over the longer term.

Studies

How financially vulnerable are CESEE households? An Austrian perspective on its neighbors

Pirmin Fessler, Emanuel List, Teresa Messner[1]

We employ newly available microdata to analyze household indebtedness and financial vulnerability in selected CESEE countries. The new 2014/15 wave of the Household Finance and Consumption Survey (HFCS) covers Slovenia, Estonia, Hungary, Latvia, Poland and Slovakia. Austrian banks have significant exposure to households in many CESEE countries, and the number of nonperforming loans is rather high in some of them. Our goal is to provide a clear picture of household vulnerability and its potential impact on financial stability and thus to allow for thinking in evidence-based scenarios. We focus on the joint distribution of debt and collateral and add several measures of financial vulnerability, such as loan-to-value, debt-to-income and debt service-to-income ratios. In addition, we employ econometric methods from the decomposition and policy evaluation literature to decompose differences in vulnerability measures between countries into two parts: one that is attributable to different borrower characteristics and another that is down to other external factors, such as differences in banks' behavior across countries. Our results show that households are particularly vulnerable in Latvia and Hungary and that variations in household composition have different effects on vulnerability across the countries covered.

JEL classification: C81, D31, E21, E31, G21, O52, R31
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Credit risk is one of the most important factors for determining a bank's solvency. It is shaped by the default risk of the bank's different borrowers (companies, other banks, governments and households). Referring to households, credit risk typically includes the risk of increasing collection costs, unforeseen changes in cash flow, and partial or full loss of the principal and interest. In some countries, political credit risk is also rather high in that the government may change the contractual terms between the bank as a lender and its borrowers. In recent years, the assessment of banks' credit risks stemming from the household sector has been increasingly based on household-level microdata collected via surveys. One reason for the emergence of this kind of literature is data availability. The Household Finance and Consumption Survey (HFCS), conducted by individual central banks in Europe and compiled by the European Central Bank (ECB), is a novel dataset that provides harmonized data on household balance sheet items, including all assets and liabilities, but also a trove of information on sociodemographic variables, income and consumption. The second wave of HFCS data, which were released at the end of 2016, allow us to analyze, for the first time, assets and liabilities for several Central, Eastern and Southeastern European (CESEE) countries based on a priori harmonized data.

The literature on household vulnerability examines households' vulnerability and risk-bearing capacity, i.e. it takes the borrowers' perspective to assess risks stemming from the household sector. In its handbook, the European Systemic

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Risk Board (ESRB) repeatedly underlines the importance of an individual debtor perspective (ESRB, 2014). The key tools for macroprudential risk management are debtor-level indicators: debt service-to-income (DSTI), debt-to-income (DTI), debt-to-asset (DTA) and loan-to-value (LTV) ratios as well as exposure at default (EAD) and loss given default (LGD). The availability of such risk indicators at the debtor level is a crucial precondition for supervisors when analyzing the financial stability of the household sector and performing (targeted) macroprudential interventions (Albacete and Lindner, 2013 and 2015; Albaceteet al., 2014).

A household's level of indebtedness and wealth and the prevalence of vulnerability are likely influenced by characteristics such as household size as well as age, education and employment status of the reference person[2], among other things. Such household characteristics, however, vary notably across our set of countries (see annex). To be able to make a meaningful comparison of vulnerability levels, we need to address these differences first. Fessler, Lindner and Segalla (2014) studied the link between household characteristics and differences in the wealth distribution across countries using the HFCS data. They find significant effects stemming from differences in household characteristics, which makes filtering out those differences important for a cross-country analysis of wealth. In this paper, we analyze household vulnerability in Slovenia, Estonia, Hungary, Latvia, Poland and Slovakia and try to derive some of the sources of risk for financial stability in these countries and for Austria, whose banking sector is exposed to CESEE economies. In addition, we identify vulnerable households under a counterfactual distribution in order to analyze the extent to which differences in the level of vulnerability can be explained by differences in household characteristics. Of course, there are other factors than household characteristics that affect vulnerability. Bover et al. (2016), who analyzed the role of economic institutions in the holding of debt and debt levels, found that the length of asset repossession periods accounts best for differences in the distribution of debt across countries. However, we focus on households' contribution to differences in vulnerability, whereas other potential factors are included in the remaining difference.

The remainder of this paper is organized as follows. In section 1 we give an overview of Austrian banks' exposure in the countries covered. Section 2 examines debt holdings across these countries along intensive and extensive margins. Section 3 introduces our measures of vulnerability and delivers a descriptive cross-country analysis. We focus not only on the means and medians but also on the overall distribution of risk-bearing capacity. In section 4, we employ econometric methods from the decomposition and policy evaluation literature to decompose cross-country differences in vulnerability to filter out the part attributable to different household characteristics across countries.

1 Austrian banks and house prices in the countries covered

The lending activity of Austrian banks in CESEE is important for both the Austrian banking system and CESEE economic growth. Taken together, the six economies analyzed (Slovenia, Estonia, Hungary, Latvia, Poland and Slovakia) account for over 20% of Austrian bank lending activities abroad (Bank for International Settlements (BIS) consolidated banking statistics 2016, own calculations). The largest

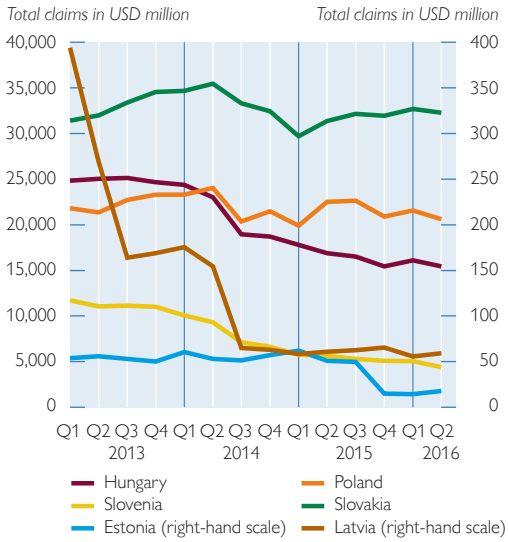
[2] *The reference person is defined according to the standard Canberra definition.*

share of foreign lending goes to the private sector, usually followed by the public sector and banks. In those countries where Austrian banks are less active (Estonia, Slovenia), exposure is almost fully concentrated on the private sector, while it is more diversified in Slovakia, Poland and Hungary.

With regard to geographical distribution, Austria seems to have a much closer relationship with its immediate neighbors (Slovakia, Slovenia, Hungary) and Poland than with the other countries covered. Austrian banks have by far the highest exposure toward Slovakia, which accounts for 9%–10% of total foreign claims, whereas lending activity in the Baltics is only marginal. Cross-border banking activity has decreased overall, most notably in Hungary and Slovenia, while remaining stable in Slovakia and Poland (see chart 1).

Chart 1

Austrian banks' claims



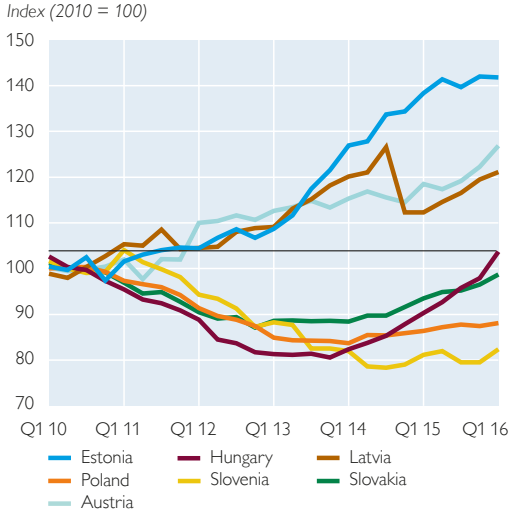
Source: BIS.

Note: Austrian consolidated foreign claims on domestic banks (excluding domestic positions), ultimate risk basis.

As we will discuss in detail in section 2, mortgages linked to the household main residence (HMR) are by far the most important liabilities of households in terms of extensive and intensive margins. Therefore, house prices can have a direct impact on LTV ratios as well as LGD.

Chart 2

Nominal residential property prices



Source: BIS.

However, it is crucial to understand that house price developments will become a risk to financial stability only once households' debt-servicing capacity decreases and households default, i.e. as long as a household is able to service its debt, actual house prices do not matter with respect to financial stability. They do matter to buyers who purchase houses in a booming market, though (as observed particularly in CESEE (OECD, 2016)). These borrowers may be granted higher mortgage loans in absolute terms, as the value of the house they purchase is considered higher, even though the buyers' LTV ratios might be similar to those during less overheated periods.

In a crisis, which might reveal vulnerabilities due to rising unemployment, stagnating wages and other adverse economic developments, the share of vulnerable households is also likely to increase. This, however, is not a result of changing

house prices, which mainly affect financial stability with regard to the EAD and LGD of already vulnerable households (Albacete, Fessler and Lindner, 2016).

Chart 2 shows the development of property price indices in the selected CESEE countries as well as Austria. Such data, at best, describe price developments of the housing stock at the mean. In many cases, however, they mostly capture property transactions using hedonic methods. Either way, even though they do not show a precise picture of house price developments for median and specifically vulnerable households, they still give us an idea of the general direction of house price developments. Chart 2 shows that there are three basic groups of countries. In Latvia and Estonia as well as in Austria, prices increased between 2010 and the first quarter of 2016. In Hungary and Slovakia, they decreased between 2010 and 2013 but then recovered to reach and exceed the 2010 level, while in Slovenia and Poland, prices decreased until 2013 and have more or less stagnated since. Note again that these price developments do not tell us anything about the implications for the median or the vulnerable property holder. Price developments in different segments of the property market (e.g. high-end vs. low-end, urban vs. rural, or rent vs. property) can be heterogeneous (see Albacete, Fessler and Lindner, 2016, for the case of Austria).

2 Indebted households and their debt

Aggregate debt developments within countries do not tell us much about credit risk. For an assessment of credit risk it is essential to know two things about a borrower: first, their probability of default in a given time period, and second, the LGD, which is the amount of debt that is irrecoverable. Usually, it is a fraction of the outstanding debt or exposure at default. Once these two things are known for all borrowers, we can assess the distribution of expected losses and model different scenarios affecting the probability of default (e.g. income or interest rate shocks) or the LGD (e.g. house price changes, which directly affect the recovery rate of banks). Naturally, it is rather difficult to assess the probability of default for each and every borrower. Markets are not perfect, and therefore the probability of default is not perfectly captured by the interest rate. That is why we use a set of measures to assess vulnerability, such as high DSTI and DTI ratios or financial margins. Nevertheless, these are just crude measures of the likelihood of actual default. The LGD is easier to approximate as it is basically the difference between a household's current value of liabilities and certain realizable assets it holds. Table 1 shows the prevalence, i.e. extensive margins, of selected household assets and liabilities across countries.

The countries covered here are characterized by high homeownership rates. All our HFCS-based results are produced taking into account complex survey weights as well as multiple imputations (for a detailed explanation, see ECB, 2016). A vast majority of households own their primary residence, ranging from about 74% of households in Slovenia to above 85% in Slovakia. These numbers are rather large compared to the about 48% of owner-occupiers in Austria or 44% in Germany (or about 64% in the United States). Financial asset holdings are not too common in the countries analyzed except in Estonia (99%): Whereas almost every household in Austria has one or more deposits with a bank, deposits are less widespread in Hungary (81%), Latvia (78%) and Poland (82%). Higher-risk assets, such as mutual fund shares, bonds and/or stocks, are not very common in CESEE coun-

Box 1

Vulnerability measures

Measure	Notation	Description	Threshold
DTA	$DA_i = \frac{D_i}{W_i} * 100$	D_i is the household's total liabilities and W_i is the household's total gross wealth. This ratio provides information about the extent to which debt can be paid back from the total stock of assets. It is an indicator of a household's potential need to deleverage in the medium to long run.	≥ 75%
DTI	$DTI_i = \frac{D_i}{I_i}$	D_i is the household's total liabilities and I_i is the household's gross annual income. This ratio provides information abount the share of debt that can be paid back in terms of annual income. This indicator, however does not account for maturity.	≥ 3
DSTI	$DSTI_i = \frac{DS_i}{I_i} * 100$	DSI_i are a household's total monthly debt payments and I_i is the household's gross monthly income (gross yearly income divided by 12). This ratio provides an indicator of the burden that debt holdings represent for current income and, more than the other ratios, reflects the significance of short-term commitments.	≥ 40%
LTV	$LTV_i = \frac{DHMR_i}{VHMR_i} * 100$	$DHMR_i$ is the household's outstanding mortgage debt with respect to the HMR, and $VHMR_i$ is the respective current value of the HMR. This indicator provides information about total credit risk in relation to the pledged assets.	≥ 75%

Source: Albacete and Lindner, 2013; Albacete and Fessler, 2010; ECB, 2013a.

tries compared with Austria (about 13%, which is already rather low), either. Given the large number of owner-occupiers, one would expect a rather high prevalence of mortgage debt. While debt related to the HMR is especially common in Estonia and Hungary (both about 19%), it is less common in Slovenia or Poland (about 8% and 12%, respectively), countries which have the highest prevalence of non-mortgage debt (both over 23%). Overdraft seems to be a very common form of debt in Slovenia (22%). The high level of homeownership and comparatively low prevalence of debt related to the HMR can, to some extent, be explained by the privat-

Table 1

Assets and liabilities: extensive margins

	Slovenia	Estonia	Hungary	Latvia	Poland	Slovakia	Austria
	% of households						
Real assets	91.5	87.1	90.4	86.7	88.8	93.7	84.5
Household main residence	73.7	76.5	84.2	76.0	77.4	85.4	47.7
Financial assets	94.6	98.8	82.8	80.2	88.9	88.7	99.8
Deposits	93.3	98.6	81.1	78.5	82.8	88.2	99.7
Mutual fund shares, bonds, stocks	6.4	6.1	11.2	1.3	5.3	5.3	12.8
Debt	38.6	36.8	36.9	33.5	37.0	36.7	34.4
Mortgage debt	9.1	20.7	20.1	17.0	13.4	16.2	16.7
Household main residence	8.2	18.7	18.8	13.5	12.0	15.2	15.5
Other real estate	1.2	2.7	1.8	3.8	1.6	1.4	1.5
Non-mortgage debt	34.8	25.1	25.5	23.0	28.4	25.3	20.6
Overdraft	22.1	9.6	11.5	5.7	6.1	6.1	12.3
Credit card	1.9	8.4	3.9	3.1	5.3	4.2	1.4
Non-mortgage loans	23.4	13.2	17.6	17.8	23.5	20.3	11.7
Private loans	2.3	–	9.8	5.6	–	4.9	4.8
Net wealth	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Net sample size	2,553	2,220	6,207	1,202	3,483	2,136	2,997

Source: HFCS 2014, ECB, OeNB.

ization of the housing market during the post-communist transition period. This is why housing credit is a fairly new tool and mostly used by the younger generation (see Meriküll and Rõõm, 2016; OECD, 2016).

The *extensive margins* tell us which assets and liabilities are important in terms of the share of the household population holding them and which households we need to focus on when we analyze credit risk stemming from the household sector. While small changes in the assets or liabilities aggregates might be due to large changes with respect to a few specific household types, large changes in the aggregates might be marginal from a borrower perspective if they stem from a large share of the household population.

As a next step, we analyze the *intensive margins*, i.e. the conditional medians of the debt of those households that actually hold debt. Aggregates are comparable to unconditional means and understate the true weight of debt at the household level. A comparatively large unconditional mean might result from many households holding relatively small amounts of debt, while a small unconditional mean might stem from a few heavily indebted households. The latter situation could be much more problematic from a financial stability perspective, but comparing aggregates (unconditional means) might misleadingly tell the opposite story.

Table 2 shows the intensive margins in EUR thousand. Note that we do not adjust for purchasing power parities. We think it does not make much sense with regard to assets and liabilities, especially as the link to consumption is not clear and the assumption of common consumption baskets across countries is rather strong, especially given the subgroups of the household population presented in table 2. Note also that especially financial assets tend to be underestimated in surveys. This is partly due to the underrepresentation of wealthy households and partly due to misreporting. While the former does not matter in terms of financial stability, as the wealthiest households tend to be not financially vulnerable, the latter might be important for such analyses. However, three of the four measures we use do not include financial assets.

Median values of real assets as well as financial assets are markedly smaller in the countries under investigation than in Austria. While the median value of the HMR is EUR 250,000 in Austria, it ranges from EUR 15,000 (Latvia) to about EUR 88,000 (Slovenia) in the other countries of our sample. In all countries but Hungary, median deposit values are below EUR 2,000, while they are at almost EUR 12,000 in Austria.

Interestingly, mortgage debt is comparatively large in the CESEE countries analyzed. The median mortgage on the HMR is between roughly EUR 11,000 (Hungary) and EUR 30,000 (Slovenia), while it is about EUR 60,000 in Austria. Put differently, the conditional median value of the main residence is 3 to 17 times larger in Austria, while the conditional median mortgage on the main residence is only about 2 to 5 times larger in Austria than in the other countries analyzed. This is a first indication of possibly higher LTV ratios in the CESEE countries. However, one has to take into account that mortgage loans in different countries might differ systematically in how recently they were granted on average. Likewise, households that hold debt might differ systematically in terms of size, education, age and income, and the characteristics of the main residences themselves might differ, too. Even though LTV ratios might be rather large given the low property values, DSTI and DTI ratios could be rather small given the low debt levels.

Table 2

Assets and liabilities: intensive margins

	Slovenia	Estonia	Hungary	Latvia	Poland	Slovakia	Austria
	Conditional medians in EUR thousand						
Real assets	89.3	52.0	30.1	20.0	70.1	54.8	139.7
Household main residence	87.8	44.9	26.1	15.1	64.4	50.0	250.0
Financial assets	1.1	2.1	3.4	0.4	2.0	2.6	15.4
Deposits	0.6	1.2	2.8	0.3	1.1	1.8	11.9
Mutual fund shares, bonds, stocks	2.9	1.8	9.8	8.0	2.4	1.9	15.9
Debt	5.0	6.4	6.2	7.2	2.4	6.0	12.4
Mortgage debt	30.0	27.0	11.4	26.0	24.2	21.4	60.4
Household main residence	30.4	27.6	10.8	21.0	24.0	21.0	59.9
Other real estate	29.0	21.8	14.7	31.5	24.3	37.5	53.0
Non-mortgage debt	2.5	0.7	1.6	1.0	1.0	1.6	2.9
Overdraft	0.9	0.0	0.6	0.5	0.5	0.4	1.0
Credit card	0.3	0.4	0.6	0.3	0.4	0.3	1.3
Non-mortgage loans	4.4	1.4	3.2	1.2	1.1	2.4	6.2
Private loans	2.0	–	3.2	0.7	–	2.0	2.9
Net wealth	80.4	43.5	26.2	14.2	57.1	50.3	85.9

Source: HFCS 2014, ECB, OeNB.

To analyze these issues further, we have to link assets and liabilities as well as liabilities and income at the household (borrower) level, and analyze the distribution of the resulting measures (see section 3). With regard to non-mortgage debt, one can clearly see that while it might pose a threat to the households themselves, it is hardly a problem for overall financial stability given its low levels. Only Slovenia shows a combination of rather large extensive and intensive margins of non-mortgage debt compared to mortgage debt. Almost one-fifth of Slovenian households hold non-mortgage loans of about EUR 4,500 at the median.

3 Household vulnerability across countries

In this section we jointly analyze assets and liabilities and income and liabilities at the household level and calculate vulnerability measures.

Table 3 shows median household gross income, median household net wealth, the most common vulnerability measures as well as typical maturities for main residence mortgages across countries. In terms of median income and median wealth, Estonia, Hungary and Latvia are at the bottom and Slovenia is at the top of the countries in our sample. While some cross-country correlation exists between income and wealth, the variation of median income is much smaller than that of median wealth.

DTA ratios are highest in Latvia (about 28%) and Hungary (20%) and particularly low in Slovenia (9%) and Poland (7%). One reason behind this is that many households in Slovenia and Poland hold non-mortgage debt that is used for consumption rather than purchasing actual assets but no mortgage debt. The DTI ratio is rather high in Hungary (about 60%), Latvia (about 43%) and Slovakia (42%). Slovakia, however, has a particularly low DTA ratio (13%). The ratio of median DSTI is also highest in Hungary (16%), and also rather high in Slovenia (13%). Actual median LTV ratios – of owner-occupiers with a mortgage – are highest in Latvia (about 58%) and Estonia (about 44%).

While actual LTV ratios of the main residence seem to be really somewhat larger in CESEE than in Austria, this is not true for DTA ratios (including all

indebted households) or DTI ratios. This might result from the fact that median housing assets (main residences) are still significantly cheaper in those countries (see table 2), and rental markets are far less developed. The data also seem to reveal that the ratio of housing value to income is somewhat inversely related to the LTV ratio: While in Austria (which has a rather low LTV ratio), the value of the HMR is seven times higher than a median household's gross yearly income, this ratio is roughly 2 for Latvia, which has the highest LTV ratio in our sample. That supports the line of thought that, in some of the countries in our sample, households are able to take on relatively more debt (in terms of LTV ratios) than in other countries since they find it relatively easier to pay back their debt using income-generated savings. Thus, households can afford high LTV ratios, while their debt is still comparatively small with regard to their income. This effect is especially pronounced as many lower-wealth households with potentially larger LTV ratios (required to buy housing at all) are able to enter the housing market in those countries, whereas in Austria or Germany, this segment typically turns to the rental market.

From this first step of vulnerability analysis, households in Hungary and Latvia potentially appear to be the most vulnerable, as they show rather high values in many median vulnerability measures. The rather high DTI and DSTI ratios in Hungary are contrasted by rather low median initial maturities (15 years), which in Latvia are 5 years longer. However, one has to take into account (1) other mitigating factors, like maturity and type of loan, (2) the full distributions instead of only the median (see below), (3) the EAD and LGD values implied (see below) as well as (4) differences in household characteristics across countries (see section 4). Even though the median is a robust statistic and much better suited than the mean to get an idea of typical levels given the skewness of the distributions at hand, it still only gives information about a certain part of the distribution. Identifying potentially risky pockets is important, as only a few households might pose a risk to financial stability if their configuration of debt, assets and income is problematic. That is why it is important to look at the full distributions of vulnerability measures.

Table 3

Medians of income and wealth and related vulnerability measures

	Slovenia	Estonia	Hungary	Latvia	Poland	Slovakia	Austria
	EUR thousand						
Gross income	14.9	11.1	7.9	8.7	13.4	13.1	35.7
Net wealth	80.4	43.5	26.2	14.2	57.1	50.3	85.9
	%						
Debt-to-asset ratio, all indebted households	8.6	15.3	20.2	28.2	6.8	12.6	20.1
Debt-to-income ratio, all indebted households	24.9	38.3	60.3	42.8	15.2	42.0	32.7
Debt service-to-income ratio, households with debt payment	12.6	9.7	16.4	11.4	9.9	11.1	5.8
Loan-to-value ratio of main residence	32.7	44.0	40.0	57.7	33.2	34.6	24.8
	Years						
Initial maturity of the highest main residence loan	15.0	20.0	15.0	20.0	24.0	24.4	25.0

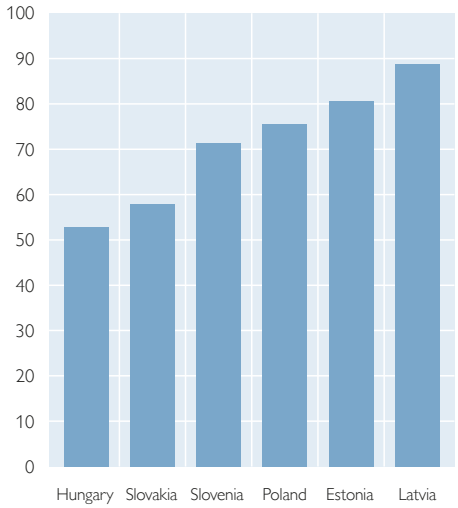
Source: HFCS 2014, ECB, OeNB.

Another important issue is the share of adjustable mortgage loans, which is particularly low in Hungary (see chart 3). Generally, adjustable mortgage loans are much more common in CESEE, ranging from a little above 50% (Hungary) to almost 90% (Latvia) of mortgage loans for the household main residence. Banks can (and hopefully do) use different types of swaps to hedge against this type of interest rate risk. However, adjustable mortgage loans also imply a certain credit risk, such as cash flow restrictions resulting from early debt repayments due to interest rate changes, or defaults or necessary changes in maturity when households are unable to meet their debt settlement schedule given higher interest rates.

Chart 3

Adjustable loans

Share in % of total loans



Source: HFCS 2014, ESCB.

Table 4 gives information about potentially vulnerable households, i.e. the share of households which exceed a certain vulnerability threshold. The thresholds were chosen in line with usual ECB thresholds (see box 1). With regard to the DTI ratio, Latvia and Hungary show the highest share of households above a threshold of 3. In terms of DSTI ratios (for indebted households), Hungary and Latvia again seem to have the most vulnerable households. In terms of LTV ratios, it is mainly Latvia, with over 40% of households above an LTV ratio of 75%, which might be linked to the 2014 collapse of house prices (see chart 2). Thus, a look at the top of the vulnerability measure distributions further indicates potential financial fragility stemming from the household sector in Hungary and Latvia.

Chart 4 shows the full distribution of LTV, DTA, DTI and DSTI ratios for the countries in our sample. The values recorded for Latvia (green line) clearly lie above those of all other countries across the full distribution of LTV and DTA ratios; they are also highest for the DTI measure (surpassing Hungary, red line) and the DSTI measure (together with Hungary). In an area where DTI values are still relevant (far from zero percent of households), the lines seem to cross particularly often, indicating uneven vulnerability characteristics across households.

Table 4

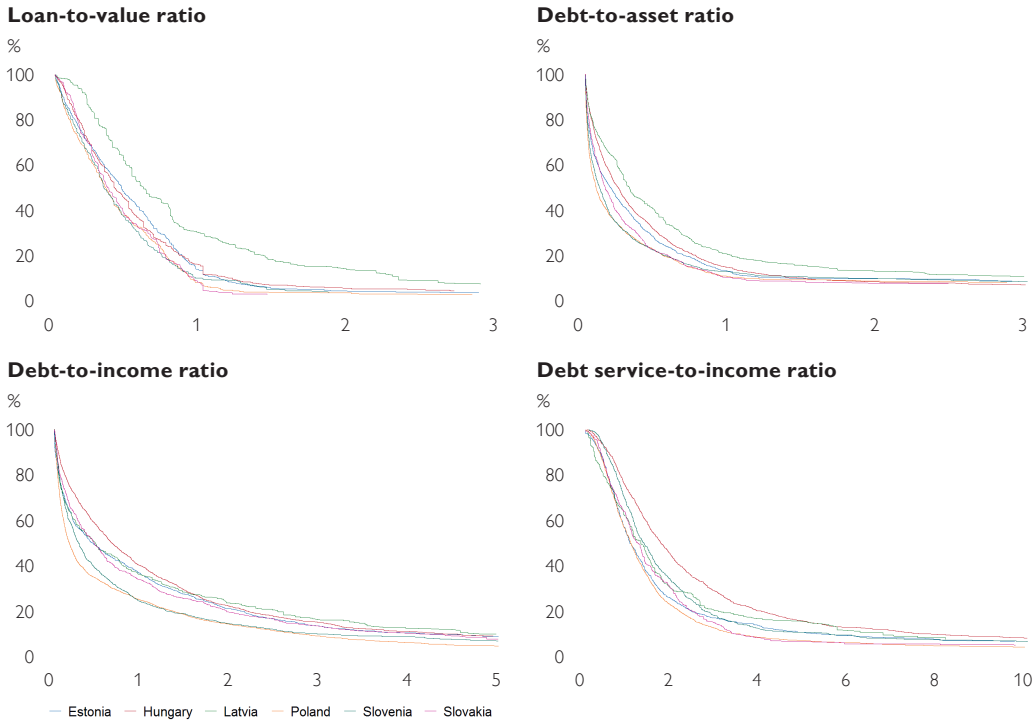
Potentially vulnerable households according to different measures

	Slovenia	Estonia	Hungary	Latvia	Poland	Slovakia	Austria
Debt-to-income ratio ≥ 3	0.07	0.10	0.12	0.13	0.06	0.10	0.10
Debt service-to-income ratio ≥ 40%	0.07	0.08	0.13	0.11	0.05	0.04	0.02
Debt service-to-income ratio ≥ 40%, with debt payments	0.09	0.10	0.17	0.14	0.05	0.05	0.02
Loan-to-value ratio ≥ 75%	0.17	0.26	0.24	0.41	0.18	0.17	0.09

Source: HFCS 2014, ECB, OeNB.

Chart 4

Share of indebted households whose ratios exceed the threshold



Source: HFCS 2014, ESCB.

Table 5 shows the share of debt that remains when we subtract different assets at the household level from total debt. Such measures of debt coverage give us information on the extent to which households are able to sell assets in order to meet their debt obligations in case of liquidity constraints or potential default. Therefore, they refer to households' LGD. Among the CESEE countries in our sample, the share of household debt covered by the most liquid financial assets is largest in Hungary: After subtracting financial assets from total debt, only 63% of debt is left. In contrast, about 85% of household debt remains in Latvia (table 5, third

Table 5

Potentially vulnerable households according to different measures

	Slovenia		Estonia		Hungary		Latvia		Poland		Slovakia		Austria	
	hh	*debt*	*hh*	*debt*	*hh*	*debt*	*hh*	*debt*	*hh*	*debt*	*hh*	*debt*	*hh*	*debt*
Debt	38.6	100.0	36.8	100.0	36.8	100.0	33.5	100.0	37.0	100.0	36.6	100.0	34.4	100.0
Debt minus deposits	28.2	81.8	28.6	89.6	24.6	74.5	27.4	88.1	24.1	80.3	25.6	84.5	21.4	73.4
Debt minus financial assets	25.9	76.0	26.5	82.3	21.7	63.4	25.3	85.0	20.4	76.3	23.4	78.7	19.0	65.6
Debt minus financial assets and other real estate	21.6	59.5	19.0	52.2	21.2	56.1	20.1	61.8	18.6	57.1	22.9	64.6	17.2	55.3
Debt minus financial assets and other real estate and household main residence	5.9	6.3	4.7	3.1	4.7	10.3	7.4	16.1	3.6	1.8	3.6	3.4	7.4	8.9
Debt minus gross wealth	3.6	4.7	3.4	2.0	4.1	8.7	5.6	13.9	2.7	1.3	2.5	2.7	5.6	6.9

Source: HFCS 2014, ECB, OeNB.

Note: This table shows the percentage share of households holding positive debt after deducting certain assets (hh) as well as the share of this debt in total debt (debt).

line), where liquidity-constrained households are only able to cover about 15% of their debt by selling the financial assets they hold. Including real estate property other than the main residence (table 5, fourth line) – something households might also realize before they sell their main residence – the share of remaining debt is lowest in Estonia (about 52%) and highest in Slovakia (about 65%). Looking at debt minus gross wealth, Latvian (14%) and Hungarian (9%) households hold the highest shares of total debt not covered by any asset. In Poland, household debt is virtually fully covered by total assets. As mentioned in section 2, Hungary and Latvia struggled with declining property values. While Latvia faced a sharp reduction in property prices in 2014 from which it has slowly recovered, house prices in Hungary have only recently returned to the 2010 values, but were notably lower at the time of the survey. All other countries show substantially lower levels of uncovered debt, which are also lower than the Austrian value of 7%. Depending on a country's bankruptcy and insolvency regulations, these figures are particularly crucial to banks in the case of (systemic) default, since these are rough estimates of what each bank has to be able to cover.

In section 4 we turn to analyzing which share of the cross-country differences we observed so far might just be down to differences in household characteristics and which is due to differences in vulnerability given the same household characteristics, i.e. stemming from diverging developments since the loans were taken out or from differences in banks' assessment of a household's situation and its future payment and risk-bearing capacities across similar households in different countries.

4 What drives the difference? Filtering out household characteristics

In this section we use methods from the economic decomposition literature to decompose the differences in indebtedness and vulnerability measures M across countries $c \in C$ into a part that is explainable by observable household characteristics and an unobservable part. This way we can produce a set of counterfactual measures M^C_{rew}, which is based on a comparison of households that are similar in their characteristics X, as opposed to the original set M^C, where differences between measures are due to differences within similar households as well as differences in the share of different households according to their characteristics X.

Suppose we observe a cross-section with independent and identically distributed draws from the distribution P of variables (Y,C,X), where Y is a set of variables used to calculate risk measures M^C, C is a set of dummies identifying countries c, and X is a set of limited but important household characteristics (household size as well as age, education and employment status of the household's reference person). Note that especially education is a good predictor of lifetime income and social status and networks. Note also that this is drawn over all of the countries $c \in C$ and not for each country separately. Our HFCS subset using adequate weighting represents such a draw, where countries can be interpreted as a stratification dimension of the survey.

We denote $P^C(Y|X)$ as the conditional distribution of Y given X for country $C=c$, and define

$$P^c_{rew}(Y) := \int_X P^c(Y|X)dP(X). \quad (1)$$

The distribution defined in equation (1) is the distribution of Y given X for the subpopulation in country $C=c$, but averaged over the full population distribution (X including all countries). That is why this distribution is a counterfactual distribution for each country $c \in C$, in which household characteristics are identical across households and match the overall distribution of X across all countries considered. Note that using this overall distribution minimizes the need of reweighting to achieve the new distribution of X for all countries.

Such approaches have been around since the seminal contribution of Rosenbaum and Rubin (1983) and have become popular in economics after the contribution of DiNardo, Fortin and Lemieux (1996). A fairly recent review of decomposition methods can be found in Firpo, Fortin and Lemieux (2011). While most applications in the literature – especially in policy evaluation – use these methods with additional assumptions to retrieve causal effects, we use them to filter out differences due to household characteristics to be able to basically compare apples to apples when comparing across countries, i.e. take into account that households are systematically different in different countries, and identify remaining differences between similar households across countries.

To practically create the counterfactual disitributions defined in (1), we need to calculate the reweighting factors for each country Ψ^c, which is given by

$$\Psi^c(X) := \frac{P(X)}{P^c(X)} = \frac{\mathbb{1}(C = c)}{P(C = c|X)} \tag{2}$$

where $\mathbb{1}(.)$ is the indicator funtion and $P(C=c|X)$ is the probability that a household lives in country c given its characteristics X. As we are not observing (1) we have to construct it by using Ψ^c, as we can rewrite (1) to

$$P^c_{rew}(Y) := \int_X P^c(Y|X)\, \Psi^c\, dP^c(X). \tag{3}$$

However, this requires the estimation of Ψ^c. In principle we could use different parametric, semiparametric and nonparametric methods to estimate $P(C=c|X)$. We keep it simple and use a logit regression for every country c:

$$\hat{P}(C = c|X) = \frac{\exp(X \cdot \beta^c)}{1 + \exp(X \cdot \beta^c)} \tag{4}$$

Once the data are reweighted using Ψ^c, we can decompose the differences between any country measure M^C and the overall measure M (its difference to the average) into a part which is explained by different household characteristics X, namely

$$M - M^c = (M - M^c_{rew}) + (M^c_{rew} - M^c) \tag{5}$$

where $M^C_{rew}(P^C_{rew}(Y))$ are measures calculated on reweighted counterfactual data, and therefore the first term reflects the remaining differences and the second term the differences due to household characteristics. Note in particular that we can also decompose any distributional statistic of all household-level measures, such as quantiles.

Chart A1 in the annex shows the distributions of the estimated propensity scores for all countries. As expected, given the limited houshold characteristics we wish to rebalance, the overlap in all cases is rather large. However, table A1 (original data) and table A2 (reweighted data) in the annex show that the amount of rebalancing is still rather substantial for many household characteristics. Note that full rebalancing is not feasible as we use a semiparametric procedure to rebalance, and continous covariates cannot be rebalanced completely. Still, a large part of the variation in household characteristics between countries is eliminated by the procedure.

As mentioned in the introduction, household characteristics vary across countries (see annex, tables A1 and A2): Larger households (four or more persons) are more common in Poland and Slovakia, smaller ones (one or two persons) in Estonia, Hungary and Latvia. While the chosen reference person is likely to be middle-aged in Slovenia, Poland and Slovakia, reference persons were more often on the upper and lower edges of the age distribution in Estonia, Hungary and Latvia. Also with respect to education and employment, characteristics are heterogenous. Note that the aim of this paper is not to harmonize vulnerability measures, hence we do not claim that the reweighted measures are in any way better suited to assessing vulnerability. We rather seek to analyze the degree to which differences are down to household structure in order to better understand how this might influence vulnerability analyses when comparing countries. If the reweighted figures are larger than the original, the country's specific household structure has a dampening effect on household vulnerability. Here, other factors (likely stemming from the macroeconomic environment, the banking sector or the regulatory environment) might contribute to financial vulnerability. If the reweighted figures are smaller than the original, the country's household characteristics could be considered a factor contributing to vulnerability.

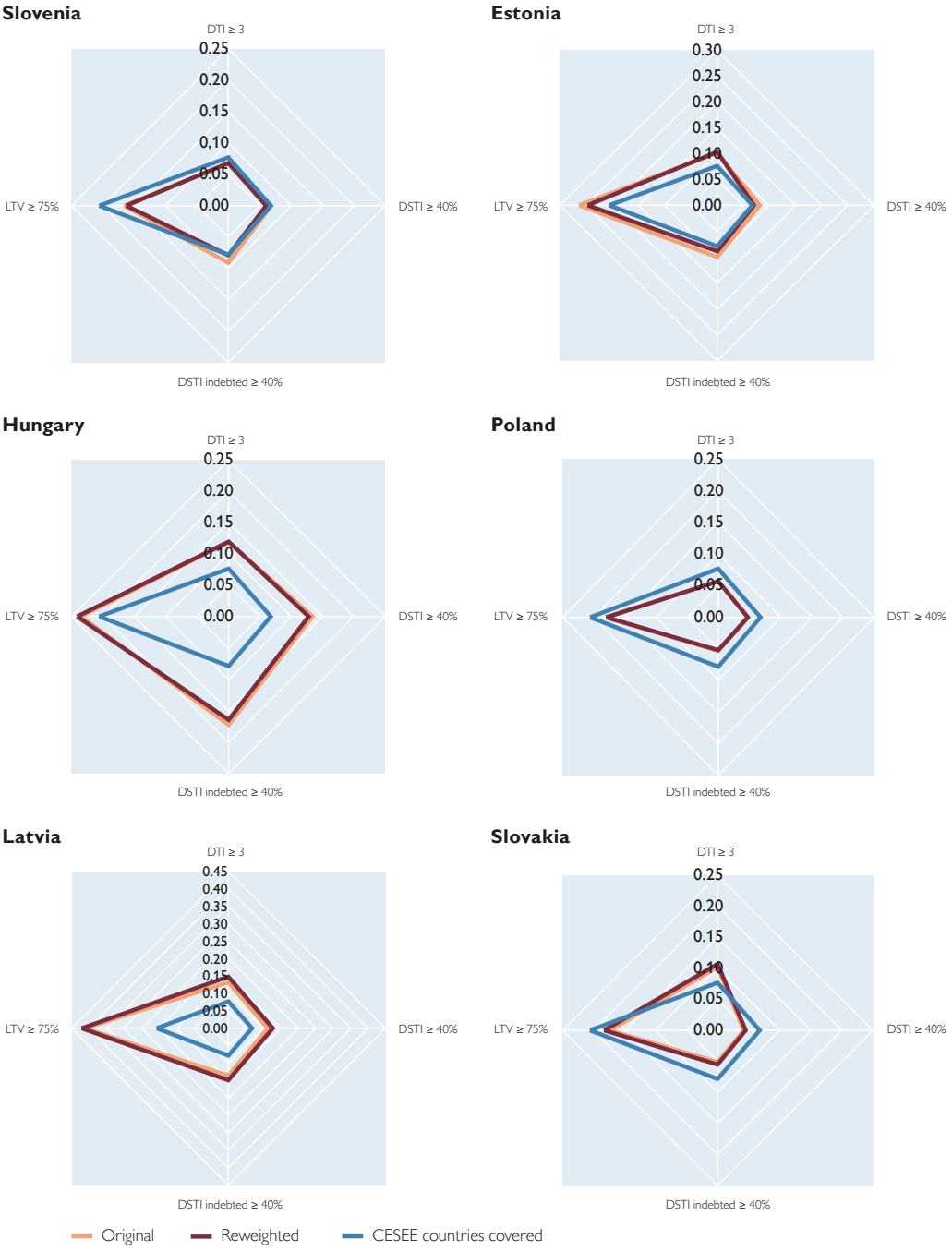
Chart 5 shows the share of vulnerable households for the aggregate of all six countries (CESEE), the observed shares (original) as well as the reweighted shares for all countries (reweighted) in net charts. The underlying data can be found in the annex (table A3). Figures inside the CESEE aggregate in the net chart mean that the country has fewer vulnerable households with regard to this measure than the aggregate region, figures outside mean that more vulnerable households exist in the respective country.

After implying a common household structure for the countries under investigation, the shares of households with an above-threshold DTI ratio are again largest (and by far larger than in the CESEE aggregate) in Latvia and Hungary. While the share remains de facto the same in Hungary, the changes are comparatively substantial and positive in Latvia (+12%) and Slovakia (+5%). The shares remain broadly unchanged for the other countries in our sample.

The changes observed for the DSTI measure are generally larger than for the other measures, which likely stems from the fact that it takes into account the maturity of the loan and that household characteristics, such as employment status or household size, have the biggest impact on a household's debt-paying capacity. Looking at the DSTI ratio (for households with debt payments), we find that the biggest share of vulnerable households can (still) be found in Hungary and Latvia. The shares decreased by 1 percentage point in half the countries, namely Slovenia, Estonia and also Hungary, but increased in Slovakia and particularly Latvia. In the latter

Chart 5

Potentially vulnerable households according to different measures



Source: HFCS 2014, ECB, OeNB.

Note: DTI stands for debt-to-income ratio, DSTI for debt service-to-income ratio and LTV for loan-to-value ratio.

countries, the household configuration contributes positively to household vulnerability compared with the average.

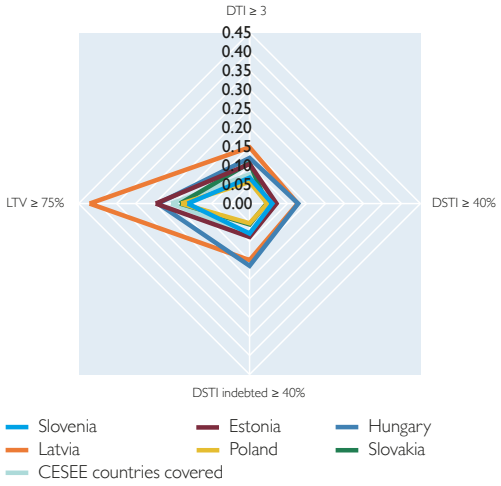
As regards the LTV ratio, the share of households above a 75% threshold increased by 1 percentage point to 42% in Latvia, where it remains highest. Estonia, where the

share dropped by 1 percentage point, has the second-highest value (25%), followed closely by Hungary (24%) (see table A3).

While the actual changes seem to be rather small, an increase by 1 percentage point in the vulnerable household population should not be underestimated. In addition, the direction of change (increase/decrease) provides us with information on the role of household characteristics for being vulnerable. As concerns the decomposition exercise, the households of larger countries (Poland, Hungary) have more weight in the aggregate (CESEE) so that their figures are likely to be more stable than those of smaller countries.

Chart 6

Different measures of household vulnerability based on a common household structure



Source: HFCS 2014, ECB, OeNB.

Chart 6 delivers all reweighted figures in one net graph, i.e. comparable shares of vulnerable households when imposing a common household structure with regard to household size, age, education and employment status. All remaining differences are therefore not due to differences in these characteristics.

Chart 6 illustrates that comparable households seem to be least vulnerable in Poland, Slovakia and Slovenia while there are markedly more vulnerable households in Hungary and Latvia. Many households in Latvia and Hungary hold high amounts of debt relative to their income, and their debt servicing payments are also higher than those of comparable households in other countries. Given that a large fraction of households in these two countries has also notably higher LTV ratios, the exposure at default might be higher and a cause of concern for the banking sector. What we can take from the decomposition analysis is that household vulnerability in the different countries may stem from different sources: For Slovakia and Latvia, we observe an increase in the share of vulnerable households for all measures, reflecting the fact that the current household configuration is dampening overall vulnerability and that other factors, such as diverging developments since the households took out the loans or differences in bank assessment and future payment and risk-bearing capacities, etc., may give rise to differences in the vulnerability level. A look at the data for Estonia and Slovenia shows that, relative to other countries, vulnerability may be driven to a larger extent by differences in household characteristics (as the above-threshold shares of vulnerable households decrease), i.e. these countries have more households of the kind that is deemed typically vulnerable across all countries.

When we turn to the share of debt covered by different assets after eliminating differences due to household characteristics (table 6), the changes are particularly large in Hungary and Latvia.

While Hungary still posts the smallest share of debt not covered by financial assets, the share of debt not covered by financial assets, other real estate and the

Table 6

Coverage of debt by household assets after adjusting for household characteristics

	Slovenia		Estonia		Hungary		Latvia		Poland		Slovakia	
	hh	*debt*	*hh*	*debt*	*hh*	*debt*	*hh*	*debt*	*hh*	*debt*	*hh*	*debt*
Debt	39.7	100.0	39.2	100.0	38.4	100.0	36.0	100.0	36.5	100.0	35.3	100.0
Percentage change through reweighting	2.8	0.0	6.6	0.0	4.2	0.0	7.3	0.0	–1.4	0.0	–3.6	0.0
Debt minus financial assets	26.7	75.7	27.2	82.4	22.8	67.1	28.0	86.3	20.0	76.2	23.2	78.8
Percentage change through reweighting	3.3	–0.5	2.6	0.1	4.7	5.7	10.9	1.5	–2.0	–0.2	–0.8	0.0
Debt minus financial assets and other real estate and household main residence	5.9	6.2	4.1	2.8	5.0	18.4	9.1	17.7	3.5	1.8	3.9	2.9
Percentage change through reweighting	–0.7	–1.4	–13.4	–10.6	6.1	78.0	22.6	10.2	–2.6	–0.1	9.4	–15.5
Debt minus gross wealth	3.5	4.6	2.8	1.7	4.4	16.8	7.0	15.3	2.6	1.3	2.9	2.2
Percentage change through reweighting	–1.0	–2.0	–15.6	–14.7	7.0	93.4	25.0	10.1	–4.3	–0.4	15.2	–16.2

Source: HFCS 2014, ECB, OeNB.

Note: This table shows the percentage share of households holding positive debt after deducting certain assets (hh) as well as the share of this debt in total debt (debt).

HMR increases noticeably to 18% of debt not covered, up from 9%. Interestingly, while the remaining debt burden increases sharply, the share of households that have to bear this burden remains the same. The pattern observed in Hungary becomes even more pronounced when we look at debt minus gross wealth: The remaining debt almost doubles, while the share of indebted households increases only slightly, leaving some 4% of households with almost 17% of debt not covered. In Latvia, the opposite effect can be observed, albeit on a smaller scale. After deducting financial assets as well as gross wealth, the remaining burden increases modestly (by about 10%), while the share of households affected increases by more than twice as much (about 25%). In both countries, debt is concentrated on a comparatively small share of households. Again, household characteristics seem to ease credit fragility and the concentration of debt in these two countries. Some of the households affected could be those that borrowed excessively during the boom (Latvia) or those that used foreign currency loans, which led to an increase in their outstanding debt (Hungary). A further observation[3] is that while similar household characteristics are observed in the two Baltic countries covered (Estonia and Latvia), the effects of the reweighting procedure are divergent. This suggests that vulnerable households across countries do not necessarily share the same characteristics, i.e. there is no typical set of household characteristics that would classify a vulnerable household.

In all other countries in our sample, imposing similar household characteristics leads to a marginal decrease in the share of households and debt (debt minus gross wealth), with only Slovakia posting a notable decrease in the debt share (3%) and at the same time an increase in the share of households affected (2%).

For one, our results confirm that comparable households are more exposed in Latvia and Hungary than in the other countries in our sample. For another, the results indicate that country-specific household characteristics may contribute to financial vulnerability e.g. in Estonia or Slovenia. Countries where the imposition of a common household structure leads to an increase in the share of vulnerable

[3] *This observation was kindly pointed out by one of the anonymous referees.*

households may be more exposed to external factors than the other countries. Such factors may stem from the banks themselves, i.e. eligibility regulations, or from the type of loan granted. In the case of Hungary, Poland and Latvia, many foreign exchange loans were granted prior to the crisis, and the associated costs increased dramatically once currency risk materialized. In Hungary, foreign currency loans were fully transformed to local currency loans based on a preferential exchange rate, but this happened after this wave of the HFCS was conducted (for a detailed description of different measures taken with respect to foreign currency lending across CESEE, see Beckmann, 2017).

5 Summary and conclusions

In this study, we employ newly available microdata to analyze and assess household indebtedness and financial vulnerability in selected CESEE countries. The 2014/15 wave of the Household Finance and Consumption Survey (HFCS) covers Slovenia, Estonia, Hungary, Latvia, Poland and Slovakia. The stock-taking exercise of extensive and intensive margins of all measures considered revealed some peculiarities with respect to households' balance sheet characteristics in each country. While home ownership is markedly higher in the CESEE countries than e.g. in Austria or Germany, the value of real estate property is significantly lower. Given these low values and the relatively high levels of debt, LTV ratios are higher in the CESEE countries.

Central to this analysis is the usage of different vulnerability measures such as DTI, DSTI and LTV ratios, and the identification of those households that exceed certain vulnerability thresholds. The distribution of these measures reveals that households in Latvia and Hungary are particularly vulnerable. These two countries also have the highest median LGD, which is crucial to the banking sector. This could be a repercussion of the financial crisis: a relatively high prevalence of foreign currency loans, unsustainable loans granted during the boom and a collapse of property prices, which affected Latvia in particular.

We employed a procedure that decomposes differences in the level of household financial vulnerability into a part that is due to household characteristics and another that results from other external factors. Our analysis of the drivers of the differences in household vulnerability across countries helped interpret the results further. The analysis shows that household characteristics explain a small but important part of the differences in household vulnerability across countries. What is most interesting is that the direction of the effects stemming from differences in household characteristics varies across countries: When we look at vulnerability measures (DTI, DSTI and LTV ratios), differences in household composition have a dampening effect on overall vulnerability in Latvia and Slovakia, an enhancing effect in Estonia and Slovenia and a mixed effect in Hungary. When we consider debt coverage, the household structure of Latvia and Hungary has a dampening effect. Also, differences in unobserved external factors (i.e. differences due to the banking sector, etc.) might weigh on household financial health in Hungary and Latvia more than in the other countries. Households in these two countries were identified as the most vulnerable: Not only is the remaining debt burden (debt minus gross wealth) highest (as a share of total debt), but debt is also the most concentrated on a small share of households. In Estonia and Slovenia, household vulnerability is enhanced by the countries' household structure.

The different directions of the effects indicate that there is no typical household structure that suggests a high level of vulnerability as different types of households are vulnerable across countries.

Turning to the implications for the Austrian banking sector, we note that household debt in the countries in our sample is rather small compared to Austria. Whereas the financial position of households in Slovakia, Poland and Slovenia seems to be fairly sound, households in Latvia and Hungary are, financially, the most fragile. For Austrian banks, the risk stemming from Latvian households would be small, while that stemming from Hungarian households would be somewhat more pronounced. In Hungary, however, foreign currency loans (a type of debt which potentially increased due to currency depreciation) were transformed into local currency loans based on a favorable exchange rate during and after the HFCS survey wave. As a result, some of the risks we found have likely become less significant in the meantime.

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Annex

Table A1

Household characteristics

	Slovenia	Estonia	Hungary	Latvia	Poland	Slovakia	CESEE
Household size							
One household member	32.6	35.8	33.4	31.7	24.0	25.7	26.9
Two household members	25.1	29.8	29.6	30.3	25.7	21.9	26.4
Three household members	18.6	16.3	17.2	18.2	20.2	19.5	19.3
Four household members	11.7	12.7	12.7	12.3	16.2	18.7	15.4
Five or more household members	12.0	5.4	7.1	7.5	13.9	14.3	12.1
Age of reference person							
Age 16 to 24	1.2	3.7	1.8	2.4	1.4	0.6	1.5
Age 25 to 34	10.0	16.3	11.2	12.7	14.8	9.2	13.4
Age 35 to 44	16.3	17.6	19.8	17.7	19.6	24.7	19.8
Age 45 to 54	20.8	18.0	18.7	19.0	20.3	20.1	19.8
Age 55 to 64	23.0	17.5	20.7	19.8	21.9	21.8	21.5
Age 65 to 74	14.7	13.5	16.4	14.0	12.3	14.8	13.5
Age 74+	13.9	13.5	11.5	14.4	9.8	8.7	10.4
Highest level of education of reference person							
Primary education	5.0	2.6	1.5	2.2	14.2	1.2	9.6
Secondary education	73.6	63.4	68.2	65.3	61.2	79.3	64.8
Tertiary education	21.5	34.0	30.3	32.4	24.6	19.5	25.7
Employment situation of reference person							
Employed	43.7	57.4	50.9	52.2	51.3	51.4	51.1
Self-employed	6.4	5.1	6.4	6.6	11.2	12.3	9.8
Unemployed	6.5	4.7	4.1	5.9	3.4	4.3	3.9
Retired	41.6	26.8	34.2	31.1	26.4	28.7	28.8
Other	1.8	5.9	4.4	4.3	7.8	3.3	6.4

Source: HFCS 2014, ECB, OeNB.

Note: The household reference person is chosen according to the international standards of the Canberra Group, which uses the following sequential steps to determine the unique reference person per household: 1) household type determined by a) one of the partners in a registered or de facto marriage, with dependent children, b) one of the partners in a registered or de facto marriage, without dependent children, and c) a lone parent with dependent children, 2) the person with the highest income, 3) the eldest person.

Table A2

Household characteristics reweighted

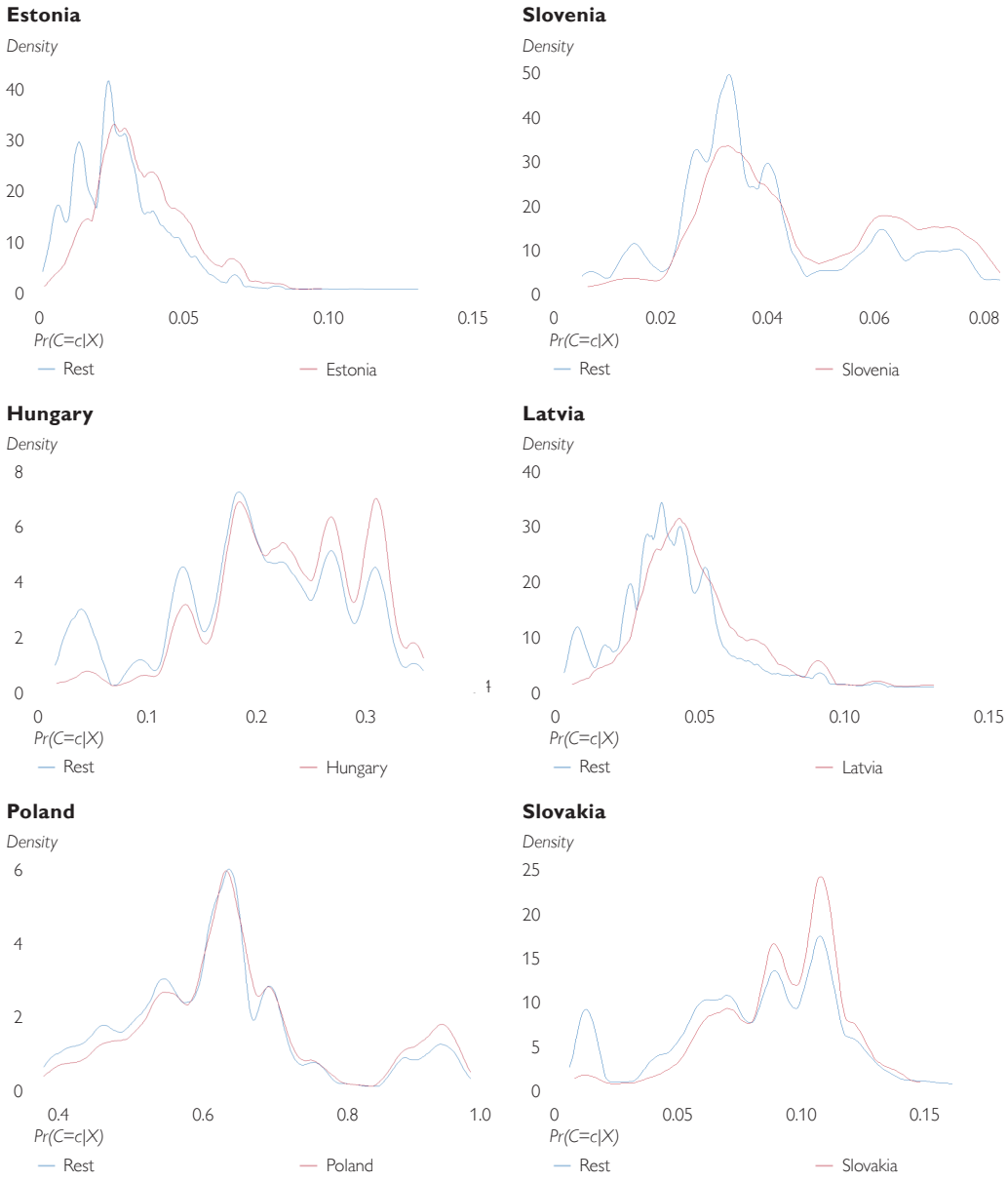
	Slovenia	Estonia	Hungary	Latvia	Poland	Slovakia
Household size						
One household member	27.8	28.1	26.4	26.2	26.6	26.1
Two household members	25.5	25.8	26.5	27.6	26.4	25.0
Three household members	18.5	19.4	19.0	19.2	19.4	19.9
Four household members	15.7	14.7	14.9	14.9	15.4	16.0
Five or more household members	12.5	11.9	13.2	12.1	12.2	13.0
Age of reference person						
Age 16 to 24	2.6	2.5	1.8	3.1	1.4	0.9
Age 25 to 34	12.7	13.9	12.3	12.8	14.4	11.2
Age 35 to 44	19.5	21.2	22.6	21.3	18.6	26.5
Age 45 to 54	24.2	19.8	20.9	20.0	19.8	19.7
Age 55 to 64	18.5	17.2	19.1	17.9	22.5	18.9
Age 65 to 74	10.5	14.6	12.5	12.1	12.9	12.5
Age 74+	12.1	10.8	10.9	12.8	10.4	10.3
Highest level of education of reference person						
Primary education	8.9	9.6	9.6	7.5	9.5	10.7
Secondary education	64.8	63.1	63.8	64.5	64.5	64.8
Tertiary education	26.4	27.3	26.6	28.0	26.0	24.6
Employment situation of reference person						
Employed	51.0	50.3	52.9	50.2	51.3	50.5
Self-employed	9.6	9.4	8.9	9.9	9.9	9.9
Unemployed	4.0	3.7	3.7	3.8	3.9	4.5
Retired	28.7	28.8	28.1	29.4	28.5	27.4
Other	6.7	7.8	6.4	6.7	6.4	7.7

Source: HFCS 2014, ECB, OeNB.

Note: The household reference person is chosen according to the international standards of the Canberra Group, which uses the following sequential steps to determine the unique reference person per household: 1) household type determined by a) one of the partners in a registered or de facto marriage, with dependent children, b) one of the partners in a registered or de facto marriage, without dependent children, and c) a lone parent with dependent children, 2) the person with the highest income, 3) the eldest person.

Chart A1

Kernel density estimates of propensity scores



Source: HFCS 2014, ECB, OeNB.

Table A3

Effects of imposing a common household structure on vulnerability measures

	Slovenia	Estonia	Hungary	Latvia	Poland	Slovakia
Debt-to-income ratio ≥ 3	0.07	0.10	0.12	0.15	0.06	0.11
Percentage change through reweighting	1.5	2.0	0.8	12.1	0.0	4.9
Debt service-to-income ratio ≥ 40%	0.06	0.07	0.13	0.13	0.05	0.05
Percentage change through reweighting	–11.8	–13.4	–4.5	12.4	–2.1	7.1
Debt service-to-income ratio ≥ 40% with debt payment	0.08	0.09	0.16	0.15	0.05	0.06
Percentage change through reweighting	–13.2	–11.1	–4.7	9.6	–1.9	7.8
Loan-to-value ratio ≥ 75%	0.16	0.25	0.24	0.42	0.18	0.18
Percentage change through reweighting	–1.81	–6.08	2.55	2.18	–0.55	5.17

Source: HFCS 2014, ECB, OeNB.

The relevance of remittance inflows to CESEE countries: evidence from macro- and micro-level data

Anna Katharina Raggl[1]

In this study, a combined analysis of micro- and macro-level data on remittances is used to shed light on the relevance of such transfers in Central, Eastern and Southeastern European (CESEE) countries. In the early and mid-1990s, and more recently in the context of EU accession, CESEE countries experienced considerable out-migration, and remittances have become an important source of foreign exchange in these countries. Against this background, this study examines the relevance and nature of remittance inflows to CESEE. To this end, both the dispersion of remittances across individuals in a country (based on microdata from the OeNB Euro Survey) and the average amount received per recipient (estimated by combining micro- with macrodata) are assessed. By relating these two dimensions of remittances descriptively, we examine differences across countries and changes over time.

JEL classification: F24, F22, O57
Keywords: remittances, emigration, intensive and extensive margin, CESEE

Growth of global remittances, which used to be historically high year on year, has decreased recently, with the World Bank (2016) expecting a stabilization at low but positive rates. Despite this overall slowdown, in some countries, remittances still account for a considerable share of GDP. In particular, remittances to low- and middle-income countries are more than twice as high as official development assistance and aid. They amounted to two-thirds of FDI inflows in 2015 and constitute a stable, typically countercyclical, source of income. Given this countercyclicality, which is not inherent in most other private capital flows, remittances enhance the receiving households' resilience to idiosyncratic or macroeconomic shocks or crises in general, thus contributing to poverty reduction (see e.g. OECD, 2014; Adams and Page, 2005). In addition, remittances promote local development by supporting small businesses and small-scale agriculture (Grabel, 2008), i.e. entities that usually do not benefit from FDI inflows. Not only the overall size, but also this distinctive feature that sets remittances apart from other capital flows calls for a thorough assessment.

In a worldwide comparison, small island states as well as Central, Southern and Eastern Asian countries and the Caribbean are prominent recipients of remittances. In Central, Eastern and Southeastern European (CESEE) countries[2], remittances likewise make substantial, above-average contributions to the respective GDP. In the early and mid-1990s, and more recently in the context of EU accession, CESEE countries experienced significant out-migration. In 1992, net migration[3] was negative in all selected CESEE countries apart from the Czech

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[2] *This study focuses on the following CESEE countries: six EU countries (Bulgaria, Croatia, the Czech Republic, Hungary, Poland and Romania) and four non-EU countries (Albania, Bosnia and Herzegovina, FYR Macedonia and Serbia). These ten countries are covered in the OeNB Euro Survey, which provides the micro-level data used in this study.*

[3] *Net migration refers to the difference between immigration flows to and emigration flows from a country. Data on net migration stem from the World Bank's World Development Indicators; they are updated at five-year intervals.*

Republic, Hungary and Serbia, and, in 1997, net migration turned negative also in Serbia. Currently, the stock of migrants from Albania and Bosnia and Herzegovina amounts to approximately 40% of the respective home country population. The number of emigrants from the former Yugoslav Republic of (FYR) Macedonia and Croatia came to approximately 25% and 20% of the respective country's population in 2015. The countries with the lowest emigration rates among the CESEE countries covered here are Hungary (6%), the Czech Republic (9%) and Poland (12%), which are still well above the global average of 3%. These high emigration rates explain the large inflows of remittances to CESEE countries, where, in 2015, remittances even exceeded FDI inflows. Against the background of the growing importance of remittances relative to other inflows and the comparatively scarce literature on the topic, this study zeroes in on remittances in the CESEE region.

The aim of this study is to shed light on the relevance of remittance inflows to selected CESEE economies by combining country-level and individual-level data sources. While the former provide information about the aggregate amount of remittances that flows into a given country, the latter are used to determine the number of recipients of remittances within that country, as well as to identify, for instance, recipients' socio-economic characteristics. Combining macro- and micro-level data allows approximating the average amount of remittances received per recipient in a given country – a measure that cannot be calculated based on either of the two data sources alone. The number of individuals receiving remittances can be referred to as the extensive margin of remittances, whereas the average amount of remittances received per recipient can be referred to as the intensive margin of remittances. The intensive margin is of particular interest, as it contains information about the distribution of remittances across the population. Contrary to remittances per capita, a measure that assumes an equal distribution of remittances across the population, the intensive margin of remittances shows the average amount per recipient, which allows a more detailed analysis of the implications for household finances, the distribution of disposable income and household vulnerability.

This study is organized as follows. Section 1 focuses on the macro-level evidence and compares global developments and trends in remittance flows to those observed for CESEE countries. In section 2, microdata from the OeNB Euro Survey are used to assess the share of remittance-receiving households as well as recipients' socio-economic characteristics. In section 3, macro- and micro-level evidence is combined and countries are characterized by the spread of remittance recipients and the size of the average amount a typical recipient receives. Section 4 provides a summary.

1 Macroevidence of remittance inflows to CESEE countries

1.1 Global developments

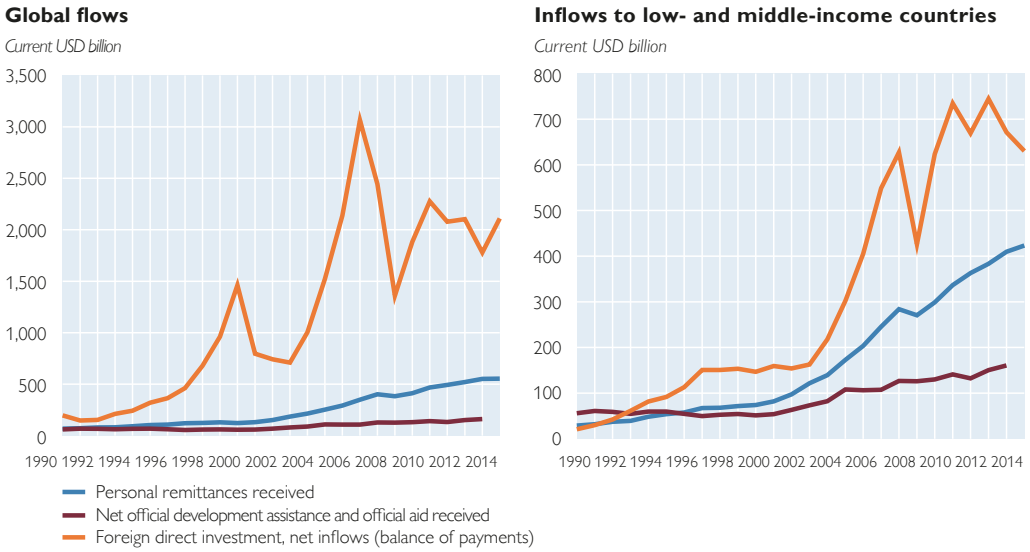
The growth of worldwide remittances[4], which picked up in the early and mid-2000s and averaged well above 10% during the late 1990s and in 2008, experienced a slowdown following the onset of the financial crisis. The overall volume of

[4] *The growth rates are based on data on personal remittances received, measured in current U.S. dollars, as published by the World Bank (World Development Indicators). For a thorough assessment of the role of remittances in the balance of payment statistics, see IMF (2009), IMF (2009a) and Reinke (2007).*

remittances declined in 2009, but the growth rates recovered to an average of 7.7% between 2010 and 2014. While the growth rate of global remittances was close to zero again in 2015, the World Bank predicted an increase of 0.8% for 2016, and expects growth in remittances to level off at historically low, yet positive yearly rates of between 3% and 4%.[5] This development is partly due to moderate economic growth in the main remittance-sending countries, but also to low oil prices reducing remittances from oil-producing countries (mainly Russia; to a lower extent also Gulf Cooperation Council (GCC) countries). The appreciation of the U.S. dollar against currencies of other core remittance-sending countries (mainly the euro and the Russian ruble) has further dampened growth of USD-denominated remittances in recent years (World Bank, 2016a). Despite the recent slowdown in overall remittance growth, remittances to low- and middle-income countries[6], which are directly channeled to households, are more than twice as high as official development assistance and aid flows (chart 1).

Chart 1

Remittances, net official development assistance and aid (ODA) and foreign direct investment (FDI)



Source: World Development Indicators (World Bank).

Furthermore, in low- and middle-income countries, remittances amount to half the size of FDI inflows and they are more stable than private capital flows, which have repeatedly been shown to be highly cyclical with respect to the eco-

[5] *These data are based on the Annual Remittances Data and on the Bilateral Remittances Matrices (as at October 2016), which are analytically estimated datasets published by the World Bank.*

[6] *Low-income economies are defined as countries with a gross national income (GNI) per capita of USD 1,025 or less in 2015, as calculated using the World Bank Atlas method. Lower-middle-income economies are countries with a GNI per capita between USD 1,026 and USD 4,035, and upper-middle-income economies are countries with a GNI per capita between USD 4,036 and USD 12,475. High-income economies are countries with a GNI per capita of USD 12,476 or higher. All the non-EU CESEE countries covered here (Albania, Bosnia and Herzegovina, FYR Macedonia and Serbia) as well as Bulgaria and Romania belong to the group of upper-middle-income countries, while Croatia, the Czech Republic, Hungary and Poland fall into the group of high-income countries.*

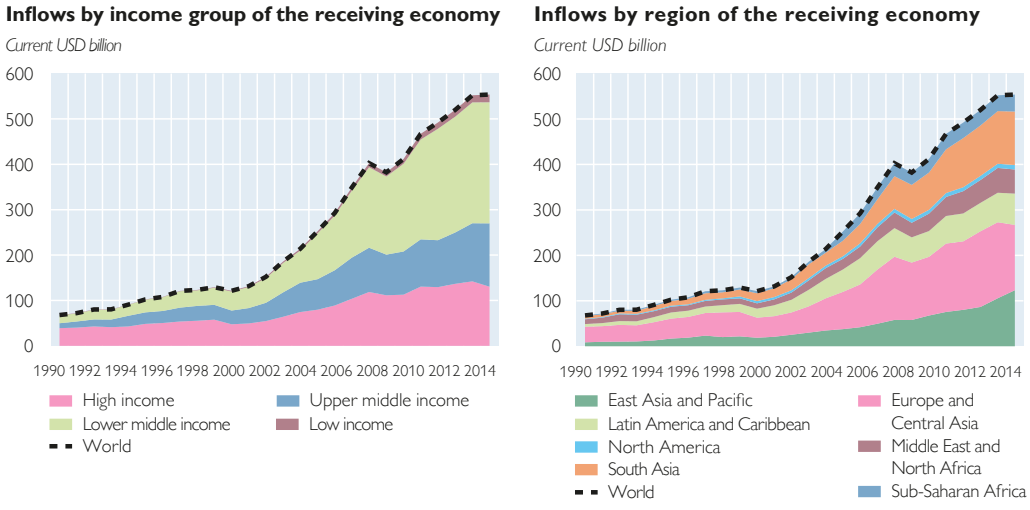
nomic performance of the receiving economy. Private capital flows tend to soar during booms, and decrease sharply during recessions (see Kaminsky et al., 2004).[7]

Remittances, in contrast, are less volatile and tend to be countercyclical with respect to the receiving countries' economic performance and procyclical with respect to the remittance-sending country (see chart 1 and Frankel, 2011; Bettin et al., 2014). This countercyclicality of remittances can help smooth households' consumption patterns in the event of adverse shocks – in particular if remittances are intended for consumption. Migrants in fact tend to increase remittances amid weak economic conditions in the receiving economies and if the recipients are faced with wage decreases or unemployment, crop failures or similar hardships. But even remittances sent for investment purposes do not exhibit the high volatility and procyclicality observed for other capital flows. Migrants continue investing in their home countries in difficult times whereas foreign investors withdraw capital – a phenomenon that is similar to the home bias of investment (Ratha, 2005).

The vast majority of global remittances – roughly 75% or more than USD 420 billion in 2015 – are directed toward low- and middle-income countries (chart 2, left panel). Low-income countries receive less than one-twentieth of the amount channeled to middle-income countries and less than one-seventh of the amount sent to high-income countries. In per capita terms, remittances average some USD 30 in low-income countries, USD 73 in middle-income countries and more than USD 100 in high-income countries (as at 2015).[8]

Chart 2

Remittances inflows by receiving economies



Source: World Development Indicators (World Bank).

[7] *Araujo et al. (2017) highlight, inter alia, that private capital flows to emerging markets are more procyclical and less persistent than flows to low-income countries, thereby confirming Kaminsky et al. (2004), who show that procyclicality is particularly strong for middle- and high-income countries.*

[8] *Remittances per capita should not be confused with remittances per recipient. While the former may be computed easily by dividing overall remittance inflows by total population, the latter results from dividing overall inflows by the number of actual recipients of remittances. Remittances per recipient must be estimated based on micro-level data (see section 2.1).*

Although remittances are often seen as monetary flows that redistribute income from high- to low-income countries, low-income countries appear to gain less from this redistribution in per capita terms than middle-income countries. When normalizing remittance inflows with the receiving countries' GDP levels, this picture is reversed. Between 2009 and 2015, average remittances amounted to 4.6% of GDP in low-income countries, yet only came to 3.7% of GDP in middle-income countries, and to 1.5% of GDP in high-income countries.[9] In terms of shares in GDP, low-income countries also make up the core remittance-sending group of countries, as surprising as this may seem at first. However, in light of dynamic South-South migration (World Bank, 2016; Ratha and Shaw, 2007), i.e. migration from one developing country to another, such a finding is no longer astonishing. A geographical breakdown of remittance-receiving countries (chart 2, right panel) reveals that, recently, the majority of remittances have been directed to Europe and Central Asia, South Asia as well as East Asia and the Pacific. The core remittance-sending regions are high-income countries in Europe and Central Asia, the Middle East and North Africa, and also North America (see chart A1 in the annex). Approximately 42% of worldwide remittances in 2015 originated in Europe and Central Asia (63% thereof in the European Union and 50% thereof in the euro area, respectively), 22% in the Middle East and North Africa, 19% in North America and 14% in East Asia and the Pacific. The remaining world regions combined – Latin America and the Caribbean, South Asia and Sub-Saharan Africa – sent less than 4% of global remittances. On the country level, the United States was the most important remittance-sending country (16% of overall remittances in 2015), followed by Saudi Arabia (10%), Switzerland (6%), China (5%) and Russia (5%). Among European Union countries, Germany (5% of overall remittances in 2015), France, Luxembourg and the United Kingdom (3% each) exhibited the highest outflows of remittances.

1.2 Trends in CESEE countries

While the development of remittance inflows to CESEE countries has in general broadly followed the patterns observed at the global level, both the increase between 1998 and 2004 and the decline during the crisis were considerably more pronounced, and so was the subsequent recovery. The average growth rate of remittances to CESEE countries was negative during the period from 2009 to 2012, but increased considerably between 2013 and 2015, namely to almost 5.7% (see table 1). The two panels of chart 3 highlight the role of remittances compared with official development assistance and aid (ODA, left panel) and the contribution of each country to total remittance inflows to the region (right panel) in CESEE countries.

Table 1

Average growth rates of remittance inflows

	World	Low and middle income	CESEE
	Annual growth rates in %		
1998–2004	8.84	11.26	35.47
2005–2008	17.16	19.52	19.66
2009–2012	5.36	6.55	–4.49
2013–2015	4.04	5.28	5.67

Source: World Development Indicators (World Bank), author's calculations.

Note: According to the World Bank's classification of income groups (December 2016), the Czech Republic, Croatia, Hungary and Poland belong to the group of high-income countries, and Albania, Bosnia and Herzegovina, Bulgaria, FYR Macedonia, Romania and Serbia belong to the group of (upper) middle-income countries.

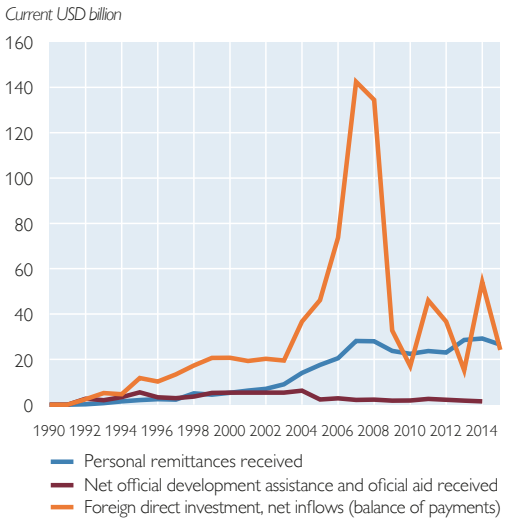
[9] *The shares in GDP are calculated based on data published by the World Bank (World Development Indicators) and represent unweighted averages of the country groups.*

Until the early 2000s, ODA and remittance inflows to CESEE countries were of a similar magnitude, but the rise in remittances was accompanied by decreases in aggregate ODA. Currently, ODA amounts to merely 5% of remittances. FDI inflows to the CESEE region were higher than other inflows already in the mid-1990s, and they soared in the mid-2000s, before contracting drastically right after the onset of the crisis. Since then, FDI inflows have been highly volatile, whereas remittances have remained comparatively stable. During the crisis, remittances to CESEE decreased, mainly due to poor economic performance in migrants' host countries, picked up again after 2012, before declining again in 2015. The drop in FDI inflows was even more pronounced, however, and as a consequence, remittances exceeded FDI inflows by about USD 2 billion in 2015.

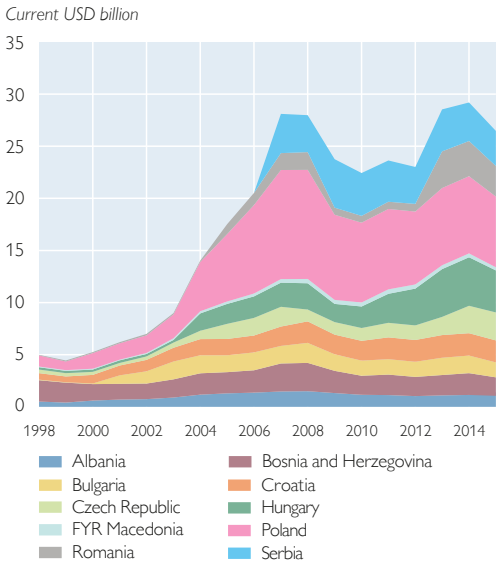
Chart 3

Inflows to CESEE

Inflows of remittances, ODA and FDI to CESEE



Inflows of remittances to CESEE, by recipient economy



Source: World Development Indicators (World Bank).

The countercyclicality of remittances with respect to the economic performance of the receiving countries has been repeatedly shown in the literature – in particular for the group of middle-income countries, which includes most of the CESEE countries.[10] The decreases in remittances at the onset of the crisis and in recent years should be associated with weak economic conditions in migrants' destination countries (procyclicality with respect to the performance of the remittance-sending countries) rather than with weak development in the recipient countries.

As is evident from a geographical decomposition of total remittance inflows to CESEE countries (right panel of chart 3), Poland receives roughly one-quarter of total remittances to the region, followed by Hungary (15%), Serbia (13%) and Romania (11%). When we take the size of the countries into account and stan-

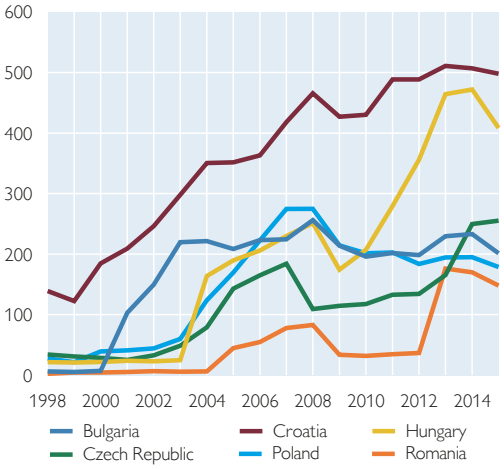
[10] *See for example Kaminsky et al. (2004) or Araujo et al. (2017).*

Chart 4

Inflows of remittances to CESEE: per capita

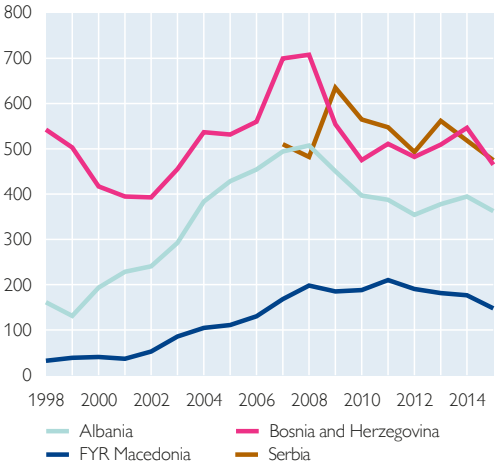
Remittances per capita, EU CESEE countries

Current USD



Remittances per capita, non-EU CESEE countries

Current USD



Source: World Development Indicators (World Bank).

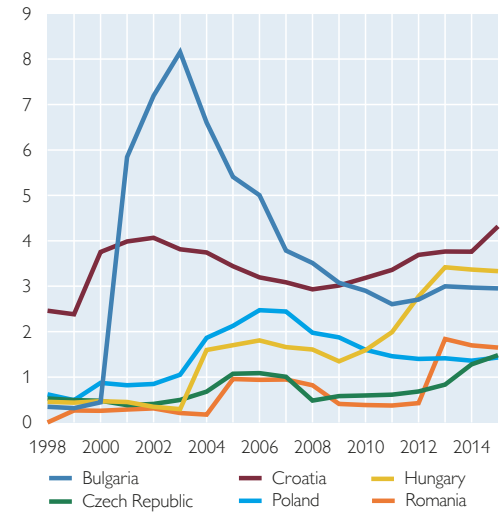
dardize total remittances by population (chart 4), in per capita terms, Bosnia and Herzegovina, Serbia, Croatia, Albania and recently also Hungary are the top remittance recipients of the region. Per capita remittances in these countries are roughly twice as high as those directed toward Poland, which – at less than USD 180 in 2015 – receives particularly little in per capita terms. Similarly, the lowest share of remittances in GDP in 2015 (chart 5) is observed in Poland (1.4%), followed by the Czech Republic (1.5%) and Romania (1.6%). By contrast, the

Chart 5

Inflows of remittances to CESEE: shares in GDP

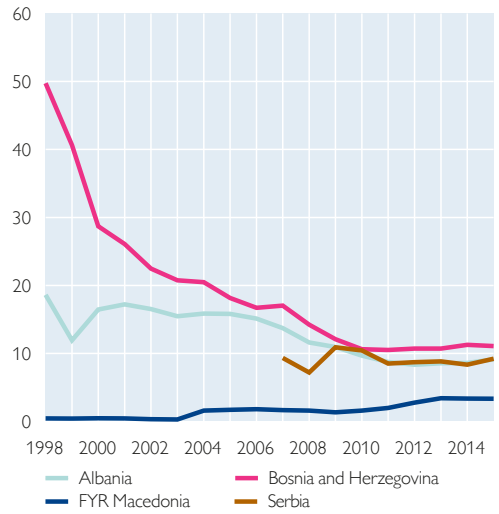
Remittances as shares in GDP, EU CESEE countries

% of GDP



Remittances as shares in GDP, non-EU CESEE countries

% of GDP



Source: World Development Indicators (World Bank).

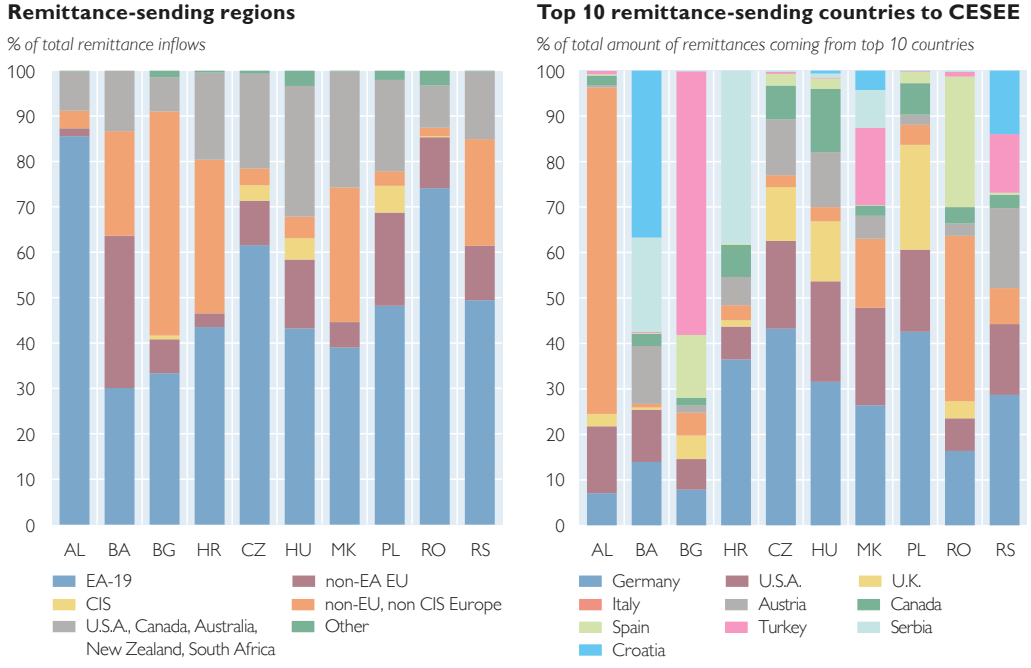
highest shares of GDP were recorded in Bosnia and Herzegovina (11%), Albania and Serbia (9% each).

1.3 The bilateral dimension of remittances to CESEE countries

Chart 6 gives an overview of the main remittance-sending countries with respect to the CESEE region. The underlying World Bank data represent estimates of bilateral remittances based on bilateral migration stock data.[11] The left panel highlights that countries in the euro area (EA-19) are the top remittance-sending countries in most CESEE countries. In Bulgaria, Croatia, FYR Macedonia, but also in Bosnia and Herzegovina and in Serbia, non-EU, non-CIS European countries[12] are major sources of remittances. Bulgaria, for example, receives most remittances from Turkey, which also accounts for a large part of remittances sent to FYR Macedonia. Croatia receives more remittances from Serbia (top sender) than from Germany (runner-up), and Serbia receives the largest shares from Austria and Germany. The right panel of chart 6 presents the top 10 remittance-sending countries to the overall CESEE region (together, these sending countries account for more than 70% of total inflows), showing for each CESEE country a breakdown by these top 10 senders.

Chart 6

Main remittance-sending countries and regions



Source: Bilateral Remittance Matrix 2015 (World Bank, as at October 2016).

[11] *All unilateral macro-level data on remittances used in this paper are taken from the World Bank's World Development Indicators and are based on IMF balance of payments data. Given different compilation methods, there may be discrepancies between the unilateral data on remittances and the estimates of the bilateral flows of remittances used in chart 6.*

[12] *Non-EU, non-CIS European countries are Switzerland, Norway, Bosnia and Herzegovina, Serbia, Kosovo, Albania, FYR Macedonia, Iceland, Turkey, and Lichtenstein.*

2 Microevidence of remittance inflows to CESEE countries

2.1 Descriptive statistics

The micro-level data are based on the OeNB Euro Survey, an individual-level dataset the Oesterreichische Nationalbank (OeNB) started to compile in selected CESEE countries[13] in 2007. In the 2009–2015 waves, respondents were asked whether they received money from abroad;[14] they had the answer choices "No," "Yes, regularly," "Yes, infrequently," "Don't know" and "No answer". (The survey did not ask households to specify amounts.) Based on individual answers, the share of remittance recipients can be estimated as the (survey-weighted) average of positive answers for each year and country.[15]

This descriptive analysis shows that, similar to the macroeconomic level, the survey-based estimates of the shares of remittance recipients in the population differ considerably across CESEE countries (table 2). In Poland, Hungary and the Czech Republic, less than 5% of the population says that they, on average, received remittances between 2009 and 2015, whereas in Bosnia and Herzegovina and FYR Macedonia more than 10% reported remittances, in Albania even 22%. The latter three non-EU CESEE countries are also those with the highest emigration rates in the sample, and the former three countries exhibit the lowest emigration rates among the ten economies under consideration.

Table 2

Extensive margin, emigration rates and remittances per capita

	Remittance recipients (% of population), mean, 2009–2015	Remittance recipients (% of population), standard deviation, 2009–2015	Emigration rates (% of origin-country population) in 2015	Remittance inflows per capita (current USD), mean, 2009–2015
Albania	22.33	3.78	38.87	389.06
FYR Macedonia	10.89	1.53	24.83	182.77
Bosnia and Herzegovina	10.20	1.87	43.32	508.46
Serbia	7.60	1.76	13.59	542.15
Romania	7.22	1.07	17.18	91.10
Croatia	6.69	2.06	20.48	478.56
Bulgaria	5.75	1.79	16.39	209.30
Poland	4.25	1.22	11.71	195.68
Hungary	3.14	1.53	6.05	343.93
Czech Republic	2.95	0.71	8.84	167.00

Source: Author's calculations based on OeNB Euro Survey; UN International Migrant Stock (2015); World Development Indicators.

While the above figures are averages of all survey waves, chart 7 illustrates the development of the survey-based estimates of the shares of remittance recipients over time. In addition to the observable heterogeneity across countries, the shares

[13] *The OeNB Euro Survey is conducted in the ten CESEE countries listed in footnote 2. The group comprises the CESEE EU Member States and the Western Balkan countries that do not use the euro as legal tender.*

[14] *The precise questions were: "Do you personally or your partner receive money from abroad? E.g. from family members living or working abroad, pension payments, etc.?" from 2009 to 2013 and in 2015, and "Did your household receive income (or financial support) from the following sources: Income from abroad (from family members living or working abroad, pension payments, etc.)?" in 2014.*

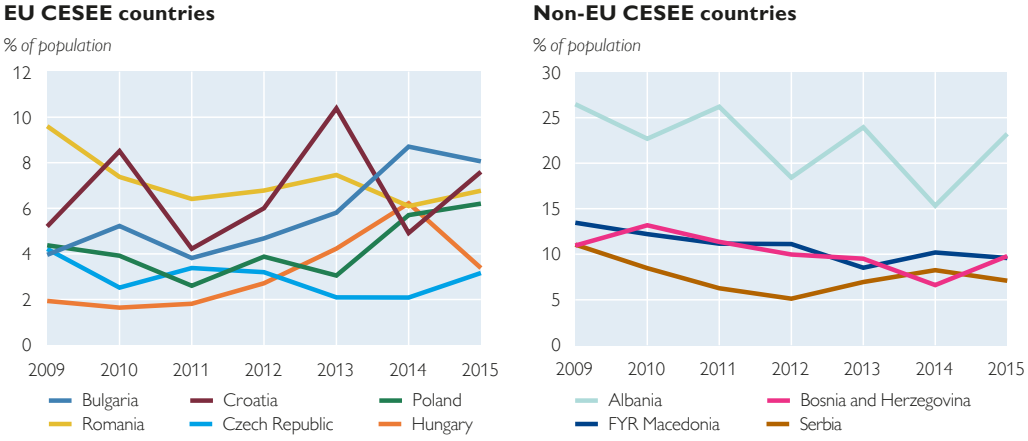
[15] *In particular, the share of remittance recipients is estimated as the (survey-weighted) share of individuals that stated an either regular or infrequent receipt of money from abroad among all individuals who gave valid answers. Those that answered "Don't know" or "No answer" are excluded from the base. The shares are computed for each country and year.*

are particularly volatile in Albania and Croatia, but also in Bulgaria. Charts A2 and A3 in the annex present the same estimated shares of remittance recipients per country but add the corresponding 95% confidence intervals of the estimates (calculated by using survey weights based on the standard error of the estimated mean). The high volatility of the shares of recipients is confirmed by previous microdata-based research. De Sousa et al. (2009) show for Albania, using microdata from the World Bank's Living Standards Measurement Study (LSMS) for the years 2002, 2003 and 2004, that on average 26% of households reported the receipt of remittances during that three-year period. This percentage roughly matches our OeNB Euro Survey estimates.

According to Petreski and Jovanovic (2013), the share of remittance-receiving households in FYR Macedonia stood at 16% in 2008 (which is close to the upper bound of our 95% confidence interval for 2009) and 21% in 2012 (which is considerably above our 95% confidence interval for 2009). In another assessment for FYR Macedonia, Mughal et al. (2013) present a share of remittance-receiving households of approximately 7% in 2008 – a figure that lies below the lower bound of our estimate. Hence, for FYR Macedonia, the estimates based on the OeNB Euro Survey are within the broad range of estimates published in other studies.

Chart 7

Share of remittance-receiving individuals



Source: Author's calculations based on OeNB Euro Survey.

Petreski and Jovanovic (2013) also estimate the share of remittance-receiving households for Bosnia and Herzegovina, reporting approximately 8% for 2007 and 6% for 2011. While the declining trend is similar to the OeNB Euro Survey estimates, the magnitude lies below our lower bounds. Other estimates for Bosnia and Herzegovina (Oruc, 2011) put the share of recipients at 11% in 2004, a figure that is much closer to the 10% average of our estimates for the 2009–2015 period. Giannetti et al. (2009) estimate the share of remittance recipients in the Czech Republic (5%), Poland (5%) and Hungary (13%) based on data for 2005. While our estimates for 2009 are similar in the case of the Czech Republic and Poland, a considerable difference exists for Hungary, which might indicate an underestimation for the latter country on our part. On the other hand, emigration rates from Hungary are comparatively low (at below 5%), and this observation is in line with our estimated recipient share of 3%.

The estimates and the comparisons with other published values suggest that it is difficult to assess the share of remittance recipients based on microdata, with survey-based estimates likely to underestimate the actual shares. On average, the share of invalid answers for this question in the OeNB Euro Survey ranges from 1.3% to 3.7%. It is safe to assume that invalid answers are more common among recipients of remittances than among respondents who do not receive money from migrants abroad, as income-related information is not always readily shared. In that case, the estimated shares of recipients would be underestimated, with the actual shares likely to be closer to the upper bounds of the estimates.

2.2 Typical recipients of remittances in CESEE countries

To shed light on the socio-economic characteristics of recipients of remittances and to determine whether they differ across countries, we use OeNB Euro Survey data to estimate simple linear probability models (LPMs), i.e. OLS models with a binary explanatory variable.[16] With LPMs we can estimate the partial effects of socio-economic characteristics on an individual's probability of receiving remittances. The dependent variable is a dummy variable that takes a value of one if individual i living in country j receives remittances in year t, r_{jti}. We estimate

$$r_{jti} = a_j + \Sigma_k \beta_j^k x_{jti}^k + \mu_{jt} + \in_{jti} \quad (1)$$

where a_j is a country-specific constant, μ_{jt} represents country-specific year fixed effects and $\in_{jti}$ is the remaining error term. x_{jti}^k represents k different individual and household-specific characteristics and includes the income category, the individual's education and age, the size of the household, the number of children (aged under 7 and between 7 and 15 years) and dummies that indicate whether the individual is unemployed or retired. The estimated coefficients β_j^k are partial correlations of the covariates with an individual's propensity to receive remittances and should not be interpreted as causal effects. As such, this analysis is merely indicative and descriptive in nature, and for lack of a sound treatment of endogeneity, it does not allow causal inference.

The above specification is run for each country, and the results are presented separately for the six EU CESEE countries (table 3) and the four non-EU CESEE countries in the sample (table 4). The main findings of the LPM estimations can be summarized as follows. High-income households appear to be more likely to receive remittances than households belonging to the low-income category. This holds for all non-EU CESEE countries and for all EU-CESEE countries, except for Poland and Romania. In EU CESEE countries, high-income households have a 1.9-percentage-point (Hungary) to 3.3-percentage-point (Czech Republic) higher probability of receiving remittances, as other covariates are held constant. Moreover, a statistically significant difference between low- and middle-income households is evident in the Czech Republic and in Croatia.

[16] *For simplicity, we rely in this exploratory analysis on LPM models as opposed to probit or logit models. The estimated coefficients can directly be interpreted as changes in the probability of receiving remittances. An advantage of probit or logit models is that they lead to predictions between zero and one, which might not be the case when applying the OLS framework. Nevertheless, LPMs are unbiased and consistent if the proportion of predictions outside the unit interval is not too large.*

Table 3

Determinants of the likelihood of receiving remittances: EU CESEE countries

	(1)	(2)	(3)	(4)	(5)	(6)
	BG	HR	CZ	HU	PL	RO
Medium income	0.000840 (0.899)	0.0181* (0.063)	0.00937* (0.051)	0.00311 (0.543)	–0.00885 (0.136)	–0.00399 (0.622)
High income	0.0237*** (0.004)	0.0291** (0.018)	0.0330*** (0.000)	0.0194*** (0.007)	0.00797 (0.255)	–0.00369 (0.667)
Medium education	0.0208** (0.026)	0.00306 (0.803)	–0.00755 (0.303)	–0.0169** (0.024)	–0.00162 (0.826)	0.000430 (0.963)
High education	0.0153** (0.021)	–0.0141 (0.169)	–0.000493 (0.951)	–0.0112 (0.139)	–0.00639 (0.313)	0.00687 (0.413)
Age	–0.00147 (0.123)	–0.000907 (0.496)	0.00116** (0.027)	–0.00158** (0.042)	–0.00220** (0.026)	–0.00339*** (0.001)
Age, squared	0.00000754 (0.495)	0.0000143 (0.390)	–0.0000106* (0.092)	0.0000117 (0.112)	0.0000268** (0.025)	0.0000129 (0.210)
Retired	0.0175 (0.124)	0.00853 (0.633)	–0.0144* (0.079)	–0.00600 (0.356)	–0.00791 (0.433)	0.0350*** (0.001)
Unemployed	0.0247** (0.014)	0.0284** (0.024)	–0.00820 (0.233)	0.0117 (0.144)	0.0156 (0.132)	0.0225** (0.029)
Household size	–0.0135*** (0.000)	–0.000810 (0.853)	–0.00595** (0.040)	–0.000299 (0.913)	0.00229 (0.445)	–0.0102*** (0.007)
Number of kids younger than 7	0.0292*** (0.001)	0.00439 (0.616)	0.00850 (0.125)	–0.00620 (0.285)	0.00948 (0.166)	0.00568 (0.542)
Number of kids aged 7 to 15	0.0187*** (0.003)	–0.00763 (0.215)	0.00168 (0.692)	0.00350 (0.487)	0.00532 (0.333)	0.00784 (0.278)
Observations	7,001	6,997	7,286	6,917	6,865	7,246

Source: Author's calculations based on OeNB Euro Survey.

*Note: p-values in parentheses. * p < 0.1, ** p < 0.05, *** p < 0.01. All specifications include a constant and year fixed effects.*

In non-EU CESEE countries, the partial effects of high-income households are even larger: high-income households have a 5.1-percentage-point (Serbia) to 5.9-percentage-point (Albania) higher likelihood of receiving remittances than low-income households, and in Albania also middle-income households receive more remittances, ceteris paribus.[17] In the absence of methods that counteract endogeneity issues, distortions of the estimates due to reversed causality in the income-remittances nexus could prove an obvious caveat. However, given that households are not likely to add remittances to their stated income and the income variable enters as a categorical variable, biases of the estimates should be limited. The link between household income and the probability of receiving remittances can have important implications for the distributional effects of remittances.

If wealthier households are more likely to receive remittances, their overall income increases further, whereas that of poorer households remains unchanged. This may cause income distributions to widen. High-income households may be more likely to receive remittances because they can afford sending relatively more migrants abroad, have the means to ensure a better level of education prior to

[17] *Poprzenovic (2007) presents similar findings for Croatia.*

Table 4

Determinants of the likelihood of receiving remittances: non-EU CESEE countries

	(1)	(2)	(3)	(4)
	AL	BA	MK	RS
Medium income	0.0514***	0.0100	0.0112	0.00241
	(0.000)	(0.314)	(0.344)	(0.771)
High income	0.0590***	0.0544***	0.0534***	0.0509***
	(0.000)	(0.000)	(0.000)	(0.000)
Medium education	0.0693***	0.0112	0.0247*	–0.0201**
	(0.000)	(0.327)	(0.063)	(0.036)
High education	0.0265*	0.00983	–0.0153	–0.0263***
	(0.071)	(0.367)	(0.240)	(0.004)
Age	–0.00747***	0.00123	–0.000786	0.00181
	(0.007)	(0.352)	(0.612)	(0.148)
Age, squared	0.0000931**	–0.00000526	–0.00000235	–0.0000264*
	(0.010)	(0.742)	(0.891)	(0.092)
Retired	0.0292	0.0348**	0.0144	0.0355**
	(0.377)	(0.026)	(0.452)	(0.031)
Unemployed	0.0348**	0.0422***	0.0466***	0.0233***
	(0.023)	(0.000)	(0.000)	(0.009)
Household size	–0.0104	–0.00739*	–0.0163***	–0.00431
	(0.102)	(0.062)	(0.001)	(0.192)
Number of kids younger than 7	–0.00776	0.00548	0.0135	0.0150**
	(0.548)	(0.495)	(0.176)	(0.043)
Number of kids aged 7 to 15	–0.0199**	–0.00647	0.0134*	0.00804
	(0.017)	(0.281)	(0.084)	(0.172)
Observations	7,226	6,902	7,001	7,172

Source: Author's calculations based on OeNB Euro Survey.

*Note: p-values in parentheses. * p < 0.1, ** p < 0.05, *** p < 0.01. All specifications include a constant and year fixed effects.*

migration (or can afford education abroad), which increases migrants' earning potential in their destination countries, or may rely on supportive international networks.[18] The link between remittances and changes in income inequality is not new of course. Falzoni and Soldano (2014), who examined Eastern European countries, or Raggl (2015), who focused on Western Balkan countries, found evidence for an inequality-increasing effect of remittances in the region at the macro-level.

Additional findings of the empirical exercise at hand support the idea of remittances being altruistically motivated, with senders intending to support families and friends especially during hardship and adverse situations. In particular in non-EU CESEE countries, but also in Bulgaria, Croatia and Romania, unemployed individuals are more likely to receive remittances. With respect to education, no homogeneous findings are manifest. While in Albania and Bulgaria a higher level

[18] *Stark et al. (1986) provide an early contribution that focuses on the link between remittances and inequality. They argue that remittances from "pioneer migrants," i.e. migrants from countries that are at the beginning of their migration history, tend to increase income inequality in the respective home country, as in such countries emigration is costly. Once emigration becomes more common, network effects reduce the cost of emigration, which then also enables members of poorer families to emigrate. Subsequently, the inequality-increasing effect of remittances might decrease.*

of education is found to be associated with a higher probability of receiving remittances, in Serbia the opposite is true. However, after controlling for income, we detect no statistically significant relationship between education and the likelihood of receiving remittances in several economies. In most countries, the larger the household size, the lower is the likelihood of receiving remittances, possibly in part because emigration reduces household sizes. Moreover, we find evidence in Romania, Bosnia and Herzegovina as well as Serbia that the probability of receiving remittances is higher if individuals are retired.

3 A synthesis of micro- and macro-level data

3.1 Approximating the intensive margin of remittances

Combining the evidence available at the country level with the individual data offers additional insights that go beyond the aggregate amount of remittance inflows to a country and the share of beneficiaries. The macro-level data allow approximating the total inflows of remittances to a country, and the latter can then be used to calculate average remittances per capita or the share of remittances in GDP. This information sheds light on the magnitude of remittances, thus covering a dimension absent in the survey data. The survey data, on the other hand, contain information on the number of remittance recipients in a country, which allows assessing the dispersion of both remittances and remittance recipients in the countries of our sample. Especially in trade and labor economics, such a measure refers to the extensive margin, which usually covers the range (i.e. number) of inputs, workers, trade partners, or in this case, recipients of remittances. The intensive margin, conversely, refers to the intensity (i.e. amount) of an economic action, e.g. the size of trade flows to a given trade partner, the number of working hours of a working individual, or the amount of remittances sent to a recipient. This intensive margin of remittances – the average amount of remittances received per recipient – cannot be gleaned from one of the data sources alone. By combining the information deducible from both macro- and micro-level data, however, the intensive margin of remittances can be approximated as outlined below.

The balance of payments statistics provide estimates of total inflows of remittances to a country i – R_i. By using the population of this country N_t, it is possible to compute the average remittances per capita. The OeNB Euro Survey data provide information about the extensive margin, namely the share of remittance recipients in the total population $\frac{N_i^r}{N_i}$, where N_i^r denotes the number of individuals in the population that receive remittances in country i. The intensive margin of remittances $\frac{R_i}{N_i^r}$ can thus be calculated as

$$\frac{R_i}{N_i^r} = \frac{R_i}{N_i}\frac{N_i}{N_i^r} \tag{2}$$

This indicator not only shows total inflows to receiving countries and the share of beneficiaries in the total population, but also sheds light on the average size of remittances per recipient. Contrary to remittances per capita, a measure that presumes an equal distribution of remittances across the entire population of a country, the intensive margin of remittances can help identify distributional effects of remittances. If total remittances to a country are distributed among a small number of recipients, the average amount per recipient is comparatively high, and depending on the recipients' income level, the distributional effects may be

substantial. If, however, total inflows are distributed among a large group of households, the average amounts are lower, and remittances have a limited impact on the overall dispersion of income.

The estimated average intensive margin of remittances and the corresponding upper and lower bounds of the estimates are shown in chart 8. The upper and lower bounds are determined using the 95% confidence intervals that are calculated for the shares of remittances based on the survey data. While the intensive margins (blue bars) are based on the mean share of remittance-receiving households, the lower bound of the intensive margin is calculated by using the upper-bound estimates of the recipient shares and the upper bound of the intensive margin is calculated by using the lower-bound estimate of the recipient shares.[19] The bounds allow an assessment of the uncertainty associated with the respective estimates and the chart shows that imprecision is pronounced especially for countries with high intensive margins.

Chart 8

Intensive margin of remittances: average, 2009–2015

Average remittances received per recipient, current USD

Source: Author's calculations based on World Development Indicators (World Bank) and OeNB Euro Survey.

Among the countries under review, the intensive margin of remittances is estimated to be lowest in Romania, FYR Macedonia and Albania. Given the low values of per capita remittances and remittances as shares in GDP in Romania and FYR Macedonia, this finding is not surprising. Macrodata for Albania, however, suggest that remittances per capita are high. Besides, the share in GDP is close to 10%, which, given the low intensive margin, implies a large share of remittance recipients in the population. The microdata evidence presented in chart 7 corroborates this. Although Albania receives comparatively sizeable inflows of remittances, the amount per recipient is low as the number of recipients is high.[20] Our estimates suggest that Hungary records the highest intensive margin of remittances, at between USD 3,000 and USD 15,000 per year. In this country, the estimated share of remittance recipients is comparatively low on average, and with remittances per capita and shares in GDP having been high in recent years, the average amount per recipient is estimated to be high. The uncertainty associated with the microdata-based estimated shares in remittances translates into large confidence intervals for the estimate for Hungary. Hence, the result should be

[19] *The asymmetry of the bounds around the mean is attributable to the estimation approach used: The inverse of the upper (lower) bound of the shares is multiplied by remittances per capita to obtain the lower (upper) bound of the intensive margin, and as the deviations from the mean estimate do not enter additively but multiplicatively, the bounds are not symmetrical around the mean. This asymmetry implies that an underestimation of the shares (as suspected) leads to a relatively strong overestimation of the intensive margin, and an overestimation of the shares would lead to a comparatively small underestimation of the intensive margin.*

[20] *Using data from the early 2000s, de Sousa et al. (2009) published a survey-based estimate of approximately USD 700, which seems rather low given that the remittances per capita already ranged from USD 250 to USD 300 in those years.*

interpreted with caution. A comparison with recent literature suggests that the share of remittance recipients estimated for Hungary based on our survey data might underestimate the actual shares (see section 2.1). For this reason, an average amount closer to the lower bound of the estimated intensive margin seems more likely. Also for Croatia, the intensive margin of remittances is estimated to be comparatively high. Annual per capita remittances to the country exceed USD 500, and with a share of recipients of less than 10%, remittances per recipient of USD 7,000 are not astonishing. Yet, on the assumption that the share of recipients is underestimated, the lower bounds of the estimates should be considered. The intensive margins of remittances in Bulgaria, Poland, Bosnia and Herzegovina and the Czech Republic are estimated to lie between USD 3,000 and USD 6,000 per annum. Barbone et al. (2012) confirm a similar figure for Poland. For Bosnia and Herzegovina, Petreski and Jovanovic (2013) peg remittances per recipient at approximately USD 3,200 in 2011, which corresponds to our lower-bound estimate of the same year. In Serbia, the intensive margin of remittances is estimated to range from USD 5,000 to USD 8,000 per year. Although these amounts appear high, and no direct comparison is found in the literature, remittances from Switzerland to Serbia varied between CHF 200 and CHF 50,000 in the early 2000s according to the International Organization for Migration (IOM, 2007). Also, the majority of households received between CHF 1,000 and CHF 8,000 per year (mean: approximately CHF 4,800). When we consider the considerable increase in per capita remittances since the years the estimates are based on, the figures correspond to the lower part of our estimated range.

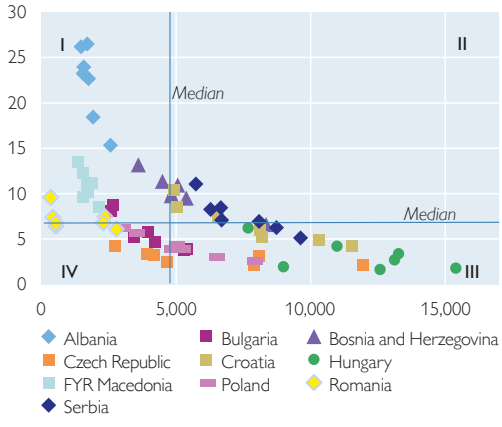
3.2 The extensive vs. the intensive margin of remittances in CESEE

In the following, the extensive and intensive margins of remittances are related to each other graphically (see chart 9). Both margins of remittances are plotted against each other for all country-years available (10 CESEE countries between 2009 and 2015), where each color corresponds to a specific country. As one would expect, the overall relationship between the intensive and the extensive margins is negative, which indicates that a large relative number (share) of recipients is associated with lower amounts received, and vice versa. The chart moreover shows the median of the intensive and extensive margins (blue vertical and horizontal lines) and divides the plot area into four quadrants. These quadrants can be interpreted as four categories that define the nature of remittances, and all country-year pairs can be allocated to one or more of these categories.

Chart 9

Extensive and intensive margins of remittances

% of remittance recipients in population, yearly observations, 2009–2015



Source: Author's calculations based on World Development Indicators (World Bank) and OeNB Euro Survey.

Many receive little (quadrant I): A comparatively large share of the population (= extensive margin) receives a comparatively small amount of

remittances (= intensive margin). Albania and FYR Macedonia can be assigned to this category for all years observed. The receipt of remittances is widespread in these countries, but the amounts per average recipient are rather small. The distribution of data points is mainly vertical. Hence, changes in overall remittance inflows predominantly result in changes at the extensive margin, while the intensive margin remains more or less constant. A fraction of the data points from Bosnia and Herzegovina (2009–2011), Bulgaria (2014–2015) and Romania (2009–2010, 2013) are also found in this quadrant.

Many receive much (quadrant II): A comparatively large share of the population receives a comparatively large amount of remittances. Serbia, and for some years also Bosnia and Herzegovina (2012–2015) and Croatia (2010, 2012–2013, 2015), can be assigned to this category, with the latter two figuring at the quadrant border. No country falls in this category for the full period. This constellation does not appear to be persistent. For all three countries, the intensive margin seems to be more volatile than the extensive margin. In other words, the amounts of remittances change, while the share of recipients remains comparatively constant.

Few receive much (quadrant III): Only a comparatively small share of the population receives a comparatively large amount of remittances. In Hungary, the share of remittance recipients is estimated to be low, but the sizeable overall inflows to the country imply that those few recipients receive comparatively large amounts of remittances. The horizontal spread of Hungarian data points suggests that changes in overall remittances result mainly in changes at the intensive margin (i.e. the amounts) and to a lower extent at the extensive margin (i.e. the share of recipients). For some years, Croatian (2009, 2011, 2014) and Serbian (2011–2012) data points are in this quadrant, too, while in other years, Croatia and Serbia fall into quadrant II. This suggests that in these two countries changes in overall remittance inflows tend to be associated with changes at the extensive margin rather than the intensive margin. The Czech Republic is spread across quadrant III (2013–2015) and quadrant IV (2009–2012), which points to considerable heterogeneity at the intensive margin.

Few receive little (quadrant IV): Only a comparatively small share of the population receives comparatively small amounts of remittances. In the Czech Republic and – in some years – also in Bulgaria and Poland, the share of remittance recipients is low. On account of the rather low overall inflows of remittances, the amounts per recipient are likewise low compared with other country-year pairs in the sample. The variation of the data points of these three countries suggests that the intensive margin of remittances reacts more strongly to changes in overall remittance inflows than the extensive margin.

4 Summary

Emigration rates from CESEE countries have been high – in particular since the early 1990s – compared with global averages. At present, the number of emigrants from both Albania and Bosnia and Herzegovina equals approximately 40% of the given country's current population. Among the CESEE countries under review, the Czech Republic and Hungary record the lowest emigration rates, but, at 9% and 6%, they are still considerably above the global average of 3%. Emigration has various consequences for the source countries – brain drain, brain gain, and

challenges for social security systems are just some examples. Remittances, too, directly result from migration, and an in-depth analysis of their relevance in the receiving economies is of utter importance. For many countries, especially in CESEE, remittances are an important source of foreign exchange. It has been shown repeatedly that – contrary to other private capital flows – remittances are countercyclical with respect to the GDP of the receiving economies. Therefore, they can help smooth consumption patterns, counteract economic shocks or hardships experienced by the receiving households, contribute to the financing of small-scale enterprises, or serve as collateral and help households overcome credit constraints. As a result, investment in physical and human capital is fostered by remittances, which in turn has implications for economic growth and local development.

Remittance inflows to CESEE countries mirror the high emigration rates. They have followed a pattern similar to that observed globally, but exhibited a more pronounced drop during the crisis and a stronger subsequent recovery. Between 2014 and 2015, growth in remittances to CESEE was negative, but the recent contraction of FDI inflows was even more marked so that in 2015 remittances exceeded the level of FDI inflows. In aggregate terms, Poland receives the highest amount of remittances among the CESEE countries under review, but in per capita terms or as shares in GDP, the non-EU CESEE countries as well as Croatia and Hungary receive considerably more. At approximately 1.4%, the share of remittances in GDP between 2013 and 2015 was lowest in Poland and highest in Bosnia and Herzegovina (11%), Albania and Serbia (9% each).

Adding insights from individual-level data reveals that the extensive margin of remittances, i.e. the share of recipients, varies considerably both over time and across countries. It is highest among the non-EU CESEE countries in the sample, especially in Albania, but also in FYR Macedonia and Bosnia and Herzegovina, and lowest in Poland, the Czech Republic and Hungary.[21]

According to the results of a simple econometric exercise using the OeNB Euro Survey data, there is a positive relationship between income and the likelihood of receiving remittances. High-income households are more likely to receive remittances from abroad and therefore their incomes increase further. As low-income households have a lower probability of receiving remittances, remittances cause the dispersion of income across households to widen. This inequality-enhancing property of remittances confirms previous findings in the literature. The analysis further shows that the probability of receiving remittances increases for retired persons, for members of a small household and for unemployed persons (only in non-EU CESEE countries). With respect to recipients' level of education, no clear relationship is found after controlling for income.

Relating the amounts of remittances deduced from macrodata to the share of recipients as estimated based on microdata allows the calculation of the so-called intensive margin of remittances, i.e. the average amount per recipient. Our findings suggest that the average amounts received are lowest in Romania, FYR Macedonia and Albania, and highest in Croatia and Hungary. In particular for the latter two countries, estimation uncertainty is high, however. The overall

[21] *The shares of remittance recipients are correlated with the emigration rates of the countries, with the shares plausibly corresponding to the number of emigrants in spite of the high volatility.*

relationship between the extensive and the intensive margin is negative, when we pool all country-year pairs. This indicates a tradeoff between the dispersion of remittances and the magnitude of payments received by households. A graphical representation of this relationship helps classify the nature of remittances by country, as it allows assessing whether changes in the overall magnitude of remittances tend to affect primarily the intensive margin (and hence the amounts received per recipient, as e.g. in the Czech Republic, Hungary or Serbia) or the extensive margin (i.e. the number of recipients, which is, for instance, the case in Albania and FYR Macedonia).

The descriptive analysis in this paper shows that remittances to CESEE countries are still a relevant source of household income even when their growth rates are slowing down.

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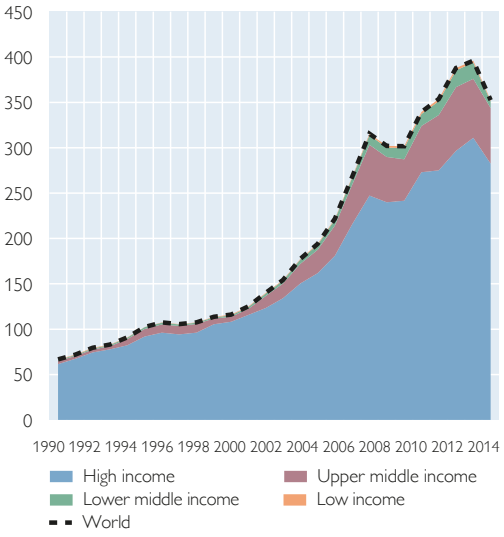
Annex

Chart A1

Remittance outflows by sending economies

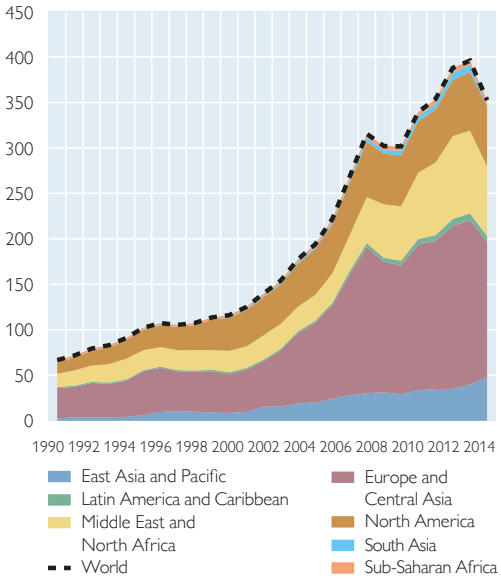
Outflows by income group of the sending economy

Current USD billion



Outflows by region of the sending economy

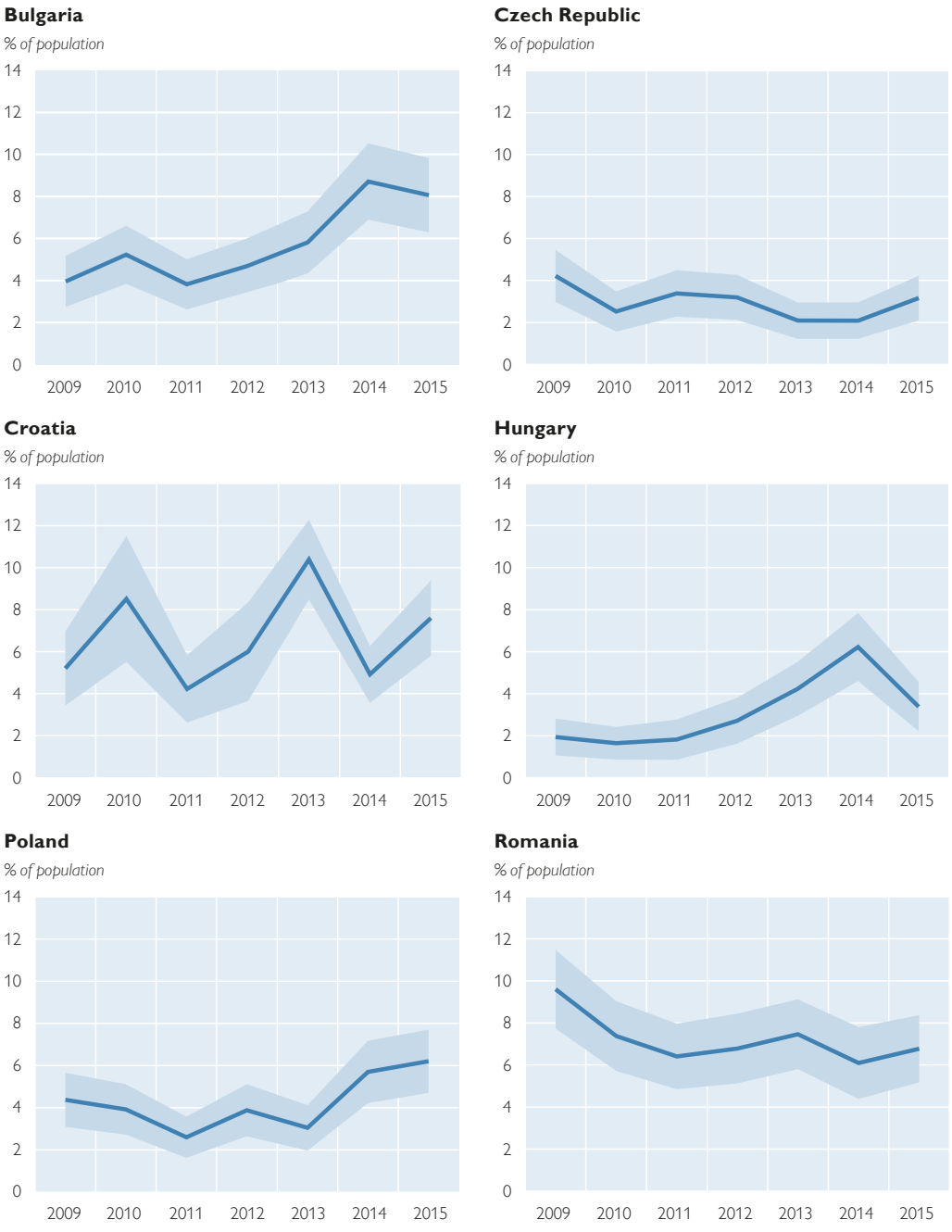
Current USD billion



Source: World Development Indicators (World Bank).

Chart A2

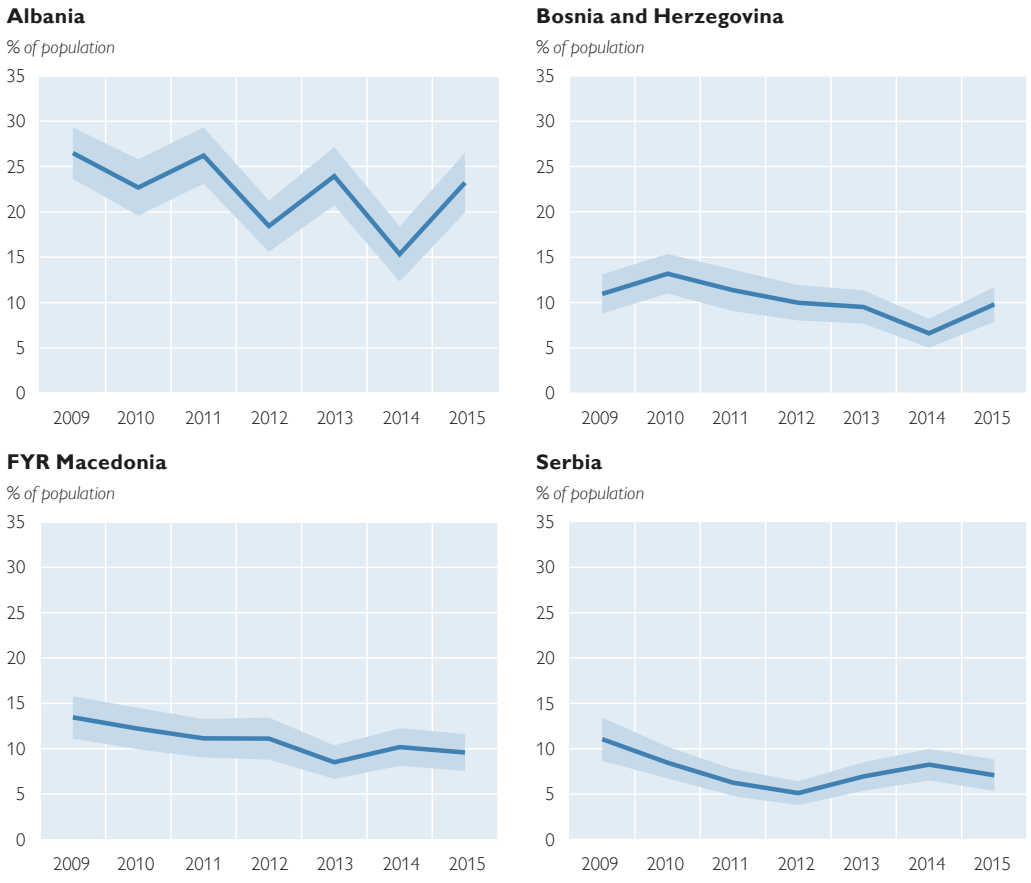
Share of remittance recipients (including upper and lower bounds, 95%): EU CESEE countries



Source: Author's calculations based on OeNB Euro Survey.

Chart A3

Share of remittance recipients (including upper and lower bounds, 95%): non-EU CESEE countries



Source: Author's calculations based on OeNB Euro Survey.

Event wrap-ups and miscellaneous

HFCS-CESEE Workshop: How to use survey data for analyzing financial stability in CESEE countries

Compiled by
Pirmin Fessler and
Caroline Stern

The HFCS-CESEE Workshop hosted by the Oesterreichische Nationalbank (OeNB) on January 26 and 27, 2017, concentrated on the question "How to use survey data for analyzing financial stability in CESEE countries." During the workshop various possibilities of using Household Finance and Consumption Survey (HFCS) and similar survey data to analyze financial stability in Central, Eastern and Southeastern European (CESEE) countries were examined.

The *keynote address* delivered by Robert Stehrer (Director, The Vienna Institute for International Economics) dealt with household, wealth and income inequality. Stehrer pointed to the fact that households contribute two-thirds to GDP growth in the euro area. He proceeded with shedding light on the nexus between household wealth and consumption, elaborating on existing literature and theories. The last part of the keynote address focused on inequality. Overall, Stehrer concluded that when comparing CESEE countries with the euro area the main differences are the levels of household wealth. However, as he stated, there is less inequality in CESEE countries than in euro area countries. Moreover, he showed that wealth in Europe is much more unequally distributed than income. In the discussion that ensued participants raised the question whether real estate is the main source of wealth and whether the HFCS can capture wealth correctly.

Session 1 was dedicated to *household indebtedness*. Three presenters gave insights into the current situation in the euro area and in their home countries. Juha Honkkila (European Central Bank) gave an overview of indebtedness in the euro area from 2010 to 2014 based on HFCS data. One of his main statements was that the debt service burden in the euro area has decreased since 2010, mainly because of a decline in interest rates. Tamás Briglevics (Magyar Nemzeti Bank) presented information on the mortgage landscape in Hungary. He showed where data from the Hungarian credit registry and HFCS data match and where they differ. As an aside, he also stated that due to the conversion of foreign exchange loans in Hungary the outstanding volume of mortgages has been reduced by 10%. The last presenter in the first session was Tairi Rõõm (Eesti Pank). She offered insights into the financial situation of Estonian households and showed evidence from stress tests performed with HFCS data. Key findings are that bank profitability in Estonia is strongly affected by real estate price shocks, while the risks to financial stability from the household sector are seen as modest overall, based on Eesti Pank's analysis. As session discussant, Nicolás Albacete (OeNB) commented on the three contributions in session 1.

Session 2 dealt with *macroprudential policy* and its evaluation on the basis of microdata. Luminita Tatarici (Banca Naţională a României) discussed the long-standing experience of the Romanian central bank in implementing loan-to-value and debt service-to-income measures. She showed how efficient these measures have been in ensuring that both debtors and creditors are able to cope with adverse shocks and pointed out that self-regulation by banks does not lead to the necessary risk-bearing capacities. Michael Sigmund (OeNB) discussed the paper after the presentation. Then, Piotr Banbula (Narodowy Bank Polski) examined the effectiveness of debt service-to-income measures in a benefit versus cost

analysis. Based on simulations he assessed the desirability of certain debt service-to-income thresholds and showed that they can be an effective tool for macroprudential policy. However, it is crucial to bear in mind that, on the other hand, they also restrict financially sound households' credit opportunities. Esther Segalla (OeNB) served as the paper discussant. Subsequently, Gaston Giordana (Banque centrale du Luxembourg) presented a paper on the short-run side effects of macroprudential policy regulating mortgages. Using a welfare dominance approach he explained that despite the positive long-term effects there can be substantial costs in the short run. These direct and indirect short-run costs may prevent appropriate policies that would have positive long-term effects from being implemented. Sebastian Beer (OeNB) concluded the first day with a discussion of this paper.

Session 3 addressed issues of *financial vulnerability*. Nathaniel Young (European Bank for Reconstruction and Development – EBRD) opened the session with a presentation on household loan decisions and local banking markets, which was the result of joint work with colleagues from the OeNB. The analysis was based on OeNB Euro Survey and EBRD BEPS II data. Main preliminary findings are that banks select households with solid, easily observable attributes for lending. This may cause other households to become discouraged and to decide not to apply for a loan. Furthermore, foreign banks, which perform less relationship lending, may be particularly selective. However, one workshop participant pointed out that it might be worth differentiating between different foreign banks as they might have very different strategies. Next, Nadežda Siņenko and Ludmila Fadejeva (both Latvijas Banka) presented a financial stability analysis based on two surveys, a national survey on indebted households as well as the Eurosystem Household Finance and Consumption Survey, and compared their results to results obtained on the basis of credit register data. They modeled different economic shocks and obtained effects generalized to the aggregate loan portfolio of Latvian households. Even though financial fragility has decreased in recent years there is still a considerable share of vulnerable households due to recent crisis developments. The two presentations were discussed by Teresa Messner (OeNB). Then, Mate Rosan (Hrvatska narodna banka) presented a three-step approach toward measuring households' financial distress (cluster analysis, binary dependent variable model and stress testing). Afterwards, Merike Kukk (Eesti Pank) presented her paper on "What are the triggers for arrears on debt?" based on a comprehensive panel dataset. One of her main findings is that income decline is an important trigger for arrears on debt (ability-to-pay theory). However, she also finds that the debt service ratio is equally important. The probability of arrears is lowest for loans granted in years of tight credit conditions and high house prices. Mariya Hake (OeNB) acted as session discussant for the latter two papers.

Session 4 emphasized the importance of *financial literacy* for financial stability and highlighted the role of new financial technologies in this context. Also the OeNB's financial literacy programs were discussed. Maya Silgoner (OeNB) presented information on financial literacy gaps in the Austrian population based on an extended version of the recent OECD financial literacy toolkit. She showed how gender gaps in knowledge are mitigated by different behavioral patterns, and used an instrumental variable approach to establish the causal channel between financial knowledge and financial behavior. Andrej Cupák (Národná banka

Slovenska) presented similar results for Slovakia, derived from a financial literacy module in the Slovakian HFCS. He highlighted the connection between financial literacy and saving for retirement in Slovakia and also used a novel instrumental variable approach based on paradata from the survey's interviewers to establish a causal relationship. As in the case of Austria and in line with the literature, the causal effect increases significantly when using an instrumental variable approach, which points to a severe underestimation for classical control-based regression settings. Martin Taborsky (OeNB) concluded the second day of the workshop by discussing the two presentations and offering more insights into the OeNB's financial literacy program.

The presentations and the workshop program are available at:
https://www.oenb.at/en/Calendar/2017/2017-01-26-hfcs-cesee-workshop.html.

The OeNB's 80th East Jour Fixe: Bulgaria and Romania – 10 years after EU accession[1]

Compiled by
Mathias Lahnsteiner[2]

Combining two focal points of interest for the Oesterreichische Nationalbank (OeNB) – EU integration and Central, Eastern and Southeastern Europe (CESEE) – the 80th East Jour Fixe reviewed economic and institutional developments in Bulgaria and Romania over the first decade following the two countries' accession in 2007. The event took place at the OeNB on March 31, 2017.

In her introductory statement, *Helene Schuberth,* Head of the OeNB's Foreign Research Division, highlighted some features of the transition process and pointed out that the boom and bust cycle in CESEE in a way has overshadowed the benefits of Bulgaria's and Romania's EU membership. Both countries joined the EU at the height of a boom period, which came to an end shortly after EU accession, when Lehman Brothers collapsed in September 2008. While Bulgaria and Romania have shared some challenges arising inter alia from excessive capital inflows, their macroeconomic policy frameworks have been quite different.

In the first session, central bank representatives gave their view on macroeconomic developments. *Florian Neagu,* Deputy Director of the Financial Stability Department at the National Bank of Romania, emphasized that EU accession had been a very positive event for Romania. Yet, he pointed out that economic developments have been highly uneven across Romania's regions and that the economy has not shifted to more innovative sectors with higher value added. With regard to capital inflows and foreign currency lending, Neagu elaborated on Romania's experiences with loan-to-value and debt service-to-income ratios. In his opinion, the central bank has reached its three goals – price stability, financial stability and exchange rate stability – although big challenges occurred after EU accession. Then, *Zornitsa Vladova,* Head of Financial and Monetary Research Division at the Bulgarian National Bank, gave a presentation on her country. She portrayed the currency board, the central bank's countercyclical policies (including countercyclical capital requirements and restrictions on credit growth) and a strict fiscal policy as the main pillars of Bulgaria's policy framework. According to Vladova, the most important EU accession effects have emanated from strong capital inflows and EU funds. Overall, real convergence has made progress, but has slowed considerably from 2009. With regard to the financial sector, Vladova illustrated that banks have managed to substitute parent bank funding with domestic deposits since 2008. Moreover, nonperforming loans rose markedly in the aftermath of the global financial crisis, but started to fall in 2013.

The discussion that followed centered on macroprudential measures, the role of foreign banks, credit growth as well as the costs and benefits of specific monetary policy regimes. One of the points raised was that subsidiaries of foreign banks (which were characterized as being small within the banking group, but systemically important for the host country) may have been restricted by the economic situation and regulatory requirements in their parents' home countries in the last few years. With regard to the fixed exchange rate under the currency board

[1] *The presentations and the workshop program are available at: https://www.oenb.at/en/Monetary-Policy/Research/workshops.html.*

[2] *Oesterreichische Nationalbank, Foreign Research Division, mathias.lahnsteiner@oenb.at.*

regime, it was highlighted that balance sheet effects had been avoided in Bulgaria, while the exchange rate was not available as an adjustment tool.

As chair of the second session, *Peter Backé,* Deputy Head of the OeNB's Foreign Research Division, then welcomed two speakers from the European Commission. *Mariana Hristcheva,* Head of Unit of Evaluation and European Semester, discussed the implementation of European structural and investment funds. Hristcheva presented a comprehensive compilation of facts and figures on the allocation, volumes and economic impact of EU funds in Bulgaria and Romania. In both countries, the bulk of European regional development and cohesion funds went to environmental and infrastructure (in particular road) projects under the 2007–2013 EU budgetary framework. EU fund absorption picked up slowly in the first two years of the programming period in both countries, but then started to rise faster in Bulgaria than in Romania. Hristcheva also elaborated on the features of the European structural and investment funds under the 2014–2020 programming period and inter alia pointed to the application of ex-ante conditionality. Subsequently, *William Sleath,* Director in the Secretariat General at the European Commission, gave a presentation on progress on judicial reform and the fight against corruption and organized crime in the framework of the Cooperation and Verification Mechanism (CVM). He made clear that the rule of law is one of the EU's fundamental pillars and highlighted the high economic costs of corruption as well as the benefits of having an effective judicial system and a predictable legal environment. The CVM has served as a tool to keep up the reform momentum after EU accession with the aim of bringing the two countries reasonably close to EU standards. Sleath explained that progress has been uneven and further steps are needed for concluding the CVM. The discussion that followed focused on the low rate of absorption in the current funding cycle up to now, the possible impact of Brexit on the EU budget as well as the risk of backtracking on reforms.

The third session was chaired by *Julia Wörz,* Head of the Central, Eastern and Southeastern European Analysis Unit at the OeNB's Foreign Research Division. In the first presentation of the session, *Gabor Hunya,* senior economist at The Vienna Institute for International Economic Studies (wiiw), showed that the inward FDI stock as a percentage of GDP is higher in Bulgaria than in Romania, which is partly related to the size of the economies. However, it turns out that the economic importance of FDI in Romania is higher than in Bulgaria, as a larger part of FDI has been directed to the manufacturing sector in the former country, whereas a substantial part has gone into the real estate sector in the latter. After both countries had seen substantial FDI inflows before the global financial crisis, no upward trend could be observed in the last few years, particularly with regard to greenfield investments. The export structure reflects the FDI structure: In Romania, machinery and vehicles have gained a prominent role, while Bulgaria's exports have remained dominated by food, fuel and chemicals. The final presentation was delivered by *Anna Ilyina,* Head of Poland Baltics Division at the IMF's European Department. She focused on emigration and its economic impact in CESEE. She highlighted that emigration reduces labor supply in addition to the effects of adverse demographic trends. Ilyina discussed push and pull factors for emigration and highlighted that emigration from CESEE shows evidence of brain drain. While inflowing remittances tend to promote investment, financial deepening and consumption, they seem to be associated with lower labor force participation in

recipient countries (lower incentives to work). While it is obvious that a smaller labor force reduces nominal GDP in net sending countries, Ilyina also stipulated that emigration has a negative impact on GDP per capita. Yet, she also emphasized that migration has a positive economic impact on the EU as a whole. Ilyina finished her presentation by raising a range of policy options for CESEE countries to retain and attract workers and to better utilize remittances and the remaining work force.

Points raised in the discussion that ensued included the appropriateness of focusing on GDP, as also the income of emigrants could or should be taken into account. Yet, liabilities (government debt, pension liabilities) have to be seen against the background of the country's economic strength. Furthermore, the different implications of structural emigration (one-way flow from CESEE) versus cyclical reallocation of labor were discussed. As regards policy options available for net receiving countries it was seen as a paradox that mitigating measures are being discussed in those countries that economically benefit from migration flows within the EU.

Wrapping up the event, *Marion Mühlberger,* senior economist at Deutsche Bank (Risk Research), concluded that the resilience of the two economies has been tested and confirmed by the crisis and that rebalancing has been achieved. Moreover, the short term economic outlook appears encouraging. For the medium term, however, one has to take into account that human capital will remain a constraint on growth, in contrast to other emerging market regions. Yet, in comparison to other emerging economies, Bulgaria and Romania enjoy the advantage of having EU membership as an institutional selling point vis-à-vis foreign investors. Both countries face the challenge of evading the middle income trap, and convergence will very likely continue at a more moderate pace than before the crisis.

Statistical annex

Statistical annex

This section provides tables detailing selected economic indicators for Albania, Bosnia and Herzegovina, FYR Macedonia,[1] Kosovo, Montenegro, Serbia and Ukraine, i.e. CESEE countries not covered in the "Recent economic developments and outlook" section.

Conventions used

x = No data can be indicated for technical reasons
. . = Data not available at the reporting date
Discrepancies may arise from rounding.

Table 1

Gross domestic product

	2010	2011	2012	2013	2014	2015	2016
	Annual real change in %						
Albania	3.7	2.5	1.4	1.0	1.8	2.6	3.2
Bosnia and Herzegovina	0.8	0.9	–0.9	2.4	1.1	3.0	2.0
Kosovo	3.3	4.4	2.8	3.4	1.2	4.3	3.6
FYR Macedonia	3.4	2.3	–0.5	2.9	3.6	3.8	2.4
Montenegro	2.5	3.2	–2.7	3.5	1.8	3.4	2.7
Serbia	0.6	1.4	–1.0	2.6	–1.8	0.8	2.8
Ukraine	4.1	5.4	0.2	0.0	–6.6	–9.8	2.3

Source: wiiw.

Table 2

Industrial production

	2010	2011	2012	2013	2014	2015	2016
	Annual real change in %						
Albania	36.2	19.0	15.7	28.3	1.6	–2.2	–10.7
Bosnia and Herzegovina	4.3	2.4	–3.9	5.2	0.2	3.1	4.4
Kosovo[1]	1.8	–5.7	14.9	6.5	–1.3	5.0	3.5
FYR Macedonia	–4.9	6.9	–2.7	3.2	4.8	4.9	3.4
Montenegro	17.5	–10.2	–7.1	10.6	–11.4	7.9	–4.4
Serbia	1.2	2.5	–2.2	5.5	–6.5	8.3	4.7
Ukraine	11.2	8.0	–0.7	–4.3	–10.1	–13.0	2.8

Source: wiiw.

[1] *According to gross value added data.*

[1] *Former Yugoslav Republic of Macedonia.*

Table 3

Average gross wages – total economy

	2010	2011	2012	2013	2014	2015	2016
	Annual change in %						
Albania	–3.6	4.9	2.9	–3.2	25.3	2.8	4.2
Bosnia and Herzegovina	1.1	4.4	1.5	0.1	–0.1	0.0	0.9
Kosovo[1]	16.2	21.7	1.7	0.6	16.9	7.2	3.0
FYR Macedonia	1.0	1.2	0.2	1.2	1.0	2.7	1.8
Montenegro	11.2	1.0	0.7	–0.1	–0.4	0.3	3.6
Serbia	7.5	11.1	8.9	5.7	1.2	–0.5	3.8
Ukraine	17.5	17.6	14.9	7.9	6.6	20.5	23.6

Source: wiiw.

[1] Average net monthly wages.

Table 4

Unemployment rate[1]

	2010	2011	2012	2013	2014	2015	2016
	%						
Albania	14.0	14.0	13.4	15.9	17.5	17.1	15.2
Bosnia and Herzegovina	27.2	27.6	28.0	27.5	27.5	27.7	25.4
Kosovo	45.1	44.8	30.9	30.0	35.3	32.9	26.5
FYR Macedonia	32.0	31.4	31.0	29.0	28.0	26.1	23.7
Montenegro	19.6	19.7	19.7	19.5	18.0	17.6	17.4
Serbia	19.2	23.0	23.9	22.1	18.9	17.7	15.3
Ukraine	8.1	7.9	7.5	7.2	9.3	9.1	9.3

Source: wiiw.

[1] Labor force survey, period average.

Table 5

Industrial producer price index

	2010	2011	2012	2013	2014	2015	2016
	Period average, annual change in %						
Albania	0.3	2.6	1.1	–0.4	–0.5	–2.1	–1.6
Bosnia and Herzegovina	1.0	5.5	0.4	–1.8	–0.5	0.6	–2.1
Kosovo[1]	4.1	4.5	1.9	2.5	1.7	2.7	–0.3
FYR Macedonia	8.7	11.9	1.4	–1.4	–1.9	–3.9	–2.4
Montenegro[1]	–0.9	3.2	1.9	1.6	0.1	0.3	–0.1
Serbia	12.7	12.7	6.8	2.7	1.3	1.0	0.0
Ukraine	20.9	19.0	3.7	–0.1	17.1	36.0	20.5

Source: wiiw.

[1] Kosovo, Montenegro: NACE 1 classification.

Table 6

Consumer price index

	2010	2011	2012	2013	2014	2015	2016
	Period average, annual change in %						
Albania	3.6	3.4	2.0	1.9	1.6	1.9	1.3
Bosnia and Herzegovina	2.1	3.7	2.1	–0.1	–0.9	–1.0	–0.8
Kosovo	3.5	7.3	2.5	1.8	0.4	–0.5	0.3
FYR Macedonia	1.6	3.9	3.3	2.8	–0.3	–0.3	–0.1
Montenegro	0.5	3.3	4.0	1.8	–0.5	1.4	0.1
Serbia	6.8	11.1	7.3	7.7	2.1	1.4	1.1
Ukraine	9.4	8.0	0.6	–0.3	12.1	48.7	13.9

Source: wiiw.

Table 7

Trade balance

	2010	2011	2012	2013	2014	2015	2016
	% of GDP						
Albania	–25.5	–27.1	–23.2	–20.6	–22.2	–22.4	–24.1
Bosnia and Herzegovina	–29.3	–30.8	–30.5	–27.4	–29.7	–26.0	–24.6
Kosovo	–39.6	–42.5	–40.5	–37.5	–37.0	–36.3	–38.2
FYR Macedonia	–21.6	–25.2	–26.5	–22.9	–21.7	–20.2	–18.8
Montenegro	–40.7	–39.9	–43.5	–39.5	–39.8	–40.4	–44.9
Serbia	–15.9	–16.4	–17.8	–12.1	–12.3	–11.9	–10.2
Ukraine	–6.8	–10.6	–12.0	–11.6	–5.3	–3.8	–7.5

Source: wiiw.

Table 8

Current account balance

	2010	2011	2012	2013	2014	2015	2016
	% of GDP						
Albania	–11.3	–13.2	–10.2	–10.9	–12.9	–10.8	–9.6
Bosnia and Herzegovina	–6.0	–9.5	–8.7	–5.3	–7.3	–5.5	–4.5
Kosovo	–11.7	–12.7	–5.8	–3.4	–6.9	–8.6	–9.1
FYR Macedonia	–2.0	–2.5	–3.2	–1.6	–0.5	–2.1	–3.1
Montenegro	–22.9	–17.7	–18.7	–14.5	–15.2	–13.3	–19.2
Serbia	–6.8	–10.9	–11.6	–6.1	–6.0	–4.7	–4.0
Ukraine	–2.1	–6.0	–7.9	–8.7	–3.4	–0.2	–4.1

Source: wiiw.

Table 9

Net FDI inflows

	2010	2011	2012	2013	2014	2015	2016
	% of GDP						
Albania	8.8	6.8	6.9	9.8	8.7	8.7	9.1
Bosnia and Herzegovina	2.4	2.7	2.3	1.5	2.9	1.7	1.7
Kosovo	8.3	8.2	4.5	5.3	2.7	5.3	3.6
FYR Macedonia	2.3	4.6	1.5	3.1	2.4	2.4	3.6
Montenegro	18.4	12.3	15.2	10.0	10.8	17.4	5.5
Serbia	4.3	10.6	3.2	4.5	4.5	6.3	5.9
Ukraine	4.6	4.3	4.6	2.4	0.3	3.3	3.4

Source: wiiw.

Table 10

Reserve assets excluding gold

	2010	2011	2012	2013	2014	2015	2016
	End of period, % of GDP						
Albania	20.6	20.0	19.9	20.5	21.5	27.6	26.8
Bosnia and Herzegovina	25.2	23.9	24.2	25.8	28.0	29.5	31.9
Kosovo	14.4	11.9	14.4	13.0	11.6	12.6	13.8
FYR Macedonia	20.9	23.9	25.3	22.1	25.9	22.6	24.0
Montenegro	13.3	9.3	10.9	12.6	15.8	18.6	21.7
Serbia	32.1	34.4	32.5	31.3	28.1	29.3	28.0
Ukraine	23.6	19.4	12.1	9.5	5.4	13.8	16.6

Source: wiiw.

Table 11

Gross external debt

	2010	2011	2012	2013	2014	2015	2016
	End of period, % of GDP						
Albania	45.6	53.5	57.5	66.2	69.5	74.4	72.9
Bosnia and Herzegovina	51.6	48.9	52.2	52.2	51.9	53.7	54.3
Kosovo	31.2	29.7	30.0	30.2	31.2	33.3	40.0
FYR Macedonia	57.8	64.2	68.2	64.0	70.0	70.1	73.5
Montenegro[1]	29.2	32.6	40.7	42.6	45.2	54.0	53.0
Serbia	79.0	72.2	80.9	74.8	77.1	78.3	77.9
Ukraine	83.1	80.5	71.9	71.7	102.6	132.4	128.9

Source: wiiw.

[1] *Gross external public debt.*

Table 12

General government balance

	2010	2011	2012	2013	2014	2015	2016
	% of GDP						
Albania	–3.1	–3.5	–3.4	–5.0	–5.2	–4.1	–2.2
Bosnia and Herzegovina	–2.4	–1.2	–2.0	–2.2	–2.0	0.7	–0.9
Kosovo	–1.8	–1.1	–1.2	–2.9	–2.6	–1.9	–1.3
FYR Macedonia	–2.4	–2.6	–3.9	–4.0	–4.2	–3.4	–2.6
Montenegro	–4.8	–3.7	–6.1	–6.0	–3.0	–8.0	–3.9
Serbia	–4.6	–4.8	–6.8	–5.5	–6.6	–3.7	–1.4
Ukraine	–5.8	–1.7	–3.5	–4.2	–4.5	–1.6	–2.3

Source: wiiw.

Table 13

Gross general government debt

	2010	2011	2012	2013	2014	2015	2016
	% of GDP						
Albania	57.7	59.4	62.1	65.6	70.1	72.7	71.6
Bosnia and Herzegovina	39.3	40.8	44.3	43.5	44.0	45.2	45.2
Kosovo	5.9	5.3	8.1	8.9	10.5	12.9	13.2
FYR Macedonia	34.6	32.0	38.3	40.2	45.7	46.6	50.0
Montenegro	40.7	45.6	53.4	55.7	56.2	62.8	61.0
Serbia	41.8	45.4	56.2	59.6	70.4	74.6	74.0
Ukraine	38.6	35.1	35.3	38.4	69.4	79.1	81.0

Source: wiiw.

Table 14

Broad money

	2010	2011	2012	2013	2014	2015	2016
	End of period, annual nominal change in %						
Albania	12.5	9.2	5.0	2.3	4.0	1.8	3.9
Bosnia and Herzegovina	7.2	5.8	3.4	7.9	7.3	8.0	8.3
Kosovo	12.9	8.8	7.1	17.3	–4.2	5.6	..
FYR Macedonia	8.4	7.5	0.5	0.2	7.2	7.6	6.1
Montenegro	3.4	2.1	8.4	4.8	9.1	10.9	9.5
Serbia	12.9	10.3	9.4	4.6	7.6	6.6	11.5
Ukraine	23.1	14.2	13.1	17.5	5.4	4.0	10.9

Source: wiiw, European Commission.

Table 15

Official key interest rate

	2010	2011	2012	2013	2014	2015	2016
	End of period, %						
Albania (one-week repo rate)	5.00	4.75	4.00	3.00	2.25	1.75	1.25
Bosnia and Herzegovina[1]	×	×	×	×	×	×	×
Kosovo[2]	×	×	×	×	×	×	×
FYR Macedonia (CB bills)[3]	4.11	4.00	3.73	3.25	3.25	3.25	3.75
Montenegro[2]	×	×	×	×	×	×	×
Serbia (two-week repo rate)	11.50	9.75	11.25	9.50	8.00	4.50	4.00
Ukraine (discount rate)	7.75	7.75	7.50	6.50	14.00	22.00	14.00

Source: wiiw.

[1] *Currency board.*
[2] *Unilateral euroization.*
[3] *Monthly weighted average interest rate on central bank bills auctions (28 days).*

Table 16

Exchange rate

	2010	2011	2012	2013	2014	2015	2016
	Period average, national currency per EUR						
Albania	137.79	140.33	139.04	140.26	139.97	139.74	137.36
Bosnia and Herzegovina	1.96	1.96	1.96	1.96	1.96	1.96	1.96
Kosovo	×	×	×	×	×	×	×
FYR Macedonia	61.52	61.53	61.53	61.58	61.62	61.61	61.60
Montenegro	×	×	×	×	×	×	×
Serbia	103.04	101.95	113.13	113.14	117.31	120.76	123.10
Ukraine	10.53	11.09	10.27	10.61	15.72	24.23	28.29

Source: wiiw.

Notes

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