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Stability and Security.

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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 2019 should be e-mailed to *eva.gehringer-wasserbauer@oenb.at* by May 1, 2019.

Applicants will be notified of the jury's decision by mid-June 2019.

Recent economic developments and outlook

Developments in selected CESEE countries

Economic activity still in full swing, but headwinds are increasing[1, 2, 3]

1 Regional overview

A weaker international environment and rising international uncertainty…

In the first half of 2018, global growth lost some of the strong momentum registered in the second half of 2017. This is especially true for the euro area, where slower export growth weighed on economic dynamics. In CESEE, the weakening of the external environment is exacerbated by a slowdown in global trade and industrial production as well as by a softening of export orders, which points toward an ongoing period of weaker trade.

More moderate growth numbers and the weaker incoming data that underpin them are due in part to a sharp rise in policy uncertainty since the beginning of the year. One important area where uncertainty has increased notably is international trade relations. U.S. actions (or threatened actions) on tariffs, the responses by its trading partners, and a general weakening of the commitment to the multilateral trade system have dented sentiment and could impact investment and trade in the future. In this respect, an especially important factor for the future economic development of the CESEE region is the evolution of global value chains. A process of de-fragmentation in international production would not only directly impact the position of CESEE in the international division of labor, but would also slow the diffusion of technological progress, thereby ultimately lowering productivity and welfare.

…have not yet impacted economic dynamics in CESEE EU Member States

Notwithstanding these international headwinds, CESEE EU Member States – despite mostly being small and open economies – have so far not experienced a noticeable slowdown in growth. On the contrary, growth remained very robust in the first half of 2018. Domestic demand continued to be boosted by good sentiment, higher wages, private sector releveraging and tightening labor markets. Firms are approaching the limits of their production capacity and were increasingly prepared to spend on capital formation. This was in part a reaction to the scarcity of available labor, and investments were directed toward labor-saving technologies in several countries. Public investment and construction continued to be supported by inflows of EU funds. Credit growth has recovered in recent years and currently seems to be broadly in line with economic fundamentals. Credit growth to certain sectors in some countries, however, experienced a boom. This is especially true for mortgage credit in several Central European countries, which among other things was fueled by strong increases in housing prices. These developments warrant close monitoring, and regulators have already taken steps to prevent excesses.

Developments in Turkey and Russia were less benign

Developments in Turkey and Russia were less benign than in the CESEE EU Member States. Financial conditions are tightening in many emerging markets

[1] *Compiled by Josef Schreiner with input from Katharina Allinger, Stephan Barisitz, Markus Eller, Mariya Hake, Mathias Lahnsteiner, Thomas Reininger, Tomáš Slačík and Zoltan Walko.*

[2] *Cutoff date: October 5, 2018. This report focuses primarily on data releases and developments from April 2018 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.*

[3] *All growth rates in the text refer to year-on-year changes unless otherwise stated.*

around the globe as they adjust to a tighter monetary policy by the Fed and an impending end of asset purchases by the ECB. In such an environment, rising domestic policy risk and/or geopolitical tensions can pose threats to financial and economic stability.

In Turkey, growth has already slowed noticeably due to a combination of various factors, including economic imbalances that have been building up in recent years, deteriorating international relations with the U.S. and worries about the future shape of economic policy, especially with respect to the independence of central economic policy institutions. Economic turbulence went hand in hand with deteriorating sentiment, sharply rising prices and a notable deceleration of credit growth.

Risks have also increased in Russia. The imposition of a new round of U.S. sanctions against the country, for example, has already contributed to a weakening of the ruble in international markets. The latter is even more remarkable as the weakening of the currency occurred in a period of rising oil prices, a factor that usually supports the ruble's external value. However, the high oil price did fuel a moderate economic expansion throughout the first half of 2018. Growth figures in Russia nevertheless remained well below the respective figures in other countries of the region, especially among the CESEE EU Member States.

Strong economic momentum continues

Having averaged 3.9% annual GDP growth in 2017, aggregate economic activity in CESEE was at its strongest level for six years. This positive trend continued in the first half of 2018, with growth rates averaging 3.5% year on year. The moderate deceleration compared with last year's performance was mainly related to a slower economic expansion in Turkey. Quarterly growth profiles show that Turkey's economy lost steam especially in the second quarter of 2018, when political tensions and waning trust weighed on private consumption and investment (see table 1). In the other countries of the region, short-term growth dynamics are broadly similar to last year's readings with greater variation only in Romania, Russia and Slovenia.

Tightening labor market conditions fuel wage growth and private consumption

Private consumption remained the single most important pillar of growth throughout most of the CESEE region, benefiting from good sentiment, rising stocks of household credit, swift wage growth and improving labor market conditions (see chart 1).

Table 1

Real GDP growth

	2016	2017	Q1 17	Q2 17	Q3 17	Q4 17	Q1 18	Q2 18
	Period-on-period change in %, seasonally and working-day adjusted							
Slovakia	3.3	3.4	0.8	0.9	0.9	0.9	1.0	1.1
Slovenia	3.1	4.9	1.8	1.4	1.0	2.0	0.5	0.8
Bulgaria	3.9	3.6	0.9	1.0	0.9	0.7	0.9	0.8
Croatia	3.5	2.9	0.6	0.8	0.8	0.1	0.8	1.1
Czech Republic	2.5	4.3	1.3	2.3	0.5	0.7	0.5	0.7
Hungary	2.2	4.0	1.4	1.1	1.1	1.3	1.2	1.0
Poland	3.0	4.6	1.0	0.9	1.4	1.0	1.6	1.0
Romania	4.8	7.0	2.4	1.5	2.2	0.3	0.1	1.4
Turkey	3.2	7.4	1.4	2.1	1.2	1.8	2.0	0.9
Russia	–1.0	1.5	0.6	0.7	0.1	-0.3	0.9	..
Euro area	1.9	2.4	0.7	0.7	0.7	0.7	0.4	0.4

Source: Eurostat, national statistical offices.

In fact, labor markets are becoming increasingly tight in many countries, especially in the CESEE EU Member States. Unemployment rates have been falling consistently in recent years, from an average level of around 10% in early 2013 to just 4% in August 2018. This represents the lowest reading since the start of transition. Positive labor market developments are also substantiated by several other indicators: Unemployment declined among the most vulnerable age cohorts, namely young persons (under 25 years) and older persons (over 50 years). The trend in long-term unemployment was positive and broad based. Furthermore, employment kept expanding throughout the region, contributing to a convergence of employment rates to euro area levels. Although the highest increases in employment were reported for Turkey and Croatia, these were the countries in the region where employment rates still fell short of average euro area levels as of mid-2018. On the other side of the spectrum, the Czech Republic's employment rate increased to nearly 75%.

The flip side of these positive labor market trends were increasing labor market shortages. According to a survey by the European Commission, labor is increasingly perceived as a limiting factor for production in the CESEE EU Member States: In the third quarter of 2018, at least 43% of respondents struggled to find workers. The respective figures went up to as much as 83% in the case of Hungary. While the potential for immigration from the Western Balkans and Ukraine should be significant and is already alleviating some pressures on labor markets (e.g. in Poland), it is unlikely that immigration can fully offset the lack of workers given the overall restrictive immigration stance of most CESEE governments. Furthermore, geographic mobility in CESEE remains limited, with people's propensity to emigrate often being higher than their willingness to commute. In this context, regional labor market disparities have increased since 2013, with the dispersion of regional unemployment rates going up for nearly all countries where data are available.

Against this backdrop, nominal wages rose powerfully during the review period, increasing by more than 10% year on year, on average, in the first half of 2018. Romania led the ranking with annual increases of more than 30%. Slowly rising inflation rates cut somewhat into purchasing power throughout the region. Nevertheless, real wages also advanced swiftly in the first half of 2018.

In general, strong wage increases were not fully reflected in price developments during the review period. A certain increase in service price inflation could be observed in some CESEE EU Member States. Nominal effective currency appreciation and a certain reduction in corporate profit shares, however, kept core inflation largely in check.

Dynamic labor markets and higher wages positively impacted on sentiment. Consumer confidence as reflected by the Economic Sentiment Indicator of the European Commission reached a historic high in May 2018, some 25 points above the readings of early 2013. Despite some retreat in recent months, sentiment is still clearly above long-term averages. At the same time, demand for consumer credit rose noticeably, providing further impetus for private consumption.

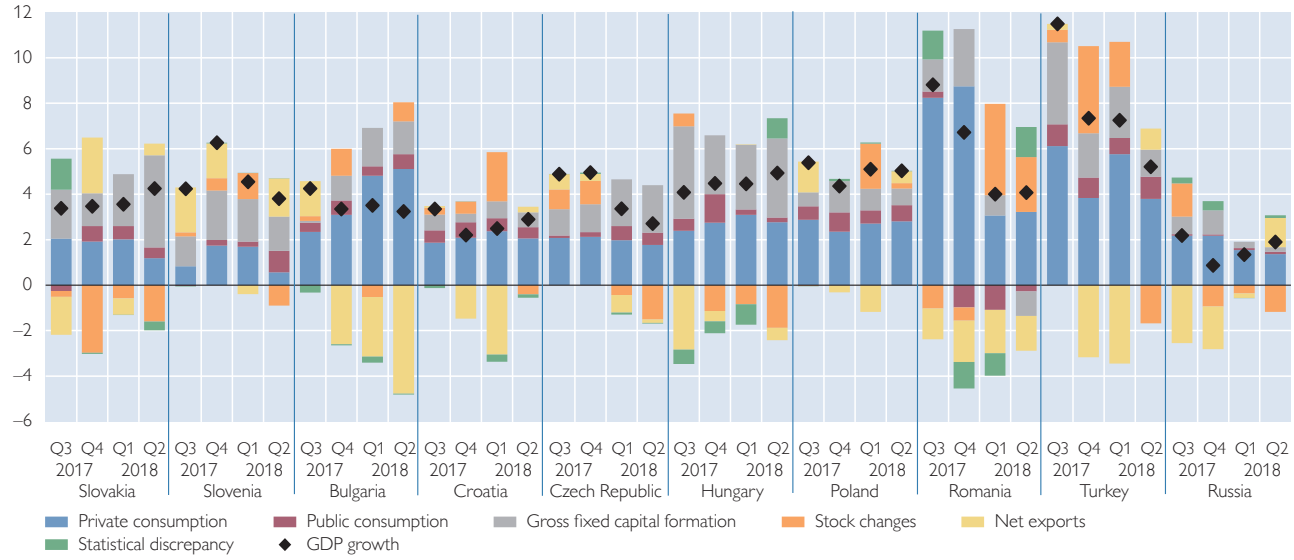
Higher investment demand as capacities approach their limits

Gross fixed capital formation gained further momentum in most countries throughout the first half of 2018 (see chart 1), with private investment fueled by high capacity utilization rates, full order books, strong industrial confidence, efforts to save on increasingly scarce labor, and improved credit market conditions amid low interest rates. Investment in construction and public investment picked up as well, strongly supported by utilization of EU funds in many countries as the 2014–2020

Chart 1

GDP growth and its main components

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



Source: Eurostat, national statistical offices.

programming period unfolds. In the CESEE EU Member States, this lifted annual investment growth to an average of 7.6% year on year in the first half of 2018.

Capital formation, however, was less brisk in Russia and Turkey. In both countries, investment growth in the first half of 2018 was lower than in 2017. In Turkey, construction investment weakened and investment in new machinery and equipment practically came to a standstill. Financing costs for (often imported) capital goods increased strongly against the backdrop of the lira's slide and sharply higher interest rates since May 2018.

Lower international demand impinges on exports

Moderating external demand put a damper on export growth. Given the region's strong integration into international production networks and a comparatively high import content of domestic export production, import growth moderated in tandem. Dynamic domestic demand, however, kept import growth rates (6.3% in the first half of 2018) above export growth rates (5.1% in the first half of 2018) for the region on average. This translated into an increasingly negative contribution of net exports to GDP growth. Only in Slovenia and Russia did the external sector lift growth somewhat in the first half of 2018.

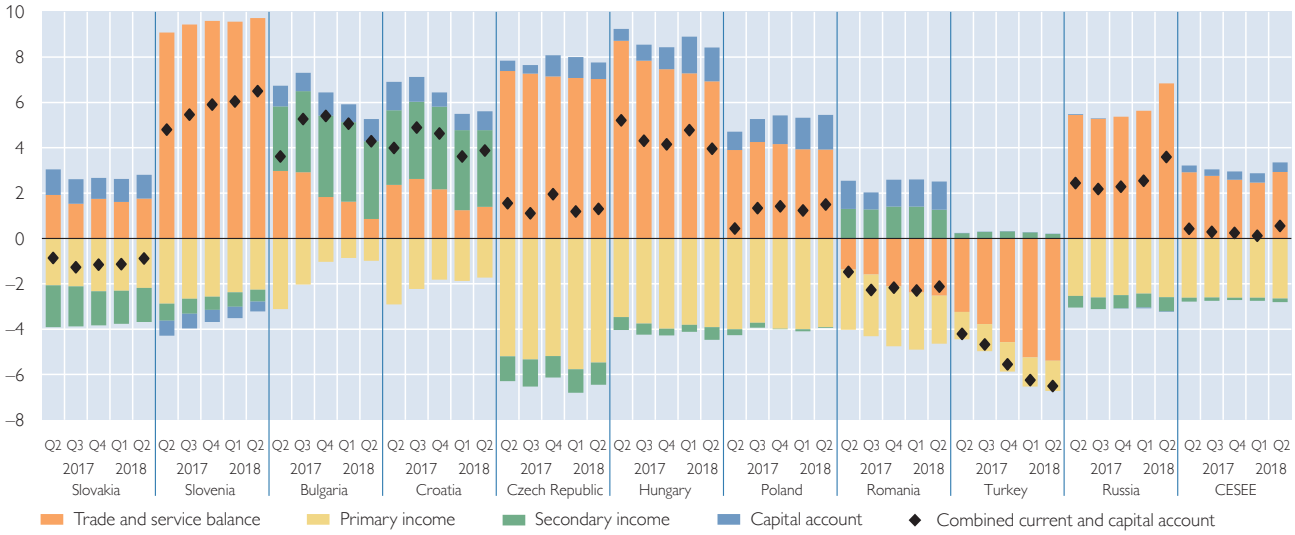
Ongoing rise in ULCs strains price competitiveness

Export dynamics might also have suffered from a deterioration of price competitiveness that has been observed for several quarters now. During the review period, unit labor cost (ULC) growth in manufacturing (measured in euro) outpaced the respective growth in the euro area in all countries but Russia, Slovenia and Turkey. In general, productivity figures were robust, reflecting increasingly tight labor markets that prevented labor input growth from keeping pace with manufacturing output growth. Some labor-saving investment might also have boosted productivity. At the same time, productivity advances fell notably short of labor cost increases: Labor cost growth in manufacturing was in the high single or even double digits in the first half of 2018 in most countries.

Chart 2

Combined current and capital account balance

% of GDP, four-quarter moving sum



Source: Eurostat, IMF, national central banks.

Compared with the rest of the region, cost increases were relatively moderate in Russia and Slovenia, which explains part of the good performance of those two countries in terms of price competitiveness. Furthermore, competitiveness in Russia and Turkey also benefited from a strong currency depreciation against the euro.

In addition to ULC trends, survey data also hint toward some weakening of international competitiveness. The European Commission regularly asks firms about their competitive positions in markets inside and outside the EU. While a majority of firms still reported improvements in competitiveness in the third quarter of 2018, the share of such responses decreased noticeably.

Trade balances weigh on current account positions in many countries

Rising headwinds from the international environment also impinged upon the region's external balances. Most countries reported some decline in their combined current and capital account surpluses or increases in their deficits during the review period. These developments were mostly related to weakening trade balances, while the other components of the current account remained broadly unchanged. Notable improvements in the current account were reported only for Slovenia (where the deficit in primary income decreased while the trade balance remained stable) and especially for Russia. The rising oil price and the weakening exchange rate boosted Russia's goods balance. Russia's strong performance was also responsible for the moderate increase in the region's combined current and capital account surplus from 0.2% of GDP in the fourth quarter of 2017 to 0.6% of GDP by mid-2018 (four-quarter moving sums; see chart 2).

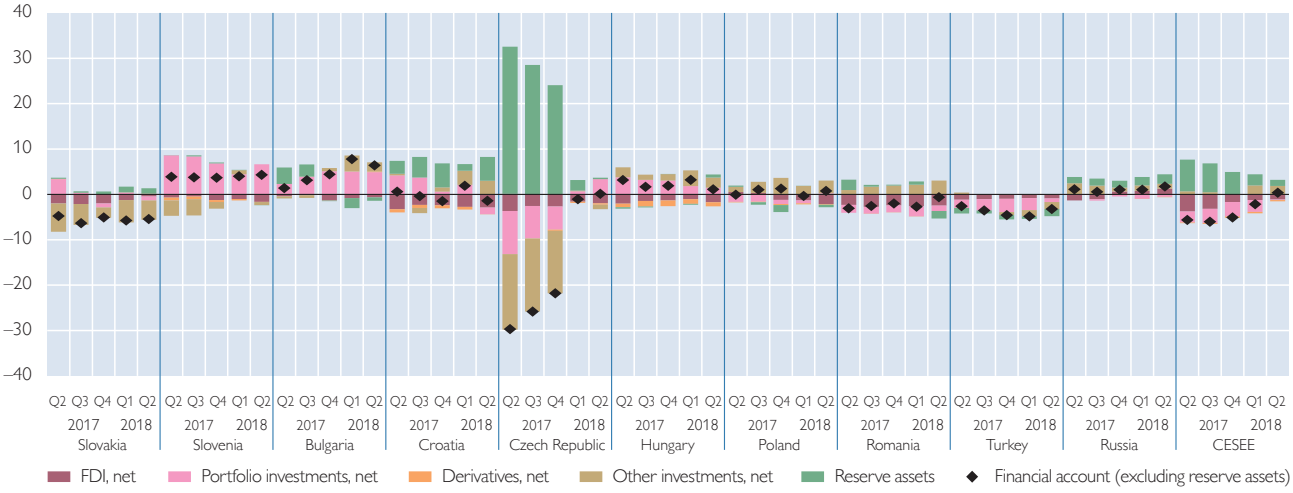
Moderate capital outflows from the CESEE region

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 increased from –5.1% of GDP in the fourth quarter of 2017 to 0.4% of GDP in the second quarter of 2018 (four-quarter moving sums; see chart 3). In other words, the CESEE countries experienced a capital outflow. This development was driven by a higher surplus in other investments which

Chart 3

Financial account balance

% of GDP, four-quarter moving sum



Source: National central banks.

reflect bank flows. At the same time, a deficit in portfolio investments of the magnitude of some 3% of GDP at the end of 2017 turned into a balanced position in mid-2018.

On a country level, the Czech Republic stands out with notable changes in both portfolio and other investments. A strong buildup of liabilities in those two categories was observed prior to the abolition of the exchange rate floor of the Czech koruna in April 2017, partly for speculative reasons.

Energy prices drive up headline inflation while core inflation continues to be surprisingly contained

Inflation gained some speed during the review period in all CESEE countries. The strongest increase was reported for Turkey, where exchange rate depreciation lifted the inflation rate to 17.9% in August and to 24.5% in September 2018. Price growth in Turkey was also fueled by still considerable demand pressures and the pass-through of strong producer price inflation. Producer prices increased by 46.2% in September 2018. A notable acceleration of inflation was also reported for Bulgaria, where service price growth outstripped HICP growth by a large margin.

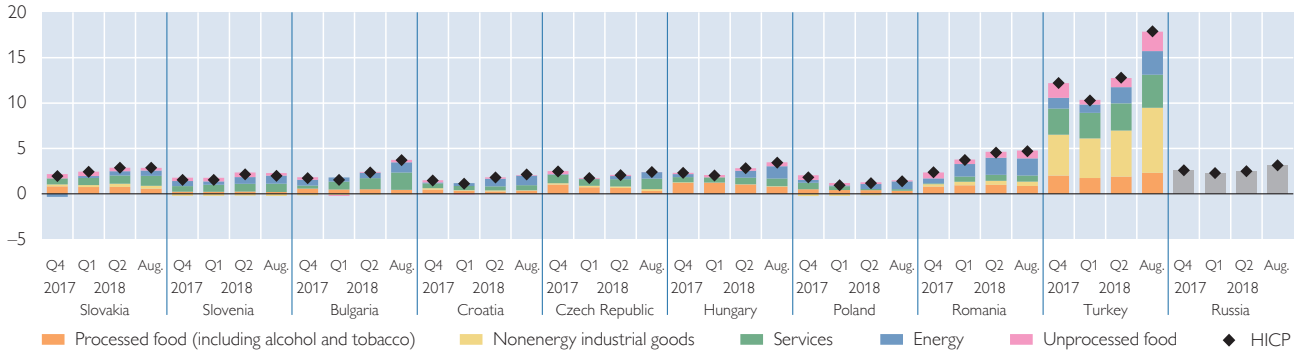
In general, rising price pressures primarily reflected stronger inflation in energy goods not least related to rising oil prices in world markets (see chart 4). At the same time, service price growth also started to accelerate somewhat in many countries, putting moderate upward pressure on core inflation. In most CESEE countries, however, inflation as well as core inflation remained contained.

Domestic price pressures have been building up especially in the CESEE EU Member States over the past two years: Tight labor markets and strong wage growth pushed up aggregate ULC growth. Capacity utilization has been rising since late 2016 and is now above pre-crisis levels. According to the European Commission, the output gap turned positive in 2017 and is projected to widen further in 2018 and 2019. These factors have not yet had a stronger impact on inflation as nominal effective exchange rates in the countries of the region appreciated especially in 2017 and remained strong throughout 2018. Furthermore, there is evidence that corporate sector profit ratios have declined in recent quarters, absorbing some of the upward pressure of wages on prices.

Chart 4

HICP inflation and its main drivers

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



Source: Eurostat.

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

Missed inflation targets and/or currency depreciation necessitate monetary tightening

The Czech Republic was the first country among the CESEE EU Member States to end the period of monetary accommodation that started in late 2012. The Czech central bank (CNB) adhered to a policy of gradual monetary tightening during the review period and hiked its policy rate in three steps from 0.75% in June to 1.5% in October 2018 (see chart 5). According to CNB projections, inflation will be above the target for the rest of the year 2018.

The Romanian central bank (NBR) increased its policy rate in May 2018, from 2.25% to 2.5%. At the same time, it raised the deposit facility rate to 1.5% and the lending facility rate to 3.5%. This step was motivated by accelerating inflation that consistently overshot the inflation target. The NBR expects inflation to decline towards the upper bound of the variation band around its target by the end of 2018. Upward risks to inflation stem, among other things, from the fiscal policy stance and labor market conditions.

In Turkey, the central bank (CBRT) reacted to the depreciation of the Turkish lira and the increase in inflation by initially hiking its one-week repo auction rate from 8% to 17.75% in June 2018. On September 13, more than a month after financial market turbulence worsened, the CBRT increased its policy rate by a further 625 basis points to 24%. These measures were flanked by a row of liquidity and regulatory measures targeted at banks.

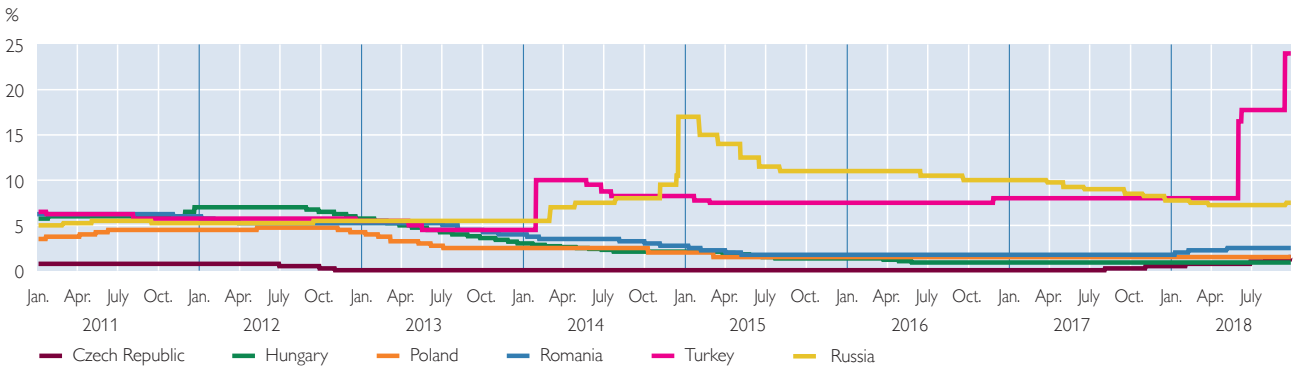
In September 2018, the Russian central bank (CBR) hiked its policy rate for the first time since January 2015, lifting it by 25 basis points to 7.5%. The ruble's depreciation, supply-side-related food inflation and increased inflation expectations were among the key drivers that motivated this step. The ruble depreciated notably throughout the year in reaction to the harsher-than-expected U.S. sanctions, the possibility of a new round of sanctions and the finance ministry's foreign-exchange purchases to replenish the reserve fund.

Stable and broadly solid credit developments throughout most of CESEE

Growth of domestic credit to the private sector (nominal lending to the non-bank private sector adjusted for exchange rate changes) was solid and broadly in line with fundamentals throughout most of CESEE. Credit growth accelerated moderately in most countries (see chart 6) reflecting favorable general economic conditions in an environment of low interest rates and heightened competition

Chart 5

Policy rate developments in CESEE



Source: National central banks.

among banks. Credit growth reflected to some extent a substantial increase in housing loans which went hand in hand with rising real estate prices. Housing prices rose by some 8% year on year in the first half of 2018, notably quicker than in the second half of 2017 (6.4%). Price increases of more than 10% were reported for Hungary, Slovenia and Turkey.

Notwithstanding the country's still modest economic growth and high NPL ratio (19.2% in mid-2018), lending growth in Russia accelerated throughout 2018 and was the highest in the CESEE region. The revival was largely driven by retail credit, which rose by 20.6% in August 2018, while credit to enterprises increased by only 11.6%. Mortgage loans and unsecured consumer credit have grown particularly briskly, which gives rise to concern. The CBR has responded by increasing its risk-weightings for high-interest mortgage and consumer loans.

Credit growth accelerated notably also in Croatia and Hungary. In Croatia, the availability of bank financing on the market and favorable liquidity led to lower interest rates and to an easing of credit standards for corporates. Among households, demand for housing loans increased in connection with a positive outlook for the real estate market and consumer confidence while the consumption of durable consumer goods spurred growth in the demand for other types of household loans. In Hungary, corporate lending benefited from the central bank's Market-based Lending Scheme, while lending to households was bolstered by expanded housing subsidies.

A certain moderation of credit growth over the past months was reported for the Czech Republic, Slovakia and Slovenia. In Slovenia, consumer credit largely sustained its momentum, while credit growth to corporations decelerated as increasing corporate profits enabled companies to satisfy their investment needs by means of retained earnings.

In the Czech Republic and Slovakia, credit growth declined against the backdrop of regulatory action (however, credit to Slovak households continued to grow, remaining in the double digits). Specifically, since 2016 banks in both countries are required to hold countercyclical capital buffers. Those buffers have repeatedly been raised to their current levels of 1% in the Czech Republic and 1.25% in Slovakia. Further increases of the buffer rates are in the pipeline, to

1.25% in January 2019 and to 1.5% in July 2019 in the Czech Republic, and to 1.5% in August 2019 in Slovakia. Furthermore, both countries introduced measures to put a brake on the expansion of housing loans. The Slovak central bank (NBS) placed new limits on debt-to-income ratios for housing and consumer loans and tightened loan-to-value limits for housing loans in July 2018. The Czech central bank introduced stricter loan-to-value ratios for housing loans already in 2017.

Tightening financial conditions lead to a marked deceleration of credit growth in Turkey

The largest deceleration of credit growth was observed in Turkey (from a peak of 15% in December 2017 to 7.3% in August 2018) as financial conditions tightened substantially. The weighted average cost of CBRT funding increased from 12.75% at the end of 2017 to 24% in October 2018. Apart from higher borrowing costs, the slowdown also reflected the moderating economic momentum and fading effects of the government's subsidized loan schemes. As of mid-2018, the NPL ratio in the Turkish banking sector remained low at 3.2% but the quality of bank assets might actually be lower than this figure suggests (due to sales of NPLs and the rollover of potentially distressed loans under the government's loan guarantee scheme). The banking system had an overall capital adequacy ratio of 15.9% at the end of June 2018 (13.1% when counting only tier-1 capital). The sharp depreciation of the Turkish lira, however, is weighing on the capital ratio, given that risk-weighted assets are partially denominated in foreign currency. The Turkish supervisor has temporarily allowed banks to calculate their capital ratios with the exchange rate of end-June 2018.

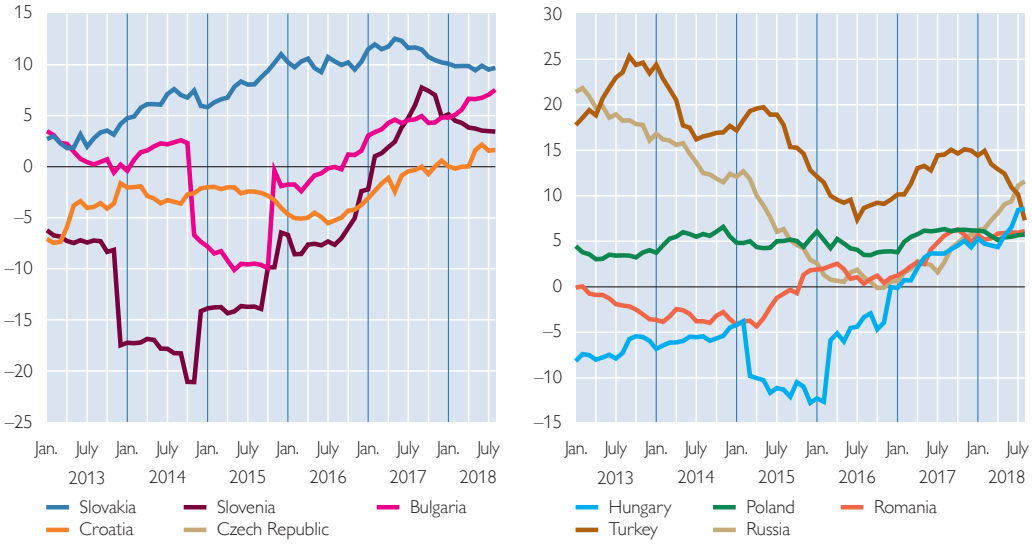
Lending surveys indicate easing supply conditions

Lending surveys indicate a continued strength in demand for credit in the CESEE region. According to the most recent CESEE Bank Lending Survey by the European Investment Bank, demand for credit improved across the board in the first half of 2018. This marked the tenth semester of favorable developments. All factors affecting demand made positive contributions. Notably, investment accounted for a good part of the strengthening in demand, whilst debt and corporate

Chart 6

Growth of credit to the private sector

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



Source: National central banks.

restructuring were almost irrelevant. Access to funding also continued to improve in CESEE, supported by easy access to domestic sources (mainly retail and corporate deposits).

Increasing demand was paired with an easing of aggregate supply conditions in the first half of 2018 – the second significant easing over the past two years. At the same time, the gap between credit demand and credit supply that had been perceived for several quarters continued to persist. On balance, this would imply an improvement of the loan quality associated with most of the new lending compared with previous credit cycles. Across the client spectrum, credit standards eased especially for SME lending and consumer credit, while they tightened for mortgages. Changes in local regulations and groups' NPLs were perceived as key factors adversely affecting supply conditions.

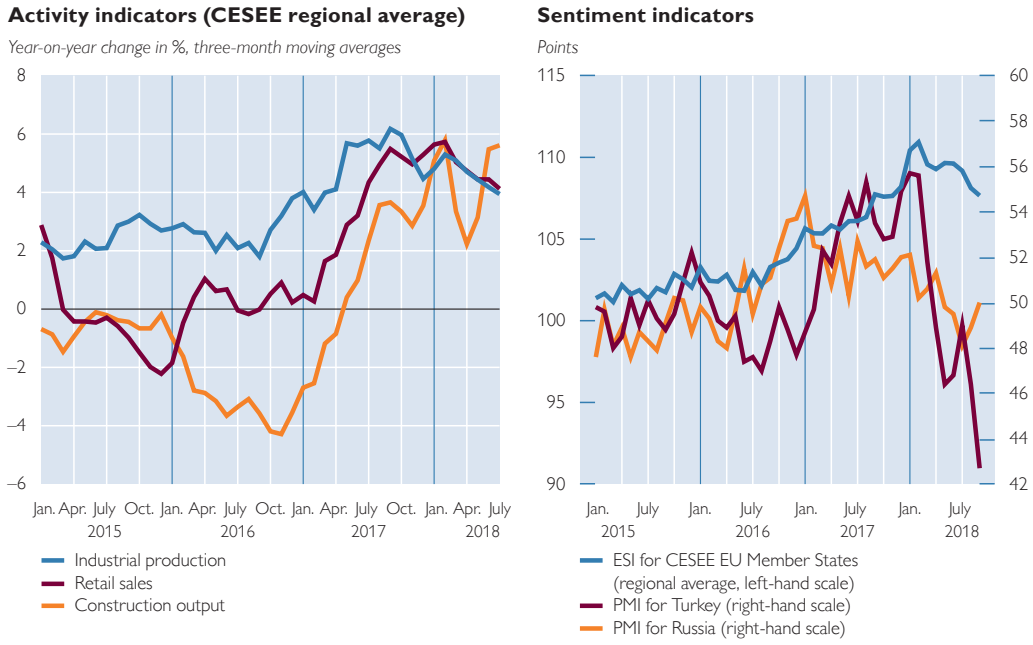
Country-level bank lending surveys conducted by national central banks mostly corroborate these findings: More or less all countries reported rising demand for loans across sectors. With respect to lending conditions, several countries (e.g. Czech Republic, Croatia, Poland and Romania) reported some tightening, especially in the area of loans for housing purchases.

Softening high-frequency and sentiment indicators point toward decelerating growth

While remaining on generally very solid levels, leading indicators softened during the review period (see chart 7). With regard to activity indicators, industrial production growth declined from an average of 5.3% in February to 3.9% in July 2018. The decline was relatively broad based. The most substantial weakening, however, was reported for Turkey against the backdrop of increasing general economic tensions. Retail sale growth decelerated too: At 4.1% in July, it was 1.5 percentage points lower than in February 2018. On a country level, the largest decrease was again observed in Turkey, but sales moderated somewhat in most

Chart 7

Leading indicators



Source: Eurostat, wiiw, European Commission, Markit.

other countries too. Construction output held up best among activity indicators, with broadly unchanged growth rates between early and mid-2018. The figures displayed a high degree of volatility, however.

Economic sentiment deteriorated throughout the region. The Economic Sentiment Indicator (ESI; average for the CESEE EU Member States) retreated from its peak in early 2018 to reach an average of 107.7 points in September 2018. This reading, however, still is notably above the long-term average. The decline in the index was most pronounced in services and industry, while sentiment in construction continued to brighten somewhat. The Purchasing Managers' Index (PMI) for Russia decreased to levels below 50 (the threshold indicating an expansion) over the summer months, before coming back to this level in September 2018. Reflecting the general economic situation, the PMI for Turkey plummeted from 55.7 points in January to only 42.7 points in September 2018.

The softening of leading indicators is already reflected in recent GDP growth forecasts for Turkey. The IMF, for example, cut its projection for 2019 from 4.4% in April to 0.4% in October 2018. Forecasts for the CESEE EU Member States and Russia remained broadly stable over time. However, at around 3.5% (for CESEE EU Member States) and 1.5% (for Russia), growth in 2019 is expected to turn out lower than in 2018. For a detailed outlook for the CESEE region, see "Outlook for selected CESEE countries" in this issue.

Box 1

Ukraine: new official financing crucial for building up FX reserves in view of debt repayment constraints and election-related uncertainties

In the first half of 2018, GDP growth accelerated to 3.5% on the year from 2.5% in 2017, with domestic demand remaining the key driver. Private consumption benefited from increasing real wages and pensions as well as from remittances, while gross fixed capital formation was on the rise inter alia due to road and transport infrastructure projects. Public consumption also increased somewhat. Export performance was rather weak, posting a contraction in the first quarter and only a small increase in the second quarter of 2018. Imports showed similar dynamics, but the negative contribution of net exports declined on balance. Moreover, it should be noted that agricultural output increased on the year because the grain crop harvest started earlier than usual. While GDP growth gained momentum, annual CPI inflation decelerated markedly, nearing the upper bound of the central bank's target range (6.5% ±2 percentage points as of the end of the third quarter of 2018) in August 2018 at 9%. Core inflation, which has also been declining this year, reached 8.7% in August 2018. These developments notwithstanding, the National Bank of Ukraine (NBU) decided to hike its key policy rate by 50 basis points, to 18%, in early September 2018, citing various risks to the disinflation trend.

The current account deficit stood at 2.2% of GDP in the four quarters up to mid-2018, thus remaining broadly unchanged compared with 2017. With the trade and services balances showing a considerable deficit (of almost 7% of GDP), the current account deficit was kept in check by surpluses in the income balances arising from income generated by Ukrainians abroad, particularly in Poland. Net FDI inflows (partly related to debt-to-equity transactions) covered almost 80% of the current account deficit in the four quarters up to mid-2018. Despite a noticeable reduction in recent years, Ukraine's gross external debt is still very high (EUR 97 billion or 95.4% of GDP in mid-2018). For comparison, official FX reserves amounted to EUR 14 billion (excluding gold) at end-August 2018. With sizeable public external debt repayments coming up, further IMF disbursements would be crucial for building up FX buffers. Doubts over a further IMF tranche together with other domestic and external factors fueled pressures on the hryvnia during the summer, as evidenced by some depreciation and foreign currency sales by the NBU. Moreover, presidential and parliamentary elections in 2019 might bring about heightened uncertainties.

The structural reform agenda has been moving forward this year with the parliamentary endorsement of a bill to create a specialized anti-corruption court (and amendments demanded by the IMF). This step raised the chances for concluding the pending review under the IMF Extended Fund Facility (EFF), on which discussions had started in May 2017. Yet, agreements on fiscal policy issues and on household gas and heating tariff increases were still outstanding until recently. Eventually, the Ukrainian authorities opted to negotiate a new arrangement that will replace the EFF (which would have expired in March 2019). Following an IMF mission to Kyiv in September, a staff-level agreement on a USD 3.9 billion 14-month stand-by arrangement (SBA) was made public in mid-October immediately after the government had announced an increase in household gas and heating tariffs. The IMF Executive Board will consider the new SBA following parliamentary adoption of a government budget for 2019 that is in line with IMF staff recommendations. Approval of the new SBA would also help to unlock external funding from other sources, inter alia from the EU under the fourth macro-financial assistance program (signed in September 2018), under which EUR 1 billion could be made available in two installments.

Box 2

Western Balkans[1]: keeping the growth momentum despite rising headwinds

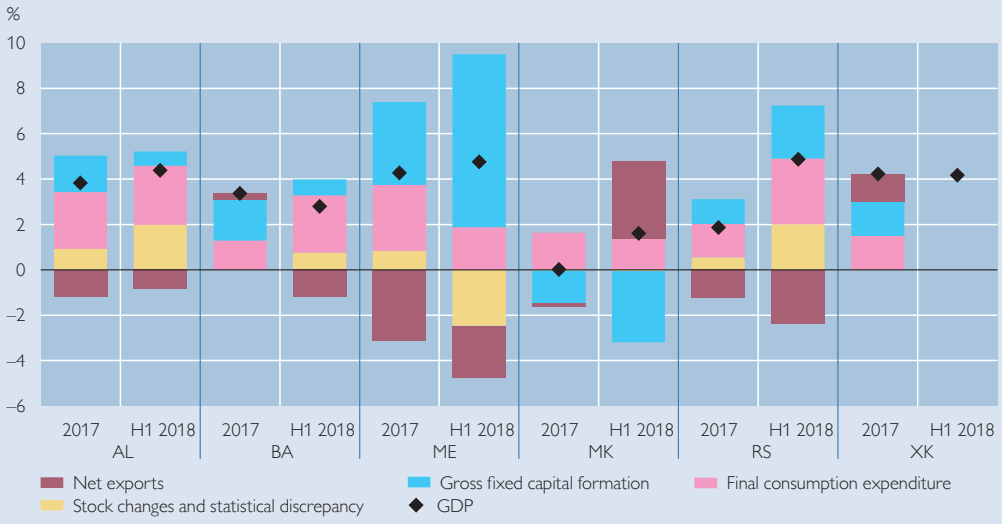
Economic growth kept pace in the first half of 2018 in all Western Balkan countries. On balance, (unweighted) output growth rose to 3.8% on average, from 2.9% in 2017, with year-on-year growth ranging from 1.6% (in the former Yugoslav Republic (FYR) of Macedonia) to 4.9% (in Serbia). FYR Macedonia and Serbia also happened to be the countries that experienced the strongest economic headwind. In Montenegro, Albania and Kosovo, GDP growth remained elevated but broadly flat compared with full-year 2017 figures (4.8%, 4.4% and 4.2 %, respectively), while GDP growth in Bosnia and Herzegovina decelerated to 2.8% in the first half of 2018.

In most of these economies, domestic demand remained the main driver of GDP growth in the first half of 2018 (see chart 1). Upbeat growth of employment and wages continued to fuel private consumption, while fiscal stimulus pushed up public investments especially in the infrastructure and energy sectors, thus compensating for lukewarm private (foreign direct) investments in some countries.

At the same time, net exports were less of a drag on, and even turned supportive for, GDP growth in some Western Balkan countries in the first half of 2018 as compared to 2017. In FYR Macedonia, the strong export performance of the automotive industry coupled with weaker imports added to growth while sizeably narrowing external imbalances. In Kosovo and Albania, exports benefited from rising commodity and basic metals prices, helping Albania to narrow its external imbalances (see chart 2). In Montenegro, the solid increase of exports was overshadowed by the high import content of investments mainly related to the Bor-Boljare highway, thus lifting the four-quarter moving average current plus capital account deficit to 21.4% of GDP by June. On the financing side, net FDI inflows increased in all countries but Montenegro and Kosovo. Overall, the current account deficit was fully covered by net FDI in Albania, Serbia and FYR Macedonia, while notable coverage gaps were reported for Montenegro and Kosovo.

Chart 1

Robust contribution of domestic demand in first half of 2018



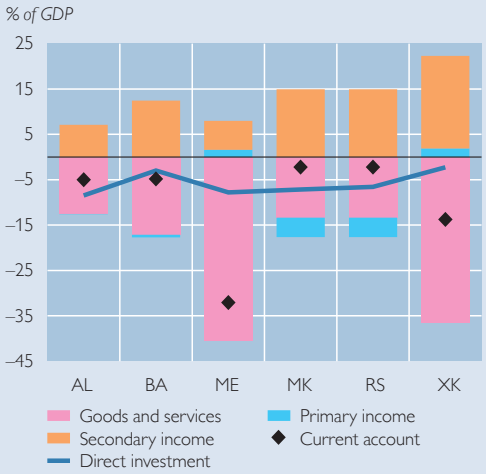
Source: Eurostat, wiiw, World Bank.

[1] *The Western Balkans comprise the EU candidate countries Albania, FYR Macedonia, Montenegro and Serbia as well as the potential candidate countries Bosnia and Herzegovina, and Kosovo. 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.*

Despite the ongoing economic acceleration and recent reforms in some countries, the rapid employment creation experienced in 2017 slowed down in the first half of 2018 across the Western Balkan countries except for Albania. In Kosovo, employment even contracted by 2 percentage points. According to the Labour Force Survey, employment growth was strongest in Albania (+2.4 percentage points) and Serbia (+1.2 percentage points), with the services and manufacturing sectors apparently accounting for the largest increases according to the World Bank. In Montenegro and Kosovo, employment was also boosted by public sector hiring. Despite these increases, employment rates remained still well below EU-28 levels (i.e. 72.2% in 2017) in the first half of 2018, ranging from 29% (Kosovo) to 59% (Albania). Yet, unemployment continued to decline and hit historical lows in most of the countries in the region (see statistical annex). Compared to the same period of the previous year, Albania and FYR Macedonia reported the biggest unemployment declines, to 12.9% and 21.4%, respectively in the second quarter of 2018. The lower unemployment rates achieved by Bosnia and Herzegovina and Kosovo are somewhat distorted because they are mainly due to declining labor force participation rates by young cohorts given strong emigration and to some extent by lower female participation. Youth unemployment (among those aged 15–24) dropped somewhat in the first half of 2018 in Albania and Montenegro, but remained high in all Western Balkan countries, with levels ranging from 27% (Serbia) and 55% (Kosovo).

Chart 2

Current account and FDI



Source: IMF, national central banks, World Bank.

Note: Positive (negative) values for direct investment positions indicate that net acquisition of assets is higher (lower) than the net incurrence of liabilities.

Mirroring higher energy prices, stronger domestic demand and tax hikes, consumer price inflation increased somewhat in several Western Balkan countries in the first half of 2018 compared to 2017. Core inflation remained relatively stable in this period, implying contained inflationary pressures. Inflation in Montenegro was the highest in the region (3.6% in the first half of 2018) due to VAT and excise hikes. While also having raised fuel excise duties, Bosnia and Herzegovina and FYR Macedonia managed to keep inflation at 1.1% and 1.6%, respectively, in the same period. In Serbia, inflation declined to 1.7% in the first half of 2018 on the back of subdued food prices and currency appreciation. Kosovo reported the lowest inflation rate in the region (0.3% in the first half of 2018) against the backdrop of declining energy and housing prices.

In contrast to 2017, none of the inflation-targeting countries undershot the lower bound of the inflation target in the first half of 2018. In Albania, lower-than-expected inflation coupled with currency appreciation prompted the central bank to lower its policy rate in June 2018 for the first time since May 2016, by 25 basis points to 1%. To preserve the inflation target and to keep exchange rate appreciation from accelerating further, it also decided to purchase excess currency in the forex market. In Serbia, the latest policy rate cut, to 3% in April 2018, has not been followed by further adjustments, despite mounting appreciation pressures and contained inflation. Moreover, frequent central bank interventions on the foreign exchange market served to reduce exchange rate volatility vis-à-vis the euro (both in nominal and real terms), thus limiting the appreciation of the dinar to close to 2% between April 2018 and September 2018. The central bank of FYR Macedonia, finally, lowered its key interest rate in August 2018, by 25 basis points to 2.75%, citing sluggish domestic demand and improved external position.

On the back of resolution mechanisms put in place in some Western Balkan countries, bank asset quality gradually improved and overall supported credit growth (see statistical annex). Albania continued to record the highest nonperforming loan (NPL) ratio in the region (13.3% in mid-2018) despite the introduction of new insolvency legislation, while Serbia managed to cut back NPLs substantially, to a historical low of 9.7% in the first quarter of 2018, supported by ongoing sales of NPLs to asset management companies. In Montenegro, asset quality improved also due to the effective implementation of legislation on voluntary financial restructuring and despite the application of stricter financial reporting standards (IFRS 9), thus bringing the NPL share down to 7% by June 2018. Kosovo, while having failed to put in place a NPL resolution mechanism so far, has been making progress with the introduction of a new system to enforce collateral recovery. This contributed to the decline of the NPL share to 2.8% as of June 2018.

The ongoing process of bank balance sheet cleaning, more favorable lending conditions and elevated domestic demand fed through to credit dynamics in most countries. The first half of 2018 was marked by an acceleration of credit growth. Albania was the only country to buck the regional trend, with lending decelerating somewhat, to 3.2% year on year in the first half of 2018, but this decline also reflected the lek appreciation and loan write-offs. As a common feature among all Western Balkan countries, the growth of lending to households used to outpace the growth of corporate lending for years. In Kosovo and in Bosnia and Herzegovina, however, corporate lending growth has since become as high as the growth of lending to households. Overall, lending to the nonfinancial private sector was the strongest in the first half of 2018 in Kosovo (10.9%), FYR Macedonia (8.2%) and Serbia (8.1%). On a positive note, currency risks in the private sector portfolios declined somewhat on the back of the ongoing implementation of de-euroization measures. With the Albanian authorities having adopted a comprehensive de-euroization strategy in January 2018, de-euroization has also become more widespread. De-euroization will, however, be a protracted process, as foreign currency loans continue to account for high shares of overall lending, ranging from some 42% of total loans (FYR Macedonia) to nearly 67% (Serbia).

Fiscal imbalances remained broadly unchanged at best in most of the Western Balkan economies in the first half of 2018 despite robust revenue growth. Improved tax collection and higher revenues from indirect taxes coupled with lower interest payments are expected to have kept fiscal balances on the positive side only in Serbia. In addition, expenditure-led consolidation in Serbia and Montenegro is ongoing. Montenegro should be able to meet the 2018 annual budget target of 2.8% of GDP, not least because of a comprehensive tax reform, including a VAT hike. In contrast, fiscal imbalances widened in Kosovo due to rising public sector wages and pensions for war veterans. Similarly, the fiscal position of Bosnia and Herzegovina markedly deteriorated during 2018 due to increased pre-election expenditures prior to the general elections in October 2018. However, even the countries pursuing expenditure consolidation policies have been investing more during 2018, targeting mainly infrastructure and public utilities. Only in FYR Macedonia were increased fiscal expenditures largely directed to pensions, subsidies, and social assistance, with capital spending declining. Helped by accelerating GDP growth and despite rising fiscal deficits, the stock of public debt (including publicly guaranteed debt) was on a decline in most of the Western Balkan economies in the first half of 2018. In Serbia, public debt shrank only somewhat until June 2018, to 59.7% of GDP, yet following a decrease of almost 10 percentage points in 2017. Small debt increases were reported by Kosovo and by Bosnia and Herzegovina, but they have kept their public debt ratios at low levels (i.e. 16.3% and 36.3% of GDP, respectively as of June).

As of the third quarter of 2018, Bosnia and Herzegovina as well as Serbia are the only countries in the region to have programs with the IMF in place. In Bosnia and Herzegovina, slow progress with the implementation of structural reforms considerably delayed the completion of the second review under the Extended Fund Facility (initially approved in September 2016). The planned disbursement of a tranche of EUR 38 million was postponed by the IMF in July, with reference to the pre-election weakening of the fiscal position due to higher public sector wages and social transfers. Serbia reached a staff-level agreement with the IMF in June on a

30-month policy coordination instrument, without having drawn any funds under the IMF stand-by arrangement concluded in February. With respect to EU accession, Montenegro remains most advanced in the negotiation process. So far, 31 out of 35 chapters have been opened, most recently chapter 17 on economic and monetary policy on June 25. In FYR Macedonia, a consultative referendum was held on September 30 on the country's name. Voter participation was well below 50%, but the majority of those who exercised their voting right supported the agreement with Greece. The corresponding bill has since been approved by parliament, but parliamentary approval is still outstanding in Greece.

2 Slovakia: economic growth robust but constrained by tight labor market conditions

Investment becomes the dominant driver of economic growth

Slovakia's real GDP growth accelerated in the first half of 2018 to nearly 4% compared to 3.4% last year. In the second quarter of 2018, the economy grew at the fastest year-on-year rate observed since end-2015. Economic expansion continued to be driven by domestic demand on the back of ongoing household spending and particularly by a sustained swift increase in gross fixed capital formation. After having accelerated for more than a year, household consumption growth started to gradually peter out in the last quarter of 2017 and slowed down noticeably in the second quarter of 2018. The latter drop – mainly brought about by significantly lower food and beverage consumption – came rather as a surprise given the favorable labor market developments and the ensuing wage hikes. In contrast, public consumption speeded up in the first six months of 2018 compared to 2017 as a whole, not least owing to strong wage growth in the public sector. The weakened contribution of private consumption to growth was counteracted by a massive increase in fixed investment, especially in the automotive sector. However, also public investment strengthened, boosted by a revival in large infrastructure projects and an increased absorption of EU funds. The external sector made a broadly neutral contribution to growth in the first half of 2018, compared to a mildly positive influence in 2017 as a whole. On the one hand, the dent in the contribution of net exports was caused by somewhat weaker external demand. On the other hand, import growth outpaced export growth due to higher investment-driven demand for imports.

Exports supported by investments in the automotive sector

The goods and services trade balance remained positive also in the six months to June 2018. The foreign trade figures benefited from the higher production capacity in the automotive sector and the introduction of new car models, which spurred both the volume and value of exported cars. The current account deficit improved somewhat in the first half of 2018 in comparison to 2017 as a whole, mainly due to a lower deficit of the primary income balance.

The general government deficit is expected to fall marginally in 2018 compared to the 1% of GDP recorded in 2017. Faster fiscal consolidation is held back by some legislative measures of the government as well as the expected acceleration in healthcare expenditures. As a result, aided by an increasing primary budget surplus, falling debt servicing costs and vigorous GDP growth, the general government debt is projected to trend downward rather mildly to about 49% of GDP this year.

Economic growth could be significantly higher if there were no labor shortages

Robust economic growth and the resulting higher demand for skilled labor continue to be echoed in historically high employment levels, record-low unemployment rates and significant wage growth. As the latter increasingly outpaces productivity growth, unit labor costs are rising more quickly. Moreover, shortages of (skilled) labor increasingly put a drag on economic growth. Slovakia's central bank estimates that GDP would increase by an additional 1.3% if all the current job vacancies were filled.

After three years of falling prices, inflation turned positive in 2017 and accelerated further to average 2.7% between January and August 2018. This was mainly due to faster fuel and energy price increases as a result of the continuing rise in the oil price. However, also nonenergy industrial goods prices and services prices contributed to the inflation speedup. Credit to households kept growing at double-digit rates despite macroprudential measures introduced by the Slovak central bank to curb the too swift expansion. The growth of credit to households is driven mainly by mortgages amid interest rates below the euro area average.

Table 2

Main economic indicators: Slovakia

	2015	2016	2017	Q1 17	Q2 17	Q3 17	Q4 17	Q1 18	Q2 18
	Year-on-year change of the period total in %								
GDP at constant prices	3.9	3.3	3.4	3.0	3.7	3.4	3.5	3.6	4.2
Private consumption	2.2	2.7	3.6	3.3	3.5	3.9	3.6	3.5	2.2
Public consumption	5.4	1.6	0.2	–1.1	–0.3	–1.4	3.1	3.1	2.5
Gross fixed capital formation	19.8	–8.3	3.2	0.8	–5.4	10.4	6.1	12.5	20.4
Exports of goods and services	6.4	6.2	4.3	8.2	–0.3	3.8	5.7	2.4	8.0
Imports of goods and services	8.4	3.7	3.9	7.7	–0.8	5.9	3.3	3.2	7.8
	Contribution to GDP growth in percentage points								
Domestic demand	5.4	0.9	2.6	2.2	3.3	3.6	1.1	4.3	4.1
Net exports of goods and services	–1.5	2.4	0.5	0.8	0.4	–1.7	2.5	–0.7	0.5
Exports of goods and services	5.9	5.8	4.0	7.9	–0.3	3.3	5.6	2.4	7.6
Imports of goods and services	–7.4	–3.4	–3.5	–7.1	0.8	–4.9	–3.1	–3.1	–7.0
	Year-on-year change of the period average in %								
Unit labor costs in the whole economy (nominal, per person)	1.6	1.4	2.8	2.2	2.4	4.0	2.7	5.1	4.2
Unit labor costs in manufacturing (nominal, per hour)	–0.4	3.6	6.5	3.4	10.1	7.1	5.6	9.5	7.9
Labor productivity in manufacturing (real, per hour)	4.4	0.4	0.5	2.3	–1.2	0.0	0.9	–0.4	1.7
Labor costs in manufacturing (nominal, per hour)	4.1	4.0	7.0	5.7	8.8	7.1	6.5	9.1	9.7
Producer price index (PPI) in industry	–2.9	–3.9	2.5	2.6	3.0	2.3	1.9	0.9	1.6
Consumer price index (here: HICP)	–0.3	–0.5	1.4	1.0	1.0	1.6	2.0	2.4	2.9
	Period average levels								
Unemployment rate (ILO definition, %, 15–64 years)	11.5	9.7	8.2	8.8	8.2	8.0	7.8	7.2	6.7
Employment rate (%, 15–64 years)	62.7	64.9	66.2	65.8	66.1	66.4	66.4	67.1	67.1
Key interest rate per annum (%)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Nominal year-on-year change in the period-end stock in %								
Loans to the domestic nonbank private sector[1]	11.0	10.3	10.2	11.5	12.3	11.5	10.2	9.9	9.9
of which: loans to households	12.4	13.4	11.8	13.9	13.4	12.3	11.8	12.4	12.3
loans to nonbank corporations	8.9	5.4	7.6	7.7	10.6	10.0	7.6	5.6	5.9
	%								
Share of foreign currency loans in total loans to the nonbank private sector	0.5	0.4	0.2	0.4	0.4	0.4	0.2	0.2	0.2
Return on assets (banking sector)	0.9	1.1	0.8	0.9	1.0	0.9	0.8	0.9	0.9
Tier 1 capital ratio (banking sector)	16.5	16.2	16.6	16.6	16.6	16.5	16.6	16.4	16.3
NPL ratio (banking sector)	4.8	4.3	3.6	4.2	4.0	4.0	3.6	3.5	3.4
	% of GDP								
General government revenues	42.5	39.3	39.4	..	..	..	..	..	..
General government expenditures	45.2	41.5	40.4	..	..	..	..	..	..
General government balance	–2.7	–2.2	–1.0	..	..	..	..	..	..
Primary balance	–1.0	–0.6	0.4	..	..	..	..	..	..
Gross public debt	52.3	51.8	50.9	..	..	..	..	..	..
	% of GDP								
Debt of nonfinancial corporations (nonconsolidated)	51.7	55.0	29.8	..	..	..	..	..	..
Debt of households and NPISHs[2] (nonconsolidated)	35.0	38.2	20.4	..	..	..	..	..	..
	% of GDP (based on EUR), period total								
Trade balance	1.3	2.0	0.8	1.7	1.5	–0.9	0.8	1.2	2.0
Services balance	0.2	0.6	1.0	0.9	1.1	1.4	0.5	0.8	1.1
Primary income	–1.7	–2.3	–2.3	–1.4	–2.5	–2.5	–2.8	–1.3	–2.0
Secondary income	–1.6	–1.7	–1.5	–1.6	–2.3	–1.3	–0.8	–1.4	–2.4
Current account balance	–1.7	–1.5	–2.1	–0.4	–2.2	–3.3	–2.2	–0.8	–1.3
Capital account balance	3.5	2.0	0.9	0.0	1.8	0.4	1.5	0.4	1.9
Foreign direct investment (net)[3]	–0.1	0.6	–2.0	–4.5	–0.7	–3.1	0.0	–1.2	2.4
	% of GDP (rolling four-quarter GDP, based on EUR), end of period								
Gross external debt	85.4	90.9	110.8	95.1	95.2	97.3	110.8	111.7	114.2
Gross official reserves (excluding gold)	2.1	2.0	2.3	1.8	2.1	2.1	2.3	2.8	3.2
	Months of imports of goods and services								
Gross official reserves (excluding gold)	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.4	0.4
	EUR million, period total								
GDP at current prices	78,896	81,154	84,985	19,340	21,196	22,315	22,135	20,461	22,635

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

[1] *Foreign currency component at constant exchange rates.*
[2] *Nonprofit institutions serving households.*
[3] *+ = net accumulation of assets larger than net accumulation of liabilities (net outflow of capital).*
– = net accumulation of assets smaller than net accumulation of liabilities (net inflow of capital).

3 Slovenia: new government takes over solid public finances

Minority government took office in September 2018

Following lengthy coalition talks, a new center-left minority government took office in Slovenia in mid-September 2018. It consists of five parties holding 43 out of 90 parliamentary seats and depends on the support of a left-leaning party. This introduces uncertainty, both regarding the stability of the government and the effectiveness of policy implementation, especially as the government faces politically sensitive issues such as the privatization of two major banks and the reform of the pension, healthcare and long-term care systems.

GDP growth moderates during first half of 2018, but remains healthy

GDP growth slowed to a still healthy 4.2% year on year during the first half of 2018. The growth structure was balanced, with consumption, investments and net real exports all contributing to growth. Private consumption growth benefited from healthy increases in real wages and employment, the continued expansion of consumption loans and a further strengthening in consumer confidence. Public consumption growth surged in the second quarter of 2018, possibly in connection with the parliamentary elections. Investment growth was particularly high in nonresidential construction and, to a lesser extent, in machinery and equipment, mirroring historically high capacity utilization in industry and the improved financial position of the corporate sector. Both export and import growth held up well despite the moderation of import demand in major export markets, but net real exports contributed less to the overall GDP growth rate than in 2017.

Structural balance moving away from MTO despite headline budget surplus

According to the European Commission's 2018 Spring Forecast, Slovenia's budget is expected to post a surplus of 0.5% of GDP in 2018 and 0.4% in 2019. Government debt should continue to decline and reach 65% by end-2019. Fiscal developments are set to benefit from the strong economic background while the European Commission expects the structural balance to gradually deteriorate to a deficit of 1.5% of GDP in 2019 (from a deficit of 0.6% in 2017) and thus to move away from Slovenia's medium-term objective (MTO) of a surplus of 0.25% of GDP. In June 2018, the EU Council therefore found that Slovenia faced the risk of significantly deviating from the recommended adjustment path toward the MTO and recommended that measures be taken already in 2018 to comply with the Stability and Growth Pact.

European Commission approved new privatization plan for NLB

In mid-August 2018, the European Commission approved a new privatization plan for Nova Ljubljanska banka (NLB), according to which a first sale tranche of at least 50% plus one share must be sold by end-2018 and the state's stake in the bank will be reduced to 25% plus one share by end-2019. If Slovenia fails to comply with these deadlines, a divestiture trustee will be appointed to complete the privatization. In late July, parliament also passed legislation to shield the NLB from the enforcement of claims by Croatian courts in connection with Yugoslav-era deposits of Croatian citizens.

Inflation remains low despite strong economic and household credit growth

Inflation accelerated from 1.5% in the first quarter of 2018 to around 2% by mid-2018 mainly on the back of energy and unprocessed food prices. Core inflation remained almost unchanged at around 1% over the period. Despite continuing low interest rates, the growth of lending to the corporate sector remained weak during the reporting period as the sector continued to finance investments from internal resources, given good profitability. By contrast, lending to households remained fairly strong, reflecting robust growth in consumption loans. The Slovenian central bank has already called attention to risks in connection with this type of lending (i.e. unsecured loans with relatively long maturities and approved in simplified procedures), even if stable lending growth is seen as necessary to reduce banks' income risks and preserve their profitability amid low interest rates.

Table 3

Main economic indicators: Slovenia

	2015	2016	2017	Q1 17	Q2 17	Q3 17	Q4 17	Q1 18	Q2 18
	Year-on-year change of the period total in %								
GDP at constant prices	2.3	3.1	4.9	4.8	4.2	4.2	6.3	4.5	3.8
Private consumption	2.3	3.9	1.9	1.9	0.9	1.6	3.1	3.4	1.1
Public consumption	2.4	2.7	0.5	0.7	0.1	–0.2	1.3	1.2	5.3
Gross fixed capital formation	–1.6	–3.7	10.7	13.8	10.0	7.4	12.0	10.1	8.2
Exports of goods and services	5.0	6.4	10.7	9.8	8.3	12.1	12.7	8.7	9.3
Imports of goods and services	4.7	6.6	10.3	10.2	8.1	10.9	11.8	10.5	8.3
	Contribution to GDP growth in percentage points								
Domestic demand	1.7	2.6	3.6	4.0	3.3	2.3	4.7	4.9	2.1
Net exports of goods and services	0.6	0.5	1.3	0.8	0.9	2.0	1.5	–0.4	1.7
Exports of goods and services	3.8	5.0	8.4	7.8	6.4	9.3	9.9	7.3	7.6
Imports of goods and services	–3.2	–4.5	–7.0	–7.0	–5.5	–7.3	–8.4	–7.7	–5.9
	Year-on-year change of the period average in %								
Unit labor costs in the whole economy (nominal, per person)	0.3	1.8	1.2	0.3	1.5	1.9	1.2	2.4	3.6
Unit labor costs in manufacturing (nominal, per hour)	–5.2	–5.2	–1.7	–2.8	2.0	–0.2	–5.2	–1.3	–4.1
Labor productivity in manufacturing (real, per hour)	6.0	9.0	8.7	5.9	7.5	10.0	11.5	9.1	7.3
Labor costs in manufacturing (nominal, per hour)	0.5	3.3	7.0	2.9	9.6	9.8	5.7	7.6	2.9
Producer price index (PPI) in industry	–0.2	–1.4	2.2	1.7	2.2	2.3	2.4	2.2	2.1
Consumer price index (here: HICP)	–0.8	–0.2	1.6	2.0	1.4	1.3	1.5	1.5	2.1
	Period average levels								
Unemployment rate (ILO definition, %, 15–64 years)	9.1	8.1	6.7	7.9	6.5	6.4	5.9	6.0	5.3
Employment rate (%, 15–64 years)	65.2	65.9	69.3	67.3	69.1	70.4	70.3	69.7	71.1
Key interest rate per annum (%)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Nominal year-on-year change in the period-end stock in %								
Loans to the domestic nonbank private sector[1]	–6.5	–2.4	4.8	1.3	3.8	7.8	4.8	4.3	3.5
of which: loans to households	0.1	3.3	6.8	5.2	5.9	7.3	6.8	6.5	6.5
loans to nonbank corporations	–11.2	–7.0	3.1	–2.0	2.0	8.2	3.1	2.3	0.8
	%								
Share of foreign currency loans in total loans to the nonbank private sector	3.8	3.2	2.4	3.1	2.8	2.5	2.4	2.3	2.2
Return on assets (banking sector)	0.3	0.9	1.1	1.4	1.3	1.2	1.1	1.4	1.5
Tier 1 capital ratio (banking sector)	20.1	20.2	19.4	20.0	19.9	19.7	19.4	..	..
NPL ratio (banking sector)	9.9	5.5	3.6	5.2	5.0	4.7	3.6	3.2	2.9
	% of GDP								
General government revenues	44.9	43.3	43.1	..	..	..	..	..	..
General government expenditures	47.7	45.3	43.1	..	..	..	..	..	..
General government balance	–2.9	–1.9	0.0	..	..	..	..	..	..
Primary balance	0.4	1.0	2.5	..	..	..	..	..	..
Gross public debt	82.6	78.6	73.6	..	..	..	..	..	..
	% of GDP								
Debt of nonfinancial corporations (nonconsolidated)	67.8	60.9	27.6	..	..	..	..	..	..
Debt of households and NPISHs[2] (nonconsolidated)	27.6	27.4	13.6	..	..	..	..	..	..
	% of GDP (based on EUR), period total								
Trade balance	3.8	3.8	3.6	3.6	3.9	4.3	2.7	3.1	3.9
Services balance	4.8	5.4	6.0	5.4	6.1	6.9	5.3	5.8	6.7
Primary income	–3.2	–3.2	–2.6	–2.2	–2.2	–2.8	–3.0	–1.4	–1.8
Secondary income	–1.0	–0.8	–0.6	–0.9	–0.7	–0.5	–0.2	–1.1	–0.3
Current account balance	4.4	5.2	6.4	5.9	7.1	7.9	4.7	6.4	8.5
Capital account balance	1.1	–0.7	–0.5	–0.5	–0.6	–0.5	–0.5	–0.4	–0.3
Foreign direct investment (net)[3]	–3.3	–2.2	–1.2	–2.1	1.2	–1.9	–2.1	–1.2	–1.4
	% of GDP (rolling four-quarter GDP, based on EUR), end of period								
Gross external debt	120.0	111.0	101.1	109.7	107.3	103.2	101.1	99.6	98.0
Gross official reserves (excluding gold)	1.8	1.5	1.5	1.6	1.5	1.6	1.5	1.4	1.4
	Months of imports of goods and services								
Gross official reserves (excluding gold)	0.3	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.2
	EUR million, period total								
GDP at current prices	38,863	40,357	43,000	9,873	10,931	10,995	11,201	10,563	11,642

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

[1] *Foreign currency component at constant exchange rates.*
[2] *Nonprofit institutions serving households.*
[3] *+ = net accumulation of assets larger than net accumulation of liabilities (net outflow of capital).*
– = net accumulation of assets smaller than net accumulation of liabilities (net inflow of capital).

4 Bulgaria: robust economic growth increasingly driven by domestic demand

Buoyant domestic demand counterbalanced by slowing exports

Domestic demand in Bulgaria gained further momentum in the first half of 2018. The increasingly positive contributions to economic growth from private consumption and fixed investment were, however, counterbalanced by a further slowdown in exports. As a result, in the first half of 2018 the Bulgarian economy did not grow as dynamically as in 2017. Post-2009 average growth rates are still significantly outpaced, though. A production-side view reveals that the real estate and financial sectors provided a major lift to the economy.

Compared to recent years, gross fixed capital formation grew surprisingly strongly in the first half of 2018 on the back of the government's public infrastructure priorities, a recovery in the use of EU investment funding programs and robust investor confidence indicators. Also, private consumption expanded very significantly, surging in the second quarter of 2018 in particular. The labor market is still improving as unemployment rates are approaching historical lows, but it is also becoming increasingly tight and potentially mismatched; in the first half of 2018, for example, the number of job vacancies grew far more strongly than the number of occupied jobs. On the other hand, annual real wage growth lost considerable steam in the first half of 2018, nearly halving to around 5% compared to the second half of 2017.

Relatively strong pickup in consumer prices compared to previous years

Driven mainly by services and energy price hikes, the annual HICP inflation rate in Bulgaria has climbed gradually from 1.3% in January to 3.7% in August 2018. Due to raised excise duties on tobacco products in place since early 2018 and higher prices of water supply services over the 2018 to 2019 period, administered prices have also contributed significantly to inflation.

Sound financial sector developments support domestic demand

Lending to the domestic nonbank private sector – especially to households – gained further momentum in the first half of 2018. However, credit dynamics still did not outpace buoyant deposit growth and the loan-to-deposit ratio thus continued to decline. Banking sector profitability increased considerably in the first half of 2018, with returns on assets and on equity reaching 1.6% and 13.1%, respectively, in June 2018. Banking sector capitalization, on the other hand, declined somewhat, reaching a still comfortable tier 1 capital ratio of 19.7% in mid-2018. Despite growing loans, the NPL ratio declined only moderately in the first half of 2018 compared to end-2017, but the coverage ratio improved considerably as provisions and reserves expanded.

Adopted roadmap toward simultaneously joining ERM II and the banking union

In the first half of 2018, Bulgaria for the first time held the semiannual presidency of the Council of the European Union. More clarity has been achieved on Bulgaria's path toward ERM II participation. On July 12, 2018, ERM II stakeholders established that a positive assessment on Bulgaria's ERM II entry will be linked to a positive ECB decision on Bulgaria entering into close cooperation with the SSM. Bulgaria applied for close cooperation with the SSM on July 18, 2018, with a view to entering into this cooperation when it starts participating in ERM II. The ECB has already made explicit which Bulgarian credit institutions will be subject to a comprehensive assessment, which can be expected to be concluded by July 2019, approximately, and would be followed by the implementation of the identified follow-up measures. Apart from close supervisory cooperation with the ECB, the Bulgarian authorities committed to implementing, before ERM II entry, additional policy measures related to other financial sector issues, institutional quality and governance.

Table 4

Main economic indicators: Bulgaria

	2015	2016	2017	Q1 17	Q2 17	Q3 17	Q4 17	Q1 18	Q2 18
	Year-on-year change of the period total in %								
GDP at constant prices	3.6	3.9	3.6	3.6	3.9	3.8	3.0	3.5	3.2
Private consumption	4.5	3.6	4.8	3.8	5.7	4.6	5.2	3.6	7.3
Public consumption	1.4	2.2	3.2	5.8	1.2	2.5	3.5	1.6	2.8
Gross fixed capital formation	2.7	–6.6	3.8	2.4	4.0	4.2	4.1	10.2	6.3
Exports of goods and services	5.7	8.1	4.0	6.1	3.6	4.6	2.1	5.0	0.5
Imports of goods and services	5.4	4.5	7.2	9.1	6.2	5.4	8.2	4.6	5.8
	Contribution to GDP growth in percentage points								
Domestic demand	3.5	1.6	5.3	5.3	5.2	4.0	6.5	3.8	6.7
Net exports of goods and services	0.1	2.3	–1.7	–2.2	–1.5	0.2	–3.4	0.0	–3.5
Exports of goods and services	3.7	5.2	2.6	4.0	2.3	3.2	1.2	3.5	0.3
Imports of goods and services	–3.6	–2.9	–4.3	–6.2	–3.8	–3.0	–4.6	–3.5	–3.8
	Year-on-year change of the period average in %								
Unit labor costs in the whole economy (nominal, per person)	2.3	2.5	5.4	2.6	4.1	7.5	8.3	6.1	5.1
Unit labor costs in manufacturing (nominal, per hour)	6.8	6.5	1.0	1.0	–1.0	2.2	2.1	7.1	8.9
Labor productivity in manufacturing (real, per hour)	2.3	2.9	11.1	9.8	12.3	10.5	11.5	3.1	1.4
Labor costs in manufacturing (nominal, per hour)	9.3	9.5	12.2	10.8	11.2	12.9	13.8	10.4	10.5
Producer price index (PPI) in industry	–2.1	–3.1	4.9	5.2	4.3	5.2	5.1	3.1	5.1
Consumer price index (here: HICP)	–1.1	–1.3	1.2	0.8	1.4	0.9	1.7	1.6	2.4
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)	9.3	7.7	6.3	7.0	6.4	5.9	5.7	5.8	5.5
Employment rate (%, 15–64 years)	62.9	63.4	66.9	64.3	67.2	68.5	67.5	66.5	67.9
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 %								
Loans to the domestic nonbank private sector[2]	–1.9	1.6	4.9	3.7	4.3	5.0	4.9	5.6	6.7
of which: loans to households	–1.4	2.0	6.1	4.6	6.0	5.9	6.1	6.4	9.2
loans to nonbank corporations	–2.2	1.3	4.1	3.1	3.3	4.4	4.1	5.1	5.3
	%								
Share of foreign currency loans in total loans to the nonbank private sector	49.9	44.4	37.9	42.5	41.0	39.7	37.9	37.0	36.3
Return on assets (banking sector)	1.0	1.4	1.2	1.2	1.4	1.2	1.2	1.1	1.6
Tier 1 capital ratio (banking sector)	20.5	20.9	20.9	21.3	21.3	21.0	20.9	19.8	19.7
NPL ratio (banking sector)	10.9	9.0	6.9	9.1	8.7	8.1	6.9	6.6	6.6
	% of GDP								
General government revenues	39.1	35.2	36.1	..	..	..	..	..	..
General government expenditures	40.7	35.0	35.2	..	..	..	..	..	..
General government balance	–1.6	0.2	0.9	..	..	..	..	..	..
Primary balance	–0.7	1.1	1.7	..	..	..	..	..	..
Gross public debt	26.0	29.0	25.4	..	..	..	..	..	..
	% of GDP								
Debt of nonfinancial corporations (nonconsolidated)	96.5	91.3	87.7	..	..	..	..	..	..
Debt of households and NPISHs[3] (nonconsolidated)	23.8	23.2	23.7	..	..	..	..	..	..
	% of GDP (based on EUR), period total								
Trade balance	–5.8	–2.1	–4.1	–5.9	–3.2	–1.3	–6.3	–7.3	–6.4
Services balance	6.7	6.1	6.0	1.8	5.3	13.8	2.0	2.7	5.4
Primary income	–4.5	–5.1	–1.1	–2.2	–0.7	–0.6	–1.0	–1.3	–1.2
Secondary income	3.6	3.3	3.7	5.2	3.5	4.4	2.0	4.7	3.1
Current account balance	–0.1	2.3	4.5	–1.0	4.8	16.2	–3.3	–1.2	0.9
Capital account balance	3.1	2.2	1.0	1.1	0.7	1.0	1.3	0.0	1.5
Foreign direct investment (net)[4]	–5.2	–1.5	–1.4	–2.2	–1.3	–0.7	–1.5	0.5	–0.8
	% of GDP (rolling four-quarter GDP, based on EUR), end of period								
Gross external debt	81.6	79.3	74.2	78.8	77.5	74.9	74.2	75.7	72.1
Gross official reserves (excluding gold)	42.2	46.7	44.1	46.5	45.9	46.4	44.1	41.5	42.5
	Months of imports of goods and services								
Gross official reserves (excluding gold)	8.0	9.4	8.2	9.0	8.8	8.8	8.2	7.7	7.9
	EUR million, period total								
GDP at current prices	45,287	48,129	50,430	10,260	12,347	13,800	14,023	10,982	13,249

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

[1] *Not available in a currency board regime.*
[2] *Foreign currency component at constant exchange rates.*
[3] *Nonprofit institutions serving households.*
[4] *+ = net accumulation of assets larger than net accumulation of liabilities (net outflow of capital).*
– = net accumulation of assets smaller than net accumulation of liabilities (net inflow of capital).

5 Croatia: solid growth, Agrokor settlement plan adopted

Strong private consumption growth, but investment and exports disappoint

GDP growth in Croatia re-accelerated to 2.7% in the first half of 2018, after a temporary slowdown in the last quarter of 2017. Private consumption remained the main growth driver, growing by 3.7% year on year in the first half of the year. It benefited from steadily falling unemployment, an increase in net real earnings and a slow acceleration of credit growth. Gross fixed capital formation advanced by 3.3% in the first half of 2018 against the backdrop of an improving investment climate (with the ESI near all-time highs) and a higher absorption of EU funds. The latter also fueled construction activity, which benefited from rising demand and real estate prices.

Net exports made a negative contribution to growth. Export growth was negative in the first quarter of 2018, partially due to strong base effects, but re-accelerated to 5.6% in the second quarter. Import growth remained strong at 5.1% in the first half of the year. The six-month trade deficit was reported at EUR 4.7 billion, 9% higher than in the same period of 2017. The services balance was supported by another strong tourist season.

On the output side, the main contribution to growth came from wholesale and retail trade, transport, accommodation and food service activities, which expanded by 4.6% in the first half of 2018. Industry and manufacturing output grew by only 0.5% in the first half of 2018.

Fiscal consolidation continues; room for limited fiscal easing

After a small budget surplus in 2017, the Croatian government expects budget deficits of 0.5% of GDP in 2018 and 0.4% of GDP in 2019. The debt-to-GDP ratio continued its decline and stood at 76.2% of GDP at the end of the first quarter. According to Croatia's public debt management strategy, the ratio will be reduced to 69% of GDP by 2020.

Despite ongoing consolidation, the Croatian government should have enough fiscal space to support EU fund absorption and deliver some limited fiscal easing to the private sector. The government just submitted a proposal to parliament that includes lower income and property tax rates from 2019 and a lower VAT rate from 2020.

Central bank continues expansionary stance

Monthly HICP inflation has accelerated over the course of the year and reached 2.1% year on year in August 2018, largely driven by energy price developments. Core inflation remained roughly unchanged at around 0.7%. The national reference rate (average interest rate paid by banks on deposits) continued its downward trend and Croatian kuna liquidity in the banking system increased to a record high of HRK 23.3 billion in July 2018 (+18% since end-2017). In 2018, the Croatian central bank has so far conducted two outright foreign exchange operations, purchasing EUR 726 million from the banking sector. Growth of lending to households accelerated over the first half of the year. Corporate lending growth remained negative.

Croatian outlook improves due to Agrokor settlement

The elevated risks surrounding the restructuring of the Agrokor company have decreased considerably. On July 4, 2018, Agrokor creditors representing 80% of outstanding claims voted in favor of the proposed settlement plan. The decision on the settlement became effective in October 2018, and restructuring could be completed around January 2019. Some risks associated with the orderly implementation of the settlement plan remain. In addition, Uljanik, a Croatian shipbuilding company that employs roughly 4,200 people, has been in severe financial distress. A restructuring solution has yet to be agreed.

Despite the Uljanik situation, the rating agency Standard & Poor's recently revised the outlook on Croatia's BB+ sovereign rating from neutral to positive. Fitch and Standard & Poor's upgraded Croatia's long-term sovereign rating from BB to BB+ earlier in 2018, citing strong GDP growth prospects and an improving fiscal position that will continue to reduce the government debt burden.

Table 5

Main economic indicators: Croatia

	2015	2016	2017	Q1 17	Q2 17	Q3 17	Q4 17	Q1 18	Q2 18
	Year-on-year change of the period total in %								
GDP at constant prices	2.4	3.5	2.9	2.9	3.2	3.4	2.2	2.5	2.9
Private consumption	1.1	3.5	3.6	3.5	3.8	3.7	3.4	3.9	3.6
Public consumption	–1.0	0.7	2.7	2.0	2.3	3.1	3.4	2.8	2.5
Gross fixed capital formation	3.8	6.5	3.8	6.1	3.7	3.7	1.9	3.6	3.1
Exports of goods and services	9.4	5.6	6.4	10.6	7.0	5.6	3.8	–0.5	5.6
Imports of goods and services	9.2	6.2	8.1	11.7	6.1	8.3	6.8	5.5	4.7
	Contribution to GDP growth in percentage points								
Domestic demand	2.1	3.7	3.5	4.2	3.0	3.4	3.7	5.9	2.8
Net exports of goods and services	0.3	–0.1	–0.6	–1.4	0.2	0.1	–1.5	–3.1	0.2
Exports of goods and services	4.2	2.7	3.1	4.1	3.1	3.7	1.7	–0.2	2.6
Imports of goods and services	–4.0	–2.8	–3.7	–5.5	–2.9	–3.6	–3.1	–2.9	–2.3
	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)	51.7	–3.0	2.1	9.1	–3.2	1.0	1.5	5.5	8.8
Labor productivity in manufacturing (real, per hour)	–32.3	7.0	3.5	–2.2	9.1	4.6	2.3	2.5	3.8
Labor costs in manufacturing (nominal, per hour)	2.4	4.2	5.4	6.7	5.6	5.6	3.8	8.1	13.0
Producer price index (PPI) in industry	–3.8	–4.3	2.0	2.1	1.7	1.8	2.2	1.1	2.5
Consumer price index (here: CPI)	–0.3	–0.6	1.3	1.1	1.1	1.4	1.5	1.1	1.8
EUR per 1 HRK, + = HRK appreciation	0.3	1.1	0.9	2.0	1.0	0.9	–0.1	0.4	0.4
	Period average levels								
Unemployment rate (ILO definition, %, 15–64 years)	16.4	13.3	11.3	14.1	11.1	9.1	11.0	10.5	7.7
Employment rate (%, 15–64 years)	56.0	56.9	58.9	55.9	59.2	61.0	59.6	59.0	61.1
Key interest rate per annum (%)	..	..	..	..	..	..	..	..	..
HRK per 1 EUR	7.6	7.5	7.5	7.5	7.4	7.4	7.5	7.4	7.4
	Nominal year-on-year change in the period-end stock in %								
Loans to the domestic nonbank private sector[1]	–4.0	–3.8	0.8	–1.7	–0.9	0.0	0.8	0.0	2.2
of which: loans to households	–3.2	–4.6	2.3	–0.2	0.1	0.7	2.3	2.3	4.0
loans to nonbank corporations	–5.2	–2.6	–1.1	–3.5	–2.1	–0.9	–1.1	–3.0	–0.3
	%								
Share of foreign currency loans in total loans to the nonbank private sector	66.7	60.1	56.9	58.9	58.0	57.7	56.9	56.1	55.5
Return on assets (banking sector)	–1.1	1.3	0.9	0.4	0.5	0.7	0.9	1.4	1.5
Tier 1 capital ratio (banking sector)	19.1	21.3	22.3	21.6	21.7	21.3	22.3	21.6	21.4
NPL ratio (banking sector)	16.7	13.8	11.3	13.9	13.2	12.5	11.3	11.4	11.2
	% of GDP								
General government revenues	44.9	46.3	46.0	..	..	..	..	..	..
General government expenditures	48.4	47.2	45.3	..	..	..	..	..	..
General government balance	–3.4	–0.9	0.8	..	..	..	..	..	..
Primary balance	0.0	2.2	3.4	..	..	..	..	..	..
Gross public debt	83.8	80.6	78.0	..	..	..	..	..	..
	% of GDP								
Debt of nonfinancial corporations (nonconsolidated)	99.1	96.3	90.0	..	..	..	..	..	..
Debt of households and NPISHs[2] (nonconsolidated)	38.3	35.0	34.2	..	..	..	..	..	..
	% of GDP (based on EUR), period total								
Trade balance	–15.6	–15.8	–16.8	–18.5	–19.1	–15.8	–14.3	–20.9	–18.1
Services balance	17.9	18.7	19.0	3.5	19.1	43.2	5.3	2.6	18.8
Primary income	–0.7	–3.2	–1.8	–2.1	–3.2	–2.2	0.3	–2.4	–2.5
Secondary income	2.9	2.9	3.6	3.5	4.0	2.8	4.3	3.0	3.4
Current account balance	4.5	2.6	4.0	–13.6	1.0	28.1	–4.4	–17.7	1.6
Capital account balance	0.7	1.4	0.6	0.7	0.9	0.5	0.5	1.0	1.4
Foreign direct investment (net)[3]	–0.5	–4.1	–2.4	–2.1	–1.3	–2.5	–3.6	–3.5	–2.0
	% of GDP (rolling four-quarter GDP, based on EUR), end of period								
Gross external debt	101.7	89.3	81.8	92.9	84.2	81.8	81.8	82.0	80.0
Gross official reserves (excluding gold)	30.7	29.0	32.1	34.0	29.3	30.8	32.1	33.3	33.3
	Months of imports of goods and services								
Gross official reserves (excluding gold)	8.0	7.6	7.8	8.7	7.4	7.6	7.8	8.1	8.1
	EUR million, period total								
GDP at current prices	44,623	46,656	48,999	10,816	12,331	13,746	12,107	11,297	13,004

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

[1] *Foreign currency component at constant exchange rates.*
[2] *Nonprofit institutions serving households.*
[3] *+ = net accumulation of assets larger than net accumulation of liabilities (net outflow of capital).*
– = net accumulation of assets smaller than net accumulation of liabilities (net inflow of capital).

6 Czech Republic: economic boom has passed its peak

Growth remains robust thanks to domestic demand

After the Czech economy expanded at the second highest pace in a decade in 2017 (4.3%), growth slowed down noticeably in the first half of 2018 (to just above 3%). Real GDP thus grew at rates broadly in line with Czech National Bank (CNB) estimates of potential output. In contrast to last year's positive contribution to the economic boom by both domestic demand and net exports, growth in the first half of 2018 was driven solely by domestic demand. Net exports, in contrast, put a slight drag on growth as a result of weaker external demand. Household consumption remained one of the key growth determinants. It was buoyed particularly by strong growth in disposable income on the back of rising wages, higher social benefits and stronger business income. In addition, consumer expectations remained optimistic despite some recent slight deterioration. The positive contribution of public consumption to economic growth increased in the first half of 2018, mainly owing to accelerated wage growth. Fixed investment continued to post major gains in the first half of 2018 so that its contribution to growth nearly tripled compared with 2017 as a whole. On the one hand, this is ascribable to intensified household housing investment despite tightening monetary policy and credit standards. On the other hand, fixed capital formation by the public and private nonfinancial sectors also strengthened. While the former was spurred mainly by higher drawdown of EU funds, the latter echoes firms' effort to automatize production in the face of labor shortages and rapidly growing wages.

The surplus of the trade and services balance improved on the back of positive terms-of-trade values. As a result, the current account balance turned positive again despite deficits in the primary and secondary income balances. The fiscal surplus recorded in 2017 is expected to remain broadly unchanged this year, rising public sector wages and strong government investment notwithstanding. This is because these higher expenditures will be counteracted by higher revenue stemming from strong economic growth and certain government measures[4]. As a result, gross public debt relative to GDP is projected to decline by about 2 percentage points by end-2018.

"Treat our staff nicely" – labor shortages increasingly dampen the economy

Robust economic growth is taking its toll in the form of a sustained tightening of the labor market. Employment has climbed to new historical highs while the unemployment rate stood at 2.2% in the second quarter of 2018. This is the lowest level since the beginning of transition and still the lowest rate in the EU. The shortage of labor and the resulting wage hikes (which somewhat outpace productivity growth) pose a growing challenge for firms and a barrier to growth. This is exemplified by a restaurant which is said to have put up a sign asking guests for an unusual favor: "Please treat our staff nicely as it is much more difficult to find a waiter than a guest."

Inflation eased somewhat in the first half of 2018 compared with 2017 as a whole, hovering on average around the CNB's target (2% ±1 percentage point). This deceleration was brought about mainly by lower food price growth and lower core inflation in the first quarter of 2018. Since the second quarter of 2018, however, food and fuel price growth started to quicken while core inflation accelerated, too. As a result, overall inflation has been picking up over the last couple of months and came in at 2.4% in August.

The CNB expects headline inflation to remain in the upper half of the tolerance band until mid-2019 before it returns to target. Therefore, the CNB has continued its monetary policy tightening; so far in 2018, it has lifted its two-week repo rate by a total of 100 basis points in four steps. The key policy rate was raised most recently to 1.5% on September 27, 2018.

[4] *E.g. the electronic sales registration introduced in the recent past, and VAT control statements.*

Table 6

Main economic indicators: Czech Republic

	2015	2016	2017	Q1 17	Q2 17	Q3 17	Q4 17	Q1 18	Q2 18
	Year-on-year change of the period total in %								
GDP at constant prices	5.3	2.5	4.3	3.6	3.6	4.9	4.9	3.4	2.7
Private consumption	3.7	3.6	4.3	4.0	4.2	4.4	4.5	4.1	3.8
Public consumption	1.9	2.7	1.3	2.1	1.5	0.6	1.0	3.0	2.7
Gross fixed capital formation	10.2	–3.1	3.3	0.0	3.6	4.6	4.6	8.9	8.8
Exports of goods and services	6.0	4.3	6.7	7.8	4.5	6.7	7.9	3.8	4.3
Imports of goods and services	6.8	2.8	6.0	5.8	3.5	6.4	8.2	5.3	5.0
	Contribution to GDP growth in percentage points								
Domestic demand	5.5	1.0	3.2	1.3	2.6	4.2	4.6	4.3	2.9
Net exports of goods and services	–0.2	1.4	1.1	2.3	1.1	0.7	0.3	–0.8	–0.1
Exports of goods and services	5.0	3.5	5.4	6.6	3.7	5.0	6.2	3.2	3.5
Imports of goods and services	–5.2	–2.1	–4.3	–4.3	–2.6	–4.3	–5.9	–4.0	–3.6
	Year-on-year change of the period average in %								
Unit labor costs in the whole economy (nominal, per person)	–0.8	3.1	3.6	3.1	4.7	3.1	3.4	6.4	6.6
Unit labor costs in manufacturing (nominal, per hour)	0.3	2.6	0.5	1.8	–1.7	1.8	0.1	4.3	7.2
Labor productivity in manufacturing (real, per hour)	3.7	2.0	6.7	4.9	10.1	5.6	6.2	4.1	2.6
Labor costs in manufacturing (nominal, per hour)	4.0	4.7	7.2	6.8	8.2	7.5	6.3	8.6	10.0
Producer price index (PPI) in industry	–2.4	–3.2	0.8	2.3	1.5	0.1	–0.9	–2.4	–0.2
Consumer price index (here: HICP)	0.3	0.6	2.4	2.5	2.3	2.4	2.5	1.7	2.1
EUR per 1 CZK, + = CZK appreciation	0.9	0.9	2.7	0.1	1.8	3.6	5.4	6.4	3.7
	Period average levels								
Unemployment rate (ILO definition, %, 15–64 years)	5.1	4.0	2.9	3.5	3.0	2.8	2.4	2.4	2.2
Employment rate (%, 15–64 years)	70.2	72.0	73.6	72.8	73.3	74.1	74.3	74.2	74.7
Key interest rate per annum (%)	0.1	0.1	0.2	0.1	0.1	0.2	0.4	0.7	0.8
CZK per 1 EUR	27.3	27.0	26.3	27.0	26.6	26.1	25.6	25.4	25.6
	Nominal year-on-year change in the period-end stock in %								
Loans to the domestic nonbank private sector[1]	6.7	7.8	6.9	9.2	9.2	8.8	6.9	6.7	6.3
of which: loans to households	7.6	7.2	7.5	8.0	8.1	7.7	7.5	7.6	7.5
loans to nonbank corporations	5.7	8.5	6.2	10.6	10.5	10.1	6.2	5.6	4.9
	%								
Share of foreign currency loans in total loans to the nonbank private sector	10.8	13.0	13.3	15.5	14.8	15.2	13.3	14.5	14.8
Return on assets (banking sector)	1.2	1.3	1.1	1.1	1.3	1.2	1.1	1.0	1.2
Tier 1 capital ratio (banking sector)	17.9	17.9	18.7	17.6	18.3	18.0	18.7	18.1	18.3
NPL ratio (banking sector)	5.5	4.6	3.7	4.2	4.0	3.8	3.7	..	..
	% of GDP								
General government revenues	41.1	40.2	40.4	..	..	..	..	..	..
General government expenditures	41.7	39.4	38.8	..	..	..	..	..	..
General government balance	–0.6	0.7	1.6	..	..	..	..	..	..
Primary balance	0.5	1.7	2.3	..	..	..	..	..	..
Gross public debt	40.0	36.8	34.6	..	..	..	..	..	..
	% of GDP								
Debt of nonfinancial corporations (nonconsolidated)	59.7	58.5	59.8	..	..	..	..	..	..
Debt of households and NPISHs[2] (nonconsolidated)	30.5	31.2	32.6	..	..	..	..	..	..
	% of GDP (based on EUR), period total								
Trade balance	4.1	5.2	4.7	7.7	5.6	3.3	2.8	6.8	5.3
Services balance	1.7	2.3	2.4	2.5	2.6	2.4	2.2	2.7	2.7
Primary income	–5.6	–5.3	–5.2	–0.4	–7.7	–7.3	–4.8	–3.3	–6.4
Secondary income	0.0	–0.6	–0.9	–1.3	–1.2	–1.1	–0.2	–1.7	–1.0
Current account balance	0.2	1.6	1.0	8.4	–0.6	–2.7	–0.1	4.5	0.6
Capital account balance	2.2	1.1	0.9	0.1	0.6	0.6	2.2	0.1	–0.1
Foreign direct investment (net)[3]	1.1	–3.9	–2.7	–5.4	–2.1	–0.9	–2.6	–0.8	–3.4
	% of GDP (rolling four-quarter GDP, based on EUR), end of period								
Gross external debt	68.5	73.4	89.2	90.3	92.6	91.9	89.2	86.0	83.6
Gross official reserves (excluding gold)	35.0	45.9	64.1	68.8	68.7	66.7	64.1	61.4	61.2
	Months of imports of goods and services								
Gross official reserves (excluding gold)	5.6	7.7	10.7	11.3	11.3	11.0	10.7	10.4	10.4
	EUR million, period total								
GDP at current prices	168,522	176,368	191,921	42,814	47,707	49,406	51,994	48,311	51,983

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

[1] *Foreign currency component at constant exchange rates.*
[2] *Nonprofit institutions serving households.*
[2] *+ = net accumulation of assets larger than net accumulation of liabilities (net outflow of capital).*
– = net accumulation of assets smaller than net accumulation of liabilities (net inflow of capital).

7 Hungary: approaching the end of loose policy conditions

GDP growth accelerated in the first half of 2018, driven by strong consumption and investment activity

GDP in Hungary grew by 4.6% year on year during the first half of 2018. Private consumption and gross fixed capital formation were the major pillars of growth, while net real exports made a slightly negative contribution. Private consumption benefited from the acceleration of employment growth, continued heavy wage increases and strong and improving consumer confidence. Vibrant investment activity was boosted by the utilization of EU funds, a notable pick-up in lending to corporates and in lending to households for house purchases amid low interest rates, increased capacity utilization, expanded housing subsidies and a further improvement in economic sentiment. Export growth slowed somewhat, mirroring weaker demand in major export markets and the wage-driven erosion of cost competitiveness. Import growth slowed along with decelerating exports and a substantial run-down of inventories, so that net real exports contributed substantially less negatively than in 2017.

Hungary called on to take corrective action to approach MTO

According to the European Commission's spring forecast, Hungary's budget deficit will widen to 2.4% of GDP in 2018. The budgetary stance in 2018 is procyclical, with the structural deficit rising further beyond 3% of GDP and thus further away from the medium-term objective (MTO) of 1.5% of GDP. Having assessed the country's budgetary developments, the European Commission concluded in May 2018 that Hungary was in significant deviation from the adjustment path toward the MTO in 2017. Following up on this, the EU Council in June 2018 issued a recommendation that Hungary implement measures to achieve a structural adjustment of 1% of GDP already in 2018 and gave Hungary a deadline of mid-October 2018 to report on action taken.

MNB has signaled intention to start tightening monetary conditions from mid-2019

Inflation rose to 3.4% by the third quarter of 2018, mainly due to higher energy prices. Core inflation remained stable at around 2.3%, as rising services price inflation was counterbalanced by decelerating processed food price increases.

The Hungarian central bank (MNB) continued to maintain a loose monetary policy stance. While it kept its main policy rates unchanged, it gradually increased the outstanding volume of its Hungarian forint liquidity-providing foreign exchange swaps (until May) and of its monetary policy interest rate swaps. The MNB also continued its mortgage bond purchase program. However, the increase in oil prices led to an upward revision in the MNB's medium-term inflation forecast in June 2018, which (along with heightened exchange rate volatility) prompted the MNB to scale back its easing bias. Finally, at its meeting in September 2018, the monetary council announced that it would start to gradually normalize monetary conditions. To this end, the three-month deposit facility, the monetary interest rate swaps and the mortgage bond purchase program will be phased out by end-2018. In the future, required reserves will be the main policy instrument, and monetary conditions will be adjusted through foreign exchange swaps and the interest rate corridor. At the same time, the MNB decided to introduce a new, liquidity-neutral "Funding for Growth Scheme Fix" to promote long-term lending to SMEs at fixed interest rates in 2019.

Lending grew during the first half of 2018. Lending to the corporate sector continued to be supported by strong investment growth, the loosening of lending conditions by banks and the MNB's Market-based Lending Scheme, which is set to terminate at end-2018, however. Lending to households benefited from ongoing strong wage growth, housing subsidies, the modest loosening of lending standards by banks and the expansion of fixed rate loans. To further promote lending to households at fixed interest rates, the MNB has prescribed tighter debt service-to-income ratios for loans with interest rate fixation periods of less than ten years, effective from October 1, 2018.

Table 7

Main economic indicators: Hungary

	2015	2016	2017	Q1 17	Q2 17	Q3 17	Q4 17	Q1 18	Q2 18
	Year-on-year change of the period total in %								
GDP at constant prices	3.4	2.2	4.0	4.3	3.3	3.9	4.4	4.4	4.8
Private consumption	3.6	4.3	4.7	3.5	4.7	5.1	5.6	6.0	5.4
Public consumption	1.1	0.8	0.3	–5.8	–2.2	2.8	6.1	2.6	0.3
Gross fixed capital formation	1.9	–10.6	16.8	21.6	21.0	14.4	13.1	17.1	15.0
Exports of goods and services	8.5	3.4	7.1	10.2	5.4	4.7	8.3	3.5	6.2
Imports of goods and services	6.4	2.9	9.7	12.7	7.6	9.1	9.7	3.8	7.5
	Contribution to GDP growth in percentage points								
Domestic demand	1.2	1.5	5.4	5.3	4.5	6.8	4.9	4.4	5.4
Net exports of goods and services	2.2	0.7	–1.4	–1.0	–1.2	–2.8	–0.5	0.0	–0.5
Exports of goods and services	7.5	3.1	6.3	9.6	5.0	4.2	7.0	3.4	5.7
Imports of goods and services	–5.2	–2.4	–7.7	–10.6	–6.2	–7.0	–7.4	–3.4	–6.2
	Year-on-year change of the period average in %								
Unit labor costs in the whole economy (nominal, per person)	–2.4	4.4	5.9	6.1	7.8	5.1	4.4	7.8	5.4
Unit labor costs in manufacturing (nominal, per hour)	–0.1	8.5	5.9	4.1	6.3	7.6	5.6	7.9	6.7
Labor productivity in manufacturing (real, per hour)	4.1	–2.7	2.3	3.4	2.9	0.9	2.1	1.5	2.1
Labor costs in manufacturing (nominal, per hour)	4.0	5.6	8.4	7.6	9.4	8.6	7.9	9.5	8.8
Producer price index (PPI) in industry	–1.0	–1.7	3.3	3.5	2.9	2.6	4.3	3.6	5.3
Consumer price index (here: HICP)	0.1	0.4	2.4	2.6	2.1	2.5	2.3	2.0	2.8
EUR per 1 HUF, + = HUF appreciation	–0.4	–0.5	0.7	1.0	1.1	1.5	–0.7	–0.6	–2.3
	Period average levels								
Unemployment rate (ILO definition, %, 15–64 years)	6.9	5.2	4.2	4.6	4.3	4.1	3.8	3.9	3.6
Employment rate (%, 15–64 years)	64.0	66.5	68.2	67.1	68.1	68.7	68.8	68.7	69.3
Key interest rate per annum (%)	1.6	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9
HUF per 1 EUR	309.9	311.5	309.3	309.1	309.9	306.5	311.7	311.1	317.1
	Nominal year-on-year change in the period-end stock in %								
Loans to the domestic nonbank private sector[1]	–12.7	0.0	4.3	0.7	3.7	4.1	4.3	4.6	6.5
of which: loans to households	–15.6	–2.7	1.3	–0.7	0.6	1.6	1.3	–0.1	2.1
loans to nonbank corporations	–10.0	2.3	6.8	1.8	6.3	6.3	6.8	8.4	10.1
	%								
Share of foreign currency loans in total loans to the nonbank private sector	24.3	22.4	23.5	22.4	23.0	23.1	23.5	23.5	24.7
Return on assets (banking sector)	–0.1	1.3	1.8	2.1	2.1	1.8	1.8	1.7	1.6
Tier 1 capital ratio (banking sector)	16.9	19.2	21.1	19.3	19.7	19.6	21.1	20.2	19.3
NPL ratio (banking sector)	10.6	6.4	3.7	5.3	4.6	4.1	3.7	3.1	2.8
	% of GDP								
General government revenues	48.2	44.9	44.5	..	..	..	..	..	..
General government expenditures	50.1	46.5	46.5	..	..	..	..	..	..
General government balance	–1.9	–1.7	–2.0	..	..	..	..	..	..
Primary balance	1.6	1.6	0.8	..	..	..	..	..	..
Gross public debt	76.7	76.0	73.6	..	..	..	..	..	..
	% of GDP								
Debt of nonfinancial corporations (nonconsolidated)	77.0	73.2	66.0	..	..	..	..	..	..
Debt of households and NPISHs[2] (nonconsolidated)	20.9	20.4	18.7	..	..	..	..	..	..
	% of GDP (based on EUR), period total								
Trade balance	3.7	4.1	1.5	1.6	3.4	0.6	0.7	0.1	1.7
Services balance	4.5	6.0	6.0	5.5	6.1	7.0	5.3	6.2	6.2
Primary income	–4.5	–2.5	–4.0	–4.0	–4.6	–3.7	–3.7	–3.3	–4.9
Secondary income	–0.8	–1.3	–0.3	–0.2	0.4	–0.7	–0.6	–0.2	–0.6
Current account balance	2.8	6.2	3.2	2.9	5.3	3.2	1.6	2.9	2.4
Capital account balance	4.6	0.0	1.0	1.1	1.7	0.4	0.7	3.8	1.3
Foreign direct investment (net)[3]	–1.1	–2.0	–1.3	–2.0	2.8	–2.8	–3.1	–0.9	0.0
	% of GDP (rolling four-quarter GDP, based on EUR), end of period								
Gross external debt	107.8	97.3	85.0	96.9	94.1	89.3	85.0	82.9	82.4
Gross official reserves (excluding gold)	27.3	21.4	18.8	21.0	19.8	18.3	18.8	18.3	18.7
	Months of imports of goods and services								
Gross official reserves (excluding gold)	4.0	3.2	2.8	3.1	2.9	2.7	2.8	2.7	2.8
	EUR million, period total								
GDP at current prices	110,706	113,760	123,465	27,217	30,515	31,664	34,069	29,426	32,625

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

[1] *Foreign currency component at constant exchange rates.*
[2] *Nonprofit institutions serving households.*
[3] *+ = net accumulation of assets larger than net accumulation of liabilities (net outflow of capital).*
– = net accumulation of assets smaller than net accumulation of liabilities (net inflow of capital).

8 Poland: no adjustment of structural budget deficit amidst strong growth

Persistent, albeit moderate unit labor cost increases

GDP growth in Poland remained at about 5% in the first half of 2018 (after 4.6% in 2017), with quarter-on-quarter growth declining to 1.0% after 1.6% in the first quarter. Total final demand growth was equally strong year on year in both quarters, with weak export growth (in line with German import growth) offset by stronger inventory build-up in the first quarter and both strong foreign and domestic demand growth in the second quarter. Hence, annual real import growth remained nearly unchanged, and the net export contribution turned positive. In the first half of 2018, the current account balance showed a small surplus of 0.5% of GDP, lower than the 0.9% of GDP recorded a year earlier due to the deterioration of the trade balance to –0.5% of GDP from 0.7% of GDP. The capital account surplus increased to 1.2% of GDP from 0.7% of GDP. Net FDI inflows rose to 2.2% of GDP from 0.2% of GDP. Both fixed investment growth and the contribution of inventory build-up slowed in the second quarter, possibly reflecting previously low foreign demand. Factors conducive to business fixed investment like strong demand, high capacity utilization rates, a stable liquidity position and low real lending rates remained in place, but industrial confidence and profitability showed slight signs of deterioration, possibly linked to moderate unit labor cost (ULC) increases. In view of the number of dwellings under construction, housing investment growth again appears to have accelerated moderately, benefiting from income and financing conditions. Private consumption growth was robust at about 4.5%, supported by ongoing real wage and employment growth, stronger real pensions growth and further improvements in consumer confidence.

Headline inflation moderately higher, but core inflation hardly changed

In the first half of 2018, manufacturing ULC in Poland accelerated and outpaced corresponding ULC growth figures recorded in the euro area by 3 percentage points. The Polish złoty's euro value was higher year on year by 2.5 percentage points, eroding price competitiveness further, while helping contain inflation. In August 2018, annual headline inflation stood at 1.4% (HICP) and 2.0% (national CPI), while core inflation stood at 0.6% (HICP excluding energy and unprocessed food) and 0.9% (CPI excluding energy and food). Headline and core figures were higher than in March 2018, by 0.7 and 0.2 percentage points, under both concepts. The Polish Monetary Policy Council (MPC), pursuing an inflation target of 2.5% (CPI), has held the policy rate at 1.5% since March 2015. On October 3, 2018, it assessed that inflation will remain close to target over the monetary policy horizon and that the current interest rate level is conducive to keeping the economy on a sustainable growth path.

Risk of significant deviation from the structural adjustment path

Both the government's Convergence Program and the European Commission staff forecast expect a higher general government revenue-to-GDP ratio (due to new VAT collection measures) and a higher expenditure-to-GDP ratio (due to higher public investment) in 2018 than in 2017. The European Commission forecasts a lower headline deficit of 1.4% of GDP (2017: 1.7% of GDP), but a higher structural deficit of 2.2% of GDP (2017: 2.0% of GDP), implying a structural primary deficit of 0.7% of GDP (2017: 0.5% of GDP) and a persistent deviation from the medium-term objective of a structural deficit of 1% of GDP. Thus, in June 2018, the EU Council saw the risk of a significant deviation from the structural adjustment of 0.5% of GDP in 2018, and it recommended that the Polish government take action to ensure a structural adjustment of 0.6% of GDP in 2019. General government gross debt is forecast by the European Commission to reach 49.6% of GDP at end-2018, after 50.6% of GDP at end-2017.

Table 8

Main economic indicators: Poland

	2015	2016	2017	Q1 17	Q2 17	Q3 17	Q4 17	Q1 18	Q2 18
	Year-on-year change of the period total in %								
GDP at constant prices	3.8	3.0	4.6	4.7	4.2	5.4	4.4	5.1	5.0
Private consumption	3.0	3.9	4.7	4.6	4.7	4.7	4.7	4.2	4.7
Public consumption	2.4	1.8	3.4	2.2	3.1	3.4	4.5	3.4	4.1
Gross fixed capital formation	6.1	–8.2	3.4	1.0	1.1	3.5	5.7	8.1	4.5
Exports of goods and services	7.7	8.8	8.2	11.3	4.6	9.3	7.9	1.1	4.2
Imports of goods and services	6.6	7.6	8.7	10.7	7.7	7.0	9.4	3.4	3.6
	Contribution to GDP growth in percentage points								
Domestic demand	3.2	2.1	4.6	3.9	5.5	4.0	4.7	6.3	4.5
Net exports of goods and services	0.6	0.8	0.1	0.8	–1.3	1.4	–0.3	–1.2	0.5
Exports of goods and services	3.7	4.4	4.3	6.1	2.5	4.8	3.8	0.6	3.9
Imports of goods and services	–3.0	–3.5	–4.2	–5.4	–3.8	–3.5	–4.1	–1.8	–3.3
	Year-on-year change of the period average in %								
Unit labor costs in the whole economy (nominal, per person)	–0.6	2.6	1.3	0.7	1.0	1.1	2.4	2.3	4.5
Unit labor costs in manufacturing (nominal, per hour)	0.7	3.2	3.0	3.4	2.8	2.3	3.5	4.2	4.0
Labor productivity in manufacturing (real, per hour)	3.2	0.6	3.6	1.3	4.4	4.2	4.2	3.9	4.0
Labor costs in manufacturing (nominal, per hour)	3.9	3.8	6.6	4.7	7.3	6.6	7.9	8.2	8.2
Producer price index (PPI) in industry	–2.1	–0.3	2.7	4.1	2.7	2.6	1.6	0.1	2.4
Consumer price index (here: HICP)	–0.7	–0.2	1.6	1.7	1.5	1.5	1.8	1.0	1.1
EUR per 1 PLN, + = PLN appreciation	0.0	–4.1	2.5	1.0	3.7	1.9	3.5	3.4	–1.0
	Period average levels								
Unemployment rate (ILO definition, %, 15–64 years)	7.6	6.3	5.0	5.5	5.0	4.8	4.5	4.2	3.6
Employment rate (%, 15–64 years)	62.9	64.5	66.1	65.4	66.2	66.5	66.4	66.6	67.7
Key interest rate per annum (%)	1.6	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
PLN per 1 EUR	4.2	4.4	4.3	4.3	4.2	4.3	4.2	4.2	4.3
	Nominal year-on-year change in the period-end stock in %								
Loans to the domestic nonbank private sector[1]	5.3	3.9	6.2	5.5	6.1	6.1	6.2	5.6	5.5
of which: loans to households	3.9	4.0	4.8	4.2	4.4	4.5	4.8	5.1	5.2
loans to nonbank corporations	7.8	3.8	8.7	7.8	9.3	9.1	8.7	6.3	6.0
	%								
Share of foreign currency loans in total loans to the nonbank private sector	26.9	25.8	21.3	24.2	23.2	22.6	21.3	21.2	21.5
Return on assets (banking sector)	0.7	0.8	0.8	0.6	0.8	0.8	0.8	0.8	0.9
Tier 1 capital ratio (banking sector)	15.0	16.1	17.2	16.5	17.0	17.2	17.2	17.0	17.0
NPL ratio (banking sector)	7.5	7.1	6.8	6.9	6.9	6.9	6.8	7.7	7.3
	% of GDP								
General government revenues	38.9	38.8	39.6	..	..	..	..	..	..
General government expenditures	41.6	41.1	41.2	..	..	..	..	..	..
General government balance	–2.6	–2.3	–1.7	..	..	..	..	..	..
Primary balance	–0.9	–0.6	0.0	..	..	..	..	..	..
Gross public debt	51.1	54.2	50.6	..	..	..	..	..	..
	% of GDP								
Debt of nonfinancial corporations (nonconsolidated)	46.5	49.0	47.1	..	..	..	..	..	..
Debt of households and NPISHs[2] (nonconsolidated)	35.4	36.3	35.7	..	..	..	..	..	..
	% of GDP (based on EUR), period total								
Trade balance	0.5	0.7	0.3	0.7	0.7	0.5	–0.4	–1.0	0.0
Services balance	2.5	3.3	3.9	3.8	4.1	3.9	3.6	4.5	4.8
Primary income	–3.4	–4.2	–4.0	–2.6	–4.6	–4.3	–4.3	–2.8	–4.1
Secondary income	–0.2	–0.3	0.0	0.0	–0.3	–0.1	0.2	–0.2	–0.1
Current account balance	–0.6	–0.5	0.2	1.9	–0.1	0.0	–1.0	0.5	0.5
Capital account balance	2.4	1.1	1.3	0.6	0.8	0.9	2.5	1.2	1.3
Foreign direct investment (net)[3]	–2.1	–0.9	–1.2	–2.4	1.8	–2.1	–2.0	–2.8	–1.6
	% of GDP (rolling four-quarter GDP, based on EUR), end of period								
Gross external debt	70.5	75.4	68.4	74.8	72.6	69.4	68.4	67.2	64.7
Gross official reserves (excluding gold)	19.5	24.5	19.5	23.3	21.3	20.0	19.5	19.6	18.7
	Months of imports of goods and services								
Gross official reserves (excluding gold)	5.0	6.1	4.7	5.7	5.1	4.8	4.7	4.7	4.4
	EUR million, period total								
GDP at current prices	429,921	425,880	465,897	105,698	113,072	115,122	132,004	116,136	118,028

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

[1] *Foreign currency component at constant exchange rates.*
[2] *Nonprofit institutions serving households.*
[3] *+ = net accumulation of assets larger than net accumulation of liabilities (net outflow of capital).*
– = net accumulation of assets smaller than net accumulation of liabilities (net inflow of capital).

9 Romania: heightened fiscal policy concerns

Strong inventory buildup boosted GDP growth

Economic activity decelerated noticeably in the first half of 2018 with year-on-year GDP growth slipping to 4%. Changes in inventories delivered a remarkably large growth contribution of 2.9 percentage points and became almost as important as private consumption. In early 2018, private consumption growth was negatively affected by uncertainties about how changes in the tax system would affect net wages. Yet annual net real wage growth still posted a robust increase of 8.4% in July amid tightening labor market conditions, while consumer confidence recovered somewhat over the summer. Meanwhile, consumer lending picked up and provided some support. The investment recovery that had started in mid-2017 came to a halt with gross fixed capital formation shrinking in the second quarter. The absorption of EU funds has remained low, while residential construction weakened. Despite the slowdown in domestic demand, the negative contribution from net exports remained close to the figures seen in the second half of 2017. Import growth did not start to fall until the second quarter of 2018, when export growth dipped as well.

Fiscal policy not in line with EU policy framework

In its spring forecast, the European Commission expected Romania's general government deficit to reach 3.4% of GDP in 2018 and 3.8% of GDP in 2019. It also projected that the structural deficit will widen by 0.4% of GDP in 2018 and by a further 0.4% in 2019 from an already elevated 3.3% of GDP in 2017. In June 2018 the EU Council recommended that, under the significant deviation procedure, Romania implement measures to achieve a structural adjustment of 0.8% of GDP in 2018 and 2019 and asked Romania to report on action taken by mid-October 2018. In deriving its recommendation, the EU Council took note of Romania's failure to act upon earlier recommendations to correct its significant deviation from the adjustment path toward the medium-term budgetary objective and the risk of exceeding the 3% of GDP reference value.

Current account deficit remained unchanged, while foreign reserves declined

In the first half of 2018, Romania's current account deficit as a percentage of GDP stood at the same level (4.2%) as in the first half of 2017. The deficit in the goods and services balance increased by about 1 percentage point, but this deterioration was counterbalanced by a declining deficit in the primary income balance. The surplus in the capital account balance was only slightly higher than in the first half of 2017, reflecting the still weak absorption of EU funds. Net FDI inflows remained below the net borrowing position from current and capital accounts. It is noteworthy that official foreign exchange reserves declined markedly in the second quarter of 2018, while both portfolio and other investments recorded net outflows. The decline of official foreign exchange reserves was partly related to repayments of public external debt. Yet market observers also pointed to possible foreign currency sales by the central bank to support the Romanian leu.

Inflation peaked toward the end of the second quarter of 2018

Romanian CPI and HICP inflation rates continued to rise in the first half of 2018. The CPI inflation rate, on which Romania's inflation target is based, peaked at 5.4% year on year in May and June, before coming down somewhat to 4.6% in July and 5% in August. Core inflation rose to 3.1% in April before steadily declining to 2.8% in August. The Romanian central bank decided to raise its key policy rate by 25 basis points to 2.5% in May and has left it unchanged since then. It currently projects inflation to decline to the upper bound of its target band of 2.5% $\pm$1 percentage point by the end of 2018 and to decline further in 2019. Monetary conditions have become tighter than the key policy rate suggests, with the three-month money market rate moving up to 3.5% in mid-summer before receding slightly to 3% at end-September.

Table 9

Main economic indicators: Romania

	2015	2016	2017	Q1 17	Q2 17	Q3 17	Q4 17	Q1 18	Q2 18
	Year-on-year change of the period total in %								
GDP at constant prices	3.9	4.8	7.0	5.7	6.1	8.8	6.7	4.0	4.1
Private consumption	5.9	7.9	10.2	7.3	7.3	13.5	11.7	5.8	5.1
Public consumption	–0.4	3.8	0.2	3.8	–0.3	8.8	–6.9	–3.4	–1.0
Gross fixed capital formation	7.2	–1.9	4.5	–0.9	–0.4	6.2	10.1	6.3	–3.0
Exports of goods and services	4.9	8.3	9.1	10.6	8.7	8.7	8.3	8.1	5.3
Imports of goods and services	8.1	10.0	10.7	10.3	10.1	11.0	11.4	11.4	7.9
	Contribution to GDP growth in percentage points								
Domestic demand	5.3	5.3	7.7	2.7	7.9	8.8	9.7	6.7	4.2
Net exports of goods and services	–1.4	–0.5	–0.7	1.1	–0.2	–1.4	–1.8	–1.9	–1.5
Exports of goods and services	1.9	3.6	4.0	5.8	3.9	3.6	3.3	3.8	1.9
Imports of goods and services	–3.3	–4.1	–4.7	–4.7	–4.1	–4.9	–5.1	–5.7	–3.5
	Year-on-year change of the period average in %								
Unit labor costs in the whole economy (nominal, per person)	–3.0	6.3	9.3	7.8	12.0	6.3	10.7	15.6	11.0
Unit labor costs in manufacturing (nominal, per hour)	6.6	8.4	5.6	8.6	6.9	5.2	2.0	5.6	2.5
Labor productivity in manufacturing (real, per hour)	–0.1	1.2	8.3	6.2	8.7	7.8	10.4	5.3	7.8
Labor costs in manufacturing (nominal, per hour)	6.5	9.7	14.3	15.3	16.2	13.4	12.5	11.2	10.5
Producer price index (PPI) in industry	–2.2	–1.8	3.5	3.5	3.0	3.6	3.7	3.9	5.2
Consumer price index (here: HICP)	–0.4	–1.1	1.1	0.4	0.6	1.0	2.4	3.7	4.5
EUR per 1 RON, + = RON appreciation	0.0	–1.0	–1.7	–0.6	–1.2	–2.6	–2.4	–2.9	–2.2
	Period average levels								
Unemployment rate (ILO definition, %, 15–64 years)	7.1	6.1	5.1	5.6	5.0	4.9	4.9	4.8	4.3
Employment rate (%, 15–64 years)	61.4	61.6	63.9	61.2	65.5	65.3	63.4	63.1	65.5
Key interest rate per annum (%)	1.9	1.8	1.8	1.8	1.8	1.8	1.8	2.1	2.4
RON per 1 EUR	4.4	4.5	4.6	4.5	4.6	4.6	4.6	4.7	4.7
	Nominal year-on-year change in the period-end stock in %								
Loans to the domestic nonbank private sector[1]	1.8	1.0	4.8	2.3	4.0	5.9	4.8	5.3	6.1
of which: loans to households	4.1	4.5	7.1	4.8	5.3	6.5	7.1	8.8	9.3
loans to nonbank corporations	–0.3	–2.4	2.3	–0.3	2.6	5.4	2.3	1.7	2.7
	%								
Share of foreign currency loans in total loans to the nonbank private sector	49.3	42.8	37.2	41.8	39.8	38.6	37.2	36.8	35.0
Return on assets (banking sector)	1.2	1.1	1.3	1.3	1.4	1.4	1.3	1.6	1.7
Tier 1 capital ratio (banking sector)	16.7	17.6	18.0	17.7	17.8	17.2	18.0	17.9	17.6
NPL ratio (banking sector)	13.5	9.6	6.4	9.4	8.3	8.0	6.4	6.2	5.7
	% of GDP								
General government revenues	35.0	31.6	30.5	..	..	..	..	..	..
General government expenditures	35.8	34.6	33.4	..	..	..	..	..	..
General government balance	–0.8	–3.0	–2.9	..	..	..	..	..	..
Primary balance	0.8	–1.5	–1.6	..	..	..	..	..	..
Gross public debt	37.7	37.4	35.0	..	..	..	..	..	..
	% of GDP								
Debt of nonfinancial corporations (nonconsolidated)	43.0	39.7	35.9	..	..	..	..	..	..
Debt of households and NPISHs[2] (nonconsolidated)	17.2	16.5	15.8	..	..	..	..	..	..
	% of GDP (based on EUR), period total								
Trade balance	–4.9	–5.4	–6.3	–5.9	–7.0	–5.7	–6.8	–6.7	–7.0
Services balance	4.2	4.5	4.2	5.2	4.6	4.1	3.4	4.7	4.1
Primary income	–2.4	–2.6	–2.6	–2.2	–5.9	–2.6	–0.5	–1.6	–4.0
Secondary income	1.7	1.5	1.4	0.7	1.9	1.5	1.4	0.8	1.3
Current account balance	–1.2	–2.1	–3.4	–2.1	–6.3	–2.6	–2.5	–2.9	–5.6
Capital account balance	2.4	2.5	1.2	0.6	0.7	0.6	2.4	0.7	1.0
Foreign direct investment (net)[3]	–1.8	–2.6	–2.4	–3.1	–1.3	–4.0	–1.4	–3.9	–0.8
	% of GDP (rolling four-quarter GDP, based on EUR), end of period								
Gross external debt	57.5	54.4	49.7	53.6	52.1	50.1	49.7	50.4	49.2
Gross official reserves (excluding gold)	20.1	20.1	17.8	19.9	19.8	18.2	17.8	18.3	16.4
	Months of imports of goods and services								
Gross official reserves (excluding gold)	5.8	5.7	4.9	5.6	5.5	5.1	4.9	5.0	4.4
	EUR million, period total								
GDP at current prices	160,312	170,881	187,703	36,293	43,380	51,894	56,136	38,775	47,013

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

[1] *Foreign currency component at constant exchange rates.*
[2] *Nonprofit institutions serving households.*
[3] *+ = net accumulation of assets larger than net accumulation of liabilities (net outflow of capital).*
– = net accumulation of assets smaller than net accumulation of liabilities (net inflow of capital).

10 Turkey: currency crisis, economic downturn and uncertain outlook

Recent financial market turmoil and policy actions

Turkey's financial and economic situation has deteriorated throughout 2018, culminating in severe financial market turbulence in early August. CPI inflation has accelerated sharply, reaching 24.5% in September 2018, compared to 11.9% at the end of 2017. The sharp acceleration was triggered by a combination of the Turkish lira's depreciation (by 39% to TRY 6.2 against the U.S. dollar from the start of the year until the end of September), still considerable demand pressures and the pass-through of strong producer price inflation (46.2% in September 2018). The meltdown was likely triggered by various factors: economic imbalances have been building up in recent years, including debt build-up in the corporate sector and an increasing current account deficit financed largely by portfolio and other investment flows. Moreover, international relations with the U.S.A. deteriorated and investors became increasingly worried about President Erdogan's influence on various Turkish institutions, particularly the central bank. Policy actions by the Turkish central bank (CBRT) did not keep pace with the Turkish lira's sharp depreciation and accelerating inflation. Between April and June 2018, the CBRT raised its policy rate by a total of 500 basis points and simplified its monetary policy framework in May. In reaction to the turbulence in August, Turkish authorities initially focused on liquidity and regulatory measures targeted at banks. In mid-September, more than one month after the start of the financial market turmoil, the CBRT raised its policy rate from 17.75% to 24%, and the government announced an economic reform program that aims to bring down inflation and promises fiscal restraint.

Economic slowdown has started and is expected to accelerate

GDP grew by 6.2% in the first half of 2018, decelerating from its peak in the third quarter of 2017 (11.5%). The slowdown in growth was visible across all growth components. Private consumption growth decelerated from 9.3% in the first quarter to 6.3% in the second quarter. Investment growth decelerated from 7.9% to 3.9%.

The fiscal stance continued to be expansionary in the first half of the year, and gross public debt increased to 29.2% of GDP. The recent mid-term economic program envisages fiscal restraint, and the government plans to keep annual general budget deficits below 2% of GDP until 2021. This fading fiscal support – paired with the effects of the depreciating lira, rising borrowing costs and elevated inflation – is expected to cause economic growth to decelerate swiftly over the coming quarters.

External imbalances are a key source of risk for Turkey

Net exports contributed negatively to economic growth in the first half of 2018. Export growth was slow in the first half of the year, reaching 2.6% year on year. Import growth was still as high as 7.8% but has been slowing down rapidly. Imports shrank in June, July and August in annual terms. In mid-2018, Turkey's current account deficit stood at 7.7% of GDP (compared to 5.5% a year earlier).

Net FDI inflows amounted to only 0.7% of GDP in the first half of 2018. Net portfolio inflows hovered around 0% of GDP, thus being much lower than the 4.5% registered in the same period of 2017. The shortfall was partly offset by net other investment inflows of 2.9% of GDP. Gross international reserves declined from EUR 90 billion at end-2017 to EUR 84 billion in June 2018, net of banking sector minimum reserve requirements, reserves amounted to only EUR 50 billion (equivalent to roughly two months of imports). Gross external debt increased further to 53.6% of GDP at mid-2018, of which 80% can be attributed to the banking and nonfinancial corporate sector.

Table 10

Main economic indicators: Turkey

	2015	2016	2017	Q1 17	Q2 17	Q3 17	Q4 17	Q1 18	Q2 18
	Year-on-year change of the period total in %								
GDP at constant prices	6.1	3.2	7.4	5.3	5.3	11.5	7.3	7.3	5.2
Private consumption	5.4	3.7	6.1	4.5	3.1	10.3	6.3	9.3	6.3
Public consumption	3.9	9.5	5.0	9.0	–1.8	7.6	5.9	4.9	7.2
Gross fixed capital formation	9.3	2.2	7.8	3.9	7.7	12.8	6.6	7.9	3.9
Exports of goods and services	4.3	–1.9	11.9	10.0	11.0	17.7	9.2	0.7	4.5
Imports of goods and services	1.7	3.7	10.3	0.9	2.2	15.0	22.8	15.4	0.3
	Contribution to GDP growth in percentage points								
Domestic demand	6.5	4.1	6.7	5.2	3.9	10.7	6.7	8.7	6.0
Net exports of goods and services	0.5	–1.3	0.1	2.0	1.7	0.3	–3.2	–3.4	0.9
Exports of goods and services	0.9	–0.4	2.5	2.2	2.3	3.5	1.8	0.2	1.0
Imports of goods and services	–0.4	–0.9	–2.4	–0.2	–0.5	–3.2	–5.0	–3.6	–0.1
	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)	11.6	15.8	4.0	5.5	5.9	0.8	4.0	11.5	14.7
Labor productivity in manufacturing (real, per hour)	4.9	4.5	6.2	4.8	5.2	8.1	6.6	6.1	3.3
Labor costs in manufacturing (nominal, per hour)	16.8	21.0	10.4	10.5	11.5	8.9	10.9	18.2	18.5
Producer price index (PPI) in industry	5.3	4.3	15.8	15.0	15.5	16.0	16.7	13.4	20.1
Consumer price index (here: HICP)	7.7	7.7	11.1	10.0	11.6	10.6	12.2	10.3	12.8
EUR per 1 TRY, + = TRY appreciation	–3.8	–9.6	–18.9	–17.5	–17.0	–19.8	–20.9	–16.1	–24.5
	Period average levels								
Unemployment rate (ILO definition, %, 15–64 years)	10.5	11.1	11.1	12.9	10.3	10.7	10.4	10.8	9.8
Employment rate (%, 15–64 years)	50.2	50.7	51.6	49.5	52.2	52.6	51.9	51.1	52.7
Key interest rate per annum (%)	7.6	7.5	8.0	8.0	8.0	8.0	8.0	8.0	11.2
TRY per 1 EUR	3.0	3.3	4.1	3.9	3.9	4.1	4.5	4.7	5.2
	Nominal year-on-year change in the period-end stock in %								
Loans to the domestic nonbank private sector	19.4	15.8	20.8	20.3	21.5	23.2	20.8	19.3	21.3
of which: loans to households	8.5	9.6	16.3	12.3	13.4	17.6	16.3	14.8	14.1
loans to nonbank corporations	24.2	18.2	22.3	23.3	24.6	25.3	22.3	20.8	23.8
	%								
Share of foreign currency loans in total loans to the nonbank private sector	33.6	35.8	32.9	34.6	32.8	32.4	32.9	33.4	35.1
Return on assets (banking sector)	1.2	1.5	1.6	1.9	1.8	1.7	1.6	1.7	1.7
Tier 1 capital ratio (banking sector)	12.7	12.7	13.6	13.1	13.7	13.9	13.6	13.5	13.1
NPL ratio (banking sector)	3.1	3.4	3.1	3.3	3.2	3.2	3.1	3.0	3.2
	% of GDP								
General government revenues	32.4	..	..	..	..	..	..	..	..
General government expenditures	31.1	..	..	..	..	..	..	..	..
General government balance	1.3	–1.3	–2.0	..	..	..	..	..	..
Primary balance	3.3	1.1	0.5	..	..	..	..	..	..
Gross public debt	27.5	28.5	28.5	..	..	..	..	..	..
	% of GDP								
Debt of nonfinancial corporations (nonconsolidated)	..	..	..	..	..	..	..	..	..
Debt of households and NPISHs[1] (nonconsolidated)	..	..	..	..	..	..	..	..	..
	% of GDP (based on EUR), period total								
Trade balance	–5.6	–4.7	–6.9	–4.8	–6.9	–7.8	–7.7	–8.3	–8.1
Services balance	2.8	1.8	2.3	1.0	1.9	4.2	1.9	1.4	2.6
Primary income	–1.1	–1.1	–1.3	–1.2	–1.6	–1.0	–1.4	–1.1	–1.8
Secondary income	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.1	0.0
Current account balance	–3.7	–3.8	–5.6	–4.8	–6.3	–4.3	–6.9	–8.0	–7.4
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)[2]	–1.5	–1.2	–1.0	–1.2	–0.6	–1.1	–1.0	–0.5	–0.9
	% of GDP (rolling four-quarter GDP, based on EUR), end of period								
Gross external debt	48.9	50.6	51.5	51.4	51.6	50.8	51.5	51.2	53.6
Gross official reserves (excluding gold)	11.1	11.2	9.3	10.8	10.4	10.1	9.3	9.1	8.8
	Months of imports of goods and services								
Gross official reserves (excluding gold)	5.1	5.4	3.8	5.0	4.7	4.4	3.8	3.7	3.5
	EUR million, period total								
GDP at current prices	771,913	778,812	751,693	164,918	186,454	201,532	198,788	167,977	169,374

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

[1] *Nonprofit institutions serving households.*

[2] *+ = net accumulation of assets larger than net accumulation of liabilities (net outflow of capital).*
– = net accumulation of assets smaller than net accumulation of liabilities (net inflow of capital).

11 Russia: coping with fresh waves of U.S. sanctions and benefiting from oil price rises

Modest economic recovery picks up slightly, driven by domestic demand

Russia's modest economic recovery picked up speed slightly during the first half of 2018. GDP growth (year on year) accelerated from the first to the second quarter, resulting in a 1.7% expansion in the first half of 2018. Economic activity continued to be driven by domestic demand as private consumption posted a 2.7% gain in the first half of 2018 (year on year) and fixed investment grew by 1.4%. The growth contribution of net exports turned positive in the second quarter of 2018 as import expansion was dampened by the relatively weak Russian ruble and by the authorities' import substitution policies. On the production side of GDP, manufacturing led the recovery, followed by retail sales. The unemployment rate (ILO definition, seasonally adjusted) declined to 4.8% in the second quarter, a post-Soviet record low.

New U.S. sanctions hit Russian ruble, but CBR's prudent stance contributes to low inflation

Notwithstanding a substantial rise in the price of Urals grade crude (by an average of 39% on the year during the first eight months of 2018), the Russian ruble's external value did not strengthen like it usually does in periods of oil price rises, but instead weakened (by 3% against the U.S. dollar and 11% against the euro). This was due to economic uncertainty triggered by the imposition of fresh U.S. sanctions in April 2018, which were directed against a number of Russian businessmen and companies; extraterritorial measures also allow for the punishment of non-U.S. firms doing business with Russia. Further trade-related punitive measures were adopted by the U.S.A. in August, and additional sanctions may follow in late 2018. A second reason for the Russian ruble's weakness was the finance ministry's foreign exchange purchase program carried out by the Russian central bank (CBR) in order to bolster the country's international reserve position. This program was temporarily halted in August. Despite the weak Russian ruble, inflation remained low, yet ticked up slightly from July (2.6%) to August (3.1%), compared to the annual target of 4%. The moderate level of inflation is attributable to continued restrained domestic demand and the CBR's prudent monetary policy. In reaction to the volatility of the exchange rate, the CBR raised its key interest rate slightly to 7.5% in mid-September.

Higher oil prices, the weak Russian ruble and conservative macroeconomic policies contribute to the re-emergence of twin surpluses

Swelling revenues from the further growth of oil prices combined with sustained restraint in spending pushed the federal budget surplus in the first eight months of 2018 to 3.1% of GDP (compared to a deficit of 0.6% of GDP for the same period in 2017). The fiscal rule providing for the transfer of "excess" oil revenues to the National Wealth Fund if the Urals oil price exceeds the threshold level of USD 40 per barrel led to the replenishment of this fund, which recovered to 5.2% of GDP in mid-2018. The oil price-triggered expansion of exports (valued in U.S. dollars) coupled with the weakening of the Russian ruble were the main factors driving up Russia's current account surplus, which increased to 6.3% of GDP in the first half of 2018.

Despite still elevated NPL ratio, bank lending regains some momentum

Net private capital outflows more than doubled to 2.5% of GDP during the same period. These outflows were mostly connected to enterprises building up foreign assets and banks paying down their debts. The country's total external debt declined further to 30.8%, largely on account of firms reducing their financial obligations. International reserves amounted to 23.7% of GDP in mid-2018. Notwithstanding the country's ongoing modest economic growth and high NPL ratio (19.2% in mid-2018), lending started to regain momentum; however, this revival is partly driven by unsecured consumer credit and thus gives rise to concern.

Table 11

Main economic indicators: Russia

	2015	2016	2017	Q1 17	Q2 17	Q3 17	Q4 17	Q1 18	Q2 18
	Year-on-year change of the period total in %								
GDP at constant prices	–2.8	–1.0	1.5	0.6	2.5	2.2	0.9	1.3	1.9
Private consumption	–9.7	–3.7	3.3	1.7	3.0	4.2	4.3	2.8	2.6
Public consumption	–3.1	–0.7	0.4	0.3	0.4	0.4	0.4	0.5	0.6
Gross fixed capital formation	–9.9	2.3	4.3	3.1	7.0	4.0	3.4	1.8	1.0
Exports of goods and services	3.7	5.2	5.1	7.2	3.3	4.7	5.2	6.8	7.3
Imports of goods and services	–25.8	–1.0	17.4	15.0	22.0	17.1	15.4	9.6	2.8
	Contribution to GDP growth in percentage points								
Domestic demand	–9.5	–1.6	3.5	1.2	5.9	4.5	2.4	1.5	0.5
Net exports of goods and services	7.8	1.5	–2.3	–0.9	–3.6	–2.5	–1.9	–0.2	1.3
Exports of goods and services	0.8	1.3	1.3	1.9	0.9	1.1	1.3	1.9	2.0
Imports of goods and services	6.9	0.2	–3.6	–2.8	–4.5	–3.7	–3.2	–2.1	–0.7
	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)	6.8	4.3	17.7	18.4	19.1	14.4	18.9	2.6	0.9
Labor productivity in manufacturing (real, per hour)	1.2	4.7	7.5	6.9	9.7	7.9	6.0	5.1	4.5
Labor costs in manufacturing (nominal, per hour)	8.0	9.1	26.7	26.5	30.7	23.4	26.3	7.9	5.4
Producer price index (PPI) in industry	13.5	4.3	7.8	13.1	5.5	4.5	8.0	5.0	12.0
Consumer price index (here: CPI)	15.6	7.1	3.6	4.5	4.0	3.3	2.6	2.3	2.5
EUR per 1 RUB, + = RUB appreciation	–25.0	–8.4	12.6	31.9	18.1	4.1	–1.2	–10.6	–14.9
	Period average levels								
Unemployment rate (ILO definition, %, 15–64 years)	5.6	5.5	5.2	5.5	5.2	5.0	5.1	5.1	4.8
Employment rate (%, 15–64 years)	..	..	..	..	..	..	..	..	..
Key interest rate per annum (%)	12.6	10.6	9.1	10.0	9.4	8.9	8.2	7.6	7.3
RUB per 1 EUR	68.0	74.2	65.9	62.5	62.9	69.3	68.8	69.9	74.0
	Nominal year-on-year change in the period-end stock in %								
Loans to the domestic nonbank private sector[1]	2.9	0.6	5.7	2.0	2.4	4.2	5.7	7.3	9.4
of which: loans to households	–6.1	1.6	12.7	3.4	5.9	8.8	12.7	15.5	18.8
loans to nonbank corporations	6.7	0.2	3.1	1.5	1.1	2.5	3.1	4.3	5.8
	%								
Share of foreign currency loans in total loans to the nonbank private sector	24.5	18.9	14.7	17.7	18.2	16.5	14.7	14.5	14.7
Return on assets (banking sector)	0.2	1.2	1.0	1.7	1.9	1.1	1.0	1.7	1.5
Tier 1 capital ratio (banking sector)	8.5	9.2	8.5	9.9	9.4	8.6	8.5	9.9	9.0
NPL ratio (banking sector)	16.7	18.9	19.1	18.8	18.9	18.8	19.1	19.4	19.2
	% of GDP								
General government revenues	32.3	32.7	33.7	..	..	..	..	..	..
General government expenditures	35.7	36.4	35.2	..	..	..	..	..	..
General government balance	–3.4	–3.6	–1.5	..	..	..	..	..	..
Primary balance	..	..	..	..	..	..	..	..	..
Gross public debt	13.1	12.9	13.0	..	..	..	..	..	..
	% of GDP								
Debt of nonfinancial corporations (nonconsolidated)	..	..	..	..	..	..	..	..	..
Debt of households and NPISHs[2] (nonconsolidated)	..	..	..	..	..	..	..	..	..
	% of GDP (based on EUR), period total								
Trade balance	10.8	7.0	7.3	9.9	6.5	5.1	7.9	11.3	11.4
Services balance	–2.7	–1.9	–2.0	–1.5	–2.0	–2.4	–2.0	–1.7	–1.9
Primary income	–2.8	–2.7	–2.5	–1.5	–3.6	–2.7	–2.1	–1.2	–4.3
Secondary income	–0.4	–0.5	–0.6	–0.5	–0.4	–0.7	–0.6	–0.7	–0.4
Current account balance	4.9	1.9	2.3	6.4	0.6	–0.7	3.1	7.8	4.8
Capital account balance	0.0	–0.1	0.0	0.0	0.0	0.0	0.0	–0.1	–0.1
Foreign direct investment (net)[3]	1.1	–0.8	0.7	1.0	–1.3	0.4	2.5	1.5	0.6
	% of GDP (rolling four-quarter GDP, based on EUR), end of period								
Gross external debt	38.7	41.5	31.2	38.5	34.5	32.8	31.2	30.7	30.8
Gross official reserves (excluding gold)	23.8	25.7	21.3	24.3	22.4	21.6	21.3	22.1	23.7
	Months of imports of goods and services								
Gross official reserves (excluding gold)	13.9	15.0	12.4	14.6	13.3	12.7	12.4	12.7	13.4
	EUR million, period total								
GDP at current prices	1,232,463	1,173,009	1,395,089	328,692	350,042	345,815	370,540	317,949	335,701

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

[1] *Foreign currency component at constant exchange rates.*
[2] *Nonprofit institutions serving households.*
[3] *+ = net accumulation of assets larger than net accumulation of liabilities (net outflow of capital).*
– = net accumulation of assets smaller than net accumulation of liabilities (net inflow of capital).

Outlook for selected CESEE countries

CESEE-6 economic growth robust but moving sideways, Russia recovering only slowly[1,2]

We project that CESEE-6[3] GDP growth will reach 4.0% per annum in 2018 and then soften slightly to 3.6% and 3.4% in 2019 and 2020, respectively. Overall, consumer sentiment continues to be bright, supported primarily by favorable labor market and lending conditions. Hence private consumption growth will remain fairly strong. Investment growth will peak in 2018. Overall, investment activity is benefiting from a high absorption of EU funds, brisk construction activity as well as the need to increase production capacities. In line with our assumption on euro area import growth, export activity in the CESEE-6 will weaken in 2018 and revive in 2019 and 2020. In parallel with softening export growth, import growth will also ease marginally in 2018 and edge up in 2019. Income convergence with the euro area is expected to slow down from 2.0 to 1.7 percentage points over the projection horizon (2017: 2.3 percentage points). Risks are tilted to the downside and have increased since our previous forecast.

For Russia[4], we expect GDP to grow by 1.8% in 2018 and to ease to 1.6% and 1.5% in 2019 and 2020, respectively. This pace of growth is in line with growth potential, which is low as there are no significant market-friendly reforms in sight. Private consumption growth will be muted due to higher VAT rates and weak wage growth. We see no major growth impetus from investment activity. Export

Table 1

OeNB-BOFIT GDP projections for 2018 to 2020 compared with the IMF forecast

	Eurostat/ Rosstat	OeNB-BOFIT projections October 2018			IMF WEO forecast October 2018		
	2017	2018	2019	2020	2018	2019	2020
	Year-on-year growth in %						
CESEE-6	**4.9**	**4.0**	**3.6**	**3.4**	**4.0**	**3.3**	**2.9**
Bulgaria	3.8	3.6	3.3	3.0	3.6	3.1	2.8
Croatia	2.9	2.8	2.7	2.7	2.8	2.6	2.4
Czech Republic	4.5	3.2	3.1	3.3	3.1	3.0	2.5
Hungary	4.4	4.3	3.4	2.9	4.0	3.3	2.6
Poland	4.7	4.5	4.1	3.7	4.4	3.5	3.0
Romania	6.8	3.8	3.3	3.1	4.0	3.4	3.3
Russia	1.5	1.8	1.6	1.5	1.7	1.8	1.8

Source: OeNB-BOFIT October 2018 projections, ECB staff macroeconomic projections for the euro area of September 2018, IMF World Economic Outlook (WEO) of October 2018, Eurostat, Rosstat.

Note: 2017 figures are seasonally adjusted data.

[1] *Cutoff date for data underlying this outlook: September 20, 2018. 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 assumptions contained in the September 2018 ECB staff macroeconomic projections for the euro area. This implies real annual GDP growth of 2.0% in 2018, 1.8% in 2019 and 1.7% in 2020 in the euro area.*

[2] *Compiled by Antje Hildebrandt with input from Katharina Allinger, Stephan Barisitz, Markus Eller, Martin Feldkircher, Thomas Reininger, Tomáš Slačík and Zoltan Walko.*

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

[4] *The oil price assumption used by the Bank of Finland corresponds to Brent futures (quarterly data) with September 4, 2018, as the cutoff date. We expect an average oil price of USD 75 per barrel in 2018 and 2019, and a modest decline to about USD 73 per barrel by 2020.*

growth is expected to accelerate over the projection horizon. Risks to the forecast are predominantly on the downside.

1 CESEE-6: private sector demand expected to sustain economic growth

In the first half of 2018, CESEE-6 GDP grew at an annualized rate of 4.4%. This pace was similar to the growth rate achieved in the first half of 2017. Growth in Hungary and Poland was stronger than expected in the first half of 2018. In the countries that have shown some signs of overheating, namely the Czech Republic and Romania, economic growth surprised on the downside. For the second half of 2018, we expect to see sideways movement in most CESEE-6 countries with some moderation particularly in those countries that did better than expected in the first half. As a result, full-year GDP growth is expected to reach 4.0% in 2018 and then taper to 3.6% and 3.4% in 2019 and 2020, respectively. Domestic demand will continue to be an important growth driver in the period from 2018 to 2020: economic confidence will remain very strong, favorable labor market conditions will lift private consumption, and EU funding will boost gross fixed capital formation.[5]

Monetary conditions continue to be accommodative

Monetary conditions continue to be accommodative in the CESEE-6 countries. However, in the Czech Republic, some monetary tightening took place in light of stronger-than-expected inflationary pressure. For other CESEE-6 countries, we do not expect any decisive monetary tightening actions before mid- or end 2019. Against the background of prevailing monetary conditions in the CESEE-6 and the overall positive economic expectations of consumers and investors, we assume credit growth will remain strong over the projection horizon. Especially in Bulgaria, the Czech Republic and Romania, household loans are growing at a strong pace, and this is driving up private consumption. In Hungary, by contrast, credit to the corporate sector has been growing more dynamically than credit to the household sector.

Some countries in need of fiscal consolidation

Turning to fiscal policy, the picture is rather mixed across the CESEE-6 countries. Romania and Hungary need to consolidate their public finances, as they are both subject to Significant Deviation Procedures initiated by the European Commission. We expect the Czech Republic to take a rather expansionary fiscal stance in 2018 and 2019. The fiscal stance in Bulgaria, Croatia and Poland is expected to be neutral or somewhat expansionary over the projection horizon.

Private consumption growth will remain strong

In this environment, private consumption in the CESEE-6 will remain strong over the projection horizon. Labor market conditions will remain favorable and real wages will continue to post strong growth. Furthermore, robust lending to households will lift private consumption. However, several factors are expected to curtail private consumption growth: Given the need for fiscal tightening in Hungary and Romania, there appears to be no more room for major increases in public spending for households. Furthermore, in some CESEE-6 countries higher inflation has started to reduce real disposable income, leading to a moderation in consumption growth.

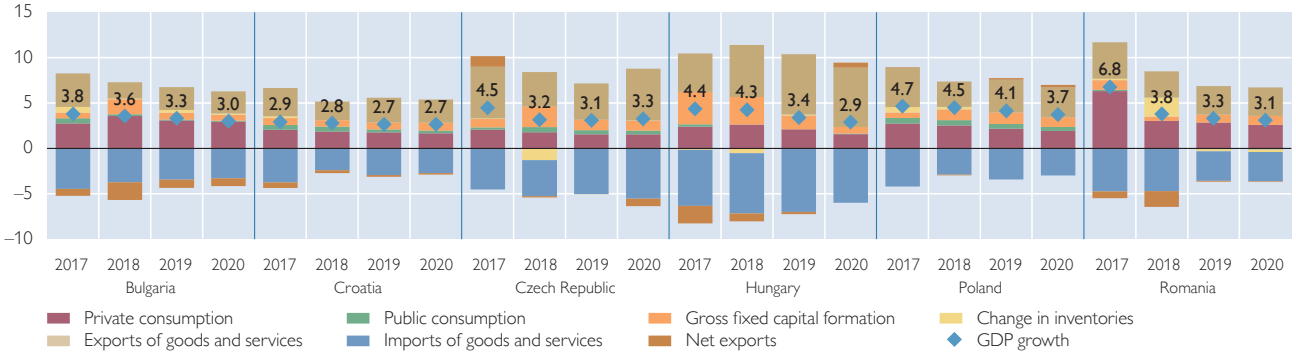
Public consumption growth has been rather mixed in 2018 so far. After a period of generous public spending, Hungary and Romania have cut public consumption in order to comply with EU requirements. Therefore, we expect

[5] *See the "Recent economic developments" section in this issue for more details.*

Chart 1

CESEE-6: GDP growth and contributions from 2017 to 2020

GDP contributions in percentage points, year-on-year GDP growth in %



Source: Eurostat, OeNB.

public consumption to post negative growth in Hungary and Romania in 2018 and 2019, and in Romania again in 2020. In Bulgaria, public consumption growth will also moderate over the projection horizon. By contrast, in the Czech Republic and Poland, public consumption growth will expand at a faster pace in 2018 than in 2017, partly due to a higher public wage bill.

Investment growth will peak in 2018

Investment activity in Bulgaria, the Czech Republic and Poland is expected to pick up sharply in 2018 compared to the previous year. In Hungary, gross fixed capital formation will moderate slightly but will continue to expand markedly by over 13% in 2018. The main factors driving this trend are the extensive use of EU funds (especially in Hungary, where EU funds have been heavily frontloaded in 2018), growing investment activity – partly due to capacity limits – as well as strong growth stimuli from the construction sector. For Romania, we expect gross fixed capital formation to decelerate somewhat due to some cooling down in certain sectors (e.g. housing construction). In Croatia, difficulties in some large companies that are important for the economy are expected to impair investment growth.

Weakening of export activity in 2018, revival in 2019 and 2020

In the CESEE-6 countries, exports will grow in line with euro area import demand. Therefore, we expect export growth to weaken year on year in 2018 and to gain some momentum thereafter. In addition to stronger external demand, new export production facilities – notably in the Czech Republic and Hungary – will support export dynamics. In parallel with decelerating consumption and export growth, import growth will moderate slightly in 2018. In 2019, we expect import growth to strengthen somewhat in most CESEE-6 countries. In all CESEE-6 countries, the contribution of net exports to GDP growth is expected to be negative in 2018, particularly in Romania (–1.7 percentage points). Going forward, the negative contribution of net exports will fade in Poland (already in 2019); in the Czech Republic and Hungary, the external sector is expected to make a slightly positive contribution to GDP growth (both in 2020).

Mounting risks cloud the CESEE-6 outlook

A wide range of downside risks und mounting uncertainties cloud the still favorable outlook for the CESEE-6 countries. In our view, the most acute risks emanate from trade tensions between the largest countries of the world as well as from the unclear modalities of Brexit, which will happen in March 2019. Adverse

developments in these areas would impact strongly on sentiment and thus cloud the overall positive outlook for global and, in particular, euro area growth over our projection horizon and would create adverse spillovers in the CESEE-6 countries.

The negative consequences of escalating trade conflicts could unleash a spiral of protectionist measures and could spill over to the small, open CESEE-6 EU Member States. The region is highly integrated in global value chains and hence also indirectly dependent on demand from third countries outside the EU. Both suppressed export demand due to higher tariffs and higher import costs of components (especially in the car manufacturing industry, given the high dependence of some CESEE-6 countries on the automotive industry) are a significant downside risk factor in our CESEE-6 GDP forecasts.

As regards Brexit, there are still many open issues and major challenges related to the U.K.'s exit strategy that present clear downside risks to our projections. The negotiations between the EU and the U.K. are still ongoing. If no agreement on exit conditions can be reached, the EU countries would be affected in several ways. Such a "hard" Brexit would imply a major loss in confidence and elevated uncertainty among economic agents. However, even the more likely outcome of a Brexit that takes place under an agreed arrangement presents a risk factor to economic growth in the CESEE-6 countries. However, the full implications for growth would accumulate over a longer period of time. The effects on trade, migration, and EU budget constraints may not be felt during the projection period.

There is additional risk in connection with recent financial tensions in some emerging markets, particularly in Turkey, which have revealed deep vulnerabilities to changes in risk assessment and a consequent repricing of risk by global investors. So far, the CESEE-6 countries have been insulated from these adverse developments. However, more widespread risk aversion among global investors toward other emerging market economies – even if not justified by economic fundamentals – could have a negative impact on the CESEE-6 countries. Furthermore, elevated levels of private and public indebtedness fuel vulnerabilities in several advanced and emerging economies – also in the CESEE-6 – especially given the risk of stronger-than-expected monetary tightening in the United States. Some general risks also emanate from potential adverse developments in the euro area, particularly the potential reemergence of redenomination risk.

Furthermore, as in our previous forecasts, geopolitical tensions must still be taken into account in assessing risk. Armed conflicts like those in Ukraine or in the Middle East as well as further sanctions against specific countries could have a dampening effect on global growth prospects.

Domestic political developments remain a source of internal risks in some CESEE-6 countries. Tensions with the EU over compliance with EU laws resulted in disciplinary actions against Poland and more recently against Hungary. We do not expect this action to have any consequences for the flow of EU funds over the projection horizon, but the measures could impinge in particular on the overall confidence of (foreign) investors.

Further domestic risks originate from CESEE-6 labor markets, which are increasingly characterized by labor shortages in certain sectors amid strongly rising unit labor costs (ULC). While this has not had a visible negative impact on the competitiveness of the CESEE-6 countries so far, it may do so if productivity

growth does not keep pace. In addition, a stronger-than-expected rise of nominal wages could lead to higher-than-anticipated inflationary pressure and to faster-than-assumed monetary tightening in some countries of the region. We already see cost-push price pressure that has resulted in higher service inflation. Higher-than-expected oil prices also present a clear upward risk to inflation expectations in the region.

We see only a few risks on the upside. The most important one would be a higher-than-foreseen absorption rate of EU funds in some CESEE-6 countries. There is still room for further improvements – mostly in the field of administrative efficiency – which could boost investment growth above expectations in some CESEE-6 countries. We also consider as an upside risk the possibility that a sustainable solution to the trade conflicts will be reached. This would certainly increase export confidence and – in the end – global trade. Furthermore, if stronger-than-expected growth occurs in the euro area, our growth expectations would be beaten on the upside.

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

Bulgaria: investment expected to play larger role in boosting robust economic growth

Our spring 2018 forecast remains largely unchanged, with minor upward revisions for 2018 and 2019. GDP growth continues to be driven predominantly by domestic demand but is expected to decelerate somewhat by 2020. At the same time, we expect some changes in the short-run growth composition.

On the one hand, the growth contribution of exports is expected to decrease considerably in 2018 as external demand conditions have worsened since our spring forecast and export growth experienced a marked deceleration already in the first half of 2018. Nearly unchanged external demand assumptions for 2019 and 2020 should contribute to some recovery in those years, however. At the same time, due to brisk domestic demand, import growth will continue to outpace export growth, thus prolonging the negative contribution of net exports to GDP growth.

On the other hand, gross fixed capital formation will gain importance in 2018. It grew with surprising dynamism in the first half of 2018. Driven in particular by the government's public infrastructure priorities and improving EU fund absorption, investment should make a significant contribution to GDP growth in 2018, namely at a rate not seen in the past 10 years. A reform push to prepare the country for joining ERM II and the banking union could further feed investor confidence. Over the forecasting horizon, however, investment growth will lose some momentum, partly due to the effects of a high base, and partly because tightening global financial conditions could impede progress in overcoming crisis legacies such as the comparatively elevated levels of nonfinancial corporate debt and nonperforming loans. Moreover, an increasingly tight labor market may also put a drag on investment growth.

Growing labor shortages could also prove to be an obstacle to the further acceleration of private consumption in the years to come. Nonetheless, we expect private consumption to lose steam only slightly over the forecasting horizon and to remain the Bulgarian economy's most important growth engine. Private consumption will continue to benefit from favorable trends in real wages and household lending. However, it remains to be seen whether the recent pickup in

consumer prices will continue for a prolonged period. Public consumption remains strong in 2018 due to significant wage increases in the education sector. For 2019 and 2020, however, we expect some moderation in line with budgetary surplus targets, and because the next parliamentary election is not scheduled to take place until 2021.

Croatia: somewhat weaker growth despite strong private consumption

GDP grew by 2.7% in the first half of 2018, having reaccelerated after a temporary slowdown in the fourth quarter of 2017. Nonetheless, recent developments, particularly in connection with exports and investment, have prompted us to mildly revise our GDP forecast downward over the entire forecast period, to 2.8% in 2018 and 2.6% in 2019 and 2020.

Private consumption remains the main growth driver and expanded by 3.7% year on year in the first half of 2018. We expect private consumption growth to slow down mildly over the forecast period, as positive effects from labor market improvements and government stimulus packages fade. Public consumption grew by 2.6% in the first half of the year and is expected to remain high in the second half of the year. Public consumption growth will be positive, but lower in 2019 and 2020 as fiscal consolidation continues.

Gross fixed capital formation growth was 3.3% year on year in the first half of 2018 and we expect it to remain at similar levels in the second half of the year. While some positive effects could come from planned investments and EU fund absorption, the impending restructuring of Agrokor, difficulties at the shipbuilding group Uljanik and indicators such as declining business confidence and lower loan growth will counteract these developments. However, we expect a mild acceleration in investment growth in 2019 and 2020 as EU fund absorption increases and concerns in connection with Agrokor diminish further.

Net exports made a strong negative contribution to growth in the first half of 2018 as export growth temporarily turned negative in the first quarter of the year[6], while import growth remained strong, fueled by domestic demand. We expect both export and import growth to remain strong over the forecast horizon, driven by stable external and domestic demand. Net exports should make a small negative contribution to growth over the projection horizon.

Czech Republic: gradual deceleration of growth toward potential

Economic expansion will remain solid but decelerate steadily from an exceptionally strong 4.5% in 2017 toward its potential[7]. Hence, GDP growth is expected to average just above 3% over the forecasting horizon. Our projection has been revised slightly downward due to weaker external demand and a lower contribution of private consumption as a result of higher inflation pressures. Nonetheless, economic growth will be driven predominantly by strong domestic activity on the back of robust private consumption and investment. Both factors mirror consumers' and firms' continued optimistic stance, their confident view of future demand, the ongoing low interest rate environment and significant wage growth.

The latter particularly reflects the increasingly tight conditions on the labor market, with vacancies significantly outnumbering jobless persons. Labor shortages are thus increasingly constraining the economy. However, strong wage growth – echoed inter alia in the high wage bill of the government, thus pushing up public consumption – has been counteracted by rising prices. Inflation has risen faster

[6] *Partially due to the strong base effects from Q1 17.*

[7] *The Czech National Bank's estimates of potential output growth range – depending on the method – between 3% and 4%.*

than previously expected due to a combination of domestic and foreign factors. Yet the single most important factor in the acceleration of inflation has been the rather unanticipated depreciation of the koruna in the wake of a change in market sentiment. As a result, inflation will remain in the upper half of the CNB's tolerance band longer than previously expected and will – according to the CNB – return to the 2% target in mid-2019. Increased inflationary pressures are likely to entail faster monetary policy tightening[8].

After particularly vigorous expansion in the first half of 2018, investment growth will peak this year and slow down thereafter amid tightening monetary policy. Investment will continue to be driven by revived construction activity, a more significant drawdown of EU funds and firms' intensified investment in automation and labor-saving technologies due to the shortage of labor.

Net exports are projected to detract from GDP growth in 2018, and the negative contribution is expected to be more significant than in the previous forecast due to a noticeable cooling of external demand, particularly in the automotive industry. In the medium term, however, the expansion of exports will pick up again despite a resumed appreciation of the koruna. The contribution of net exports to GDP growth is thus expected to be broadly neutral in 2019 before turning positive toward the end of the horizon.

Major downside risks to the forecast are associated with the overheated labor market, a continuation of the change in sentiment on global markets that caused the depreciation of the koruna, and global trade-hindering protectionist measures by the world's large economies.

Hungary: strong domestic demand expected to lift economic growth

GDP grew at an annualized rate of 4.7% during the first half of 2018 (after 4.2% in 2017). Given the stronger-than-expected growth recorded in the first half of 2018, we have revised our forecast for 2018 upward from 3.5% to 4.3%. We continue to expect moderation thereafter, but at somewhat higher growth rates than previously forecast.

Economic policies will remain supportive of growth in the short run but will then turn neutral to modestly restrictive. Increased inflation is forcing the central bank to start gradually normalizing monetary conditions.[9] Given that Hungary became subject to the EU's Significant Deviation Procedure in mid-2018, fiscal policy will also likely become restrictive. In addition, the use of EU funds is set to slow down markedly in 2019 and 2020, as the government has already pre-financed most of the projects in the current programming period.

Investment growth will remain strong in 2018, supported by factors such as the overall good economic outlook, the stepped-up disbursement of EU funds, high capacity utilization rates, a further acceleration of lending to corporates and the expansion of housing subsidies. Investment growth will likely slow in 2019 and 2020 due to the above-mentioned reasons. Changes in VAT on new homes, the expansion of housing subsidies, a new instrument for lending to SMEs, and newly

[8] *Thus far, the key policy rate has been increased by a total of 120 basis points to 1.25% since August 2017. The CNB expects domestic interest rates to converge smoothly to their assumed long-run neutral level (i.e. 3% for the three-month PRIBOR) in 2019.*

[9] *To this end, the MNB at end-September decided to eliminate its three-month deposit facility and to discontinue its monetary interest rate swaps and its mortgage bond purchase program by end-2018. In the future, required reserves will be the main policy instrument. At the same time, the MNB decided to introduce a new, liquidity-neutral "Funding for Growth Scheme Fix" from the beginning of 2019 to promote long-term lending to SMEs at fixed interest rates.*

announced investments in the auto industry have led to an upward revision in our investment forecast.

Private consumption will remain steady but slow down markedly by 2020. Strong wage growth in a tightening labor market, some employment growth, the continued brightening of consumer confidence, and households' improved financial position are expected to lift private consumption growth in 2018. Thereafter, we expect employment gains to diminish gradually, as labor reserves will be exhausted. At the same time, real wage growth should also moderate from 2019 onward, because there will be no new major minimum wage increases and because such moderation will better match productivity growth.

Public consumption growth started to ease in the first half of 2018. We expect this trend to continue given the need to reduce the budget deficit without endangering outlays for major policy priorities.

Following a dip in export growth, we expect exports to reaccelerate in 2019 in line with growing momentum from external demand. Export activity should see a boost over the medium term as new export capacities go into production, whereas strong wage growth could negatively affect export competitiveness. Moderating domestic demand will likely reduce the dynamism of imports, so that the contribution of net real exports should gradually improve over the forecast horizon and turn positive in 2020.

Poland: moderation of economic growth despite stronger investment activity

In Poland, GDP growth will slow down to 4.5% in 2018 from 4.7% in 2017. The contribution of domestic demand to GDP growth will remain stable overall in 2018, while the contribution of export growth will shrink, resulting in a growth structure tilted toward domestic demand. In 2019, the economy is projected to expand at a slower rate of 4.1%. This moderate deceleration will result from a slowdown in domestic demand that more than offsets the increase in export growth. Stronger export growth in 2019 will mainly reflect the expected growth in foreign demand but is expected to be dampened by rising manufacturing ULC and the appreciation of the zloty.

Private consumption growth will decelerate to 4.3% in 2018 and further – to 3.7% – in 2019. On the one hand, wage and employment growth as well as low interest rates continue to support robust consumption growth. On the other hand, fading stimuli from significant earlier measures (an increase in child benefit, higher tax rate thresholds, hikes in official minimum wage rates), the adverse impact of other measures (lower retirement age, wage freezes in certain public sector segments) and higher consumer price inflation will dampen private consumption growth. Public consumption growth will change only minimally and will remain substantially below GDP growth, due in part to the partial wage freeze in the public sector in 2018 and the assumption that this policy will not change significantly thereafter.

Overall, we expect gross fixed capital formation to expand by 6.3% in 2018 and by 6.6% in 2019. Emerging labor supply shortages will prevent investment growth from accelerating further over the projection horizon. Corporate investment activity will benefit from robust domestic consumption and, in 2019, stronger foreign demand growth, high capacity utilization rates, and the favorable financing situation with respect to both own funds (profitability, accumulated deposits) and external funds (low interest rates and, in particular for publicly owned companies, EU funds). Public sector investment (especially by local

governments) will continue to post strong gains thanks to EU funds. Residential investment will expand on the back of strong household income growth, low interest rates and the state-subsidized housing program for young people, which is being discontinued in 2018, however.

In 2018, import growth will slow to 5.8%, but imports will grow at a somewhat higher rate than exports given roughly unchanged domestic demand growth. In 2019, import growth will pick up speed to 6.8% but will be lower than export growth because external demand will gain speed. Hence the contribution of net exports to GDP growth will again be slightly negative in 2018, but slightly positive in 2019.

Romania: growth to weaken markedly in 2018

After peaking at 7% in 2017, Romanian GDP growth is expected to fall below 4% in 2018 and to slip further toward 3% in 2019 and 2020. Notably, changes in inventories delivered a large contribution to overall GDP growth in the first half of 2018. Hence, in addition to uncertainties about the 2018 agricultural output, the difficulty in predicting inventory changes represents a marked downside risk for this year's projection. Should the inventory cycle turn earlier than anticipated, 2018 growth will come in lower than projected (and 2019 growth will possibly be somewhat higher).

We expect private consumption to remain the main growth driver but to decelerate due to fading fiscal stimuli. After consumer confidence was shaken in early 2018 inter alia by uncertainties over the impact of significant changes in the tax system, it recovered somewhat over the summer months. Labor market conditions have remained tight. Net real wage growth (at a robust 8.4% in July), a 10% increase in average pensions effective from July 2018 and a further 15% increase in 2019 will further support private consumption. A pick-up in consumer lending represents an additional supporting factor. Despite a recent budget revision, it will be challenging to keep this year's general government deficit below 3% of GDP. Due to the need for correction, we expect public consumption to decrease slightly over the forecast horizon.

The projected recovery of gross fixed capital formation is largely based on the assumption that the absorption of EU structural and investment funds will improve gradually, while the contribution from residential construction will likely be limited due to recent downward trends.

Export growth is expected to remain sound. As euro area import demand is projected to increase in 2019, a slight acceleration of export growth seems likely. As import growth will decline due to weakening domestic demand, the contribution of net exports will improve and turn out to be only marginally negative (i.e. almost balanced) in 2019 and 2020.

3 Russia: stagnant reforms and sanctions expected to dampen economic prospects

Economic recovery continues in 2018 at a pace similar to that seen in 2017, with growth coming in at an annualized rate of 1.7% in the first half. Meanwhile, the oil price has risen strongly, but Russia's fiscal and monetary stance as well as sanctions have continued to partly moderate the effect of higher oil prices on GDP growth. Unlike in 2017, however, the floating ruble exchange rate did not appreciate but instead weakened in spring 2018 due to new U.S. sanctions. The federal budget rule continued to limit some expenditures due to the fixed low oil

price benchmark[10], while non-oil budget revenues allowed consolidated government budget spending to increase quite briskly against the backdrop of improved revenue collection and planned public sector wage hikes. Private consumption and fixed investments recovered at a moderate pace, and real export growth accelerated. The recovery of imports slowed down significantly in the spring as the ruble weakened.

The oil price assumption has been raised considerably since our previous forecast, to around USD 75 per barrel for 2018 and 2019, followed by a slight decline to about USD 73 per barrel in 2020. Even so, our GDP growth forecast remains unchanged at 1.8% for 2018 and 1.6% for both 2019 and 2020. This pace reflects the growth potential of the Russian economy, which is low as there are no significant market-friendly reforms in sight.

For 2018, increases in government expenditure and exports will support the economy, but private consumption and fixed investments will pick up only marginally. The VAT rate will rise at the beginning of 2019 (from 18% to 20%), which will heighten inflation and dampen private consumption growth. Relatively slow growth of public sector wages and pensions in 2019 and 2020 will not lead to higher private consumption growth over the projection horizon. Rather low productivity growth should contain the rise of corporate sector wages, while employment is expected to expand only modestly even when the gradual increase in the statutory retirement age from the beginning of 2019 onward is taken into account. Household borrowing will likely have limited impact on private consumption due to uncertainties and due to CBR measures that aim to constrain the growth of consumer lending.

Government expenditures will rise as a result of additional spending caused by the implementation of tasks that President Putin assigned to the government in his inaugural decree of May 7, 2018. This marks the start of a relaxation of budget rules regarding the deficit limit. The decree has also induced the government to steer investments by large companies toward so-called new national projects. However, these national projects will start to materialize only later in 2019 and it remains uncertain to what degree this will lead to higher total business investment. At the same time, uncertainty surrounding corporate investment has risen due to increased government interference as well as the introduction and threat of new U.S. sanctions. Furthermore, the inflation outlook is not conducive to monetary policy easing.

Russia's export volume should continue growing reasonably well, largely thanks to non-energy commodities supported by the rather weak ruble. As the real exchange rate is not anticipated to appreciate considerably and the revival of domestic demand remains unpromising, we have strongly lowered our year-on-year forecast for Russian imports in 2018. For 2019 and 2020, we expect imports to grow at a similar rate as in 2018.

Risks to the forecast for Russia

The risks to the forecast for Russia are predominantly on the downside. Even if the Russian economy's sensitivity to swings in the oil price has somewhat diminished, deviations from the assumed oil price remain a risk to the forecast. Risks to the global growth outlook are mainly skewed downward, posing a potential detri-

[10] *Among other things, the fiscal rule limits federal budget expenditure to a revenue frame which is currently determined by a fixed, relatively low, oil price.*

ment to Russia both directly and via the oil price. Geopolitical risks and other risks such as new unexpected sanctions remain elevated. Given that the U.S. has drafted legislation for further punitive measures against Russia, uncertainty appears particularly pronounced in the immediate future.

In terms of domestic risks, higher government expenditures may support GDP growth more than anticipated. On the other hand, production capital in Russia may become an unexpectedly strong constraint on growth, as uncertainties surround the volume and quality of the capital stock. Russia's imports remain sensitive to changes in the oil price, export revenue and the ruble exchange rate.

Studies

A simple approach to nowcasting GDP growth in CESEE economies

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Given the publication time lag inherent in national accounts data, we explore the informational content of higher-frequency indicators that become available during a quarter in nowcasting current-quarter GDP growth rates for 11 Central, Eastern and Southeastern European (CESEE) economies. Building on recent findings, we restrict our choice to three model classes: (1) principal component models, (2) bridge equations and (3) simple autoregressive (AR) models without higher-frequency variables. Moreover, we propose a variety of forecast combinations to arrive at the highest possible forecast accuracy. Our estimation sample starts in the first quarter of 2003, and our evaluation period ranges from the second quarter of 2012 to the fourth quarter of 2017. We find that higher-frequency indicators contain useful information for predicting current economic activity in most of the economies in our sample. Using forecast combinations of models with and without higher-frequency variables yields additional gains in predictive accuracy. The best performers ultimately selected vary strongly across countries: we find 10 different models for 11 countries. Eight country models produce a statistically significantly smaller forecast error than the benchmark. Calculating a CESEE-11 country aggregate based on the individual country forecasts yields a forecast performance that is highly superior to that of the benchmark.

JEL classification: C52, C53, E37
Keywords: nowcasting, principal components, country models; Central, Eastern and Southeastern Europe

"It is difficult to make predictions, especially about the future." This humorous saying has been attributed to many famous people and can also be applied to economics, despite the existence of powerful techniques and sophisticated econometric models to arrive at highly probable and often rather precise statements about future economic developments. Yet economists are not just faced with the difficulty of making predictions about the future ("forecasts"), but also about the present ("nowcasts"). This is due to the long publication lag for important economic variables, such as the components of GDP. Estimates of current economic activity are an important starting point for the analysis of the business cycle and the medium-term outlook and provide a useful reference in a policy context. Over the past years, various computational techniques have been developed to fully exploit all the information available at the time of producing a forecast. These purely computational techniques are subsumed under the term "nowcasting" and in contrast to traditional forecasting techniques, they do not include expert judgment. While indicators that summarize the current state of economic activity are nothing new – for example, the €-coin indicator for economic activity in the euro area has been published since 2001, and the Federal Reserve Banks of New York and Atlanta

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regularly publish nowcasts for the U.S. economy using different methods[2] –, surprisingly few publicly and regularly available nowcasts exist for the Central, Eastern and Southeastern (CESEE) economies.

In this paper, we propose country-specific nowcasting models for the 11 EU Member States in Central, Eastern and Southeastern Europe (CESEE-11)[3]. We adopt a foreign forecaster's perspective and attempt to implement a simple and easily applicable nowcasting tool to be used in regular country monitoring at the OeNB. As we are not aware of any public source of regular nowcasts for these economies, we have developed our own tool. It strikes a balance between finding the best model for every country and keeping the operating expense manageable for this number of countries. This approach also allows us to evaluate the forecast performance of the ultimately selected country models on a regular basis. Therefore, we opt for easily tractable models and avoid overly sophisticated methods that build on big data, allow for non-linearities and represent too much of a black box. We also attempt to limit data requirements to an extent that allows monthly updates of all 11 models in a fast and mechanical way.[4]

Section 1 reviews the literature on nowcasting for the CESEE region. Section 2 presents the baseline models; it introduces the principal component (PC) model, bridge equations (BE) and pure time series models (AR models), as well as variations and forecast combinations that we consider in the analysis. Section 3 describes the indicators that are fed into the baseline models and explains the measures used to compare the forecast performance of these models and to guide our selection of a preferred model for each country. Section 4 reports the results for individual models, countries and the CESEE-11 aggregate, and section 5 concludes the study.

1 Review of existing nowcasting studies for CESEE

Apart from a few studies on Russia and models for Croatia, the Czech Republic, Slovakia and Romania, the literature on nowcasting for CESEE is rather scarce.

Arnoštová et al. (2011) compare different model classes for the Czech Republic and find that standard principal component models outperform all others. Rusnák (2016) employs a dynamic factor model for nowcasting Czech GDP in real time and obtains satisfactory estimates. He stresses the importance of foreign variables for the accuracy of the model's nowcasts. Tóth (2017) applies a small dynamic factor model (DFM) to produce GDP nowcasts for Slovakia and obtains a higher forecast accuracy compared with naive models. Armeanu et al. (2017) use a large DFM based on 86 high-frequency indicators for Romania. Extracting three components, the authors can beat traditional Stock/Watson-type models in terms of forecast accuracy. Finally, Kunovac and Špalat (2014) develop a factor model for Croatia based on a large set of 41 indicators. This model likewise produces smaller forecasting errors compared with the naive benchmark random walk model and with bridge equations (with retail trade and industrial production). The authors stress an additional gain from averaging nowcasts obtained through different factor models.

[2] *More information on the methodologies behind these indicators can be found here: for "GDPNow" by the Fed Atlanta, see Higgins (2014) and for the Fed New York's "Nowcast Report," see Banbura et al. (2013) and Giannone et al. (2008).*

[3] *The CESEE-11 aggregate comprises the following countries: Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia.*

[4] *As outlined in the next section, the use of more indicators does not necessarily result in more precise nowcasts. Hence this choice does not necessarily represent a tradeoff between forecast quality and input costs.*

Recently available nowcasting models for Russia differ in terms of the methodology used. Mäkinen (2016) uses a range of small-scale models to produce estimates of Russian GDP growth for the first quarter of 2016 and finds that DFMs beat naive AR and autoregressive distributed lag models in terms of forecast accuracy. Porshakov et al. (2016) also report superior forecasting accuracy of DFMs over common alternative models for obtaining GDP nowcasts for Russia. Finally, Mikosch and Solanko (2017) adopt forecast pooling across different model classes (bridge equations, mixed data sampling and unrestricted mixed-frequency models) and report superior performance over standard benchmark models. They further find evidence that the indicators with the greatest informational content for producing the nowcasts vary over time and differentiate between economic downturns and recoveries.

Apart from these country-specific applications, the smaller CESEE economies in particular have received little attention in the nowcasting literature so far. However, we want to highlight two preceding articles that take a cross-country perspective on the CESEE region and lay the foundations for the model specifications that we propose in the present paper. According to the findings in Feldkircher et al. (2015), models that use high-frequency indicators yield more accurate forecasts than naive models such as AR(1) or random walk projections of GDP. Using both bridge equations and a small DFM, the authors can beat the naive benchmark for their sample of seven CESEE economies. In the case of Poland and Slovakia, only the DFM model outperforms the naive benchmark. Therefore, they recommend selecting a country-specific modeling approach for every CESEE economy based on out-of-sample forecasting performance.

Havrlant et al. (2016) demonstrate that principal component models work well for the CESEE-11 economies and yield on average smaller forecasting errors than DFMs. They further confirm that models with fewer indicators perform significantly better than models based on larger sample sets. This result is in line with Boivin and Ng (2006) and Bai and Ng (2005) and could be related to a violation of the weak orthogonality assumption and the relatively short time period for which high-frequency indicators are available for the sample of CESEE economies.

While the two studies focused on testing different model classes against each other, in this paper we follow the conclusions of Feldkircher at al. (2015) and try to select the best model for each country individually.

2 Description of model classes and forecast combination techniques

We intentionally restrict our modeling choice to simple and tractable models that have proven to yield reasonably accurate forecasts in the very short term (i.e. a horizon covering the past, current and next quarter). We build on the findings in Havrlant et al. (2016) and Feldkircher et al. (2015) and focus on the PC, BE and simple AR models, which were found to outperform other simple and tractable modeling approaches (such as DFMs or bridge equations with Bayesian variable selection).

In the following, we describe these three model classes and the variations within them to arrive at the best-performing nowcasting model for each country. In addition to exploring the forecasting performance of individual models from these model classes, we also test various forecast combinations, as described in section 2.4.

2.1 Spanning the range of principal component models

Our starting point is a principal component model as in Havrlant et al. (2016). The model is described by the following equations:

$$x_{it}^{Q} = \lambda_i PC_t^{Q} + \omega_{it} \quad (1)$$

$$y_t^{Q} = \Phi_h PC_{t-1}^{Q} + \psi_t \quad (2)$$

where x_{it}^{Q} is the quarterly aggregate of monthly indicator i and transformed to be stationary, with zero mean and unit variance. y_t^{Q} is the quarterly growth rate of real GDP. The terms ω_{it} and ψ_t are idiosyncratic shocks, which may be serially correlated. Shifting the x_{it} series appropriately resolves the issue of uneven endpoints of series due to differences in publication lags. Hence, the panel of indicators is rebalanced so that the last observations of x_{it}^{Q} and y_t^{Q} correspond. Vector PC_t^{Q} contains J common factors estimated by principal component analysis, and λ_i is a vector of J factor loadings specific to each indicator i. Note that the principal components are estimated at quarterly frequency. Once the PC_t^{Q} series has been estimated, equation (2) is fitted by OLS to obtain the vector of J coefficients Φ_h. As we work with a static model here, we need to lag PC_t^{Q} in equation (2) by one period to forecast GDP growth one quarter ahead.

We vary the principal component model along the following dimensions:

- The number of principal components pc (i.e. common factors) J can vary between one and four: pc$J$
- Equation (2) can be augmented by lagged GDP (y_{t-1}^{Q}), which yields a specification without or with lagged dependent variable (abbreviated here as g): pc$J$ versus gpc$J$
- Alternatively, lagged GDP (y_{t-1}^{Q}) can be included in the list of indicators when it is not included in the main equation (2)[5]: pcg$J$
- To remove noise arising from the deep reaction in most CESEE countries to the global financial crisis, we can include a crisis dummy c which takes the value 1 for the first quarter of 2009 and 0 otherwise: pcJc

Considering all possible combinations of the above alterations, we arrive at 24 different model specifications (*pc1, pc2, pc3, pc4, gpc1, gpc2, gpc3, gpc4, pcg1, pcg2, pcg3, pcg4, pc1c, pc2c, pc3c, pc4c, gpc1c, gpc2c, gpc3c, gpc4c, pcg1c, pcg2c, pcg3c, pcg4c*).

2.2 Variants of bridge equations

Bridge equations combine the information inherent in short-term indicators and the time series properties of the quarterly GDP series to arrive at a good estimate of current-quarter (and sometimes next-quarter) GDP (see Baffigi et al., 2004, for a good overview). We adopt a simple form of a bridge equation based on Gajewski (2014), who nowcasts GDP growth in the euro area using individual sentiment indicators only (such as ESI, PMI, €-coin) and without extrapolating monthly indicators over the quarter.[6] More precisely, he shows for the four largest euro area

[5] *Hence, the list of indicators used to estimate the factors includes both x_{it}^{Q} and y_{t-1}^{Q}, i.e. the GDP growth rate is used together with the quarterly aggregates of the monthly indicators to extract the principal components.*

[6] *In his framework, the quarterly aggregate of the monthly indicator is equal to the indicator value in the first month of a quarter. In the second month, Gajewski (2014) uses the simple average of the first- and second- month value and, similarly, in the third month, a three-month average is used. Of course, we will stick to our aggregation rules as set out in table A1 and use either averages, sums or the last observation according to the indicator.*

countries that considering one sentiment indicator leads to a significantly higher forecast performance compared with an AR(1) model. Hence, we will estimate several model specifications where we use single indicators only, i.e. without extracting any components. In contrast to Gajewski (2014), we do not restrict the choice of indicators to sentiment indicators only but make use of the pool of our 21 indicators.[7] We will proceed in the following way.

First, we must select the indicator(s) that we want to use. A common approach is to choose the indicator that exhibits the highest correlation coefficients with quarterly GDP growth. However, table A2 – where we present correlation coefficients of all indicators in all countries – shows that there is no one indicator that stands out in terms of its correlation to GDP growth. As there are several indicators showing a roughly equally high correlation coefficient with GDP growth, we choose three indicators in each country, i.e. the ones with the highest values.

Then, based on the selection of indicators x_i^Q we will estimate 14 different specifications that vary with respect to (1) the number of indicators and (2) the lag structure of the indicators. The basic model is based on quarterly data and is defined as follows:

$$y_t^Q = \alpha y_{t-1}^Q + \beta_1 x_t^Q + \beta_2 x_{t-1}^Q + \gamma crisis + \varepsilon_t, \quad (3)$$

where *crisis* is a dummy variable taking the value 1 in the first quarter of 2009. Table A1 in the annex indicates the operation by which each monthly indicator is transformed to quarterly frequency. Again, we arrive at different specifications here which arise from the following variations. First, each of the three indicators is added separately to the basic model, which results in three specifications, henceforth referred to as *be1*, *be2*, *be3*. The number stands for the respective indicator, starting with the one exhibiting the highest correlation coefficient. Hence, in the case of Poland, for example, *be1* represents a model that considers industry production (highest value), while *be2* includes turnover in the manufacturing sector (second-highest value) and so forth (see table A2). Second, we add two indicators to the baseline model, which again results in three specifications (*be12, be13, be23*). Furthermore, we also allow for a model where all indicators are included (*be123*). Finally, we consider lagged values of indicators by additionally adding them to each of the seven models specified so far. This yields seven additional specifications, which we indicate with the letter *L* (i.e. *be1L*, *be2L*, *be3L*, *be12L*, *be13L*, *be23L*, *be123L*). Hence, we are left with 14 bridge equation models overall.

2.3 Pure time series models

An even simpler approach to estimating concurrent GDP is to use the time series properties of the GDP series itself without relying on additional up-to-date information provided by monthly indicators. As it is often difficult to beat the AR(1) model in terms of forecast accuracy, we also consider this model class a fully valid alternative to our simple models. Equation 4 describes the baseline AR model:

$$y_t^Q = \alpha + \beta y_{t-1}^Q + \gamma crisis + \varepsilon_t \quad (4)$$

[7] *This approach is similar to but somewhat more general than the "bridge equations with the usual suspects" which are tested in Feldkircher et al. (2015).*

We work with quarterly data; therefore, we include up to four lags in different model specifications, and we vary these simple AR models by including and excluding the crisis dummy. The models are estimated using maximum likelihood techniques[8] to predict GDP growth rates. In total, we add 8 AR model specifications to our set of model candidates (i.e. *ar1*, *ar2*, *ar3*, *ar4*, *ar1c*, *ar2c*, *ar3c*, *ar4c*).

2.4 Forecast combinations

The literature often refers to improvements in forecast performance from pooling forecasts that are produced using different models (e.g. Kuzin et al., 2013). We also explore this technique, using the following forecast combinations.

A simple averaging of results from pooling across all model variations. We also check whether pooling across variations within each of the three model classes separately yields superior results. Since a simple average gives equal weight to extremely bad and extremely precise forecasts, we also experiment with a weighted average. Here we must distinguish between an ideal weighting scheme and one that is feasible in a real-time forecasting setting. The weights are defined in a dynamic way based on the performance of each model specification. An ideal weighting scheme gives maximum weight to the output of the best-performing model and minimum weight to the most imprecise forecast. However, forecast performance is not known ex ante, hence this weighting scheme is not feasible in real time. A feasible weighted average constructs weights based on previous forecast performance, i.e. the weights are selected based on best forecast performance in the previous period. For our dynamic forecast combination, we use the inverse of the mean average error for constructing the weights (see next section for a presentation of forecast accuracy measures used in the evaluation of forecast performance).

Finally, we also explore a more specific method of averaging selected specifications based on their static forecast performance. In this static forecast combination approach, we exploit both time series properties of the GDP series and more readily available information from monthly indicators by calculating the pairwise average between each AR model and each principal component model as well as between each AR model and each bridge equation.[9] This pairwise averaging results in 304 (8*24 + 8*14) forecast averages, from which we choose the most accurate.

In sum, adding pure model and pooled estimates together, we arrive at 356 possible nowcasts for each country (24 PC forecasts, 14 BE forecasts, 8 AR forecasts, simple average, ideal weighted average, feasible weighted average, average of all PC forecasts, average of all BE forecasts, average of all AR forecasts and 304 pairwise averages). We will compare these model estimates with a simple benchmark to assess their relative forecast performance. In the literature, the prime candidates for such a benchmark are either an AR(1) model or a random walk model. Since we include AR(1) models in our set of candidates, we benchmark the results against the random walk (RW).

[8] *More specifically, we use Stata's arima command. The default setting chosen uses a combination of the Berndt-Hall-Hall-Hausman and the Broyden-Fletcher-Goldfarb-Shanno algorithm to find an optimum. Note that our results do not change if we estimate these models with simple OLS.*

[9] *Note that the nowcasts from the AR(p) models do not vary within one quarter, i.e. the monthly nowcast of quarterly GDP growth rates is the same for all three months within a quarter. Variation within the quarter stems solely from the PC and BE forecasts.*

3 Data and forecast performance measures

As mentioned in the introduction, nowcasting refers to forecasting the present using an automated routine which extracts information from currently available data. In our case, we use a rather small set of only 21 monthly indicators to produce a purely model-based estimate of current-quarter GDP. The set of indicators is described in subsection 3.1 below. As we start from a total of 356 model-based estimates, we also need a clear criterion to select the best model, i.e. the one yielding the smallest forecast error for each country. We explain the measure of forecast accuracy on which we base our selection in subsection 3.2 below.

3.1 Description of monthly indicators

The selection of indicators to be included in the principal component models was guided by the findings in Havrlant et al. (2016) relating to the consistently better forecasting performance of small-scale models in the context of CESEE economies. More specifically, we select 21 monthly indicators from different economic categories, and within each category, we choose an indicator according to its correlation with GDP.

From Eurostat we take monthly series for industrial production, manufacturing turnover, production in construction, retail trade, the economic sentiment indicator (ESI), unemployment rate, imports and exports, and from the ECB we obtain passenger car registrations. In addition, we include industrial production in the euro area and in the three most important trading partners (from Eurostat) and the HWWI indices of world market prices and crude oil. Further, we use the Markit Manufacturing Purchasing Managers Index (PMI®) for the euro area, the €-coin indicator[10] and the CESifo index of export expectations. To capture the influence of financial markets on real activity, we also include market interest rates (the 3-month and 12-month EURIBOR provided by Macrobond). Table A1 in the annex lists all indicators in detail and provides more information, e.g. on frequency transformation and publication lags. Recall that we transform monthly indicators to quarterly frequency (either by averaging, summing or using the last observation) before extracting common factors.

Publication lags range from none for ESI (released on the last day of each month), euro area PMI and export expectations (as we extract the data and compute our nowcasts on the day of release) to seven weeks for production in construction[11]. For most indicators, the publication lag is five to six weeks.

Note that not all indicators are available for all countries and years. Our sample starts in January 2003, yet the ESI for Croatia starts only in January 2008. Further, production in construction does not exist for Croatia, Estonia, Latvia and Lithuania. Car registrations are not available for Croatia, and the time series starts only in 2006 in Bulgaria and Romania. Therefore, we do not include this series in the models for these two countries, either.

The database is updated on the 20th of each month. Apart from the ESI and unemployment, all indicators have been released by this day. We calculate three nowcasts

[10] *The €-coin indicator is itself a real-time monthly estimate of euro area-wide GDP growth, computed each month by the staff of the Banca d'Italia. See https://eurocoin.cepr.org/ for more information or Altissimo et al. (2010) for a technical description of this indicator.*

[11] *However, in contrast to GDP, which is published with the same time lag, the frequency of production in construction is monthly, hence we obtain two updates on this indicator during a quarter before the next GDP figure is released.*

for each quarter. The nowcast calculated in month t is based on data referring to month *t-1*; therefore, in January, we estimate a nowcast for the fourth quarter, using data up until December. In February, when data for January become available, our nowcast relates to the first quarter and we update the nowcast for the first quarter by April. In May, we move to estimating second quarter GDP and so on.

3.2 Measures of forecast accuracy

We perform quasi-out-of-sample forecasts for the period ranging from the second quarter of 2012 to the fourth quarter of 2017. In total, our evaluation sample covers almost 6 years, which yields 69 observations (i.e. months).[12] From these estimates, we calculate several measures of forecast performance.[13] Unfortunately, real-time GDP data series are not available for all the countries in our sample. We must rely on recently published GDP growth figures in our calculation of forecast errors (hence "quasi-out-of-sample") with the well-known caveat that we ignore the effect of different data vintages on the results.[14]

Our model selection criterion is the mean absolute error, $MAE = \frac{\sum_{n=1}^{N=69} |y_n - \hat{y}_n|}{N}$, where $\hat{y}$ denotes realized quarterly GDP growth and refers to our GDP nowcast. We choose this indicator because it reflects the absolute size of the forecast error. In our case, it can be interpreted by means of percentage points of GDP growth rates. The model with the lowest MAE will be selected as the optimal model – this is done for each country individually.

In addition, we test whether the MAE of the optimal model is statistically smaller than the MAE of the benchmark model (i.e. RW model) by means of a Diebold-Mariano statistic. This test (Diebold and Mariano, 1995) is based on the null hypothesis that the forecasting ability of two models is equal. A rejection of the null hypothesis is evidence of better forecast accuracy of the nowcast model.

Furthermore, we will present the following indicators:[15]

1 Mean forecast error: $MFE = \frac{\sum_{n=1}^{N=69}(y_n - \hat{y}_n)}{N}$, whereby a negative sign implies an over-prediction of GDP growth. The MFE is an indication of forecast bias.
2 Root mean square error: $RMSE = \sqrt{\frac{\sum_{n=1}^{N=69}(y_n - \hat{y}_n)^2}{N}}$, whereby a smaller RMSE indicates higher forecast accuracy.

Direction of change – percentage of cases in which the forecast movement direction of GDP growth relative to its previous level coincides with the direction of change of realized GDP growth. In other words, it gives the percentage of cases where the model correctly predicts the sign of the growth rate: $DOC = 1$ *if* $\{(y_{t+1} - y_t) > 0$ *and* $(\hat{y}_{t+1} - y_t) > 0\}$ *or if* $\{(y_{t+1} - y_t) < 0$ *and* $(\hat{y}_{t+1} - y_t) < 0\}$ and 0 otherwise.

[12] *To be precise, GDP figures for Croatia, Slovenia and Estonia become available somewhat later than those of other countries, which implies that we lose one-third of the observations in the evaluation for these three countries.*

[13] *We focus here on point estimates in our assessment of forecast accuracy in order to maintain comparability with most of the existing literature. In particular, we want to compare our results with the two preceding papers by Feldkircher et al. (2015) and Havrlant et al. (2016). These studies serve as a starting point for deriving a nowcasting procedure that will be applied regularly for our sample of 11 CESEE countries.*

[14] *While it would be possible to reconstruct vintages for the GDP and industry production series for most of these countries (albeit in a rather time-consuming way), such vintage data are unfortunately not available for the remaining monthly indicators.*

[15] *See for example Slacik et al. (2014) for a more detailed description of these forecasting accuracy measures.*

4 Results – selecting the models with the smallest forecast error

We first assess the forecasting performance of individual models, distinguishing between nowcasts based on PC, BE and AR models. We then present the results from averaging nowcasts. In the next step, we explore the gain from using a different model or model average in each of the three months within a quarter.[16] Finally, we present our preferred model for each country and a regional average. We calculate the forecast performance indicators described above based on 69 monthly observations in our evaluation period. The model with the smallest MAE among all country-specific models is classified as the best performer.[17] We compare the MAEs as well as the other performance measures introduced in the preceding section with the ones obtained from estimates of a simple RW model which uses neither additional, high-frequency information nor the time series properties inherent in the GDP series. The RW model serves as our benchmark.

4.1 Best performers among the country-specific models

The results from the 46 "pure" models are summarized in table 3A in the annex. In table 1, we report the forecast measures for the best-performing model according to the MAE. Three findings stand out.

First, except for Slovakia, the best-performing country models always exhibit a smaller MAE than the RW model. This is also true of the RMSE. In terms of the MFE, the RW model consistently underpredicts GDP in all countries, while the bias differs by country based on informed nowcasts using the selected best-performing model. However, the absolute value of the MFE using our selected models is lower only in 3 of 11 countries (and not different from the MFE of the RW model in a further three countries). This suggests on average a smaller, yet more consistent bias of the RW model. Finally, the direction of change (DOC) indicator is always well above 50 for both the selected model-based nowcast and the benchmark. This indicates that all models are likely to predict turning points correctly. The selected model outperforms the RW model on this criterion in six countries.

Second, 7 of 11 country models significantly outperform the benchmark model as indicated by the Diebold-Mariano test. Although the models exhibit a smaller MAE, the nowcast models for the Czech Republic, Slovakia, Lithuania and Latvia do not show a significantly better forecast performance than the RW model in a strictly statistical sense.

Third, we confirm the finding in Feldkircher et al. (2015) that there is no one model that is equally suitable for all countries. In fact, we find ten different "best" model specifications from all model classes and variations for 11 countries. An AR(4) model including a crisis dummy emerges as the best performer only for two countries, Bulgaria and Slovakia, yet only in the case of Bulgaria does this model also significantly outperform the RW benchmark as indicated by the Diebold-Mariano test. In all other countries, the specifications differ widely. More specifically, we identify four variants of AR models, four variants of BE models and three different PC specifications as the best-performing models.

[16] *We thank the anonymous referee for this suggestion.*

[17] *MAEs for all 46 models and 11 countries are available from the authors upon request.*

Table 1

The best performers among 46 "pure" models

	Best-performing model					Random walk (benchmark)				Diebold-Mariano	
	Model type	MAE	RMSE	MFE	DOC	MAE	RMSE	MFE	DOC	ΔMAE	Statistic
CZ	be23	0.47	0.56	0.00	0.77	0.53	0.71	0.03	0.82	0.06	0.89
BG	ar4c	0.23	0.27	–0.03	0.81	0.32	0.37	0.02	0.55	0.09***	3.79
HU	be123	0.38	0.45	0.20	0.69	0.60	0.79	0.15	0.73	0.23*	1.79
PL	be13L	0.34	0.43	–0.12	0.77	0.58	0.68	0.04	0.60	0.24***	4.45
RO	pcg2c	0.73	0.86	0.17	0.67	1.03	1.30	0.01	0.68	0.30***	7.63
SI	gpc2c	0.34	0.47	0.06	0.81	0.52	0.61	0.10	0.67	0.18***	3.00
SK	ar4c	0.23	0.34	–0.19	0.63	0.11	0.14	0.03	0.74	–0.12	–1.45
HR	ar3c	0.41	0.51	0.07	0.64	0.62	0.75	0.08	0.59	0.21***	2.58
EE	pc1	0.48	0.58	–0.10	0.80	1.01	1.23	0.03	0.61	0.52***	2.94
LT	ar1	0.42	0.57	–0.05	0.83	0.52	0.75	0.03	0.77	0.10	1.64
LV	be2L	0.46	0.58	0.22	0.71	0.58	0.76	–0.00	0.73	0.11	1.48

Source: Authors' estimations.

*Note: MAE = mean average error, RMSE = root mean square error, MFE = mean forecast error, DOC = direction of change (see section 3.2 for a description of the indicators). The Diebold-Mariano test is based on the null hypothesis: difference in MAE is zero, two-tailed significance levels: * p<0.10, ** p<0.05, *** p<0.01.*

Overall, short-term macroeconomic indicators make a valuable contribution to obtaining reliable information on current-quarter GDP growth in CESEE economies, but there is still room for improvement in terms of forecast accuracy.

4.2 Pooling of forecasts

Rather surprisingly, forecast pooling does not yield large gains in forecast accuracy. Table 2 summarizes the MAEs of all forecast averages. When we look at the results for simple forecast averages (i.e. pooling across all possible specifications or within model classes), we find improvements only for Slovenia (using the average across all PC models), Estonia (average across all models) and Romania (average across all BE models). However, these small improvements are not statistically significant. What is worse, we cannot observe an improvement for countries where we were not able to beat the random walk with any of the single-model specifications.

A dynamic forecast combination would clearly allow us to obtain more precise nowcasts, yet only if we knew the best-performing models ex ante. However, such a procedure is not feasible in real time. Using lagged weights does not yield any improvement except for Slovenia.

Finally, we look at the results from pairwise forecast combinations shown in the last two columns of table 2 (indicating which specification or combination is used and the corresponding MAE). For 6 of the 11 countries, such a pairwise combination reduces the MAE, while choosing a single model remains the best option in 5 countries. More precisely, in Hungary, Romania, Croatia and the Baltic states, a combination of either a PC or a BE model with an AR model leads to more accurate nowcasts. However, only in Latvia is the improvement sufficiently strong to render the nowcast significantly better than an RW estimate according to the Diebold-Mariano test.

Table 2

Forecast combinations

Country	Best single model		Simple forecast averages				Dynamic forecast combination		Pairwise forecast combination[2]	
	(memo item)		all models	PC models	BE models	AR models	current weights[1]	lagged weights		
CZ	be23	0.47	0.50	0.50	0.50	0.54	0.38	0.50	be23	0.47
BG	ar4c	0.23	0.33	0.36	0.38	0.26	0.22	0.29	ar4c	0.23
HU	be123	0.38	0.39	0.39	0.37	0.48	0.25	0.40	ar4c/be123	0.36
PL	be13L	0.34	0.38	0.38	0.37	0.43	0.29	0.36	be13L	0.34
RO	pcg2c	0.73	0.77	0.78	0.73	0.77	0.62	0.72	ar2c/be123L	0.71
SI	gpc2c	0.34	0.34	0.32	0.35	0.49	0.24	0.31	gpc2c	0.34
SK	ar4c	0.23	0.33	0.34	0.37	0.33	0.15	0.30	ar4c	0.23
HR	ar3c	0.41	0.40	0.41	0.43	0.43	0.26	0.45	ar3c/gpc2c	0.37
EE	pc1	0.48	0.47	0.52	0.58	0.53	0.18	0.43	ar4c/be1	0.38
LT	ar1	0.42	0.47	0.50	0.47	0.45	0.29	0.47	ar3/pc1c	0.41
LV	be2L	0.46	0.49	0.50	0.50	0.50	0.27	0.52	ar3c/be12	0.46

Source: Authors' estimations.

[1] Note that this estimator is unfeasible.

[2] This selection is based on all single models (N:46) plus all pairwise averaged models (= unweighted mean of each PC and BE model with each AR model, N:38x8=304).

Note: PC, BE and AR refer to principal component, bridge equation and autoregressive time series models.

4.3 Differentiating by forecast month

Clearly, new information about economic activity continuously becomes available over the three months within a quarter. Therefore, the best nowcasting model may vary across the first, second, and third month within a quarter. We explore possible gains from selecting a different model specification for each month, following the constant pattern of data releases.

Table 3 displays the MAEs of the best-performing models when we distinguish by forecast month. The first two columns repeat the best model among single models and pairwise forecast combinations while ignoring the variation across individual months. The next six columns report the best model and the corresponding MAE for each month. The last column shows the MAE that is obtained when we vary the underlying model specification across the three months.

Looking first at the changes in model selection over time, we observe that the number of pure AR models or models with AR combinations declines from the first to the third month within a quarter. This is an expected outcome, which confirms that the monthly indicators become more informative over time. In the first month of a quarter, an AR model or a combination of an AR model with a model based on monthly indicators emerges as the best performer in eight countries. In the third month, this number is reduced to five. Pure BE models often perform best in the second month, while in the third month PC models gain ground.

Comparing the MAE from the memo item with the last column, we observe a minor improvement in the accuracy of the nowcast for Hungary, Poland, Romania and Lithuania. However, in all four cases, the Diebold-Mariano test still does not indicate a statistically significantly better forecasting performance than the RW model (not reported, but available upon request). Hence, while this routine would clearly complicate regular monthly updates, the gains in forecast accuracy appear to be minor.

Table 3

Best model by forecast month

Country	Best single and combined models (memo item)		Best model in month 1		Best model in month 2		Best model in month 3		Combining best models for months 1 to 3
	Model type	MAE	Model type	MAE	Model type	MAE	Model type	MAE	
CZ	be23	0.47	ar1c/pc3	0.47	be23	0.46	be23	0.48	0.47
BG	ar4c	0.23	ar4c	0.23	ar4c	0.23	ar4c	0.23	0.23
HU	ar4c/be123	0.36	ar4c/be123	0.34	ar3c/be123L	0.34	pc3c	0.32	0.33
PL	be13L	0.34	be3	0.35	be13L	0.32	be13L	0.32	0.33
RO	ar2c/be123L	0.71	be13L	0.67	be13L	0.67	pc3	0.69	0.68
SI	gpc2c	0.34	pc3c	0.39	be1	0.34	gpc2c	0.29	0.34
SK	ar4c	0.23	ar4/pcg1	0.22	ar4c	0.23	ar4c	0.23	0.23
HR	ar3c/gpc2c	0.37	ar1c/pc4c	0.37	ar4c/gpc4c	0.37	ar3c/gpc2	0.37	0.37
EE	ar4c/be1	0.38	ar4	0.48	ar4c/be12	0.38	ar3c/gpc1c	0.36	0.40
LT	ar3/pc1c	0.41	ar1	0.42	ar1/pcg3	0.39	ar3/pc1c	0.39	0.40
LV	ar3c/be12	0.46	ar3/be2L	0.46	ar3c/pcg4c	0.44	be2	0.41	0.44

Source: Authors' estmations.

Note: MAE = mean average error. For Slovenia, Croatia and Estonia, estimates for month 1 are available for a restricted set of models (PC and AR models).

4.4 Preferred model choice

When we consider all the variations and combinations of models and model specifications that we explored and their relative forecasting performance, we arrive at the following preferred modeling choice: we choose from pure models from all three model classes and pairwise combinations of pure AR models with either BE or PC models without varying our models across months within a quarter. The preferred model specifications and their forecasting performance are summarized in table 4. For 8 of the 11 countries, our models produce a more accurate nowcast than an RW model according to the Diebold-Mariano test. For the Czech Republic, Slovakia and Lithuania, we were not able to find any variation or modification of

Table 4

Preferred nowcast specification by country and CESEE aggregate

Country		Best-performing model				Random walk (benchmark)				Diebold-Mariano	
	Model type	MAE	RMSE	MFE	DOC	MAE	RMSE	MFE	DOC	ΔMAE	Statistic
CZ	be23	0.47	0.56	0.00	0.77	0.53	0.71	0.03	0.82	0.06	0.89
BG	ar4c	0.23	0.27	–0.03	0.81	0.32	0.37	0.02	0.55	0.09***	3.79
HU	ar4c/be123	0.36	0.44	0.22	0.70	0.60	0.79	0.15	0.73	0.24**	2.04
PL	be13L	0.34	0.43	–0.12	0.77	0.58	0.68	0.04	0.60	0.24***	4.45
RO	ar2c/be123L	0.71	0.88	0.07	0.67	1.03	1.30	0.01	0.68	0.32***	3.22
SI	gpc2c	0.34	0.47	0.06	0.81	0.52	0.61	0.10	0.67	0.18***	3.00
SK	ar4c	0.23	0.34	–0.19	0.63	0.11	0.14	0.03	0.74	–0.12	–1.45
HR	ar3c/gpc2c	0.37	0.47	–0.06	0.68	0.62	0.75	0.08	0.59	0.24**	2.33
EE	ar4c/be1	0.38	0.48	–0.06	0.89	1.01	1.23	0.03	0.61	0.63***	3.21
LT	ar3/pc1c	0.41	0.56	–0.14	0.79	0.52	0.75	0.03	0.77	0.11	1.24
LV	ar3c/be12	0.46	0.61	–0.13	0.77	0.58	0.76	–0.00	0.73	0.12**	2.29
CESEE-11	weighted av.	0.23	0.29	–0.02	0.69	0.32	0.41	0.05	0.74	0.09**	2.05

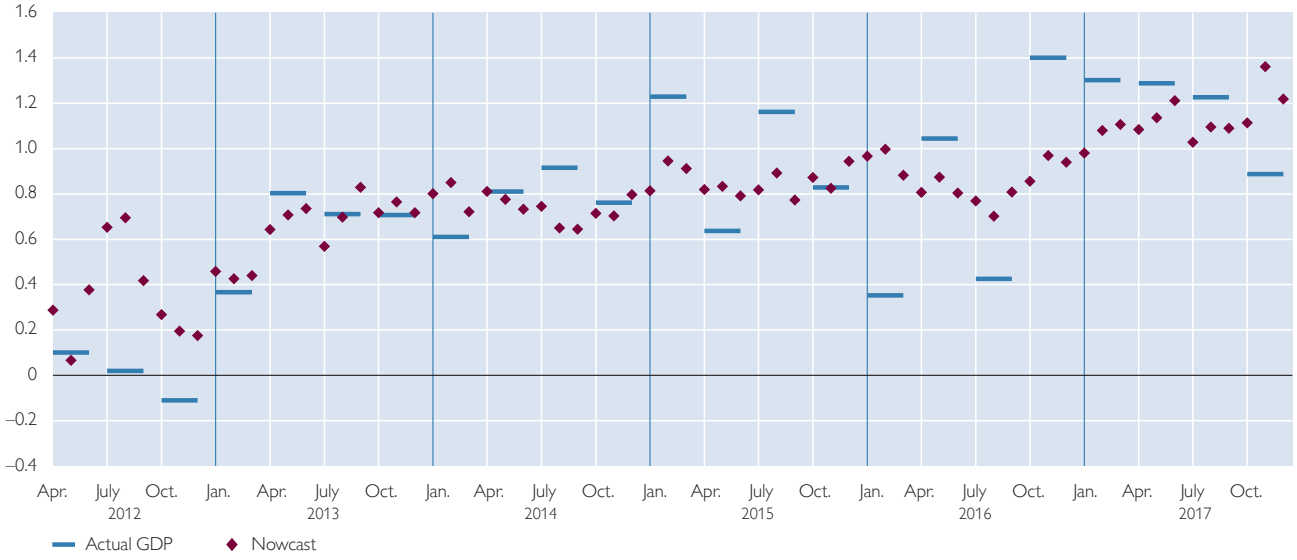
Source: Authors' estimations.

*Note: MAE = mean average error, RMSE = root mean square error, MFE = mean forecast error, DOC = direction of change (see section 3.2 for an explanation of the indicators); Diebold-Mariano test is based on the null hypothesis: difference in MAE is zero, two-tailed significance levels: * p<0.10, ** p<0.05, *** p<0.01.*

Chart 1

Out-of-sample nowcast and real GDP growth in CESEE-11

Quarter on quarter in %



Source: Eurostat, authors' calculations.

our baseline models that would be able to beat the benchmark. However, for the Czech Republic and Lithuania, we can produce a smaller MAE than the benchmark, even if the difference is not statistically significant. Overall, we consider the results to be satisfactory, with a rather high hit rate when it comes to correctly predicting the direction of change in GDP and producing on average a low and variable bias across countries. Especially with respect to the direction of change criterion, we were able to improve the forecasting performance considerably compared with the results for the pure models presented in table 1.

Table 4 also reports a regional aggregate for all 11 countries. To calculate the CESEE-11 aggregate, we weight the nowcasts of individual countries by using the GDP values (in PPP) of the countries observed in 2014. The MAE of the CESEE-11 nowcast amounts to 0.23 percentage points of GDP growth. This is quite low compared with the relatively high and highly variable growth rates in this region over the last five years. Chart 1 illustrates GDP developments and how our pooled nowcast, based on country-specific model specifications, tracks economic activity in the CESEE-11 region over the evaluation period.

5 Summary and conclusions

National accounts data are released with a seven-week lag. This first release includes headline GDP and its components and is thus particularly relevant for policy-makers. To be able to better assess the current level of economic activity between the quarterly releases of GDP in the 11 CESEE countries examined, we propose a computational approach that makes use of the information inherent in higher-frequency indicators which are published during each month of a quarter. We build on previous studies (Feldkircher et al., 2015, and Havrlant et al., 2016) and employ principal component models and bridge equations using a rather small set of carefully selected monthly indicators as well as time-series models as our baseline model setting.

More specifically, we extract principal components from a set of 21 monthly indicators covering both country-specific and international developments. This serves as a basis for specifying a selection of 24 models that vary along several dimensions (e.g. number of extracted components, lag structure, inclusion of crisis dummy and treatment of lagged dependent variable). We then add to this pool of principal component models a pool of bridge equations, adding another 14 specifications to draw from, as well as eight pure AR models. Finally, we propose several forecast combination techniques to arrive at 356 possible nowcasts for each country.

Based on out-of-sample forecasts, we choose the model with the smallest mean absolute error for each country and compare its performance to a random walk model. Our estimation sample starts in the first quarter of 2003, our evaluation period ranges from the second quarter of 2012 to the fourth quarter of 2017.

Our findings can be summarized as follows: First, we find clear evidence that high-frequency indicators can be used to improve short-term forecasts, as they yield rather accurate estimates of current GDP growth. Calculating quasi-out-of-sample forecasts based on these models, we can always find a principal component model, a bridge equation, a variation of such a model or a combination with an AR model that outperforms the RW benchmark in terms of the mean absolute error (except in the case of Slovakia). More importantly, in 8 of 11 CESEE countries, we were able to find a model specification with a statistically significantly smaller forecast error than the benchmark according to the Diebold-Mariano test.

The results are similar for other forecast accuracy measures: In most cases, our nowcast models result in a lower root mean square error than the naive benchmark, and we also beat the benchmark in terms of getting the direction of change right (apart from the Czech Republic, Hungary and Slovakia).

Second, we confirm the finding by Feldkircher et al. (2015) that the optimal model varies strongly across countries: For 11 countries, we find 10 different best-performing models. There are only two countries for which the same time series model specification yields the highest forecast accuracy, namely Bulgaria and Slovakia.

Third, we see a gain in careful forecast pooling, both across models and across countries. For six countries, we can obtain more accurate nowcasts when we average model estimates with estimates from a pure AR model (using up to four lags of GDP). Interestingly, we do not observe much gain in pooling across all available forecasts, as this mixes both highly accurate and very imprecise forecasts. Since there is no feasible way of attaching higher weights to the best-performing forecasts in a dynamic setting, we opted for a static selection of best-performing forecasts from both model classes – PC and BE models based on monthly indicators and AR models using only time series information. The pairwise combination of these models yielded a notable gain in the accuracy of the nowcasts. We also explored further gains from using different models in each month, as new information builds up over the three months of a quarter. Yet, while we clearly find fewer AR-based and more BE and PC models among the best performers in the second and third month of a quarter – indicating the growing importance of additional information from monthly indicators as the quarter evolves –, we were not able to produce a worthwhile improvement in the forecast accuracy measures. Hence, for the sake of simplicity and efficiency in daily routine, we opted against this additional differentiation. Finally, we calculated a weighted average of the

individual country estimates to obtain a nowcast for the CESEE-11 country aggregate. This nowcast is highly superior to the benchmark and produces statistically significantly smaller forecast errors and notably a smaller forecast bias.

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Annex

Table A1

List of indicators

Label	Indicator	Seasonal adjustment	Source	Publication lag (weeks)	Frequency transformation
ip	Production in industry, total	SCA	Eurostat	6	average
turnover	Manufacturing turnover	SCA	Eurostat	6	average
constr	Production in construction	SCA	Eurostat	7	average
retail	Retail trade, excluding motor vehicles and motorcycles	SCA	Eurostat	5	average
esi	Economic Sentiment Indicator	SA	Eurostat	0	last observation
car	Passenger car registrations	SCA	ACEA	2	sum
unempl	Unemployment rate	SA	Eurostat	5	last observation
imp	Imports	NA	Eurostat	6	sum
exp	Exports	NA	Eurostat	6	sum
HWWI	HWWI index of world market prices	NA	HWWI	1	average
HWWI, oil	HWWI index of world market prices, crude oil	NA	HWWI	1	average
EA ip	Production in industry, euro area	SCA	Eurostat	6	average
EA pmi	Markit Eurozone Manufacturing Purchasing Managers Index (PMI®)	SA	Markit	0	last observation
EA IFO	ifo Export Expectations for German industry	SA	CESifo	0	last observation
EA €-coin	€-coin indicator	NA	Banca d'Italia / CEPR	0	last observation
EUR3	EURIBOR 3 months	NA	Macrobond	0	average
EUR12	EURIBOR 12 months	NA	Macrobond	0	average
IP_xx	Production in industry of the three most important trading partners	SCA	Eurostat	6	average
gdp	Real GDP (quarterly)	SCA	Eurostat	7	-

Source: Authors' compilations.

Note: Seasonal as well as seasonal and calendar-day adjustment of indicators is undertaken by national statistical institutes. SCA = seasonally and calender-day adjusted, SA = seasonally adjusted, NA = non-adjusted times series.

Table A2

Pairwise correlation coefficients of GDP growth and indicators (quarterly, quarter on quarter)

	CZ	BG	HU	PL	RO	SI	SK	HR	EE	LT	LV
unempl	–0.559	–0.445	–0.346	–0.319	–0.207	–0.356	–0.388	–0.462	–0.370	–0.575	–0.611
turnover	0.411	0.368	0.684	0.487	0.513	0.607	0.477	0.061	0.390	0.367	0.549
retail	0.620	0.628	0.614	0.252	0.452	0.521	0.434	0.554	0.499	0.729	0.766
pmi	0.776	–	–	0.363	–	–	–	–	–	–	–
ip	0.674	0.627	0.743	0.494	0.568	0.769	0.432	0.585	0.541	0.197	0.546
car	0.311	–	0.298	0.164	–	0.350	0.111	–	–	–	–
imp	0.337	0.413	0.346	0.054	0.444	0.285	0.430	0.316	0.115	0.505	0.426
exp	0.305	0.287	0.311	0.028	0.410	0.239	0.412	0.193	0.116	0.449	0.190
esi	0.775	0.588	0.624	0.231	0.561	0.811	0.544	–	0.728	0.672	0.811
constr	0.113	0.506	0.236	0.338	0.219	0.382	0.350	–	–	–	–
HWWI, oil	0.245	0.192	0.315	0.036	0.187	0.360	0.218	0.187	0.374	0.289	0.051
HWWI	0.272	0.226	0.364	0.090	0.248	0.411	0.223	0.246	0.416	0.314	0.081
TP1 ip[1]	0.662	0.558	0.598	0.239	0.591	0.707	0.643	0.646	0.460	0.497	0.174
TP2 ip[1]	0.513	0.474	0.502	0.098	0.495	0.795	0.501	0.682	0.381	0.599	0.223
TP3 ip[1]	0.504	0.349	0.456	0.329	0.535	0.685	0.328	0.548	0.460	0.491	0.484
EA pmi	0.762	0.580	0.647	0.270	0.480	0.855	0.484	0.580	0.584	0.618	0.536
EA ip	0.727	0.576	0.662	0.269	0.580	0.776	0.623	0.622	0.531	0.775	0.460
EA €-coin	0.787	0.600	0.596	0.374	0.473	0.839	0.541	0.640	0.600	0.620	0.614
EA IFO	0.770	0.593	0.688	0.216	0.516	0.845	0.533	0.584	0.658	0.687	0.574
euribor, 3-m	0.742	0.707	0.666	0.132	0.633	0.785	0.762	0.593	0.542	0.825	0.517
euribor, 12-m	0.738	0.695	0.675	0.136	0.611	0.803	0.700	0.593	0.544	0.789	0.462

Source: Authors' estimations.

[1] *TP denotes the trading partner of the respective country. TP1 is the main trading partner in terms of exports, TP2 is the trading partner receiving the second highest amount of exports of the respective country, and so forth.*

Table A3

Mean absolute error (MAE) of 46 models and random walk (benchmark) model

	RW	ar1	ar1c	ar2	ar2c	ar3	ar3c	ar4	ar4c	pcg1	pcg1c	pcg2	pcg2c
CZ	0.53	0.52	0.51	0.53	0.54	0.54	0.55	0.55	0.58	0.50	0.52	0.52	0.53
BG	0.32	0.31	0.32	0.27	0.24	0.25	0.23	0.26	0.23	0.38	0.38	0.35	0.35
HU	0.60	0.51	0.49	0.52	0.45	0.51	0.43	0.50	0.43	0.38	0.40	0.42	0.40
PL	0.58	0.47	0.47	0.47	0.47	0.45	0.45	0.45	0.45	0.40	0.40	0.41	0.41
RO	1.03	0.78	0.73	0.78	0.74	0.79	0.75	0.86	0.76	0.78	0.75	0.78	0.73
SI	0.52	0.48	0.47	0.52	0.46	0.52	0.46	0.52	0.47	0.36	0.35	0.36	0.36
SK	0.11	0.34	0.55	0.32	0.40	0.31	0.29	0.24	0.23	0.34	0.32	0.49	0.32
HR	0.62	0.43	0.42	0.44	0.43	0.45	0.41	0.45	0.45	0.43	0.43	0.45	0.44
EE	1.01	0.67	0.61	0.52	0.51	0.51	0.51	0.50	0.51	0.50	0.51	0.56	0.56
LT	0.52	0.42	0.47	0.44	0.49	0.42	0.48	0.43	0.54	0.60	0.47	0.61	0.53
LV	0.58	0.51	0.52	0.50	0.50	0.48	0.48	0.52	0.52	0.51	0.58	0.65	0.62

	RW	pcg3	pcg3c	pcg4	pcg4c	pc1	pc1c	pc2	pc2c	pc3	pc3c	pc4	pc4c
CZ	0.53	0.51	0.52	0.51	0.51	0.51	0.53	0.53	0.54	0.52	0.53	0.52	0.52
BG	0.32	0.39	0.34	0.40	0.40	0.39	0.39	0.37	0.37	0.40	0.35	0.40	0.36
HU	0.60	0.43	0.42	0.49	0.49	0.39	0.40	0.43	0.41	0.43	0.41	0.50	0.47
PL	0.58	0.39	0.39	0.39	0.39	0.39	0.39	0.40	0.40	0.39	0.39	0.38	0.38
RO	1.03	0.86	0.82	0.95	0.95	0.77	0.74	0.78	0.74	0.85	0.81	0.93	0.87
SI	0.52	0.34	0.34	0.34	0.34	0.37	0.35	0.35	0.34	0.34	0.34	0.34	0.34
SK	0.11	0.57	0.34	0.54	0.54	0.35	0.32	0.50	0.33	0.54	0.33	0.53	0.34
HR	0.62	0.47	0.45	0.47	0.47	0.43	0.43	0.43	0.42	0.49	0.47	0.49	0.46
EE	1.01	0.72	0.70	0.78	0.78	0.48	0.50	0.54	0.54	0.69	0.68	0.74	0.76
LT	0.52	0.66	0.54	0.68	0.68	0.62	0.48	0.63	0.54	0.65	0.56	0.66	0.55
LV	0.58	0.69	0.66	0.61	0.61	0.51	0.58	0.64	0.66	0.76	0.71	0.78	0.73

	RW	gpc1	gpc1c	gpc2	gpc2c	gpc3	gpc3c	gpc4	gpc4c	be1	be12	be123	be13
CZ	0.53	0.48	0.50	0.50	0.52	0.49	0.50	0.49	0.50	0.53	0.51	0.51	0.53
BG	0.32	0.39	0.34	0.46	0.41	0.48	0.40	0.49	0.40	0.34	0.32	0.49	0.50
HU	0.60	0.39	0.40	0.43	0.41	0.44	0.42	0.51	0.49	0.43	0.38	0.38	0.41
PL	0.58	0.40	0.40	0.40	0.40	0.40	0.40	0.37	0.37	0.44	0.44	0.36	0.35
RO	1.03	0.78	0.75	0.79	0.75	0.85	0.81	0.92	0.87	0.74	0.74	0.75	0.75
SI	0.52	0.37	0.36	0.35	0.34	0.35	0.36	0.36	0.37	0.34	0.35	0.36	0.35
SK	0.11	0.44	0.35	0.51	0.38	0.56	0.40	0.58	0.42	0.38	0.42	0.42	0.38
HR	0.62	0.42	0.41	0.43	0.42	0.53	0.52	0.51	0.48	0.43	0.42	0.48	0.46
EE	1.01	0.49	0.51	0.55	0.56	0.65	0.65	0.70	0.73	0.54	0.58	0.65	0.54
LT	0.52	0.69	0.47	0.79	0.56	0.80	0.57	0.80	0.60	0.46	0.47	0.48	0.47
LV	0.58	0.51	0.54	0.59	0.62	0.61	0.61	0.61	0.63	0.58	0.49	0.62	0.65

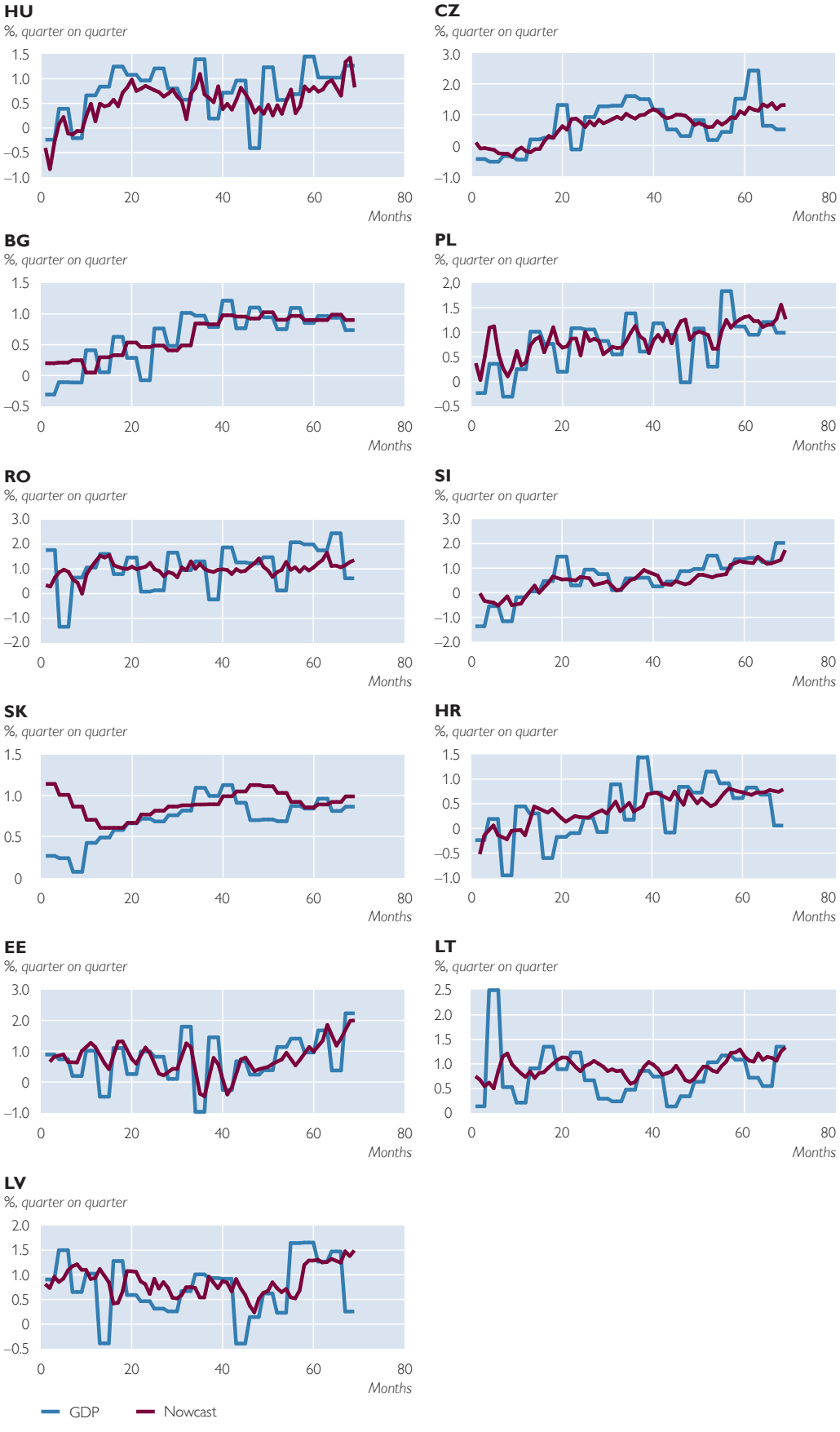
	RW	be2	be23	be3	be1L	be12L	be123L	be13L	be2L	be23L	be3L
CZ	0.53	0.48	0.47	0.52	0.53	0.53	0.51	0.52	0.50	0.51	0.50
BG	0.32	0.32	0.49	0.51	0.33	0.34	0.49	0.49	0.31	0.48	0.50
HU	0.60	0.40	0.41	0.46	0.43	0.40	0.40	0.40	0.40	0.42	0.46
PL	0.58	0.46	0.38	0.35	0.44	0.45	0.36	0.34	0.47	0.39	0.35
RO	1.03	0.74	0.75	0.74	0.75	0.77	0.76	0.73	0.75	0.74	0.74
SI	0.52	0.44	0.37	0.39	0.37	0.39	0.40	0.36	0.44	0.42	0.40
SK	0.11	0.35	0.35	0.37	0.39	0.44	0.45	0.40	0.35	0.37	0.37
HR	0.62	0.41	0.47	0.47	0.44	0.46	0.48	0.50	0.42	0.45	0.47
EE	1.01	0.79	0.81	0.89	0.62	0.65	0.76	0.64	0.79	0.84	0.90
LT	0.52	0.46	0.47	0.48	0.46	0.49	0.51	0.49	0.46	0.49	0.49
LV	0.58	0.48	0.57	0.70	0.70	0.58	0.60	0.70	0.46	0.57	0.72

Note: The figures for Estonia, Slovenia and Croatia are based on a restricted sample, as most of the models are not available in the first month of the quarter due to the longer time lag in publishing GDP data.

Source: Authors' estimations.

Chart A1

Out-of-sample nowcasts of real GDP growth for 11 CESEE countries



Source: Authors' estimations.

CESEE-related abstracts from other OeNB publications

The abstracts below alert readers to studies on CESEE topics in other OeNB publications. Please see www.oenb.at for the full-length versions of these studies.

European retail payments market integration and fintech: a case study approach

Katharina Allinger

The segment of retail payments has been among the most affected by technology-enabled innovations in financial markets (fintech). This study looks at the digitalization of retail payments markets in Europe. We develop a framework and collect supportive indicators to discuss the connection between fintech and retail payments market developments. We apply our framework to four small European economies – Sweden, Austria, Estonia and Bulgaria – and discuss what conclusions, if any, can be drawn for the integration of European retail payments markets and fintech from the developments observed in the case study countries. While there are many channels through which digitalization may facilitate the creation of a single market for retail payments, this study discusses whether fintech might also contribute to stronger retail payments market fragmentation.

Published in *Financial Stability Report 36*.

Nonperforming exposures of Austrian banks – decomposing aggregate measures

Petra Bärnthaler, Helmut Elsinger, Pirmin Fessler, Elisabeth Woschnagg

We analyze bank-level loan data to better understand the development of aggregate nonperforming exposure measures of large Austrian banks. We employ quarterly data from Q3 2014 to Q4 2017 for all 18 commercial banks in Austria that apply the International Financial Reporting Standards as well as for all their foreign subsidiaries (this leads to slightly different results than provided in other publications). We focus on the distribution of nonperforming exposure measures across time and banks as well as across economic sectors and borrower types. We find large heterogeneity across banks, economic sectors and borrower types. If we take a closer look at what lies behind the aggregate NPL ratio of about 3.6%, we find that the 10th percentile of the NPL ratio is close to zero whereas the 90th percentile is still at about 8% in the fourth quarter of 2017. Higher NPL ratios across relevant economic sectors do not seem to be concentrated in larger sectors. With regard to borrower type, we find NPL ratios of 5.3% for nonfinancial corporations, 3.8% for households and 2.2% for other financial institutions. Subsidiaries record substantially higher NPL ratios than parent institutions, e.g. over 7% for exposures to nonfinancial corporations (under 5% at parent institutions) and about 5% for households (3% at parent institutions). This points toward higher financial vulnerability among nonfinancial corporations as well as indebted households in CESEE, the region mainly responsible for nonperforming loans in the portfolios of Austrian banks' subsidiaries.

Published in *Financial Stability Report 36*.

Tina Wittenberger

Lending to households in CESEE with regard to Austrian banking subsidiaries and macroprudential measures addressing credit-related risks

The macroeconomic environment improved significantly in 2017. And so did Austrian banks' lending activities in Central, Eastern and Southeastern Europe (CESEE) – the banks' most important foreign market. As Austrian banks' exposure in terms of volume and profit is concentrated in six countries of the CESEE region, namely the Czech Republic, Slovakia, Romania, Croatia, Hungary and Russia, these countries will be the focus of this study. Moreover, the analysis sheds light on lending to households, in particular on mortgage and consumer loans, and it reveals Austrian banking subsidiaries' relative importance for their host markets. All CESEE countries analyzed in this study have implemented several macroprudential measures – either legally binding ones or in the form of recommendations – to cope with credit lending risks. Some countries did so because they are already faced with high growth rates, others did so to prevent risks from accumulating once credit growth picks up again.

Published in *Financial Stability Report 36*.

Christian A. Belabed, Mariya Hake

Income inequality and trust in national governments in Central, Eastern and Southeastern Europe

Using unique evidence from the OeNB Euro Survey, this paper sheds light on the correlation between the distribution of income and trust in national governments in ten Central, Eastern and Southeastern European (CESEE) countries between 2009 and 2015. By applying multilevel modeling to account for the hierarchical structure of the data, our main findings indicate that trust in national institutions increases with the individual's position in the regional income distribution but it overall declines with the increase of regional and country income inequality. This result is valid across different measures of income inequality and despite the slight decrease of income inequality over the period. Our analysis shows that perceived high corruption and weak rule of law are key determinants of distrust in national governments, while the negative link between income inequality and trust in national governments is more pronounced in the non-EU countries in our sample.

OeNB Working Paper 222. May 2018.

Event wrap-ups

82nd East Jour Fixe: Debt in Central, Eastern and Southeastern Europe: vulnerabilities and opportunities[1]

Compiled by Katharina Allinger, Markus Eller and Mariya Hake[2]

The 82nd East Jour Fixe organized by the Oesterreichische Nationalbank (OeNB) focused on recent developments, opportunities and challenges related to both public and private sector debt in Central, Eastern and Southeastern Europe (CESEE). The event took place on June 11, 2018, at the OeNB's premises. The speakers, who came from diverse academic, political and professional backgrounds, presented insights from their expertise to a selected audience. Notably, for the first time since the establishment of the East Jour Fixe in 1991, female presenters outnumbered male ones.

In her introductory statement, *Doris Ritzberger-Grünwald*, Director of the OeNB's Economic Analysis and Research Department, highlighted that external and internal vulnerabilities had increased in most CESEE countries during the economic boom preceding the global financial crisis. This was in particular due to high credit growth and foreign currency lending. However, on a more positive note, she also pointed out that as a distinctive component of the region's growth model, credit growth had, implicitly, also been furthering convergence. After a rather controlled deleveraging process right after the onset of the global financial crisis, total debt has recently been on the increase again (with the upsurge in private debt stronger than that in public debt). Public debt has been on the rise since 2008 already, with some countries posting an increase of nearly 30 percentage points of GDP at year-end 2017. Therefore, a potential contraction of fiscal space could weaken the scope for public investments and would provide less of a cushioning effect in case of vulnerabilities due to private sector debt, among others. Moreover, although debt levels in CESEE are still below those seen in the euro area countries, the fact that, to a varying extent, private sector credit growth in the CESEE countries has rebounded in recent years raises questions regarding the drivers of private debt, its sustainability (also with regard to potential spillovers arising from the "normalization" of monetary policy in major advanced economies) and its "wise" (i.e. productivity-enhancing) use in the corporate sector.

The keynote speech was given by *Laura Papi*, Assistant Director of the IMF's European Department. After providing an overview of debt developments in CESEE in the wake of the crisis and putting them into regional perspective, Papi noted that the timing of the East Jour Fixe was very opportune as policy makers are now able to tackle issues concerning debt in a more sustainable manner in contrast to implementing crisis-related ad-hoc measures. She pointed out that there is no consensus among academics and policy makers on how high debt levels have to be for them to be considered detrimental but stressed that a granular approach, i.e. paying attention to the underlying dynamics and composition, is of utmost importance. Using data from the newly released IMF Global Debt Database, Papi showed that external debt in CESEE is elevated compared to peer countries. At the same time, private sector debt is rising faster than public sector debt in CESEE. In particular, household sectors are leading a new spike; in contrast, a robust

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

[2] *Oesterreichische Nationalbank, Foreign Research Division, katharina.allinger@oenb.at, markus.eller@oenb.at and mariya.hake@oenb.at.*

recovery of corporate lending is mainly prevented by institutional and structural gaps in the majority of CESEE countries.

The event then focused on individual sectors in turn, with session 1, chaired by *Doris Ritzberger-Grünwald*, zoning in on the structure and sustainability of public debt in CESEE as well as on the role of fiscal rules. *Stéphanie Pamies Sumner*, Head of Sector in the European Commission's Directorate-General for Economic and Financial Affairs, introduced the Commission's framework for assessing public debt sustainability. She emphasized that, on average, public debt burdens appear to be more contained in the 11 CESEE EU Member States (CESEE-11) than in the EU as a whole, but also pointed to considerable cross-country heterogeneity. Government debt-to-GDP ratios in the CESEE-11 are still lower and the overall increase since 2007 has been smaller compared to the EU aggregate. However, a few CESEE-11 countries, i.e. Croatia, Latvia and Slovenia, have experienced particularly large increases in their government debt-to-GDP ratios. To ensure fiscal sustainability, Pamies Sumner recommended rebuilding fiscal buffers in high-debt countries, improving fiscal frameworks, reforming the pension and health care system, making taxation and expenditure more efficient, improving tax rules and administration, strengthening the supervision of the financial sector, and pursuing efforts to reduce nonperforming loans (NPLs). The second speaker in this session, *Markus Eller*, Principal Economist in the OeNB's Foreign Research Division, examined the composition of government debt in a broad set of CESEE countries. He showed that the increase in government debt levels in CESEE following the financial crisis, together with foreign portfolio investors (usually with a short-term orientation) playing a more prominent role, has accentuated refinancing risks. However, at the same time, refinancing risk has also been alleviated as governments have been increasingly able to issue longer-term debt instruments. In a few countries, a still large share of foreign currency-denominated public debt, in combination with increased debt stocks, reveals serious exposure to exchange rate risks. With respect to policy implications, Eller stressed that special emphasis should be placed on fostering CESEE capital markets to strengthen government borrowing at home and in local currencies as well as to further develop derivative products in order to hedge against interest and exchange rate risks.

Session 2, chaired by *Julia Wörz*, Head of the CESEE Analysis Unit of the OeNB's Foreign Research Division, put a spotlight on the composition and drivers of private debt in CESEE. In his presentation, *Miquel Dijkman*, Coordinator at the World Bank Financial Sector Advisory Center, took a closer look at the debt of nonfinancial corporations. He underscored paying attention to company size and institutional gaps, in particular (the lack of) bankruptcy legislation, as a means of gaining a better understanding of current debt developments. Dijkman outlined that large corporations account for the lion's share of nonfinancial corporate credit and NPLs, while small and medium-sized enterprises (SMEs) often have difficulty fulfilling collateral requirements and as a result struggle to obtain loans. At the same time, entrepreneurs are facing real finance constraints, particularly in less established sectors of the economy. Dijkman highlighted the importance of strengthening insolvency frameworks, reinforcing the functioning of the judiciary as well as creating alternatives to formal court-based insolvency proceedings (e.g. out-of-court restructuring) for unlocking the growth potential of the economy. In her presentation, *Mariya Hake*, Senior Economist in the OeNB's Foreign

Research Division, linked the analysis of income inequality and household credit in a sample of ten CESEE countries. Based on data from the OeNB's Euro Survey, Hake presented a paper showing new estimates of income inequality at the regional level, which she related to the likelihood of household debt for the period 2009–2015. The results indicate that after 2009, it was predominantly households with above median incomes that had taken out a loan, with this likelihood increasing with more pronounced regional income inequality (i.e. consumption smoothing). Consequently, banks use income inequality as an additional factor when evaluating borrowers' creditworthiness (i.e. signaling effect).

The third session, chaired by *Helene Schuberth*, Head of the OeNB's Foreign Research Division, dealt with the role of institutional arrangements, and especially the "normalization" of monetary policy. *Marek Ličák*, Director of Macroprudential Supervision, Národná banka Slovenska (NBS), gave an overview of the developments in the housing loan segment in Slovakia and the response of the NBS. The current high credit growth rates and increased household debt in Slovakia – already above levels suggested by fundamentals – are being addressed exclusively with macroprudential tools. In particular, the NBS aims to reduce the speed of credit growth by encouraging responsible lending requirements, and to increase the resilience of the banking sector by instituting higher capital buffers. Ličák reported that there is tentative evidence that the measures implemented since 2014 are showing some positive effects, and the NBS expects that a new package of measures, adopted recently, will reduce the annual growth in loans to households to 8%–9%. The implications of monetary policy normalization for debt developments in CESEE were discussed by *Birgit Niessner*, Head of Analysis Financial Institutions & Countries at Raiffeisen Bank International AG. She stressed that corporate debt levels should receive more attention as they are the likeliest source of the next debt crisis. In addition, several countries (e.g. Croatia, Russia, Turkey) are already showing large corporate balance sheet mismatches between foreign assets and liabilities. She outlined that several factors mitigate the vulnerability of CESEE resulting from the normalization of monetary policy. These include the high share of euro-denominated debt, strong and resilient foreign direct investment (FDI) flows and intercompany loans, and good reserves coverage of external debt refinancing. Niessner added that CESEE was more resilient than some other emerging market regions, given the fact that it has not been the main destination for "hot money." The third presentation was given by *Belma Čolaković*, Chief Economist, Central Bank of Bosnia and Herzegovina, on the impact of EU institutional arrangements on debt developments in the Western Balkans. Čolaković specifically referred to Article 114 of the CRR/CRD IV, according to which subsidiaries of EU banks must apply a 100% risk weight to exposures to non-EU sovereigns and central banks. She pointed out that, in particular, Western Balkan countries with a high share of government debt held by subsidiaries of EU banks could be affected by this regulation. Čolaković also illustrated that the average household in the region is not in a position to save, with the recent increases in deposit levels largely driven by the wealthiest individuals.

Wrapping up the event, *Tina Zumer*, Senior Economist in the Euro Area External Sector & Euro Adoption Division of the European Central Bank, concluded that private sector debt in CESEE should be seen as an opportunity for long-term growth despite a likely negative impact in the medium term. She stressed that

higher public debt, in contrast, would be rather detrimental to economic growth. Zumer emphasized that despite the still low debt levels (in comparison to the EU average), the resulting vulnerabilities are likely to increase risks. On the one hand, this would be due to monetary policy normalization and the resulting likely deterioration of debt-servicing capacities. On the other hand, heightened global uncertainty would lead to higher costs as well as liquidity and refinancing risks. Summing up, Zumer underlined the need for country-specific assessments as well as (structural) policy measures to ensure fiscal sustainability, a resilient and supportive institutional framework and a targeted implementation of the preventive arm through macro- and microprudential measures.

The OeNB's 83rd East Jour Fixe: Catching the wind: current challenges and opportunities for European integration and convergence[1]

On the occasion of Austria's Presidency of the Council of the European Union

Compiled by Katharina Allinger, Markus Eller[2]

On September 18, 2018, the Oesterreichische Nationalbank (OeNB) hosted its 83rd East Jour Fixe on the topic of "Current challenges and opportunities for European integration and convergence." The event was dedicated to the presentation of selected articles from a special edition of the OeNB's publication *Focus on European Economic Integration (FEEI)*, issue Q3/18. This issue was released in early September and was conceptualized to reflect selected topics from Austria's Presidency of the Council of the European Union – with a special focus on Central, Eastern and Southeastern Europe (CESEE). The speakers at the 83rd East Jour Fixe came from diverse backgrounds and presented academic, political and other professional expertise to a selected, multinational audience.

In her introductory statement, *Doris Ritzberger-Grünwald*, Director of the OeNB's Department for Economic Analysis and Research, reflected on the evolution of topics associated with convergence and economic integration over time. Over the past ten years, new topics – such as inclusiveness, structural reforms, migration, macroprudential regulation, sanctions and digitalization – have entered the stage and challenged policy makers in the region. Referring to her contribution to the special FEEI edition, co-authored with Josef Schreiner, Ritzberger-Grünwald emphasized that convergence has significantly slowed since the 2008–2009 global financial crisis, as potential output has been affected by weaker productivity and stet investment rates. While full convergence in GDP per capita by 2030 seemed a realistic scenario in the boom years prior to the 2008 crisis, this goal has since shifted further into the future.

The keynote speech was given by *István Pál Székely*, Director at DG ECFIN at the European Commission. He argued that convergence has been a success story, but that the speed, sustainability and equity of future convergence of the CESEE region would crucially depend on renewed and continuous reform efforts. Moving from the traditional convergence model to an innovation-based system requires reforms focusing on (1) the accumulation of human capital in order to support innovation, (2) allocative efficiency and (3) the quality of public and private institutions. He stated that well-designed and -implemented reforms in these areas would allow the CESEE region to benefit fully from the deepening of European integration. Székely pointed to bottlenecks for innovation-based convergence that currently arise, among other things, from marginalized societal groups who do not have sufficient access to education and from still comparatively high levels of corruption that lead to adverse selection. Being a member of the EU or having an EU accession perspective holds huge potential for promoting convergence. This is not only due to access to the single market and to sizable transfers, but also because several EU countries (e.g. Austria, Denmark, the Netherlands and Sweden) are –

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

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according to Székely – global innovation leaders, and positive know-how spillovers can thus be expected.

Session 1, chaired by *Dubravko Mihaljek*, Head of Macroeconomic Analysis at the Bank for International Settlements, focused on the EU budget and structural reform priorities. *Zsolt Darvas*, Senior Fellow at Bruegel, presented evidence on the EU's Multiannual Financial Framework. In his speech, Darvas discussed several priorities regarding a reform of the EU budget. First, he argued that a more thorough assessment was needed to identify which spending areas constitute European public goods that should best be provided at the EU level and which should be addressed at the national level. Concerning the former, he named areas with "clear pan-European implications," such as border protection, migration and climate policy. Second, given these separating lines, he made the point that EU spending on the Common Agricultural Policy (CAP, 38% of the current budget) and Structural and Cohesion Funds (34% of the current budget) should be made more efficient and effective. CAP spending, for example, is de facto an income support scheme for farmers, and it is questionable why it must be organized at the EU level and not at the local level. Third, Darvas emphasized that Brexit will leave a hole in the EU budget, but stated that a nominal freeze on CAP and cohesion spending would more than compensate for this and provide resources for new priorities. The second speaker in this session, *Andreas Breitenfellner*, Lead Economist at the OeNB, discussed some aspects of the widely used term "structural reforms." Breitenfellner first made a distinction between structural reforms and cyclical features of the economy and discussed their interaction. He then distinguished between input and output convergence, with the former meaning convergence in structural factors such as labor market institutions and the business environment. Input convergence is related to output convergence in terms of synchronizing business cycles, but not in terms of converging income per capita levels. Breitenfellner also discussed the economic literature on the short- and long-term impact of structural reforms on growth. Finally, he presented three ways of framing the link between institutional reforms at the level of Economic and Monetary Union (EMU) and structural reforms in EU Member States: they are seen as either substitutes, complements or components of each other.

Session 2 dealt with EU enlargement and neighborhood policy and was chaired by *Reiner Martin*, Lead Economist at the Joint Vienna Institute. *Wolfgang Petritsch* and *Philipp Freund* gave the introductory speech, highlighting the key political challenges currently faced by the Western Balkans and the involvement of major external players (such as the EU, the U.S.A., Russia, China, Turkey and the Gulf States) in the region as well as these players' varying interests and policy tools. The lack of a convincing strategy on the part of the EU in the past ten years has opened space for other external actors to step in. The presenters called for a consistent and committed approach to the integration of the Western Balkans into the EU. Ambassador Petritsch pointed out that there is currently a window of opportunity: for the first time in many years, the EU has produced a Western Balkans strategy with a more concrete time horizon for EU accession, while at the same time political solutions are increasingly being offered locally within the region (e.g. the name dispute in FYR Macedonia and negotiations between Serbia and Kosovo). This window of opportunity must be used, as it could close once a new European Commission is in charge. Asked about Chinese investment in the Western

Balkans and a potentially beneficial impact on physical capital stocks, Petritsch stressed that Chinese investment not only provides an economic boost, but that it is also rooted in geopolitical interference and should thus be monitored critically. However, the EU does not yet have a clear, joint position on China. According to Petritsch, reinforcing European regulation and rule of law in the region is more important than focusing on short-term economic gains. In the presentation that followed, *Laura Solanko*, Senior Advisor at the Bank of Finland Institute for Economies in Transition (BOFIT), took a closer look at the sanctions imposed on Russian entities by the EU, the U.S.A. and others, as well as at Russia's countersanctions. She acknowledged that the pure effects of the sanctions are difficult to capture given various parallel developments (such as the large drop in the price of oil and a change in the monetary policy regime). Nevertheless, she showed that the sanctions have had a clearly negative effect on the Russian economy, although the decline in the price of oil affected Russian GDP much more strongly. Russia's countersanctions, on the other hand, have affected exports of foodstuff from the EU, but macroeconomic effects in the EU are generally very small. Solanko concluded that sanctions are primarily a foreign policy tool, and their effectiveness should be measured not only in economic terms, but also against the original foreign policy goals. *Peter Backé*, Deputy Head of the OeNB's Foreign Research Division, and *Sandra Dvorsky*, Senior Advisor in the OeNB's Communications, Organization and Human Resources Department, discussed the enlargement of the euro area toward CESEE since 2010. They started by reviewing the Baltic countries' accession to the euro area. They then addressed the current playing field and the impact of institutional changes within EMU on future convergence assessments. They highlighted that nominal convergence has advanced substantially over the past decade. At the same time, they reasoned that experience from the crisis had underpinned the focus on the sustainability of the convergence process. Moreover, Backé and Dvorsky emphasized that the deepening of EMU's institutional setup, which occurred as a reaction to the crisis, also has ramifications for the euro area accession process, for example in the area of banking union: joining ERM II will necessitate close cooperation with the Single Supervisory Mechanism. Going forward, they emphasized that it is key to strike a balance between lessons drawn from the crisis and the continued application of equal treatment, for the mutual benefit of all stakeholders in the process.

Session 3 focused on financial sector development and macrofinancial stability and was chaired by *Peter Backé*. *Markus Eller*, Principal Economist at the OeNB, presented evidence on credit-to-GDP ratios calculated in line with macroeconomic and financial fundamentals and compared them with actual credit-to-GDP levels. According to the estimations, credit-to-GDP ratios have declined to levels that are more in line with the fundamentals observed in countries where they were too high before the crisis, and credit-to-GDP ratios are often below fundamentally justified levels in countries that did not experience a bubble before the crisis. Eller stressed that adding direct cross-border credit to domestic private-sector credit matters considerably, as it results in larger gaps between fundamental and actual credit levels in most cases, indicating that the adjustment back to fundamental levels has not yet been accomplished in some countries. Given the significant role of cross-border credit in CESEE, Eller pointed out that deepened and well-aligned cooperation between home and host country supervisors is an important policy

implication of the analysis. *Frank Dierick*, Adviser at the European Systemic Risk Board (ESRB), gave a presentation on the ESRB's mandate and implementation of macroprudential policy across the EU. He discussed some of the main macroprudential tools used across the EU: the countercyclical capital buffer, targeted at cyclical credit expansion, and the systemic risk buffer, targeted at long-term, noncyclical risks. Dierick also showed that many countries are already using instruments to contain risks related to (residential) real estate lending. In addition, he discussed the linkages among cross-border banking groups and the concept of voluntary reciprocity. As the macroprudential toolkit grows and becomes more widely applied, the need to assess the effectiveness and consequences of macroprudential policy increases.

Finally, session 4, chaired by *Helene Schuberth*, Head of the OeNB's Foreign Research Division, was dedicated to the topic of labor markets and migration. *Andrea Weber*, Professor at the Central European University, presented empirical evidence on the evolution of migration to Austria from the CESEE countries that have joined the EU since 2004. She showed that the inflow of migrants from these countries increased somewhat after EU accession, but accelerated much more sharply once free movement of workers was permitted after the seven-year transition period. Weber also discussed the change that took place after free movement was permitted: the average immigrant became younger, stayed for shorter periods and received lower wages. A large share of migrants works in seasonal service and tourism industries and in Austrian border regions closest to their countries of origin. In the final presentation of the East Jour Fixe, *Richard Grieveson*, Economist at the Vienna Institute for International Economic Studies (wiiw), addressed the same issue of east-west migration from the point of view of the sending countries. He showed that CESEE countries have seen GDP grow and both population in general and the working-age population decline, all of which has contributed to existing or looming labor shortages in the region. Grieveson also noted that the shortage of skilled labor in conjunction with higher wages could induce some companies to move away from the CESEE region. He also argued that immigration from non-EU countries and the return of emigrants (e.g. following Brexit) are not a solution in the medium to long term, but that increased automation and productivity growth could possibly provide some relief. Hence, labor-saving technological progress could make up for demographic developments, thus brightening the longer-term prospects for the CESEE region.

23rd Global Economy Lecture: Caroline Freund on "Trade, inequality, and populism"

Compiled by
Maria Silgoner[1]

On October 1, 2018, the Oesterreichische Nationalbank (OeNB) hosted the 23rd Global Economy Lecture[2], delivered by *Caroline Freund*, Director of Macroeconomics, Trade and Investment at the World Bank. Caroline Freund's research focuses on the effects of trade intensification, at both the intra-country and global level. In her lecture, she discussed the relationship between trade and inequality, and analyzed the origins of the recent backlash against globalization.

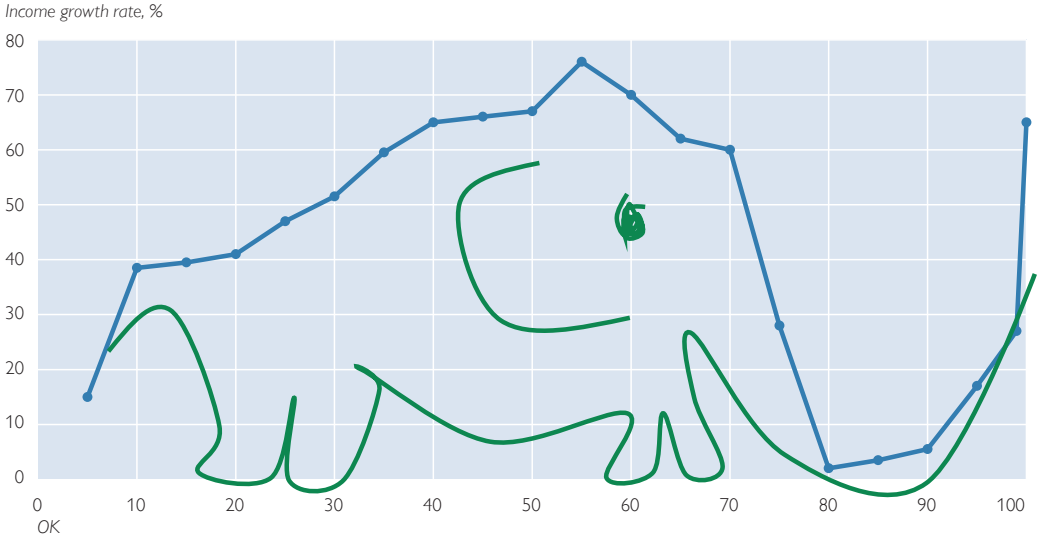
After a period of stagnation during the 1980s, global trade (measured as a share of global GDP) grew twice as fast as income from the mid-1990s to the mid-2000s. It was during the latter period that the global supply chain network was established. However, the recent financial crisis put international trade relations to the test. After a temporary trade contraction, we are now facing another period of trade stagnation, which in several respects resembles its 1980s precursor, characterized by slow progress toward concluding trade agreements as well as by protectionist tendencies.

According to one common narrative about trade and inequality, globalization has enabled poor countries to export more labor-intensive goods, a development which has then destroyed lower-skilled jobs in rich countries. In line with the Heckscher-Ohlin model, trade should reduce inequality in labor-rich countries, but raise it in labor-scarce countries. The provocative conclusion is that development in poor countries has come at the expense of low-skilled workers in industrial economies, thus also fueling the backlash against globalization.

The "elephant curve," which ranks people across the world from the poorest to the richest, seems to support this common narrative: trade makes poor people

Chart 1

Growth incidence curve, 1988–2008



Source: Graph by Lakner and Milanovic; elephant added by Freund.

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[2] *The Global Economy Lecture is an annual event organized jointly by the OeNB and The Vienna Institute for International Economic Studies (wiiw).*

better off (top of the elephant's back) and creates a class of super-rich (tip of the elephant's trunk), while the middle class in industrial countries is paying the bill (middle of the trunk). The reality, however, is much more nuanced.

Trade has contributed significantly to a drop in global inequality. Trade openness, in combination with complementary accompanying business regulations, has provided a growth boost to the economies of poor countries as resources shift to productive uses. As a result, the share of the world population living in extreme poverty, defined as living on less than USD 1.90 a day, has dropped markedly from 42% in 1981 to 10% in 2015.

The conclusion that less-skilled workers in industrial countries are net losers from trade integration may be misleading. The trough of the elephant curve actually reflects very low growth in Japan during this period, as well as negative growth in transition economies as a result of the Eastern Bloc's disintegration. In fact, the "hollowing-out of the middle" effect of the elephant curve is significantly less pronounced if Japan and the Soviet satellite states are left out.

The presence of superstar firms is actually indicative of allocative efficiency, as large firms tend to be more productive and innovative. In this sense, superstar firms are beneficial to growth and development. At the same time, however, they create extreme wealth, thus contributing to inequality.

The empirical evidence on how trade has affected within-country inequality is ambiguous. Recent evidence shows that inequality has increased in some countries as trade has helped create a class of super-rich. This reflects changes within rather than across sectors, as best performers embark successfully upon trade integration. However, trade also lowers prices, thus helping the poor, and as a result contributes to more equal distribution in other countries.

Caroline Freund concluded by emphasizing that property rights, the liberalization of business regulations, and openness to trade and foreign direct investment (FDI) play a key role in maximizing the benefits of trade integration. Taxing less productive sources of wealth may help spread these benefits to those who may otherwise lose out as a result of globalization. According to Freund, the backlash against globalization can be traced back to more than just trade effects, for instance the post-financial crisis slowdown. Interestingly enough, support of foreign trade among Americans is at an all-time high.

For more in-depth coverage of the topic, see Caroline Freund. 2016. Rich People Poor Countries: The Rise of Emerging-Market Tycoons and their Mega Firms. Washington, DC: Peterson Institute for International Economics.

Statistical annex

Statistical annex

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

Table 1

Output, unemployment and prices

	2015	2016	2017	Q1 17	Q2 17	Q3 17	Q4 17	Q1 18	Q2 18
Gross domestic product	*Annual real change in %*								
Albania	2.2	3.4	3.8	3.9	4.2	3.6	3.6	4.5	4.3
Bosnia and Herzegovina[1]	4.1	3.4	3.4	–3.0	0.9	10.5	2.5	2.0	3.4
Kosovo	4.1	4.1	4.2	2.7	4.3	4.4	3.2	3.5	4.7
FYR Macedonia	3.9	2.9	0.0	0.0	–1.3	0.2	1.2	0.1	3.1
Montenegro	3.4	2.9	4.3	2.9	5.0	4.8	3.9	4.5	4.9
Serbia	0.8	2.8	1.9	1.1	1.6	2.3	2.4	4.9	4.8
Ukraine	–9.8	2.4	2.5	2.8	2.6	2.4	2.2	3.1	3.8
Industrial production	*Annual real change in %*								
Albania	–2.1	–18.0	–0.6	–0.3	8.9	–6.3	–4.1	21.5	28.8
Bosnia and Herzegovina[2]	3.1	4.4	3.1	2.6	1.8	5.5	2.7	5.0	1.4
Kosovo	5.9	1.8	2.9	9.6	0.6	5.6	0.2	0.4	0.0
FYR Macedonia	4.9	3.4	0.2	–1.5	3.7	–2.4	0.9	5.2	4.9
Montenegro	7.9	–2.9	–4.2	–10.5	–8.5	–1.3	2.6	39.1	24.0
Serbia	7.3	5.2	3.9	1.1	3.4	7.2	3.7	6.5	2.5
Ukraine	–13.0	2.8	0.4	0.1	0.4	0.4	0.8	2.5	2.6
Average gross wages – total economy	*Annual change in %*								
Albania	1.8	–12.0	3.0	1.0	4.5	4.1	2.4	4.2	2.5
Bosnia and Herzegovina	0.0	0.9	1.6	1.5	1.8	1.6	1.5	2.1	2.8
Kosovo	5.8	1.8	–1.5	..	..	..	..	..	..
FYR Macedonia	2.7	2.0	2.6	2.3	2.3	2.9	3.1	4.7	6.2
Montenegro	0.3	3.5	2.0	3.8	1.8	1.1	1.3	–0.1	0.0
Serbia	–0.4	3.8	4.0	4.3	4.7	3.9	3.0	8.4	2.3
Ukraine	21.2	23.3	37.0	36.8	37.1	36.8	37.2	26.1	26.3
Unemployment rate[3]	*%*								
Albania	17.5	15.6	14.1	14.6	14.3	14.0	13.6	13.0	12.9
Bosnia and Herzegovina	28.2	25.8	21.1	..	..	..	..	..	..
Kosovo	32.9	27.5	30.5	30.5	30.6	30.2	30.6	26.5	29.4
FYR Macedonia	26.3	24.0	22.6	23.1	22.7	22.3	22.1	21.9	21.4
Montenegro	17.8	18.0	16.4	17.7	15.3	15.1	17.4	16.5	14.7
Serbia	18.2	15.9	14.1	15.2	12.3	13.5	15.3	15.5	12.5
Ukraine	9.5	9.7	9.9	10.5	9.5	9.1	10.5	10.0	8.6
Consumer price index	*Period average, annual change in %*								
Albania	1.9	1.3	2.0	2.4	2.0	1.7	1.8	1.9	2.2
Bosnia and Herzegovina	–1.0	–1.1	1.2	1.1	1.2	1.1	1.3	0.7	1.4
Kosovo	–0.5	0.3	1.5	1.6	1.9	1.7	0.7	0.0	0.7
FYR Macedonia	–0.3	–0.2	1.3	0.5	1.2	1.5	2.1	1.7	1.5
Montenegro	1.5	0.2	2.8	2.5	2.5	3.3	3.0	3.7	3.6
Serbia	1.4	1.1	3.1	3.1	3.7	3.0	2.9	1.6	1.8
Ukraine	48.5	14.9	14.4	13.9	13.8	16.2	13.9	13.8	11.6

Source: Eurostat, Macrobond, national statistical offices, wiiw.

[1] *Expenditure-side data.*

[2] *Value added in the national accounts.*

[3] *Labor force survey.*

Table 2

External accounts

	2015	2016	2017	Q1 17	Q2 17	Q3 17	Q4 17	Q1 18	Q2 18
Trade balance	*% of GDP*								
Albania	–22.4	–24.2	–24.4	–22.7	–22.7	–26.0	–26.0	–21.8	–20.2
Bosnia and Herzegovina	–24.2	–22.7	–22.8	–24.9	–24.9	–17.4	–26.9	–25.7	–22.7
Kosovo	–36.3	–37.7	–38.4	–39.4	–39.7	–37.0	–40.9	–41.2	–43.5
FYR Macedonia	–20.1	–18.6	–17.9	–20.0	–17.1	–15.9	–18.7	–19.5	–16.0
Montenegro	–40.0	–41.9	–43.9	–46.6	–51.2	–34.8	–46.8	–46.8	–53.1
Serbia	–11.9	–9.0	–10.8	–11.6	–9.9	–8.5	–13.2	–12.8	–11.7
Ukraine	–3.8	–7.5	–8.3	–6.6	–7.6	–8.8	–9.6	–7.8	–7.1
Current plus capital account balance	*% of GDP*								
Albania	–7.4	–6.9	–5.9	–4.8	–7.0	–3.1	–8.3	–5.2	–4.5
Bosnia and Herzegovina	–3.9	–3.5	–3.6	–3.7	–5.1	–2.0	–4.5	–5.4	–3.3
Kosovo	–8.1	–7.7	–6.6	–13.8	–15.8	13.1	–14.1	–12.4	–16.8
FYR Macedonia	–1.9	–2.6	–1.3	–6.2	–3.9	7.0	–2.5	–6.1	0.8
Montenegro	–13.2	–18.1	–18.8	–41.4	–31.5	18.1	–38.7	–36.5	–28.6
Serbia	–4.8	–3.1	–5.7	–8.7	–3.8	–3.8	–6.6	–8.4	–2.8
Ukraine	2.3	–1.4	–2.1	–2.2	0.8	–3.8	–2.9	–2.2	0.1
Foreign direct investment[1]	*% of GDP*								
Albania	–8.0	–8.7	–8.4	–7.6	–7.2	–11.5	–7.2	–10.3	–6.6
Bosnia and Herzegovina	–1.7	–1.6	–2.0	–4.7	–1.0	–1.3	–1.8	–3.9	–2.0
Kosovo	–4.7	–2.9	–3.9	–5.1	–4.8	–2.9	–3.6	–1.7	–2.8
FYR Macedonia	–2.2	–3.3	–2.3	–4.8	0.4	1.9	–6.6	–9.8	–3.4
Montenegro	–16.9	–9.4	–11.2	–13.1	–11.9	–6.5	–15.2	–6.1	–9.5
Serbia	–5.4	–5.5	–6.6	–7.0	–7.0	–6.8	–5.6	–8.3	–6.0
Ukraine	–3.3	–3.5	–2.3	–2.7	–4.2	–1.6	–1.3	–1.7	–2.5
Gross external debt	*End of period, % of GDP*								
Albania	74.4	73.4	68.5	73.0	70.2	68.7	68.5	67.3	66.8
Bosnia and Herzegovina	69.6	69.7	..	..	..	..	..	..	..
Kosovo	33.3	33.2	32.6	34.0	34.2	33.1	33.3	31.6	32.1
FYR Macedonia	69.3	74.2	73.2	78.7	78.1	76.6	73.2	81.3	81.7
Montenegro	..	..	..	..	..	..	..	..	..
Serbia	98.5	97.3	91.0	95.9	93.5	94.3	91.0	90.7	90.5
Ukraine	132.1	126.4	97.3	118.6	107.4	101.9	97.3	94.1	95.4
Reserve assets excluding gold	*Period average, annual change in %*								
Albania	27.6	26.9	25.4	26.5	24.7	24.3	25.4	23.5	23.9
Bosnia and Herzegovina	28.4	30.1	32.1	29.3	29.8	31.1	32.1	33.0	33.1
Kosovo[2]	12.2	10.0	10.7	11.2	10.9	12.8	10.9	11.2	10.9
FYR Macedonia	22.6	24.4	20.8	23.3	21.9	20.4	20.8	23.0	23.3
Montenegro	17.5	19.7	20.7	18.4	16.7	18.4	20.7	17.8	22.8
Serbia	29.3	27.6	25.2	25.9	25.6	27.7	25.2	25.3	26.9
Ukraine	13.9	16.4	15.0	14.8	16.0	15.4	15.0	14.0	14.3

Source: National central banks, national statistical offices, wiiw.

[1] *+ = net accumulation of assets larger than net accumulation of liabilities (net outflow of capital).*
– = net accumulation of assets smaller than net accumulation of liabilities (net inflow of capital).
[2] *Reserve assets (including gold).*

Table 3

Banking sector indicators

	2015	2016	2017	Q1 17	Q2 17	Q3 17	Q4 17	Q1 18	Q2 18
Bank loans to the domestic nonbank private sector	*End of period, annual change in %*								
Albania[1]	–4.3	0.4	3.6	0.6	0.6	3.5	3.6	4.7	1.6
Bosnia and Herzegovina[1]	2.2	3.4	7.5	4.6	6.2	7.5	7.5	7.3	7.1
Kosovo	7.3	10.4	11.5	10.9	10.0	10.2	11.5	10.4	11.3
FYR Macedonia[1]	6.8	0.9	7.7	–0.4	4.5	5.5	7.7	8.4	8.0
Montenegro	2.4	5.7	7.5	8.1	7.1	6.5	7.5	7.2	8.4
Serbia[1]	–1.1	1.3	7.9	3.1	3.9	4.9	7.9	8.5	7.7
Ukraine[1]	–22.2	–4.0	–17.7	–6.0	–3.1	–2.6	–17.7	6.0	5.5
Share of foreign currency loans[2]	*End of period, %*								
Albania	56.9	53.4	51.1	53.1	51.5	51.6	51.1	50.7	50.7
Bosnia and Herzegovina	70.5	64.5	62.9	62.8	62.5	62.9	62.9	62.4	61.9
Kosovo	..	..	..	..	..	..	..	..	..
FYR Macedonia	44.8	43.9	41.7	44.3	43.8	42.6	41.7	41.9	41.8
Montenegro[3]	7.9	6.3	..	6.4	5.8	5.4	5.1	6.3	6.3
Serbia[4]	70.7	67.9	66.2	67.6	66.4	66.9	66.2	66.8	67.0
Ukraine	56.0	49.5	43.9	47.6	45.9	44.1	43.9	43.4	42.9
NPL ratio	%								
Albania	18.2	18.3	13.2	17.4	15.6	14.8	13.2	13.4	13.3
Bosnia and Herzegovina	11.8	10.1	..	9.8	9.5	9.2	8.6	8.5	8.2
Kosovo	6.2	4.9	3.1	4.5	3.9	3.6	3.1	2.9	2.8
FYR Macedonia	8.5	5.5	5.1	5.6	5.6	5.5	5.1	4.4	4.5
Montenegro	12.6	10.3	7.3	9.9	8.8	7.4	7.3	7.3	7.0
Serbia	19.6	15.6	..	15.5	14.3	12.0	10.1	9.7	..
Ukraine	28.0	30.5	54.5	55.1	57.7	56.4	54.5	56.5	55.7
Tier 1 capital ratio	%								
Albania	13.5	13.8	15.1	14.2	14.6	14.8	15.1	15.6	16.6
Bosnia and Herzegovina	13.8	15.0	14.8	14.8	15.1	14.9	14.8	14.4	14.6
Kosovo[5]	19.0	17.9	18.0	18.3	18.1	17.8	18.0	18.3	17.4
FYR Macedonia	13.9	13.9	14.2	14.1	14.5	14.6	14.2	14.8	15.1
Montenegro[5]	15.5	16.1	16.4	15.8	16.6	16.8	16.4	16.2	17.2
Serbia	18.8	20.0	..	20.6	21.3	21.5	21.6	21.8	..
Ukraine	8.3	9.0	12.1	9.8	9.2	11.5	12.1	12.0	11.2

Source: National central banks.

[1] *Foreign currency component at constant exchange rates.*
[2] *In total loans to the nonbank private sector. As far as available, including loans indexed to foreign currencies.*
[3] *Share in total loans to all sectors.*
[4] *Including securities.*
[5] *Overall capital adequacy ratio.*

Table 4

Monetary and fiscal policy indicators

	2015	2016	2017	Q1 17	Q2 17	Q3 17	Q4 17	Q1 18	Q2 18
Key interest rate	*End of period, %*								
Albania (one-week repo rate)	1.8	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.0
Bosnia and Herzegovina[1]	..	..	..	..	..	..	..	..	..
Kosovo[1]	..	..	..	..	..	..	..	..	..
FYR Macedonia (28/35-day central bank bills)	3.3	3.8	3.3	3.3	3.3	3.3	3.3	3.0	3.0
Montenegro[1]	..	..	..	..	..	..	..	..	..
Serbia (one-week repo rate)	4.5	4.0	3.5	4.0	4.0	3.8	3.5	3.3	3.0
Ukraine (discount rate)	22.0	14.0	14.5	14.0	12.5	12.5	14.5	17.0	17.0
Three-month interbank rate	*Period average, %*								
Albania	3.2	2.0	2.2	2.5	2.2	1.9	2.0	2.1	1.9
Bosnia and Herzegovina	..	..	..	..	..	..	..	..	..
Kosovo	..	..	..	..	..	..	..	..	..
FYR Macedonia	1.9	2.0	1.8	1.9	1.8	1.7	1.7	1.7	1.5
Montenegro	..	..	..	..	..	..	..	..	..
Serbia	6.2	3.4	3.4	3.5	3.5	3.5	3.1	3.1	2.9
Ukraine	20.3	17.6	14.3	15.6	14.6	13.8	13.3	13.5	13.5
Exchange rate	*Period average, national currency per EUR*								
Albania	139.7	137.4	134.1	135.8	134.4	132.9	133.5	132.4	127.4
Bosnia and Herzegovina	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Kosovo	..	..	..	..	..	..	..	..	..
FYR Macedonia	61.6	61.6	61.6	61.6	61.6	61.6	61.5	61.6	61.5
Montenegro	..	..	..	..	..	..	..	..	..
Serbia	120.7	123.1	121.4	123.9	122.9	119.8	119.1	118.4	118.2
Ukraine	24.2	28.3	30.0	28.8	29.1	30.4	31.7	33.5	31.3

	2015	2016	2017	2015	2016	2017
	General government balance			General government debt		
	End of period, % of GDP					
Albania	–4.0	–1.8	–2.0	72.9	72.3	70.1
Bosnia and Herzegovina	0.7	1.2	2.6	41.9	40.5	36.2
Kosovo	1.6	0.2	1.3	12.9	14.0	15.5
FYR Macedonia	–3.5	–2.7	–2.7	38.1	39.6	39.3
Montenegro	–8.3	–3.6	–5.4	60.7	64.4	65.1
Serbia	3.7	–1.3	1.2	75.1	72.5	61.6
Ukraine	–1.6	–2.3	–1.4	79.1	80.9	71.8

Source: European Commission (Ameco), Macrobond, national central banks, wiiw.

[1] No policy rate available (unilateral euroization or currency board).

Conventions used

.. = data not available.
Discrepancies may arise from rounding.