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Call for applications: Klaus Liebscher Economic Research Scholarship

The Oesterreichische Nationalbank (OeNB) invites applications for the Klaus Liebscher Economic Research Scholarship. This scholarship program gives outstanding researchers the opportunity to contribute their expertise to the research activities of the OeNB's Economic Analysis and Research Department. This contribution will take the form of remunerated consultancy services.

The scholarship program targets Austrian and international experts with a proven research record in economics and finance, and postdoctoral research experience. Applicants need to be in active employment and should be interested in broadening their research experience and expanding their personal research networks. Given the OeNB's strategic research focus on Central, Eastern and Southeastern Europe, the analysis of economic developments in this region will be a key field of research in this context.

The OeNB offers a stimulating and professional research environment in close proximity to the policymaking process. The selected scholarship recipients will be expected to collaborate with the OeNB's research staff on a prespecified topic and are invited to participate actively in the department's internal seminars and other research activities. Their research output may be published in one of the department's publication outlets or as an OeNB Working Paper. As a rule, the consultancy services under the scholarship will be provided over a period of two to three months. As far as possible, an adequate accommodation for the stay in Vienna will be provided.

Applicants must provide the following documents and information:

- a letter of motivation, including an indication of the time period envisaged for the consultancy
- a detailed consultancy proposal
- a description of current research topics and activities
- an academic curriculum vitae
- an up-to-date list of publications (or an extract therefrom)
- the names of two references that the OeNB may contact to obtain further information about the applicant
- evidence of basic income during the term of the scholarship (employment contract with the applicant's home institution)
- written confirmation by the home institution that the provision of consultancy services by the applicant is not in violation of the applicant's employment contract with the home institution

Please e-mail applications to *scholarship@oenb.at* by the end of October 2020.

Applicants will be notified of the jury's decision by end-November.

Recent economic developments and outlook

Developments in selected CESEE countries

International headwinds take a toll on economic activity[1, 2, 3]

1 Regional overview

Further weakening of the international environment…

The pace of global economic activity remained weak in the review period. In mid-2019, global industrial production expanded at its lowest level since early 2016 and world trade growth came to a standstill. Rising trade and geopolitical tensions have furthermore increased uncertainty and negatively impacted on business confidence and investment. A more accommodative monetary policy in major regions of the world economy has cushioned some of the impact of these tensions on financial market sentiment and activity, however.

Euro area growth slowed notably in the second quarter of 2019, given a combination of risks (most prominently the threat of a "hard Brexit") and country-specific factors. The latter include political, fiscal and economic fragility in Italy and, which is more important from the perspective of Central, Eastern and Southeastern Europe (CESEE), the weakening economic momentum in Germany. German economic activity declined in the second quarter of 2019 and the country could easily slip into technical recession in the third quarter amid a slump in industrial activity.

… impacts CESEE EU Member States' GDP growth in the second quarter

After an unexpectedly strong first quarter of 2019, these external headwinds took their toll on the CESEE EU Member States. In this group of countries, average real GDP growth declined to the lowest level in three years by mid-2019. However, strong private consumption, easing real monetary conditions and a mostly expansionary fiscal stance kept economic growth at a rather robust level. We must also note that today, resilience to an adverse international environment is notably higher than ten years ago, given solid external and public balances and the associated policy space.

In the CESEE region, growth in the observation period was slowest in Russia. Lower investment and construction expenditures and the value added tax (VAT) hike at the beginning of the year weighed on domestic demand. At the same time, the weakening of the global economy and lower oil prices had exports declining notably especially in the second quarter of 2019. Industrial production continued to be supported by raw materials and low-value added goods but failed to accelerate due to weaknesses in the manufacturing sector.

Economic activity in Turkey stabilizes

More positive news came from Turkey. The Turkish economy exited recession in the first half of 2019 and reported quarterly growth rates that were notably above regional averages. This revival was based mainly on a sizable external adjustment (based on rising exports and declining imports) and several government measures (including adjusting tax rates and rising public sector wages). Private consumption and

[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 4, 2019. This report focuses primarily on data releases and developments from April 2019 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, Montenegro, North Macedonia, 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.*

Table 1

Real GDP growth

	2017	2018	Q1 2018	Q2 2018	Q3 2018	Q4 2018	Q1 2019	Q2 2019
	Period-on-period change in %, seasonally and working day adjusted							
Slovakia	3.2	4.1	1.0	1.3	0.8	0.6	0.7	0.5
Slovenia	4.8	4.1	0.3	1.2	1.1	0.6	0.6	0.0
Bulgaria	3.8	3.1	0.9	0.8	0.7	0.8	1.2	0.8
Croatia	2.9	2.6	0.3	1.4	0.5	0.3	1.5	0.2
Czech Republic	4.4	3.0	0.6	0.6	0.6	0.9	0.6	0.7
Hungary	4.1	4.9	1.2	1.1	1.5	1.1	1.4	1.1
Poland	4.9	5.1	1.4	1.3	1.4	0.4	1.4	0.8
Romania	7.0	4.1	0.3	1.3	1.3	1.0	1.2	1.0
Turkey	7.5	2.8	2.0	0.9	–1.1	–2.4	1.3	1.2
Russia	1.6	2.3	2.2	0.3	0.3	0.2	0.2	0.2
CESEE (weighted average)	3.9	3.0	1.8	0.7	0.2	–0.3	0.8	0.6
Euro area	2.5	1.9	0.3	0.4	0.2	0.3	0.4	0.2

Source: Eurostat, national statistical offices.

investments continued to shrink, however, as the instability of the Turkish lira and the efforts to stabilize the currency have badly hurt domestic demand and confidence.

Our data show that average real GDP growth in CESEE amounted to 0.8% in the first and 0.6% in the second quarter of 2019 (quarter on quarter, respectively, see table 1). This represents an acceleration compared to the second half of 2018. Most of the acceleration, however, was due to the rebound of the Turkish economy, which reported growth rates of well above 1% both in the first and second quarters of 2019 (year-on-year growth, however, remained negative). Average growth in the CESEE EU Member States declined to 0.8% in the second quarter of 2019, 0.5 percentage points below the reading recorded in the first quarter of the year. At the level of individual countries, strong dynamics were observed for Hungary and Romania, while growth in Croatia and Slovenia came to a near standstill. The same is true for Russia, where quarter-on-quarter growth has hovered at around 0.2% since mid-2018.

Exports exert a drag on growth in most CESEE countries

A look at the development of individual GDP components reveals that net exports contributed negatively to growth in most CESEE EU Member States and Russia (see chart 1). This suggests that deteriorating international demand took a toll on export activity except in Turkey. In fact, export growth in the CESEE EU Member States declined considerably in the second quarter of 2019, reaching its lowest level since late 2012 (2.4% on average, year on year). Import growth declined, too, but continued to outpace export growth on the back of robust domestic demand (+3.4% on average, year on year).

At the country level, export growth declined most clearly in Slovakia (to negative levels) and the Czech Republic, the countries most strongly integrated into European production networks. However, a downward trend was observed in most other countries as well. Throughout the CESEE region, export expectations soured and the growth of (strongly export-oriented) industrial production declined markedly during the past months and has reached its weakest level in six years.

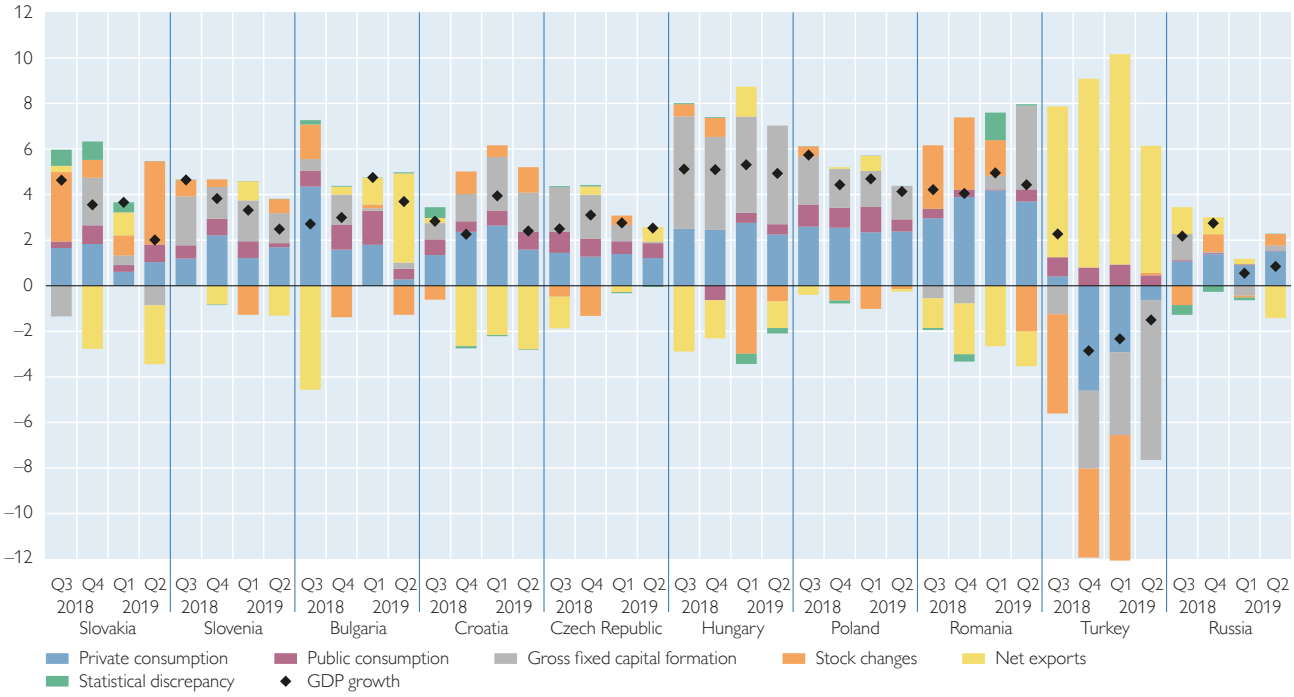
Diverging trends in competitiveness, but wage growth fuels ULC throughout the region

Elevated and prolonged increases in unit labor costs (ULC) in the CESEE EU Member States may help explain recent export weaknesses. For many quarters,

Chart 1

GDP growth and its main components

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



Source: Eurostat, national statistical offices.

strong wage advances have pushed up CESEE manufacturing ULC (measured in euro), and they continued to do so also in the review period. At the same time, largely robust productivity developments and a moderate depreciation of local currencies against the euro (by 1% to 2% in the first half of 2019) bolstered the CESEE EU Member States' competitive position somewhat in the past two quarters.

However, the situation is not homogenous throughout the region. Slovenia, Croatia and Poland, for example, managed to improve their competitiveness vis-à-vis the euro area mainly on the back of comparatively low wage growth rates in the first half of 2019. There are also differences when it comes to export markets. Surveys suggest that companies in the CESEE EU Member States assess their competitive position on markets outside the EU as largely solid, while it deteriorated on EU markets as of late.

Developments were more clear-cut in Russia and Turkey. Both countries gained competitiveness on the back of a depreciation of the respective local currencies while underlying ULC trends remained weak. In the first half of 2019, the Turkish lira lost more than 20% of its value against the euro when compared to the same period of the previous year. The Russian ruble depreciated by around 6% against the euro in the first quarter before regaining some value in the second quarter of 2019.

Poorer export prospects impact on investment…

Investment developed heterogeneously in the CESEE region. In some countries, poor export prospects led companies to postpone or scale down investment, with some of the largest projects in car manufacturing under threat from plummeting European demand. This was especially the case in the Czech Republic and Slovakia, where investment growth nosedived in the review period. However, investment

growth also lost substantial steam in Bulgaria and Slovenia. Negative trends were substantiated further by weakening orders and especially a decline in export order books. This was mirrored in corporate sentiment, with both construction and industrial sentiment (as measured by the European Commission's Economic Sentiment Indicator) on a downward trend since 2018.

In Turkey, investment spending contracted markedly. Capital formation suffered from tight financing conditions, corporates' high repayment obligations (partly related to foreign currency-denominated debt) and poor investor sentiment. In Russia, capital formation hardly contributed to growth in the first half of 2019.

… but domestic factors keep capital formation running in several CESEE countries

The negative investment dynamics, however, did not extend to the whole CESEE region. Croatia, Hungary, Poland and Romania reported strong capital formation, despite external headwinds and weakening sentiment. Factors contributing to this development include, inter alia, high capacity utilization rates, accelerated growth of credit to the corporate sector, expanded housing subsidies, EU-funded projects and/or accommodative monetary policy.

Favorable labor market developments spur domestic demand

The generally still solid level of output growth is attributable mainly to the ongoing dynamism of private consumption. Private consumption – which was responsible for the largest contributions to GDP growth in 5 of the 8 CESEE EU Member States in the first half of 2019 – continued to benefit from benign labor market conditions, swift wage growth and supportive policy measures in some countries.

Despite some softening of general economic dynamics, labor markets remained in full swing, with important labor market indicators at, or close to, historical records 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 3.6% in August 2019 – 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 (aged under 25) and older persons (aged 50+). The downward trend in long-term unemployment continued and was broad based. Furthermore, employment kept expanding throughout most of the region, contributing to a convergence of employment rates toward euro area levels (68% in the second quarter of 2019). By the second quarter of 2019, the employment rates of six CESEE EU Member States had already exceeded the euro area average.

The reverse side of these positive labor market trends were labor market shortages. According to a survey by the European Commission, a lack of labor is perceived as a strongly limiting factor for production in the CESEE EU Member States: In the third quarter of 2019, at least 39% of respondents in industry, 24% in services and 43% in construction reported that they struggled to find workers. The respective figures were highest for Hungary, where they reached levels of up to 68%.

Labor market strains relax slightly

The European Commission survey reported slightly better outcomes for manufacturing and construction during the past three quarters, which might indicate that labor markets are finally starting to cool off somewhat. Labor shortages were possibly mitigated by immigration from the Western Balkans and Ukraine (e.g. in Poland), some re-migration of CESEE citizens from Western European countries, investment in labor-saving technologies as well as a higher geographic mobility within the CESEE EU Member States.

Wage statistics also hint toward some easing of labor market strains. After a long period of acceleration, nominal wage growth in the CESEE EU Member

States has softened, on average, since the beginning of 2019, declining from around 12% year on year to about 10.5% in the second quarter of 2019.

Dynamic labor markets and higher wages positively impacted on sentiment and prompted consumers to take out credit. Consumer confidence was the only component of the European Commission's Economic Sentiment Indicator that actually improved over the reporting period.

The unemployment rate remains at a record low also in Russia (4.3% in August 2019). However, low unemployment in Russia seems to be, at least in part, related to people dropping out of the labor force. Despite remaining relatively weak by regional comparison, private consumption contributed most strongly to growth in Russia.

Turkey was the only country in the region where private consumption contributed negatively to growth and unemployment increased to above 20% in August 2019. The drag on output moderated in the review period on the back of a package of expansionary economic policy measures. These include higher minimum wages, tax cuts and the extension of cheap credit by state-owned banks, among others.

Domestic price pressures push up inflation further in the CESEE EU Member States…

Dynamic wage growth contributed to a further increase of price pressures in the CESEE EU Member States. The average inflation rate rose from 2.2% in February to 2.9% in August 2019 (see chart 2). This has been the highest inflation reading since 2012. The increase of inflation was broad based and encompassed all HICP components but energy. Energy prices were held back by the lower average oil price in the review period. Against this background, core inflation also trended up notably (from 2.2% in February to 2.8% in August 2019), indicating a strengthening of domestic price pressures. The latter have been fueled by generally tight labor markets pushing up aggregate ULC growth, by capacity utilization rates far above historical averages and a positive output gap.

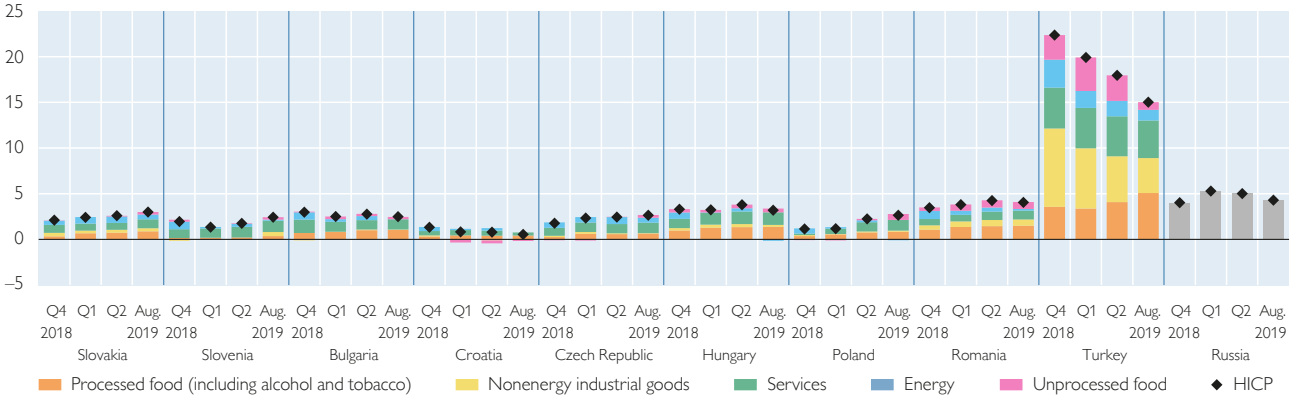
… while price dynamics moderate in Russia and Turkey

Unlike in the CESEE EU Member States, price growth moderated in Russia and Turkey. In Russia, inflation declined to 4.3% in August 2019 after it had risen to 5.3% in the first quarter of 2019 against the backdrop of a VAT increase. The pass-through effect of the VAT increase to consumer prices has been weaker than expected, in part because of low domestic demand.

Chart 2

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.

In Turkey, inflation declined from around 20% at the beginning of the year to 15% in August 2019, aided by a partial recovery of the Turkish lira and soft domestic demand conditions.

Interest rate cuts in Russia and Turkey against the background of lower inflation rates

Both the Turkish and the Russian central bank cut their policy rates as inflation rates were moderating.

In Russia, the key policy rate was cut in three steps of 25 basis points each from 7.75% in June to 7% in September 2019 (see chart 3). After these cuts, the key rate has reached the lowest level since early 2014, just before the oil price crash and Western sanctions triggered a financial turmoil and a sharp fall in the Russian ruble's external value. The Russian central bank (CBR) noted that inflation is continuing to slow and reduced its forecast for year-end inflation from 4.2%–4.7% to 4%–4.5%. With these inflation figures, compliance with the CBR's 4% inflation target is within reach.

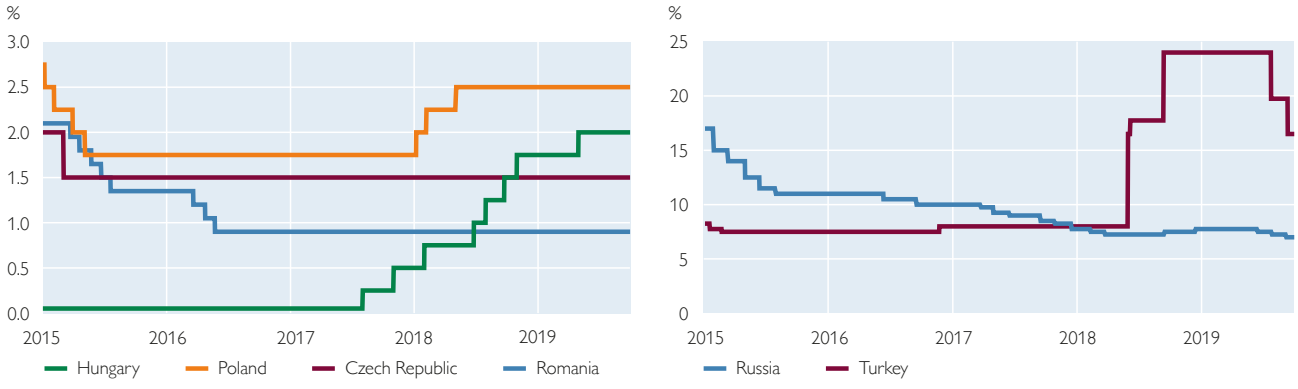
It remains to be seen, however, whether the rate cut will have a significant impact on business lending and consumption. Surveys indicate that the main constraint on investment is not the low availability of credit, but high uncertainty and the poor business environment. Moreover, although corporate profits were high across much of the business sector last year, this has not translated into a strong pickup of spending on investment. At the same time, lending conditions for households became tighter in October, as the CBR implemented new prudential rules to constrain unsecured household borrowing, which has grown too rapidly in the past two years.

The Turkish central bank (CBRT) cut its policy rate in two steps from 24% in July to 16.5% in September 2019. A change in the CBRT's top management in July preceded these two cuts. The CBRT stated that the year-end consumer price inflation rate was likely to be lower than projected. In addition to the stable course of the Turkish lira, it argued, improving inflation expectations and soft domestic demand conditions had supported the decline in core inflation. In early October, the Turkish lira came under renewed pressure because of concerns over Turkey's military incursion into Syria.

Among the CESEE EU Member States, the Czech Republic was the only country to adjust its policy rates in the review period. The Czech central bank (CNB)

Chart 3

Policy rate developments in CESEE



Source: Macrobond.

increased its rate by 50 basis points to 2% in May 2019. The CNB expects inflation to stay above the 2% target but still within the tolerance band for the rest of 2019. Comparatively strong price rises are related to persisting domestic inflation pressures, stronger administered price inflation and a renewed rise in food prices. According to the CNB, inflation will start to decrease in early 2020 and will approach the target over the monetary policy horizon, i.e. in the second half of 2020.

External adjustment in Turkey pushes up CESEE's current account balance

The combined current and capital account surplus in the CESEE region increased further in the review period, rising from 2.5% of GDP at the end of 2018 to 3.3% of GDP in mid-2019 (see chart 4). The external adjustment was especially remarkable in Turkey, where a current account deficit of 3.4% of GDP in 2018 turned into a broadly balanced position by mid-2019. A large-scale exchange rate depreciation and weak domestic demand boosted Turkey's goods and services balance. A notable improvement in the current account surplus was also reported for Bulgaria, where all individual components, especially the trade balance, posted better outcomes than a year ago.

Changes in the external accounts of the other countries under review where more moderate, ranging between +0.7 percentage points of GDP in Poland and –1.5 percentage points of GDP in Croatia. Among the components, the only somewhat more broad-based trend was a moderate decline in the primary income balance, related to lower outflows of dividends against the backdrop of generally lower economic dynamics.

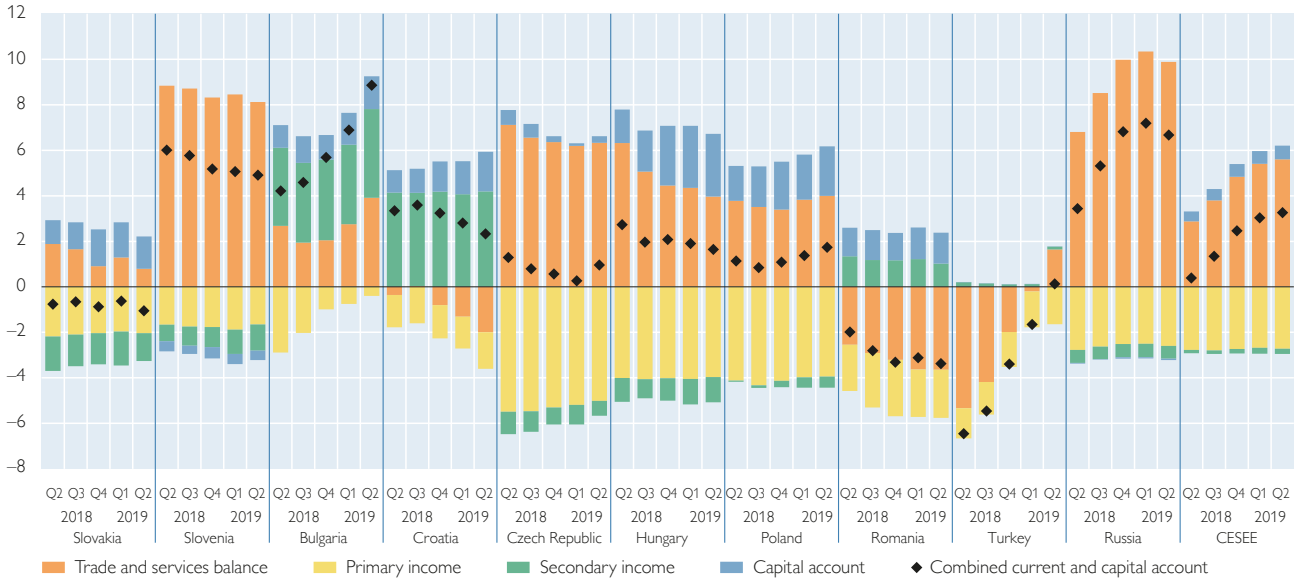
Capital outflows from CESEE broadly unchanged

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 remained broadly unchanged between end-2018 and mid-2019 (+4.2% of GDP, four-quarter moving sums, see chart 5). However, a notable reduction of the balance was to be observed between the first and second quarters

Chart 4

Combined current and capital account balance

% of GDP, four-quarter moving sum

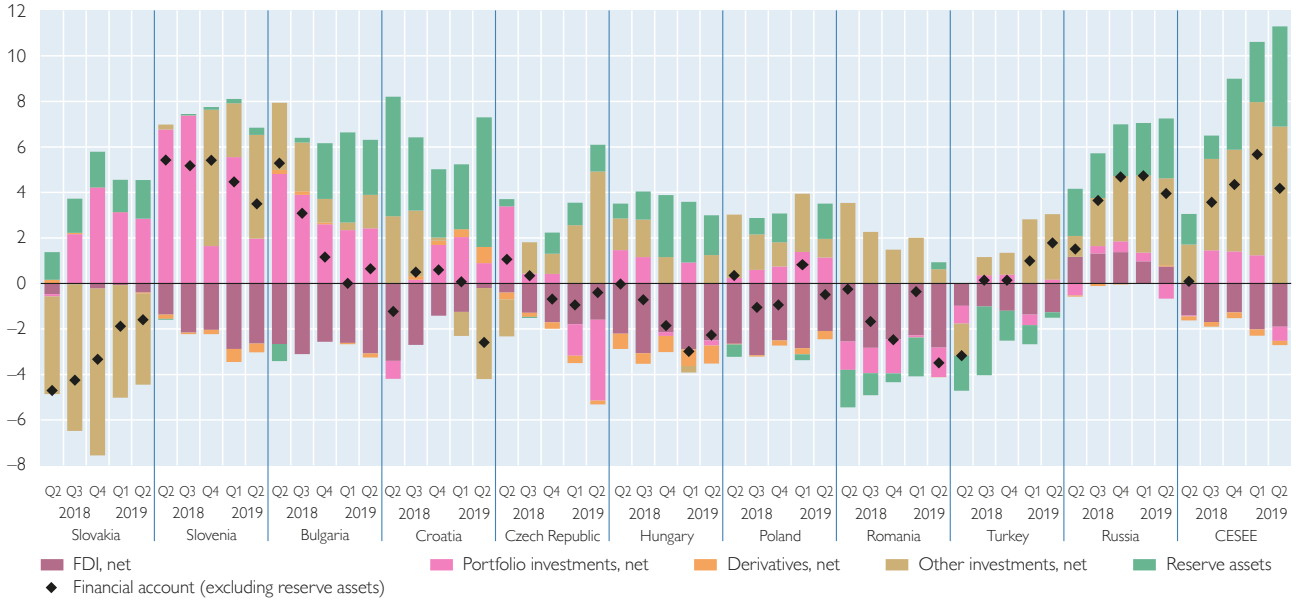


Source: Eurostat, IMF, national central banks.

Chart 5

Financial account balance

% of GDP, four-quarter moving sum



Source: National central banks.

Note: Positive values indicate a net outflow of capital, negative values indicate a net inflow of capital (vice versa for reserves).

of 2019. This implies that capital outflows have moderated. Russia contributed most to this development, as the country again reported net capital inflows into government bonds in the second quarter of 2019. However, the imposition of a new round of U.S. sanctions in August 2019 might put a brake on this development. Sanctions comprise a ban of U.S. banks from participating in initial sales of Russia's non-Russian ruble denominated sovereign debt and from providing foreign currency financing to the Russian sovereign. Furthermore, it must be noted that private sector net capital outflows from Russia continued in the first half of 2019.

Turkey was the only country in the region to report higher capital outflows in the review period. It was other investments (mostly reflecting bank flows) that weighed most strongly on capital flows, with the deterioration being driven by both a higher acquisition of assets abroad and a lower incurrence of liabilities from abroad.

Credit growth trending moderately downward in many CESEE countries

With currencies on a moderate downward trend and real interest rates falling due to higher inflation or rate cuts, real monetary conditions eased throughout CESEE in the first half of 2019 (see chart 6). Growth of domestic credit to the private sector (nominal lending to the nonbank private sector adjusted for exchange rate changes), however, declined somewhat in many countries.

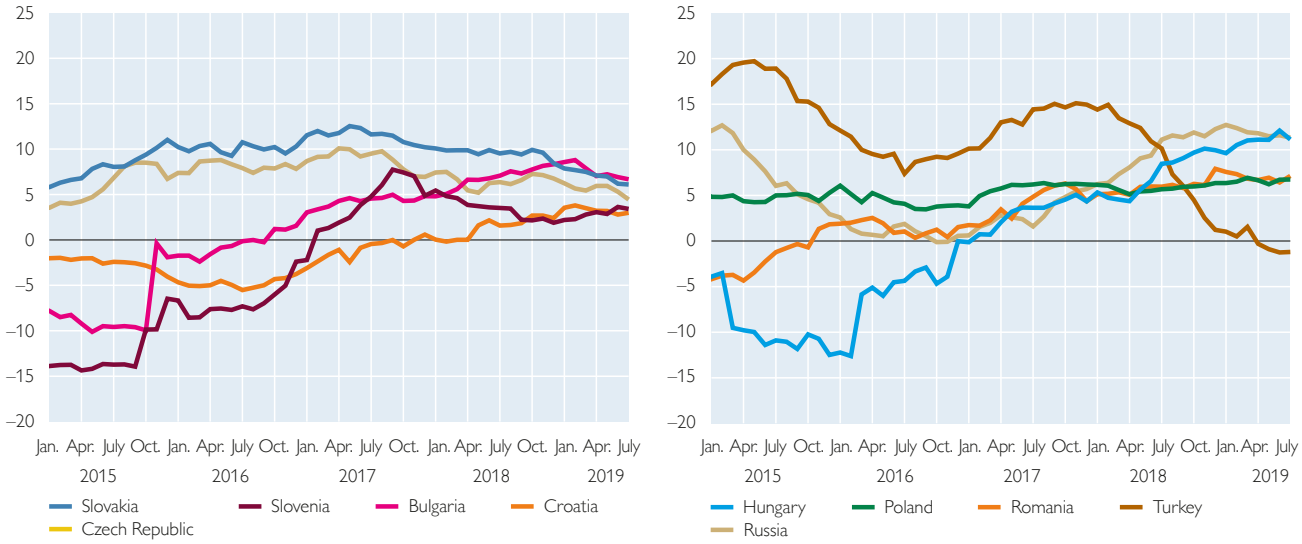
This is true for Turkey in particular. Turkish credit growth dipped into the reds in mid-2019 as tighter financial conditions, high risks and adverse exchange rate developments held back loan supply, while weakening domestic demand and high interest rates impinged on loan demand. A relaxation of lending standards for some segments and the key interest rate slash as of July 2019, however, recently contributed to an easing of lending conditions.

In fact, some moderation of credit dynamics was a welcome development especially in the CESEE EU Member States, as too rapid loan growth had caused

Chart 6

Growth of credit to the private sector

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



Source: National central banks.

risks to build up in certain segments of the loan market in several countries. This applies to housing loans in particular.

Regulators take action against rising housing loans and house prices

The past years have witnessed a notable increase in real estate prices in CESEE. In the first quarter of 2019, housing prices in the CESEE EU Member States rose by some 7% on average year on year (with growth rates ranging between 3.3% in Romania and 9.4% in the Czech Republic and Hungary). While this represents some moderation compared to 2018, housing prices continued to grow at a substantially stronger pace than in the EU on average. These dynamics were related to strong housing demand against the backdrop of favorable financing and general economic conditions as well as policies to improve the affordability of housing in several countries (e.g. in Croatia, Hungary and Poland). At the same time, a lack of skilled labor in the construction sector prevented supply from keeping track with demand.

Several CESEE central banks identified the combination of rapidly rising house prices and housing loans as a threat to financial stability (e.g. in the Czech Republic, Slovakia and Slovenia) and introduced macroprudential measures and/or issued recommendations to put a brake on this development. Instruments include debt service-to-income ratios (e.g. in the Czech Republic, Hungary, Romania, Slovakia and Slovenia), higher risk weights (e.g. in Poland and Slovenia), loan-to-value ratios (e.g. in the Czech Republic, Hungary and Slovakia) as well as loan-to-income ratios (e.g. in the Czech Republic and Slovakia).

Countercyclical capital buffer active in three countries

Bulgaria, the Czech Republic and Slovakia have also activated the countercyclical capital buffer. In Bulgaria, the buffer was implemented only in October 2019 (0.5%) and will be raised to 1% in April 2020. In the Czech Republic, the buffer currently stands at 1.5% and is to be raised to 1.75% in January 2020 and to 2% in July 2020. In Slovakia, the buffer will be raised to 2% in August 2020 from its current level of 1.5%. These measures seem to be successful in curbing credit

dynamics as Bulgaria, the Czech Republic and Slovakia also were the countries that reported the most notable decline of credit growth in the review period.

Only Hungary and Slovenia reported a stronger rise in credit growth than in the previous observation period. In Hungary, lending was supported by various policy measures, including the expansion of housing subsidies to families and the central bank's Funding for Growth Scheme Fix, targeted at long-term lending to small and medium-sized enterprises (SMEs) at fixed interest rates. In Slovenia, the growth of loans to households far outstripped the growth of loans to corporates. The latter was held back by high corporate profitability and increasing internal resources but accelerated somewhat in recent months.

Prudent lending in the CESEE EU Member States

By and large, the CESEE EU Member States' credit markets are in a sound shape as regulators keep a close eye on the build-up of risks and banks have become more prudent when it comes to extending new credit. This also shows in the European Investment Bank's (EIB) latest CESEE Bank Lending Survey. Credit demand improved across the board in the first half of 2019, marking the 13th consecutive semester of favorable developments. All factors affecting credit demand made positive contributions, only debt and corporate restructuring had almost no effect.

Higher credit demand was paired with broadly unchanged credit supply conditions in the first half of 2019. With that, the positive gap between credit demand and credit supply that had been perceived for several quarters continued to persist. On balance, this would imply a better loan quality for most of new lending than in previous credit cycles. Across the client spectrum, credit standards eased again for lending to SMEs and consumer credit, while they tightened for mortgages. Changes in local regulations were perceived as key factors adversely affecting supply conditions.

Strong growth of unsecured consumer loans in Russia

In Russia, high credit growth rates of around 12% year on year since mid-2018 have given rise to concerns. Growth is relatively lopsided as it is largely driven by retail loans, while credit to enterprises has continued to be rather sluggish. Although household debt remains comparatively low on aggregate, unsecured consumer loans (which comprise over half of all consumer loans) have grown particularly briskly. The CBR has responded by raising risk-based capital buffers several times since early 2018 and introduced additional tightening measures in October 2019.

Box 1

Ukraine: economic recovery continues, talks on further IMF program initiated

GDP growth accelerated to 3.6% year on year in the first half of 2019. Private consumption grew briskly by 11.3% year on year, benefiting from increasing real wages and pensions as well as from remittances and consumer loan growth. The unemployment rate fell to 9.2% in the first quarter of 2019, down from 9.7% one year earlier. Growth of gross fixed capital formation decelerated somewhat but remained dynamic with an annual growth rate of 12%. After exports had contracted in 2018, they recovered in the first half of 2019, boosted by a bumper harvest. Yet, as import growth sped up, the growth contribution of net exports remained negative.

Since the beginning of the year, annual headline inflation has fluctuated around 9%, and it stood at 8.8% in August. Yet, core inflation fell to 7.2% in August from 8.7% at end-2018. The National Bank of Ukraine (NBU) cut its key policy rate three times (in April, July and September) by 150 basis points overall to 16.5%. Despite these interest rate cuts, the real interest rate level is still relatively high. The NBU expects inflation to meet the 5% target at the end of next year and signaled that it would continue the monetary policy easing cycle provided inflation is steadily declining toward this target.

In the four quarters up to mid-2019, the current account deficit stood at 3.1% of GDP, slightly down from 3.4% at end-2018. The current account continues to show a large trade deficit, which is partly compensated by surpluses in both income balances that largely reflect income from Ukrainians working abroad, particularly in Poland. Net FDI inflows remained subdued, amounting to 1.7% of GDP in the four quarters up to mid-2019 (almost unchanged compared to 2018). Despite a notable reform progress that has been going on since 2014, the main obstacles to foreign investment (widespread corruption, lack of trust in the judiciary, and the influence of oligarchs) still prevail. After international financial support lifted official foreign currency reserves to USD 20.8 billion at end-2018, these reserves increased further to USD 22 billion (3.5 months of imports) by August 2019. Favorable conditions on the foreign currency market allowed the NBU to replenish its foreign currency reserves while the Ukrainian hryvnia was on an appreciation trend.

Under the 14-month IMF Stand-By Arrangement (SBA) approved in December 2018, only one tranche amounting to USD 1.4 billion (out of a total volume of USD 3.9 billion) was disbursed. In May 2019, an IMF mission held discussions with the Ukrainian authorities (including the newly elected President Volodymyr Zelensky) on the first review of the SBA. Yet, the mission indicated that it would be necessary to wait for the outcome of early parliamentary elections and for clarity about the policy intentions of the new administration before the review could be concluded. Parliamentary elections took place in July and Zelensky's party secured an absolute majority. After a government was formed, an IMF team visited Kiev to initiate discussions on a new three-year program under the IMF's Extended Fund Facility (EFF) in September. The IMF mission statement highlighted productive discussions on economic policies (including further reforms) but also underlined the need to make every effort to minimize the fiscal costs of bank resolutions. While no final agreement could be reached, it was announced that discussions would continue. The IMF seems to be concerned about controversial court rulings (to which the NBU has filed appeals) on the nationalization of Privatbank, which was carried out in December 2016 under the auspices of the IMF.

Box 2

Western Balkans[4]: economic growth lost momentum in the first half of 2019

In the Western Balkan countries, annual economic growth decelerated to 2.9% (GDP-weighted average) in the first half of 2019 from 3.8% in 2018 (and from 4.1% in the first half of 2018). The slowdown was strongest in Albania, Montenegro and Serbia. Economic performance was blurred by country-specific one-off factors in Albania and Montenegro. Albania suffered mainly from adverse weather conditions (low rain falls) that negatively affected the generation of hydroelectricity; in Montenegro, the phasing out of a large infrastructure project related to highway construction was reflected in deteriorating investment growth. In Serbia, the reasons for slower growth were more broadly based. North Macedonia, by contrast, grew much more strongly in the first half of 2019, largely reflecting recovery after a phase of political uncertainty in 2017 and early 2018. Kosovo's growth profile changed strongly in the second quarter of 2019 compared to the first quarter, with net exports becoming the major growth contributor whereas private consumption growth almost stagnated.

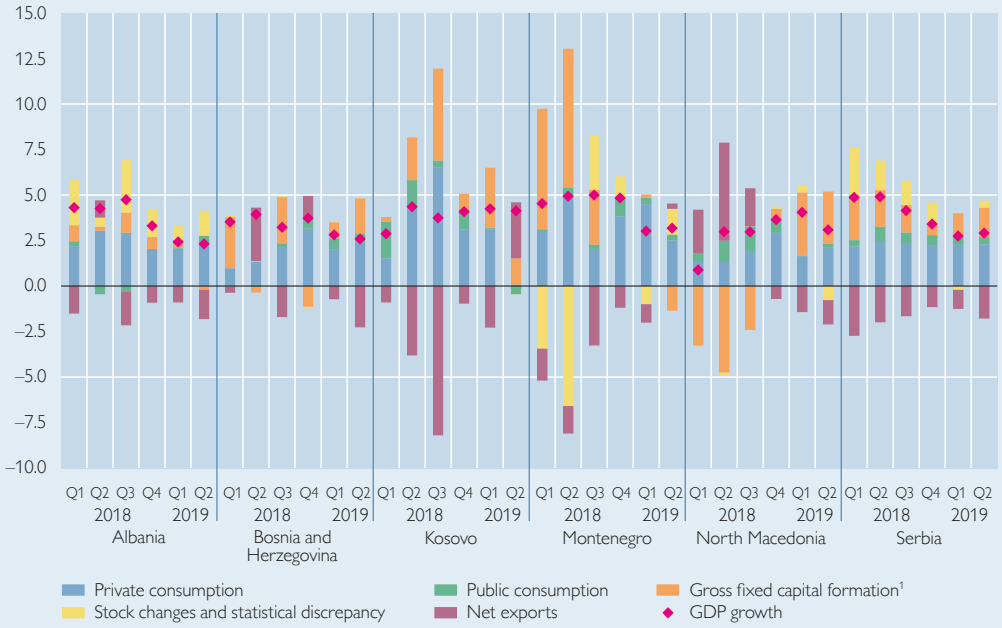
Overall, private consumption remained a dominant growth generator in the Western Balkans. It was supported by rising wages, perceptible labor market improvements, a stable inflow of remittances and a robust growth of credit to households. Remarkably, private consumption growth stagnated in Kosovo in the second quarter of 2019 after a more than 3% annual growth rate was recorded in the previous quarter. This slowdown was possibly due to higher food prices (see below) and elevated uncertainty before parliamentary snap elections in early October 2019.

[4] *The Western Balkans comprise the EU candidate countries Albania, Montenegro, North Macedonia and Serbia as well as the potential candidates 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.*

Chart 1

GDP growth slowed down in most Western Balkan countries in the first half of 2019

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



Source: National statistical offices.

[1] Gross capital formation for Bosnia and Herzegovina, Kosovo, North Macedonia.

In the first half of 2019, public consumption growth was rather subdued in the Western Balkans. Kosovo even registered negative growth rates in the first half of 2019. In Albania, by contrast, public consumption accelerated quite strongly in the second quarter of 2019 (+4.4% annually), driven by higher public wages.

As to investment activity, the picture was more mixed. In Albania and Montenegro, gross fixed capital formation slumped in the first half of 2019 (in both countries, annual growth even turned negative in the second quarter of 2019) when compared to the previous year. The phasing out of large infrastructure projects (Trans Adriatic Pipeline in Albania, highway section in Montenegro) were the main factors behind the slowdown. In Serbia, the growth of gross fixed capital formation also weakened somewhat, but the momentum remained strong overall. In North Macedonia, gross capital formation continued to recover after investment activity was dragged down by a prolonged period of political uncertainty in 2017 and early 2018.

In the first half of 2019, export growth weakened in most Western Balkan countries compared to the full year of 2018 (and compared to the first half of 2018). Apart from an overall slowdown in global trade, Bosnia and Herzegovina was affected by the trade conflict[5] with Kosovo, which is an important trade destination for the country. In Albania, exports slumped due to low energy production. Despite some deceleration, Kosovo and North Macedonia still featured strong export growth rates in the first half of 2019. Import growth weakened considerably – due to falling infrastructure-related imports in Montenegro and, in Kosovo, possibly because of higher import prices (related to the imposed tariffs) and the overall weakening of private consumption growth. In Albania, lower imports for infrastructural purposes were largely compensated by a higher need to import energy as energy production was low in the first half of 2019. The growth contribution of net exports was negative in all Western Balkan countries

[5] *In November 2018, Kosovo imposed 100% tariffs on goods from Bosnia and Herzegovina, and from Serbia. These tariffs were introduced because the two countries do not recognize Kosovo's independence.*

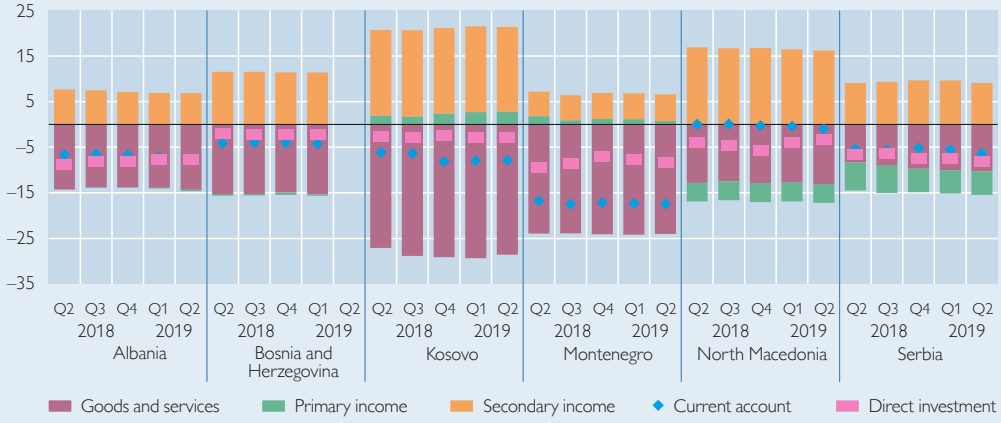
in the first quarter of 2019. In the second quarter of 2019, however, Kosovo and Montenegro registered a positive contribution of net exports.

Trade balances remained clearly negative, particularly in Kosovo and Montenegro, which recorded deficits of almost 30% and 24% of GDP, respectively, in the first half of 2019. External imbalances even widened in the Western Balkans in the first half of 2019 compared to the same period of 2018, largely on account of worsening merchandise trade balances. Remittances remained robust. In most Western Balkan countries, FDI inflows continued to finance a large part of the current account deficits.

Chart 2

Current account balances and FDI in the Western Balkans

% of GDP, four-quarter moving average



Source: National central banks, national statistical offices.

Note: A positive (negative) value in the category of direct investments indicates that the net acquisition of assets is higher (lower) than the net incurrence of liabilities.

Unemployment rates are strikingly high in most Western Balkan countries (particularly when compared to record-low unemployment rates in the CESEE EU Member States), ranging from around 10% in Serbia to 25% in Kosovo in the second quarter of 2019. It is worth noting that unemployment rates improved visibly across the region compared to the same period of 2018 – except in Montenegro, where it remained at 14.7%. Employment rates in the region increased as well, except in Kosovo, whose employment rate continues to hover around the low level of 29%. Wages (whole economy) increased robustly in most Western Balkan countries,[6] particularly in Serbia. Apart from overall robust economic growth, accelerating public wages or the raising of minimum wages supported overall wage growth. In Montenegro, by contrast, wages have stagnated more or less since early 2018, partly because government wages have remained unchanged. However, minimum wages in Montenegro were raised in spring, and wages grew marginally in the months thereafter.

Inflation has remained mostly low so far. Apart from country-specific factors, contained inflationary pressure was partly due to low imported inflation as a result of low inflation in the main trading partner countries. In Montenegro, for instance, inflation decelerated to 0.4% year on year in the first nine months of 2019 (with slightly negative inflation rates from June to September 2019), compared to 2.6% in 2018. In Bosnia and Herzegovina, inflation fell to 0.3% year on year in August 2019 (after 1.4% in 2018). In Albania, where inflation rates were below 2% in the first nine months of 2019, inflation remained below the target of 3% set by the Bank of Albania. In this case, low inflation was also related to the strong appreciation of the currency in nominal effective terms in 2018, which had a perceptible impact on inflation in the first half of 2019. The currency appreciation moderated in the first half of 2019 compared

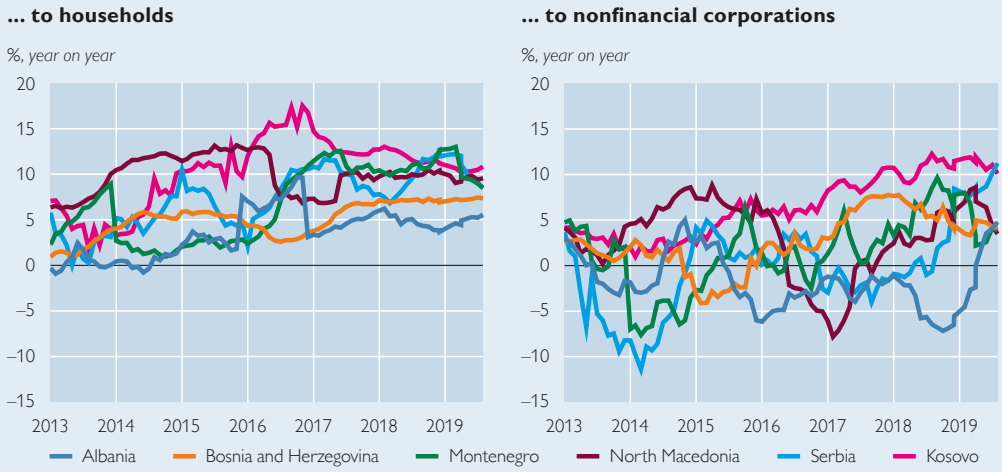
[6] *No comparable data are available for Kosovo.*

to developments recorded in 2018. In Serbia, the other inflation-targeting country in the region, inflation peaked in spring 2019 (April 2019: +3% year on year) but moved down to 1.1% year on year in September 2019. Against the background of limited inflationary pressure (the inflation target is set at 3% ±1.5 percentage point), the National Bank of Serbia (NBS) cut its key interest rate in two steps by 50 basis points to 2.5% over the summer of 2019. The Serbian dinar continued to be under appreciation pressure and the NBS intervened on the foreign exchange market to counteract the appreciation of the dinar against the euro. Kosovo, by contrast, featured rather elevated inflation rates (above 3% on average in the first seven months of 2019); this is related to the 100% tariffs imposed on goods from Bosnia and Herzegovina and from Serbia, which lifted food prices significantly.

Turning to credit developments, lending to the household sector generally remained strong in the present low interest rate environment. In Serbia, the growth of annual lending to households moderated visibly in June, July and August 2019. This might be connected to the write-offs related to the conversion of Swiss franc-denominated housing loans into euro loans. Additionally, the growth of cash loans slowed down, possibly due to regulatory changes that were already implemented at end-2018 with the aim to support sustainable lending for unsecured nonpurpose loans.[7,8] Specifically, lending to the corporate sector accelerated strongly in Serbia in the first half of 2019 and grew by more than 10% year on year in July and August 2019. In Albania, lending to the corporate sector also recovered visibly. According to the Bank of Albania,[9] the lending activities of some banks have become more dynamic after some changes in bank ownership.

Chart 3

Growth of credit



Source: IMF, national central banks.

The downward trend in nonperforming loans (NPLs) has continued since end-2018. Albania, the country with the highest NPL ratio in the Western Balkans, managed to bring its NPLs down to close to 11% of total loans in June 2019 from about 13% at the end of 2018. In June 2019, the other Western Balkan countries posted NPL ratios between 2.5% (Kosovo) and 7.2% (Bosnia and Herzegovina).

To bring down public debt and to ensure overall fiscal sustainability, the consolidation of public finances remains key in the Western Balkan countries. In 2018, public debt as a share of GDP was highest in Montenegro at 70.1%, followed by Albania with a rate of 67.9% and Serbia with 53.2%.

[7] *For more details on lending to the private sector for nonhousing purposes, see box 2 in Focus on European Economic Integration Q2/19.*

[8] *National Bank of Serbia. 2019. Trends in Lending. Second Quarter Report. September 2019.*

[9] *Bank of Albania. 2019. Monetary Policy Report. 2019/III.*

Moreover, reducing underspending for public investments remains a challenge to public finances in almost all Western Balkan countries. They also face risks related to contingent liabilities and have to address the large shadow economies. In October 2019, the Serbian authorities adopted an additional budget as government revenues were higher than expected. The extra budget mainly provides for additional spending for infrastructure projects (for roads in particular) and increasing public wages (on average, an annual increase by 9.6% is to become effective in November 2019) without changing the 2019 fiscal deficit target of 0.5% of GDP. Overall, better fiscal discipline and progress with regard to fiscal consolidation were an important motivation for Moody's to change Serbia's long-term foreign currency sovereign debt rating from stable to positive and for Fitch to revise its rating upward from BB to BB+ in September 2019.

Regarding the EU accession process, Albania and North Macedonia are still waiting to get the green light for opening accession negotiations with the European Commission. Albania has been an EU candidate country since 2014, North Macedonia since 2005. The European Commission would be ready to start accession negotiations as soon as possible. The decision, however, requires the unanimity of all EU Member States. Recently, at the European Council in mid-October 2019, the EU Member States failed to agree on opening accession talks with Albania and North Macedonia and postponed the decision on this issue to a later date. Turning to the relationship of this country group with the IMF, Bosnia and Herzegovina as well as Serbia have programs with the IMF. The IMF's EFF program with Bosnia and Herzegovina came to a standstill in 2018 due to the lacking reform process in the country. Serbia uses the IMF's Policy Coordination Instrument (PCI). In mid-October 2019, the IMF published its conclusions of the third review under the PCI. According to this review, Serbia's PCI program is broadly on track.

2 Slovakia: economic growth declines to lowest level in six years

Drivers of GDP growth rather volatile in the first half of 2019

Real economic growth in Slovakia hit the brakes and moderated from more than 4% in 2018 to 2.8% in the first half of 2019. The structure of growth was somewhat volatile. In the first quarter of 2019, the economy grew at a similar pace as at end-2018 and GDP growth was broadly balanced between domestic and foreign demand. In the second quarter of 2019, economic expansion slowed down significantly as the vigorous increase in the growth contribution of domestic demand was massively counteracted by net exports. While in the first quarter, exports benefited from the launch of new car production capacities and export growth outpaced import growth, exports contracted in the second quarter in the year-to-year comparison. Apart from base effects, this partly reflected weaker foreign demand and a significant drop of exports of petrochemical products as a result of a temporary closure of oil refinery facilities. By contrast, domestic demand maintained a relatively robust growth contribution primarily on the back of both public and private consumption. Both were boosted particularly by rising compensation of private and public employees. Yet, household consumption also profited from one-off factors such as the 2019 Ice Hockey World Championship, which was hosted by Slovakia in May. Nonetheless, despite continuously increasing disposable income, private consumption growth slowed down in the first semester of 2019 when compared to the previous year as households preferred to increase their saving rate. This possibly mirrors consumers' deteriorated confidence particularly with regard to the general economic situation and to unemployment. Fixed investment contracted in the second quarter of 2019, following a significant slowdown at the beginning of the year. Over the review period, gross fixed capital formation thus made a slightly negative contribution to growth due to moderated public investment and shrinking investment in the automotive sector. This echoed firms' reaction to discouraging signals about demand developments in trading partner countries. At the same time, it became more challenging for firms to sell their products, which brought about a significant build-up of stocks. As a result, additions to inventories became the single most important growth driver in Slovakia in the first half of 2019, adding 2.3 percentage points to GDP growth.

Due to the slowdown in economic growth, the downward trend the general government deficit showed during the last decade is expected to come to a halt in 2019. While the fiscal deficit should remain at broadly the same level as last year, public debt relative to GDP, however, is projected to go down by about 1 percentage point. This will be buttressed by a continued primary surplus and low interest payments relative to GDP growth.

Long-lasting positive labor market dynamics seem to moderate

While employment continued to rise in the first three months of 2019 mainly thanks to the service sector, employment growth came to a standstill in the second quarter in the wake of skilled labor shortages, slower economic growth and labor saving measures. The lower demand for labor in the first half of 2019 was mirrored also in a less dynamic downward trend in unemployment compared to the recent past. Nonetheless, wage growth remained robust both in the private and public sectors, reaching record levels. This was reflected again in a significant increase in ULC as wage dynamics outstripped increases in productivity by a wide margin. In the six months to June, inflation averaged 2.5% – the same price increase as in 2018. Inflation accelerated to about 3% in the third quarter, however, mainly reflecting price increases in housing, food and energy. Annual growth in loans to households moderated further in the period under review.

Table 2

Main economic indicators: Slovakia

	2016	2017	2018	Q1 18	Q2 18	Q3 18	Q4 18	Q1 19	Q2 19
	Year-on-year change of the period total in %								
GDP at constant prices	3.1	3.2	4.1	3.7	4.5	4.6	3.6	3.7	2.0
Private consumption	2.9	3.5	3.0	3.5	2.0	3.1	3.4	1.1	1.9
Public consumption	1.6	1.7	1.9	1.2	0.7	1.6	3.8	1.5	4.2
Gross fixed capital formation	–9.4	3.4	6.8	8.1	18.5	–5.7	9.0	2.1	–3.7
Exports of goods and services	5.5	5.9	4.8	1.3	7.6	5.6	4.7	7.2	–1.9
Imports of goods and services	3.4	5.3	5.3	1.1	6.6	5.4	7.8	6.4	0.8
	Contribution to GDP growth in percentage points								
Domestic demand	1.1	2.5	4.0	3.5	3.3	3.6	5.6	2.2	4.6
Net exports of goods and services	2.0	0.7	–0.3	0.2	1.2	0.3	–2.8	1.0	–2.6
Exports of goods and services	5.1	5.5	4.7	1.3	7.3	5.0	4.7	7.3	–1.9
Imports of goods and services	–3.1	–4.8	–5.0	–1.1	–6.1	–4.7	–7.5	–6.3	–0.7
	Year-on-year change of the period average in %								
Unit labor costs in the whole economy (nominal, per person)	1.3	4.2	3.4	3.9	3.2	2.6	3.7	4.4	7.8
Unit labor costs in manufacturing (nominal, per hour)	2.8	6.6	3.6	7.8	5.6	0.4	1.4	1.7	3.8
Labor productivity in manufacturing (real, per hour)	1.4	0.9	4.8	0.6	4.9	7.1	6.4	7.5	2.8
Labor costs in manufacturing (nominal, per hour)	4.2	7.5	8.6	8.4	10.7	7.6	7.9	9.3	6.7
Producer price index (PPI) in industry	–3.9	2.5	2.4	0.9	1.6	3.6	3.6	2.7	2.9
Consumer price index (here: HICP)	–0.5	1.4	2.5	2.4	2.9	2.7	2.1	2.4	2.6
	Period average levels								
Unemployment rate (ILO definition, %, 15–64 years)	9.7	8.2	6.6	7.2	6.7	6.4	6.1	5.9	5.8
Employment rate (%, 15–64 years)	64.9	66.2	67.6	67.1	67.1	67.9	68.2	68.6	68.1
Key interest rate per annum (%)	0.0	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]	10.3	10.2	8.4	9.9	9.9	9.4	8.4	7.5	6.2
of which: loans to households	13.4	11.8	11.3	12.4	12.3	12.0	11.3	9.5	8.5
loans to nonbank corporations	5.4	7.6	3.4	5.6	5.9	5.0	3.4	3.9	2.1
	%								
Share of foreign currency loans in total loans to the nonbank private sector	0.4	0.2	0.1	0.2	0.2	0.2	0.1	0.2	0.1
Return on assets (banking sector)	1.1	0.8	0.8	0.9	0.9	0.9	0.8	0.8	0.9
Tier 1 capital ratio (banking sector)	16.2	16.6	16.6	16.4	16.3	16.7	16.6	16.7	16.8
NPL ratio (banking sector)	4.3	3.6	3.0	3.5	3.4	3.4	3.0	2.9	2.8
	% of GDP								
General government revenues	39.2	39.4	39.9	..	..	..	..	..	..
General government expenditures	41.5	40.2	40.6	..	..	..	..	..	..
General government balance	–2.2	–0.8	–0.7	..	..	..	..	..	..
Primary balance	–0.7	0.6	0.6	..	..	..	..	..	..
Gross public debt	51.8	50.9	48.9	..	..	..	..	..	..
	% of GDP								
Debt of nonfinancial corporations (nonconsolidated)	55.6	59.6	53.8	..	..	..	..	..	..
Debt of households and NPISHs[2] (nonconsolidated)	38.2	40.8	42.2	..	..	..	..	..	..
	% of GDP (based on EUR), period total								
Goods balance	2.0	0.8	0.1	1.2	2.0	–1.3	–1.5	2.7	–0.6
Services balance	0.6	1.0	0.9	0.8	1.1	1.3	0.2	0.8	1.6
Primary income	–3.1	–2.3	–2.0	–1.3	–2.0	–2.2	–2.5	–1.1	–2.3
Secondary income	–1.7	–1.5	–1.4	–1.4	–2.4	–0.9	–0.8	–1.9	–1.3
Current account balance	–2.2	–2.0	–2.5	–0.7	–1.4	–3.1	–4.6	0.5	–2.6
Capital account balance	2.0	0.9	1.6	0.4	1.9	0.9	3.2	0.2	1.3
Foreign direct investment (net)[3]	–0.8	–2.0	–0.2	–1.2	2.3	–1.3	–0.7	–0.5	1.0
	% of GDP (rolling four-quarter GDP, based on EUR), end of period								
Gross external debt	92.2	111.0	113.0	108.1	109.6	109.7	113.0	109.6	111.7
Gross official reserves (excluding gold)	2.0	2.3	3.8	2.8	3.2	3.5	3.8	4.3	4.8
	Months of imports of goods and services								
Gross official reserves (excluding gold)	0.3	0.3	0.5	0.4	0.4	0.4	0.5	0.5	0.6
	EUR million, period total								
GDP at current prices	81,226	84,851	90,202	20,425	22,653	23,799	23,325	21,794	23,719

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: wage growth feeding through to inflation despite moderating output growth

GDP growth notably weaker in the first half of 2019

Output growth in Slovenia moderated notably during the first half of 2019, primarily as a result of slackening domestic demand, while the growth contribution of net real exports remained slightly negative. The dynamics of private consumption eased despite accelerating real wage growth, mirroring the slowing expansion of employment, some deterioration in consumer confidence, a modest increase in households' savings rate and a slight decline in household credit growth. Government consumption slowed from an outstandingly high base in 2018. Investment activity eased as well, driven by slowing investments in machinery and equipment along with declining capacity utilization, which was not counterbalanced by strengthening construction investments. Continued contraction in corporate credit and worsening economic sentiment along with a sharp deterioration in export expectations may have played a role here. So far, however, export growth accelerated during the first half of 2019, but as import growth strengthened similarly, the contribution of net real exports remained slightly negative like in 2018.

Budget on course toward MTO, but long-term sustainability issues still unresolved

According to the European Commission's 2019 Spring Economic Forecast, the general government surplus is expected to come to 0.7% of GDP in 2019 and to rise to 0.9% in 2020. However, as budgetary developments benefit strongly from economic strength, the structural balance is negative and is expected to deteriorate slightly in 2019, mainly on the back of higher wage costs and public investments. The European Commission expects the projected decrease in the output gap to bring about a decline in the structural deficit in 2020, close to the country's medium-term objective (MTO) (–0.25% of GDP). As a result, in its June 2019 assessment, the European Council saw Slovenia at risk of some deviation from its medium-term budgetary objective and called on the authorities to stand ready to take further measures. In addition, the European Council urged the adoption and implementation of pension, health and long-term care reforms as well as improvements in the employability of low-skilled and older workers and in the business environment.

Wage growth feeding through to inflation

HICP inflation increased from a temporary low of 1.2–1.3% at the beginning of 2019 to 2.4% by August. This acceleration was in stark contrast to average euro area developments, so that the inflation gap between Slovenia and the euro area rose from a negative 0.2 percentage points in January and February 2019 to a positive 1.4 percentage points by August. The rise in headline inflation during the reporting period mainly reflected an increase in core inflation. This increase, in turn, was attributable to both processed food and nonenergy industrial goods prices, but mostly to services prices. This may be the first indication that the rapid rise of ULC since early 2018 has finally begun to feed through to prices.

Living up to its obligations, the government sold a final 10% of the country's largest bank, Nova Ljubljanska banka (NLB), to institutional investors in June 2019. At the same time, it also privatized the third-largest bank, Abanka, by selling it to the second-largest bank, Nova Kreditna Banka Maribor (NKBM), giving them a combined market size of almost that of NLB (around 23%). In a pathbreaking ruling, a Slovene appellate court at end-August 2019 ordered Abanka to fully compensate former owners of subordinated bonds which had been scrapped during the bank restructuring of 2013/2014. According to the court, the Abanka had not fully informed its clients about possible adverse consequences of purchasing subordinated debt. The ruling could serve as a precedence for other holders of erased subordinated debt, which totals around EUR 600 million.

Table 3

Main economic indicators: Slovenia

	2016	2017	2018	Q1 18	Q2 18	Q3 18	Q4 18	Q1 19	Q2 19
	Year-on-year change of the period total in %								
GDP at constant prices	3.1	4.8	4.1	4.3	3.7	4.6	3.8	3.3	2.5
Private consumption	4.4	2.3	3.4	4.0	3.3	2.3	4.1	2.3	3.3
Public consumption	2.5	0.3	3.2	2.4	3.1	3.2	4.0	3.9	1.0
Gross fixed capital formation	–3.7	10.4	9.4	9.9	9.1	11.9	7.1	10.0	6.9
Exports of goods and services	6.5	10.8	6.6	7.7	8.2	4.2	6.5	7.9	9.4
Imports of goods and services	6.7	10.7	7.7	9.4	8.4	4.8	8.2	7.7	12.3
	Contribution to GDP growth in percentage points								
Domestic demand	2.7	3.8	4.3	4.9	3.1	4.6	4.7	2.5	3.8
Net exports of goods and services	0.4	1.0	–0.2	–0.6	0.6	0.0	–0.8	0.8	–1.3
Exports of goods and services	5.0	8.4	5.5	6.4	6.7	3.6	5.4	6.8	8.0
Imports of goods and services	–4.6	–7.4	–5.7	–6.9	–6.1	–3.6	–6.2	–6.0	–9.3
	Year-on-year change of the period average in %								
Unit labor costs in the whole economy (nominal, per person)	1.8	1.2	3.0	3.2	3.9	1.7	3.1	3.8	5.8
Unit labor costs in manufacturing (nominal, per hour)	–6.3	–2.7	–2.2	–2.5	–5.7	–3.1	2.4	1.5	0.2
Labor productivity in manufacturing (real, per hour)	9.4	9.6	6.0	9.4	8.2	4.6	2.3	5.3	4.3
Labor costs in manufacturing (nominal, per hour)	2.5	6.7	3.6	6.7	2.0	1.3	4.7	6.9	4.5
Producer price index (PPI) in industry	–1.4	2.2	2.1	2.2	2.1	2.4	1.6	1.1	0.8
Consumer price index (here: HICP)	–0.2	1.6	1.9	1.5	2.1	2.1	2.0	1.3	1.7
	Period average levels								
Unemployment rate (ILO definition, %, 15–64 years)	8.1	6.7	5.2	6.0	5.3	5.1	4.4	4.9	4.3
Employment rate (%, 15–64 years)	65.9	69.3	71.1	69.7	71.1	71.9	71.8	71.3	72.5
Key interest rate per annum (%)	0.0	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]	–2.4	4.9	1.9	4.6	3.6	2.2	1.9	2.8	3.6
of which: loans to households	3.3	6.8	6.4	6.5	6.5	6.5	6.4	6.3	5.9
loans to nonbank corporations	–7.0	3.1	–2.2	2.9	0.9	–1.7	–2.2	–0.6	1.4
	%								
Share of foreign currency loans in total loans to the nonbank private sector	3.2	2.4	2.0	2.3	2.2	2.1	2.0	1.9	1.8
Return on assets (banking sector)	0.9	1.1	1.3	1.4	1.5	1.3	1.3	1.3	1.8
Tier 1 capital ratio (banking sector)	20.2	19.4	19.4	19.8	20.2	19.4	19.4	..	..
NPL ratio (banking sector)	5.5	3.7	2.3	3.2	2.9	2.7	2.3	2.0	1.5
	% of GDP								
General government revenues	43.4	43.2	43.1	..	..	..	..	..	..
General government expenditures	45.3	43.2	42.4	..	..	..	..	..	..
General government balance	–1.9	0.0	0.7	..	..	..	..	..	..
Primary balance	1.1	2.5	2.7	..	..	..	..	..	..
Gross public debt	78.7	74.1	70.1	..	..	..	..	..	..
	% of GDP								
Debt of nonfinancial corporations (nonconsolidated)	60.9	55.4	51.4	..	..	..	..	..	..
Debt of households and NPISHs[2] (nonconsolidated)	27.3	27.2	27.0	..	..	..	..	..	..
	% of GDP (based on EUR), period total								
Goods balance	3.8	3.7	2.5	3.1	3.7	3.1	0.0	3.4	1.5
Services balance	4.8	5.2	5.9	5.0	5.6	6.8	5.9	5.3	6.4
Primary income	–2.8	–2.1	–1.8	–0.3	–2.6	–2.2	–1.9	–0.8	–1.7
Secondary income	–0.9	–0.7	–0.9	–1.3	–0.6	–1.0	–0.6	–2.1	–0.9
Current account balance	4.8	6.1	5.7	6.6	6.1	6.8	3.4	5.8	5.3
Capital account balance	–0.8	–0.8	–0.5	–0.4	–0.3	–0.2	–1.0	–0.2	–0.2
Foreign direct investment (net)[3]	–2.1	–1.2	–2.0	–0.2	–2.0	–3.9	–1.8	–3.8	–1.1
	% of GDP (rolling four-quarter GDP, based on EUR), end of period								
Gross external debt	109.7	100.5	92.0	98.0	96.7	93.0	92.0	91.5	93.0
Gross official reserves (excluding gold)	1.5	1.5	1.5	1.4	1.4	1.5	1.5	1.6	1.7
	Months of imports of goods and services								
Gross official reserves (excluding gold)	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
	EUR million, period total								
GDP at current prices	40,367	42,987	45,755	10,564	11,509	11,812	11,871	11,169	12,124

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: strong exports counterbalance slowing domestic demand

Strong turnaround of growth engines, largely due to one-off factors

GDP growth in Bulgaria was unexpectedly strong in the review period (with the annual growth rate coming to 4.2% in the first half of 2019) as exports performed surprisingly well despite unfavorable economic conditions in important export destinations (recession in Turkey, slowdown in the euro area). A major contribution to overall export growth came from mineral products, fuels and metals and was largely due to a base effect as a key sector company significantly cut production in 2018 due to the refurbishment of production capacities.

Domestic demand, by contrast, slowed remarkably in the review period compared to previous years. The considerable deceleration of gross fixed capital formation went hand in hand with a decline in industrial production (excluding construction) in the second quarter of 2019, some deceleration of lending to enterprises as well as some deterioration in capacity utilization. On the other hand, the first half of the year also saw a notable revival in the construction sector, which had stagnated in 2018. The slowdown in private consumption was accompanied by worsened consumer sentiment indicators, a slowdown in retail sales, an increase in household deposits and some deceleration in lending to households. Employment and unemployment rates, though, are still at historical best levels and annual real wage growth returned from about 5% in 2018 to more than 9% in the first half of 2019.

Consumer price pressure alleviated somewhat, reaching an annual HICP inflation rate of 2.5% in August. Inflation can be nearly fully explained by rising prices of processed food and services, while lower energy prices have negatively contributed to inflation. It should be noted that the average HICP inflation rate over the period from September 2018 to August 2019 is considerably higher (by about 2 percentage points) in Bulgaria than in the three EU countries that recorded the lowest inflation rates over this period.

Government consumption remained strong, especially in the first quarter, on the back of the realized 10% increase in public sector wages as well as rising pension, social and healthcare expenditure. However, considerable extra defense spending for the acquisition of fighter aircraft could jeopardize the targets of the national fiscal rules this year. Compared to the originally planned general government budget deficit of 0.5% of GDP, under conservative revenue assumptions this extra spending could bring public expenditures and the budget deficit close to, or above, the respective ceilings of 40% and 2% of GDP according to the Bulgarian Fiscal Council.

ECB's comprehensive assessment revealed capital shortfalls at two larger banks

In July 2019, the ECB concluded the comprehensive assessment of the six largest Bulgarian banks, revealing for two of them capital shortfalls that must be tackled before the country's entry into ERM II and the banking union. As of end-June, First Investment Bank stressed that it had already secured half of the required additional capital through provisioning and Investbank referred to the reclassification of problematic exposures and the optimization of risk-weighted assets. Meanwhile, the Bulgarian authorities have implemented most of the policy measures listed in the Action Plan to Join the ERM II. As of end-September, besides the update of secondary legislation required for participating in the banking union (i.e. the periodic adoption of EBA guidelines), only the adoption of a law to modernize the governance of state-owned enterprises in line with OECD guidelines was still pending. Last but not least the European Commission's assessment of progress made under the Cooperation and Verification Mechanism, which is to be released in mid-November 2019, will be decisive for Bulgaria's ERM II accession path.

Table 4

Main economic indicators: Bulgaria

	2016	2017	2018	Q1 18	Q2 18	Q3 18	Q4 18	Q1 19	Q2 19
	Year-on-year change of the period total in %								
GDP at constant prices	3.9	3.8	3.1	3.5	3.2	2.7	3.0	4.8	3.7
Private consumption	3.6	4.5	6.4	7.1	8.6	8.1	2.5	2.6	0.5
Public consumption	2.2	3.7	4.7	2.4	4.0	5.2	6.8	8.3	2.7
Gross fixed capital formation	–6.6	3.2	6.5	10.9	7.0	3.0	6.7	0.6	1.3
Exports of goods and services	8.1	5.8	–0.8	1.1	–2.3	–3.2	2.2	6.9	2.1
Imports of goods and services	4.5	7.5	3.7	4.6	4.9	3.8	1.6	4.8	–4.0
	Contribution to GDP growth in percentage points								
Domestic demand	1.6	4.6	5.9	6.3	8.0	6.9	2.8	3.6	–0.2
Net exports of goods and services	2.3	–0.8	–2.8	–2.6	–4.8	–4.6	0.3	1.2	3.9
Exports of goods and services	5.2	3.7	–0.5	0.8	–1.6	–2.3	1.3	4.7	1.3
Imports of goods and services	–2.9	–4.5	–2.3	–3.4	–3.2	–2.2	–0.9	–3.5	2.6
	Year-on-year change of the period average in %								
Unit labor costs in the whole economy (nominal, per person)	2.5	8.1	2.4	3.3	2.3	1.4	2.4	6.3	7.7
Unit labor costs in manufacturing (nominal, per hour)	6.5	1.1	6.9	6.9	8.5	5.8	6.5	2.3	6.5
Labor productivity in manufacturing (real, per hour)	2.9	11.0	2.6	3.3	1.8	4.5	1.0	9.2	3.4
Labor costs in manufacturing (nominal, per hour)	9.6	12.2	9.7	10.4	10.5	10.6	7.6	11.7	10.0
Producer price index (PPI) in industry	–3.1	4.9	4.0	3.1	5.1	4.1	3.5	3.3	2.7
Consumer price index (here: HICP)	–1.3	1.2	2.6	1.6	2.4	3.6	3.0	2.5	2.8
EUR per 1 BGN, + = BGN appreciation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Period average levels								
Unemployment rate (ILO definition, %, 15–64 years)	7.7	6.3	5.3	5.8	5.5	5.0	4.7	5.1	4.2
Employment rate (%, 15–64 years)	63.4	66.9	67.7	66.5	67.9	68.8	67.7	68.3	70.7
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]	1.6	4.8	8.3	5.6	6.8	7.3	8.3	7.9	6.9
of which: loans to households	2.0	6.1	11.2	6.4	9.2	9.7	11.2	11.0	8.1
loans to nonbank corporations	1.3	4.1	6.6	5.1	5.4	5.9	6.6	6.1	6.2
	%								
Share of foreign currency loans in total loans to the nonbank private sector	44.4	37.9	34.9	37.0	36.3	35.6	34.9	34.1	33.5
Return on assets (banking sector)	1.4	1.2	1.7	1.1	1.6	1.6	1.7	1.2	1.7
Tier 1 capital ratio (banking sector)	20.9	20.9	19.4	19.8	19.7	19.0	19.4	18.3	19.7
NPL ratio (banking sector)	9.0	6.9	5.1	6.6	6.6	6.1	5.1	4.9	4.8
	% of GDP								
General government revenues	35.2	36.2	36.8	..	..	..	..	..	..
General government expenditures	35.1	35.0	34.8	..	..	..	..	..	..
General government balance	0.1	1.2	2.0	..	..	..	..	..	..
Primary balance	1.0	2.0	2.7	..	..	..	..	..	..
Gross public debt	29.6	25.6	22.6	..	..	..	..	..	..
	% of GDP								
Debt of nonfinancial corporations (nonconsolidated)	91.4	86.3	81.7	..	..	..	..	..	..
Debt of households and NPISHs[3] (nonconsolidated)	23.2	22.9	23.4	..	..	..	..	..	..
	% of GDP (based on EUR), period total								
Goods balance	–2.1	–1.5	–4.1	–5.6	–5.2	–1.7	–4.4	–2.7	–1.1
Services balance	6.4	5.5	6.2	2.7	5.5	12.8	2.7	3.4	6.2
Primary income	–5.0	–4.6	–1.0	–1.7	–1.5	–0.8	–0.3	–0.5	–0.1
Secondary income	3.3	3.6	3.5	4.7	3.1	4.5	2.2	4.3	4.7
Current account balance	2.6	3.1	4.6	0.1	1.9	14.8	0.2	4.6	9.7
Capital account balance	2.2	1.0	1.1	0.0	1.4	1.6	1.0	1.5	1.6
Foreign direct investment (net)[4]	–1.3	–3.9	–2.6	0.6	–0.3	–3.3	–6.1	0.1	–2.3
	% of GDP (rolling four-quarter GDP, based on EUR), end of period								
Gross external debt	79.3	72.6	66.7	71.3	70.8	69.8	66.7	66.3	64.7
Gross official reserves (excluding gold)	46.7	43.1	42.8	40.5	41.6	42.7	42.8	41.6	40.7
	Months of imports of goods and services								
Gross official reserves (excluding gold)	9.4	8.2	8.2	7.7	7.9	8.1	8.2	8.0	8.1
	EUR million, period total								
GDP at current prices	48,129	51,663	55,182	11,240	13,451	15,248	15,243	12,607	14,883

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: stronger economic growth as investment growth accelerates

Higher EU fund absorption supports investment growth

Croatian GDP growth was higher than expected in the first half of 2019 (3.1% year on year), largely as a result of higher investment growth. Investment growth accelerated almost to double digits and was most likely driven by EU funds. Investments contributed roughly as much to overall growth as private consumption. The latter was supported by various factors: From January 1, 2019, several changes to personal income tax legislation became effective, public sector salaries were increased and the scope of reduced VAT rates was extended. The growth of loans to households accelerated in the first half of 2019, supported by lower financing costs and strong demand. Labor market trends were favorable and the (seasonally adjusted) unemployment rate declined mildly to 6.9% in August 2019.

Industrial sector weak, construction sector booming

The negative contribution of net exports to growth, which was already substantial, increased further. Export growth was sluggish in the first half of 2019, while imports grew dynamically, driven by strong domestic demand. Global factors, such as headwinds to international trade and the resulting weakness of manufacturing across Europe, likely had a negative effect on exports as did the industrial sector and the manufacturing sector in particular. The latter contracted in the second quarter, leading to an overall weak performance in the first half. The construction sector, on the other hand, grew by double digits. Tourist arrivals and overnight stays continued to grow at a moderate pace in the first eight months of 2019, contributing to solid growth in the sectors of wholesale and retail trade, transportation, storage, accommodation and food service activities. Both the tourism and construction sectors reported labor shortages, leading to a rise in the number of work permits granted to foreigners in June 2019.

Debt reduction temporarily stalled, fiscal stance still prudent

For 2019, the Croatian government expects a budget deficit of 0.3% of GDP after a surplus of 0.2% of GDP in 2018. The projected deterioration in the budget balance stems from higher expected expenditures on investments, and, to a lesser extent, subsidies and intermediate consumption. In the first quarter of 2019, budget revenues and expenditures both grew by roughly 7.5% year on year. Uljanik Group, one of Croatia's largest shipbuilding companies, was declared bankrupt and further state guarantees were activated during 2019 but, overall, fiscal risks remain low. The general government debt-to-GDP ratio stood at 74.5% in March 2019, roughly unchanged compared to end-2018. In preparation for euro adoption, the government will sell its minority stakes (<15%) in at least 90 companies in three waves by mid-2020.

Five Croatian banks to be subject to ECB's comprehensive assessment

Headline HICP inflation was 0.6% year on year in Croatia in August 2019, while core inflation came to 0.8%. The Croatian central bank (HNB) intervened in the foreign exchange market to alleviate appreciation pressures, purchasing a total of EUR 1 billion from the Croatian banking sector in February and August. Although the HNB partially offset its foreign currency operations with the Ministry of Finance, its gross international reserves continued to increase and stood at EUR 19.9 billion at end-July 2019. Banking sector claims on the private sector increased only moderately in the first half of 2019, as corporate lending growth contracted due to NPL sales and the activation of shipbuilding guarantees. The profitability and capitalization of the Croatian banking sector increased mildly from already high levels in the first half of 2019. As part of the process of establishing close cooperation with the ECB, five Croatian banks are currently undergoing an ECB comprehensive assessment. Results are expected for mid-2020.

Table 5

Main economic indicators: Croatia

	2016	2017	2018	Q1 18	Q2 18	Q3 18	Q4 18	Q1 19	Q2 19
	Year-on-year change of the period total in %								
GDP at constant prices	3.5	2.9	2.6	2.5	2.9	2.8	2.3	3.9	2.4
Private consumption	3.5	3.6	3.5	3.9	3.6	2.7	3.9	4.3	2.7
Public consumption	0.7	2.7	2.9	2.8	2.5	3.9	2.3	3.1	3.9
Gross fixed capital formation	6.5	3.8	4.1	3.6	3.1	3.7	6.1	11.5	8.2
Exports of goods and services	5.6	6.4	2.8	–0.5	5.6	3.7	1.3	4.6	1.3
Imports of goods and services	6.2	8.1	5.5	5.5	4.7	5.1	6.6	7.7	6.7
	Contribution to GDP growth in percentage points								
Domestic demand	3.7	3.5	3.8	5.9	2.8	2.1	5.0	6.2	5.2
Net exports of goods and services	–0.1	–0.6	–1.2	–3.1	0.2	0.2	–2.7	–2.2	–2.8
Exports of goods and services	2.7	3.1	1.5	–0.2	2.6	2.5	0.6	1.9	0.6
Imports of goods and services	–2.8	–3.7	–2.7	–2.9	–2.3	–2.3	–3.2	–4.0	–3.4
	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)	–15.1	1.6	6.7	3.7	8.4	6.8	8.1	–1.3	3.5
Labor productivity in manufacturing (real, per hour)	7.0	3.5	2.2	2.5	3.7	1.5	1.1	8.2	–1.5
Labor costs in manufacturing (nominal, per hour)	–8.7	5.1	9.1	6.2	12.4	8.4	9.2	6.8	2.0
Producer price index (PPI) in industry	–4.3	2.0	2.2	1.1	2.5	3.8	1.6	1.4	1.6
Consumer price index (here: HICP)	–0.6	1.3	1.6	1.1	1.8	2.0	1.3	0.8	0.8
EUR per 1 HRK, + = HRK appreciation	1.1	0.9	0.6	0.4	0.4	0.1	1.5	0.2	–0.3
	Period average levels								
Unemployment rate (ILO definition, %, 15–64 years)	13.3	11.3	8.6	10.5	7.7	7.4	8.7	7.6	6.2
Employment rate (%, 15–64 years)	56.9	58.9	60.7	59.0	61.1	61.9	60.6	61.2	61.8
Key interest rate per annum (%)	..	..	..	..	..	..	..	..	..
HRK per 1 EUR	7.5	7.5	7.4	7.4	7.4	7.4	7.4	7.4	7.4
	Nominal year-on-year change in the period-end stock in %								
Loans to the domestic nonbank private sector[1]	–3.8	0.6	2.4	0.0	2.2	1.8	2.4	3.5	2.8
of which: loans to households	–4.6	2.2	4.7	2.3	4.0	4.3	4.7	5.9	6.0
loans to nonbank corporations	–2.6	–1.6	–0.8	–3.0	–0.3	–1.4	–0.8	0.2	–1.6
	%								
Share of foreign currency loans in total loans to the nonbank private sector	60.1	56.9	54.7	56.1	55.5	55.5	54.7	54.4	53.0
Return on assets (banking sector)	1.3	0.9	1.2	1.4	1.5	1.5	1.2	1.3	1.5
Tier 1 capital ratio (banking sector)	21.3	22.3	22.1	21.6	21.4	21.1	22.1	21.6	22.0
NPL ratio (banking sector)	13.8	11.3	9.8	11.4	11.2	10.3	9.8	9.5	9.2
	% of GDP								
General government revenues	46.3	46.1	46.6	..	..	..	..	..	..
General government expenditures	47.3	45.3	46.4	..	..	..	..	..	..
General government balance	–1.0	0.8	0.2	..	..	..	..	..	..
Primary balance	2.1	3.5	2.5	..	..	..	..	..	..
Gross public debt	80.5	77.8	74.6	..	..	..	..	..	..
	% of GDP								
Debt of nonfinancial corporations (nonconsolidated)	96.3	94.9	93.1	..	..	..	..	..	..
Debt of households and NPISHs[2] (nonconsolidated)	35.0	34.2	34.1	..	..	..	..	..	..
	% of GDP (based on EUR), period total								
Goods balance	–16.3	–17.2	–18.7	–21.6	–19.0	–16.5	–18.4	–21.5	–22.0
Services balance	17.5	17.9	17.9	3.0	15.5	42.4	5.9	1.6	15.9
Primary income	–3.0	–1.5	–1.5	–1.6	–1.8	–2.6	0.3	–1.4	–2.6
Secondary income	3.9	4.2	4.2	4.1	4.4	3.1	5.3	3.6	4.9
Current account balance	2.1	3.4	1.9	–16.1	–0.9	26.4	–6.8	–17.6	–3.8
Capital account balance	1.3	1.0	1.3	0.9	1.4	1.0	2.0	1.5	2.5
Foreign direct investment (net)[3]	–4.3	–2.3	–1.4	–3.8	–3.3	0.3	0.6	–2.9	0.9
	% of GDP (rolling four-quarter GDP, based on EUR), end of period								
Gross external debt	95.8	89.2	83.0	89.6	87.9	84.4	83.0	83.8	84.7
Gross official reserves (excluding gold)	29.0	32.1	33.9	33.3	33.3	32.7	33.9	35.2	37.8
	Months of imports of goods and services								
Gross official reserves (excluding gold)	7.5	7.8	7.9	8.0	7.9	7.7	7.9	8.1	8.6
	EUR million, period total								
GDP at current prices	46,656	48,999	51,473	11,297	13,004	14,414	12,758	11,943	13,470

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: steady though slower economic growth, still driven by domestic demand

Declining investments, in particular, bring GDP growth down to potential

Real GDP growth in the Czech Republic has been gradually losing momentum since 2017, averaging some 2.5% in the first half of 2019. As a consequence, the positive output gap has been closed. Economic growth in the six months to June 2019 was again driven predominantly by domestic demand even though it lost some steam. Despite a slight deceleration, household consumption growth remained solid on the back of rising disposable income. The latter was spurred by an extraordinary hike in pensions far beyond the statutory indexation on the one hand and by rising wages on the other. Fast wage growth in the government sector also kept public consumption afloat. Growth in disposable income has been outpacing growth in private consumption since early 2018, thus lifting households' savings. This might reflect a downward trend in consumer confidence between mid-2018 and mid-2019 mainly on the back of households' rising concerns about the economic situation. However, as these worries have faded more recently, consumer confidence has begun to recover. The slowdown in GDP growth in the first half of 2019 is mostly ascribable to the significant cooling-down in fixed investment. This was partly due to base effects and partly reflected weakened foreign demand both owing to one-off factors (mainly in the automotive industry) and cyclical reasons. Weaker foreign demand is mirrored also in a significant deceleration in export growth. However, as import growth slowed down even faster, the contribution of net exports to GDP expansion turned slightly positive.

After the current account surplus had nearly vanished in 2018, it increased again in the first half of 2019 as a result of a higher surplus of the trade balance as well as a weaker outflow of dividends in the primary income balance. The fiscal surplus recorded in 2018 is projected to drop markedly. The revenue side will be negatively affected by slower economic growth and some one-off factors. At the same time, expenditures will be lifted by continued strong wage growth in the public sector, higher social transfers and government investment. Gross public debt is expected to go down by another 2 percentage points of GDP by the end of this year.

Administered prices and food prices push inflation temporarily above target

Labor markets seem to be cooling off somewhat as employment growth leveled off in the first two quarters of 2019. The unemployment rate continued to fall (to a historical low of 1.9% in the second quarter of 2019), but the decline appears to be coming to a halt. Nonetheless, labor market bottlenecks coupled with a minimum wage hike (by more than 9%) at the beginning of 2019 kept driving buoyant wage growth throughout the economy, particularly in nonmarket professions (e.g. teachers and other public employees). As a result of strong wage dynamics and consumer demand, inflation has accelerated beyond the Czech National Bank's (CNB) target (2% ±1 percentage point). Inflation thus averaged 2.4% in the first eight months of the year, driven by core components as well as faster growth in noncore administered and food prices. While the CNB assesses its monetary policy as "slightly easier than optimal," the monetary authorities expect headline inflation to gradually converge to the target by the second half of 2020. Against the background of slightly higher-than-projected inflation, the CNB proceeded with another hike of its key policy rate by 25 basis points to 2% in early May. While this policy decision was unanimous, a further monetary tightening currently does not seem likely as a vast majority of CNB board members have since been in favor of leaving rates unchanged.

Table 6

Main economic indicators: Czech Republic

	2016	2017	2018	Q1 18	Q2 18	Q3 18	Q4 18	Q1 19	Q2 19
	Year-on-year change of the period total in %								
GDP at constant prices	2.5	4.4	3.0	3.6	2.7	2.5	3.1	2.8	2.5
Private consumption	3.6	4.3	3.4	4.1	3.7	3.1	2.7	2.9	2.6
Public consumption	2.7	1.3	3.9	3.5	3.4	5.1	3.8	2.8	3.4
Gross fixed capital formation	–3.1	3.7	7.2	6.4	7.2	7.7	7.2	3.0	0.2
Exports of goods and services	4.3	6.7	4.4	3.6	4.2	4.2	5.6	1.3	1.5
Imports of goods and services	2.8	5.9	5.9	6.1	5.6	6.6	5.5	1.9	0.8
	Contribution to GDP growth in percentage points								
Domestic demand	1.0	3.3	3.7	5.1	3.4	3.8	2.7	3.1	1.9
Net exports of goods and services	1.4	1.1	–0.8	–1.5	–0.7	–1.4	0.4	–0.3	0.6
Exports of goods and services	3.5	5.3	3.5	3.1	3.3	3.1	4.4	1.1	1.2
Imports of goods and services	–2.1	–4.3	–4.3	–4.6	–4.0	–4.5	–4.1	–1.4	–0.5
	Year-on-year change of the period average in %								
Unit labor costs in the whole economy (nominal, per person)	3.1	3.5	6.3	6.6	7.1	7.0	4.8	4.9	4.7
Unit labor costs in manufacturing (nominal, per hour)	2.5	1.3	4.4	3.4	5.7	3.9	4.6	7.3	5.7
Labor productivity in manufacturing (real, per hour)	2.1	6.5	3.9	4.9	3.5	3.7	3.6	0.3	1.5
Labor costs in manufacturing (nominal, per hour)	4.8	7.8	8.5	8.4	9.4	7.7	8.4	7.6	7.3
Producer price index (PPI) in industry	–3.2	0.8	0.7	–2.4	–0.2	2.2	3.2	3.1	2.5
Consumer price index (here: HICP)	0.6	2.4	2.0	1.7	2.1	2.3	1.8	2.3	2.4
EUR per 1 CZK, + = CZK appreciation	0.9	2.7	2.7	6.4	3.7	1.4	–0.8	–1.1	–0.3
	Period average levels								
Unemployment rate (ILO definition, %, 15–64 years)	4.0	2.9	2.3	2.4	2.2	2.4	2.1	2.1	1.9
Employment rate (%, 15–64 years)	72.0	73.6	74.8	74.2	74.7	75.0	75.4	75.0	75.0
Key interest rate per annum (%)	0.1	0.2	1.1	0.7	0.8	1.2	1.7	1.8	1.9
CZK per 1 EUR	27.0	26.3	25.6	25.4	25.6	25.7	25.9	25.7	25.7
	Nominal year-on-year change in the period-end stock in %								
Loans to the domestic nonbank private sector[1]	7.8	6.9	6.8	6.7	6.3	6.6	6.8	5.4	5.3
of which: loans to households	7.2	7.5	7.5	7.6	7.5	7.6	7.5	7.0	6.6
loans to nonbank corporations	8.5	6.2	5.8	5.6	4.9	5.4	5.8	3.6	3.9
	%								
Share of foreign currency loans in total loans to the nonbank private sector	13.0	13.3	14.1	14.5	14.8	15.3	14.1	14.9	14.8
Return on assets (banking sector)	1.3	1.1	1.1	1.0	1.2	1.1	1.1	1.0	1.2
Tier 1 capital ratio (banking sector)	17.9	18.7	19.1	18.1	18.3	18.3	19.1	19.1	19.8
NPL ratio (banking sector)	4.6	3.7	3.1	3.4	3.3	3.2	3.1	3.0	2.7
	% of GDP								
General government revenues	40.2	40.5	41.5	..	..	..	..	..	..
General government expenditures	39.5	38.9	40.6	..	..	..	..	..	..
General government balance	0.7	1.6	0.9	..	..	..	..	..	..
Primary balance	1.6	2.3	1.7	..	..	..	..	..	..
Gross public debt	36.8	34.7	32.7	..	..	..	..	..	..
	% of GDP								
Debt of nonfinancial corporations (nonconsolidated)	58.5	58.1	56.7	..	..	..	..	..	..
Debt of households and NPISHs[2] (nonconsolidated)	31.2	32.6	32.0	..	..	..	..	..	..
	% of GDP (based on EUR), period total								
Goods balance	5.2	5.1	4.1	6.6	5.2	2.3	2.6	5.5	5.6
Services balance	2.3	2.5	2.3	2.5	2.7	1.7	2.1	2.8	2.7
Primary income	–5.3	–5.1	–5.3	–3.3	–6.5	–7.1	–4.2	–2.9	–5.8
Secondary income	–0.6	–0.9	–0.8	–1.7	–1.0	–0.8	0.3	–2.1	–0.2
Current account balance	1.6	1.6	0.3	4.2	0.4	–3.9	0.8	3.3	2.4
Capital account balance	1.1	0.8	0.3	0.1	–0.1	0.3	0.7	–0.5	0.6
Foreign direct investment (net)[3]	–3.9	–0.9	–1.7	0.6	–2.0	–2.7	–2.5	0.1	–1.2
	% of GDP (rolling four-quarter GDP, based on EUR), end of period								
Gross external debt	73.4	89.1	81.5	85.6	82.4	82.2	81.5	80.5	80.0
Gross official reserves (excluding gold)	45.9	64.1	59.8	61.4	61.1	59.9	59.8	60.4	60.3
	Months of imports of goods and services								
Gross official reserves (excluding gold)	7.7	10.6	10.0	10.3	10.3	10.0	10.0	10.1	10.2
	EUR million, period total								
GDP at current prices	176,368	191,999	207,725	48,429	52,127	52,578	54,591	50,875	55,161

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).

7 Hungary: government tightens budget amid slowing growth in 2020

GDP growth presumably peaked in the first quarter of 2019

Output growth in Hungary accelerated modestly during the first half of 2019 and presumably reached its cyclical peak in the first quarter. As in the past two years, growth was most pronounced in domestic demand, particularly in gross fixed capital formation, which accelerated even further from an already high base. High capacity utilization rates, accelerated credit growth, strong economic sentiment, expanded housing subsidies, EU-funded projects and loose monetary policy supported investment activity. Private consumption growth slowed but remained healthy, along with similar trends in consumer confidence, the ongoing expansion of employment and a stronger growth of loans to households. At the same time, real wage growth became somewhat weaker. Notwithstanding strong domestic demand (excluding stock changes), the contribution of net real exports improved compared to 2018, as export growth accelerated and sharp destocking reduced import demand. Looking forward, high-frequency indicators suggest a weakening of economic activity, but loose monetary policy and various government measures (Family Protection Plan, Economy Protection Action Plan) are expected to keep output growth well above the EU average.

Government tightens budgetary stance in 2020 compared to earlier plans

The deficit of the general government budget amounted to 2.2% of GDP in 2018. According to the European Commission's Spring 2019 Economic Forecast, the deficit should decline to 1.8% of GDP in 2019 and 1.6% of GDP in 2020. While the forecast for 2019 matches the Hungarian government's deficit target, the 2020 budget law envisages a substantially smaller deficit of 1% of GDP, which is also 0.5 percentage points lower than what was penciled in in the 2019 Convergence Programme Update. The tightening of the budgetary stance may be motivated by the ongoing significant deviation procedure against Hungary. In this framework, the EU Council in mid-2019 called on Hungary to adopt structural measures in the magnitude of a combined 0.8% of GDP in 2019 and 2020. Hungary must report to the EU Council on actions taken by mid-October 2019.

Central bank in data-driven wait-and-see mode

Headline inflation (HICP) peaked at 4% in May 2019 and fell back to 3.2% by August 2019. Magyar Nemzeti Bank's (MNB) preferred gage for less volatile underlying inflationary trends, i.e. core inflation[10] excluding indirect taxes, also peaked in May, at 3.7%, and declined to 3.2% by August. In its June and September 2019 inflation reports, the MNB again revised upward its inflation forecasts for the period from 2019 to 2021, expecting annual average inflation to climb from 3.3% in 2019 to 3.4% in 2020 before falling back to 3.3% in 2021. Overall, these developments have so far validated the monetary council's wait-and-see attitude as inflation is again back to near the midpoint of the MNB's medium-term target of 3% $\pm$ 1 percentage point. In addition, the monetary council has repeatedly suggested since late August 2019 that most recent trends indicated a strengthening of downside risks to the longer-term inflation outlook.

Credit to households continued to expand at a rate of 7.5% to 8% year on year during the reporting period. Housing loans were the most dynamic segment, bolstered by the expansion of housing subsidies to families, but other lending categories strengthened as well. Lending to the corporate sector continued to grow by close to 15% year on year in the second quarter of 2019, with demand focusing on longer-term credit, which was, in part, promoted by the MNB's Funding for Growth Scheme Fix (FGS-fix) scheme for SMEs and in line with strong corporate investment activity.

[10] *The national definition of core inflation excludes unprocessed food, energy and administered prices from the CPI.*

Table 7

Main economic indicators: Hungary

	2016	2017	2018	Q1 18	Q2 18	Q3 18	Q4 18	Q1 19	Q2 19
	Year-on-year change of the period total in %								
GDP at constant prices	2.3	4.1	4.9	4.6	4.9	5.1	5.1	5.3	4.9
Private consumption	4.0	4.8	5.4	5.8	5.5	5.3	5.0	5.3	4.5
Public consumption	0.7	1.3	–0.5	1.6	–0.2	–0.1	–3.1	2.2	2.3
Gross fixed capital formation	–11.7	18.2	16.5	10.5	15.6	20.0	17.2	23.4	16.4
Exports of goods and services	5.1	4.7	4.7	4.0	7.1	2.3	5.6	7.7	2.7
Imports of goods and services	3.9	7.7	7.1	5.3	8.5	6.2	8.2	6.7	4.3
	Contribution to GDP growth in percentage points								
Domestic demand	0.9	6.1	6.5	5.4	5.5	8.0	6.7	4.1	6.2
Net exports of goods and services	1.4	–1.9	–1.5	–0.8	–0.6	–2.9	–1.7	1.3	–1.2
Exports of goods and services	4.5	4.2	4.2	3.8	6.3	2.0	4.7	7.1	2.4
Imports of goods and services	–3.1	–6.2	–5.7	–4.6	–6.9	–4.9	–6.3	–5.8	–3.6
	Year-on-year change of the period average in %								
Unit labor costs in the whole economy (nominal, per person)	4.0	4.5	3.5	5.8	2.4	2.5	3.2	4.8	6.7
Unit labor costs in manufacturing (nominal, per hour)	8.8	5.2	7.4	7.1	7.0	8.1	7.6	7.0	9.0
Labor productivity in manufacturing (real, per hour)	–2.9	2.7	1.5	2.0	1.5	0.9	1.4	5.0	2.3
Labor costs in manufacturing (nominal, per hour)	5.6	8.0	9.0	9.3	8.6	9.1	9.1	12.4	11.6
Producer price index (PPI) in industry	–1.7	3.3	5.6	3.6	5.3	7.9	5.5	3.2	2.3
Consumer price index (here: HICP)	0.4	2.4	2.9	2.0	2.8	3.5	3.3	3.2	3.8
EUR per 1 HUF, + = HUF appreciation	–0.5	0.7	–3.0	–0.6	–2.3	–5.4	–3.5	–2.1	–1.8
	Period average levels								
Unemployment rate (ILO definition, %, 15–64 years)	5.2	4.2	3.8	3.9	3.6	3.9	3.6	3.6	3.4
Employment rate (%, 15–64 years)	66.5	68.2	69.3	68.7	69.3	69.5	69.5	69.9	70.0
Key interest rate per annum (%)	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
HUF per 1 EUR	311.5	309.3	318.8	311.1	317.1	324.1	323.0	317.9	322.9
	Nominal year-on-year change in the period-end stock in %								
Loans to the domestic nonbank private sector[1]	0.0	4.3	10.0	4.5	6.6	9.1	10.0	11.0	12.1
of which: loans to households	–2.8	1.3	5.8	–0.1	2.1	3.2	5.8	7.7	7.6
loans to nonbank corporations	2.3	6.8	13.1	8.3	10.1	13.7	13.1	13.5	15.4
	%								
Share of foreign currency loans in total loans to the nonbank private sector	22.4	23.5	24.0	23.5	24.7	24.1	24.0	23.8	24.1
Return on assets (banking sector)	1.3	1.8	1.4	1.7	1.6	1.5	1.4	1.4	1.3
Tier 1 capital ratio (banking sector)	19.2	21.1	17.8	20.2	19.3	19.2	17.8	16.3	16.8
NPL ratio (banking sector)	5.6	3.7	2.2	3.1	2.8	2.6	2.2	3.4	3.1
	% of GDP								
General government revenues	45.1	44.7	44.2	..	..	..	..	..	..
General government expenditures	46.8	46.9	46.5	..	..	..	..	..	..
General government balance	–1.6	–2.2	–2.2	..	..	..	..	..	..
Primary balance	1.5	0.6	0.2	..	..	..	..	..	..
Gross public debt	76.0	73.4	70.8	..	..	..	..	..	..
	% of GDP								
Debt of nonfinancial corporations (nonconsolidated)	71.8	67.3	66.5	..	..	..	..	..	..
Debt of households and NPISHs[2] (nonconsolidated)	20.4	18.7	17.8	..	..	..	..	..	..
	% of GDP (based on EUR), period total								
Goods balance	3.5	1.5	–1.3	0.6	0.3	–4.0	–1.6	0.2	–1.1
Services balance	5.4	5.8	5.7	5.3	6.3	6.6	4.7	5.1	6.0
Primary income	–2.7	–4.1	–4.0	–3.3	–4.9	–4.0	–3.8	–3.5	–4.6
Secondary income	–1.5	–1.0	–1.0	–1.1	–0.7	–0.4	–1.7	–1.6	–0.7
Current account balance	4.6	2.3	–0.5	1.5	0.9	–1.8	–2.4	0.2	–0.3
Capital account balance	0.0	0.9	2.6	2.4	2.3	1.7	3.9	2.9	2.5
Foreign direct investment (net)[3]	–2.2	–1.7	–2.1	–1.6	–0.2	–6.6	–0.2	–4.9	1.1
	% of GDP (rolling four-quarter GDP, based on EUR), end of period								
Gross external debt	97.4	85.1	81.3	83.1	82.8	81.5	81.3	81.9	81.1
Gross official reserves (excluding gold)	21.4	18.8	19.9	18.2	18.6	18.2	19.9	19.6	18.9
	Months of imports of goods and services								
Gross official reserves (excluding gold)	3.2	2.8	2.9	2.7	2.8	2.7	2.9	2.9	2.8
	EUR million, period total								
GDP at current prices	113,933	124,023	131,821	29,496	32,665	33,471	36,189	31,832	35,281

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 signs of taking heed of the EU Council's fiscal recommendation

Robust balanced growth coupled with moderate current account surplus

GDP growth in Poland stood at 4.4% in the first half of 2019 after 5.1% in 2018, with quarter-on-quarter growth declining to 0.8% after 1.4% in the first quarter. Like GDP growth, total final demand growth was lower in the first half of 2019 than in 2018, as both foreign and domestic demand growth declined and contributed substantially to total final demand growth. As a result, import growth shrank by more than export growth and the net export contribution to GDP growth turned positive. The slowdown in domestic demand stemmed mainly from the contribution of inventory build-up swinging into negative territory, having added ½ percentage point to growth in 2018. By contrast, fixed investment growth accelerated. While public investment growth (on the back of EU funds) declined, several factors like strong demand, high capacity utilization rates, a stable liquidity position and low real lending rates led to sharply higher business fixed investment, even though industrial confidence and profitability showed slight signs of deterioration. Measured by the number of dwellings under construction, housing investment growth continued but slowed down moderately. Private consumption growth also slowed moderately, as the real wage sum rose somewhat less due to an uptick in inflation. But the real growth of pensions continued unabated, and consumer confidence remained robust.

In the first half of 2019, the Polish current account balance showed a surplus of 1% of GDP after having recorded a balanced position one year earlier; this was attributable to a rise in the goods and services balance to 5% of GDP, given the parallel weakening of both export growth and domestic demand growth. The capital account surplus stood at 1.5% of GDP. Net FDI inflows stood at about 2% of GDP.

Higher ULC without eroding price competitiveness, while inflation returns to target

In the first half of 2019, nominal ULC in the whole economy continued to rise by about 4%. Manufacturing ULC grew somewhat less; their growth was also lower than in the euro area. The Polish złoty's euro value was lower year on year by about 2%, thus slightly improving price competitiveness and providing an inflation impulse. In August 2019, annual headline inflation stood at 2.6% (HICP) and 2.9% (national CPI), respectively, while core inflation stood at 2.5% (HICP excluding energy and unprocessed food) and 2.2% (CPI excluding energy and all food), respectively. Headline and core inflation figures were higher in August than in March, by roughly 0.5 percentage points, under both concepts. The Polish Monetary Policy Council, pursuing an inflation target of 2.5% (CPI), has kept the key policy rate at 1.5% since March 2015. On October 2, 2019, it concluded that inflation would remain close to the target over the monetary policy transmission horizon (after a temporary rise in early 2020) and that the current level of interest rates was conducive to keeping the economy on a sustainable growth path.

Social transfer hike ahead of elections enlarged deviation from fiscal MTO

The European Commission staff forecast expects an almost stable revenue-to-GDP ratio but an increase of the expenditure-to-GDP ratio by about 1 percentage point of GDP in 2019 compared to 2018. A significant increase of social transfers to pensioners and middle- and upper-income households with children is the main factor behind the rise in expenditures. As a result, the European Commission forecasts a headline deficit of 1.6% of GDP (2018: 0.4%) and a structural deficit of 2.8% of GDP (2018: 1.4%), implying a structural primary deficit of 1.4% of GDP (2018: 0.0%) and a persistent deviation from the MTO of a structural deficit of 1% of GDP. Thus, in July 2019, the EU Council recommended that the Polish government take action to ensure an annual structural adjustment by 0.6% of GDP in 2019, as it had already recommended in July 2018, and in 2020. The European Commission expects Polish general government gross debt to reach 48.2% of GDP at end-2019, after 48.9% at end-2018.

Table 8

Main economic indicators: Poland

	2016	2017	2018	Q1 18	Q2 18	Q3 18	Q4 18	Q1 19	Q2 19
	Year-on-year change of the period total in %								
GDP at constant prices	3.1	4.9	5.1	5.2	5.4	5.7	4.4	4.7	4.1
Private consumption	3.9	4.5	4.4	3.9	4.4	4.3	5.1	3.7	4.0
Public consumption	1.9	2.9	4.7	4.3	4.1	5.7	4.7	6.5	3.0
Gross fixed capital formation	–8.2	4.0	8.7	11.0	5.8	12.4	7.1	12.7	9.1
Exports of goods and services	8.8	9.5	6.3	3.8	8.6	5.9	6.9	6.0	3.9
Imports of goods and services	7.6	9.8	7.1	6.5	7.7	7.1	7.3	5.1	4.4
	Contribution to GDP growth in percentage points								
Domestic demand	2.2	4.7	5.3	6.4	4.5	6.1	4.4	4.0	4.2
Net exports of goods and services	0.8	0.3	–0.2	–1.2	0.8	–0.4	0.1	0.7	–0.1
Exports of goods and services	4.4	5.0	3.4	2.2	4.8	3.2	3.5	3.4	2.3
Imports of goods and services	–3.5	–4.7	–3.6	–3.4	–4.0	–3.6	–3.4	–2.7	–2.3
	Year-on-year change of the period average in %								
Unit labor costs in the whole economy (nominal, per person)	2.5	2.1	2.8	1.6	3.6	2.4	3.6	4.5	3.7
Unit labor costs in manufacturing (nominal, per hour)	3.6	2.7	4.7	4.7	3.6	4.3	6.3	2.4	5.0
Labor productivity in manufacturing (real, per hour)	0.5	3.6	3.1	3.3	4.4	2.7	2.0	3.9	2.4
Labor costs in manufacturing (nominal, per hour)	4.2	6.4	8.0	8.2	8.2	7.2	8.4	6.4	7.5
Producer price index (PPI) in industry	–0.3	2.7	2.1	0.1	2.4	3.1	2.7	2.6	1.6
Consumer price index (here: HICP)	–0.2	1.6	1.2	1.0	1.1	1.4	1.1	1.2	2.2
EUR per 1 PLN, + = PLN appreciation	–4.1	2.5	–0.1	3.4	–1.0	–1.1	–1.6	–2.9	–0.5
	Period average levels								
Unemployment rate (ILO definition, %, 15–64 years)	6.3	5.0	3.9	4.2	3.6	3.9	3.9	4.0	3.3
Employment rate (%, 15–64 years)	64.5	66.1	67.4	66.6	67.7	68.0	67.3	67.2	68.2
Key interest rate per annum (%)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
PLN per 1 EUR	4.4	4.3	4.3	4.2	4.3	4.3	4.3	4.3	4.3
	Nominal year-on-year change in the period-end stock in %								
Loans to the domestic nonbank private sector[1]	3.9	6.2	6.4	5.6	5.5	5.9	6.4	6.9	6.7
of which: loans to households	4.0	4.8	5.7	5.1	5.2	5.4	5.7	5.6	5.9
loans to nonbank corporations	3.7	8.7	7.6	6.3	6.0	6.9	7.6	9.2	8.2
	%								
Share of foreign currency loans in total loans to the nonbank private sector	25.8	21.3	20.8	21.2	21.5	20.9	20.8	20.6	19.8
Return on assets (banking sector)	0.8	0.8	0.7	0.7	0.8	0.8	0.7	0.6	0.8
Tier 1 capital ratio (banking sector)	16.1	17.2	17.1	17.0	17.0	17.3	17.1	17.0	16.9
NPL ratio (banking sector)	7.1	6.8	6.8	7.7	7.1	7.0	6.8	6.8	6.8
	% of GDP								
General government revenues	38.9	39.7	41.2	..	..	..	..	..	..
General government expenditures	41.1	41.2	41.5	..	..	..	..	..	..
General government balance	–2.2	–1.5	–0.4	..	..	..	..	..	..
Primary balance	–0.5	0.1	1.1	..	..	..	..	..	..
Gross public debt	54.2	50.6	48.9	..	..	..	..	..	..
	% of GDP								
Debt of nonfinancial corporations (nonconsolidated)	49.1	47.1	45.2	..	..	..	..	..	..
Debt of households and NPISHs[2] (nonconsolidated)	36.2	35.6	34.8	..	..	..	..	..	..
	% of GDP (based on EUR), period total								
Goods balance	0.7	0.3	–1.0	–1.3	–0.5	–0.9	–1.2	0.4	0.3
Services balance	3.3	3.8	4.4	4.6	4.8	4.1	4.0	4.7	4.7
Primary income	–4.2	–4.1	–4.1	–3.0	–4.5	–5.2	–3.8	–2.4	–4.3
Secondary income	–0.3	0.0	–0.3	–0.2	–0.1	–0.4	–0.4	–0.9	–0.3
Current account balance	–0.5	0.1	–1.0	0.1	–0.3	–2.4	–1.3	1.7	0.3
Capital account balance	1.0	1.3	2.1	1.2	1.4	2.0	3.6	0.7	2.2
Foreign direct investment (net)[3]	–0.9	–1.4	–2.5	–3.5	–2.2	–4.7	0.0	–4.8	0.8
	% of GDP (rolling four-quarter GDP, based on EUR), end of period								
Gross external debt	75.3	68.4	63.4	67.3	64.7	64.7	63.4	62.0	60.8
Gross official reserves (excluding gold)	24.5	19.5	19.7	19.5	18.6	19.0	19.7	19.2	18.5
	Months of imports of goods and services								
Gross official reserves (excluding gold)	6.1	4.7	4.5	4.7	4.4	4.4	4.5	4.4	4.3
	EUR million, period total								
GDP at current prices	426,485	467,598	496,267	116,560	119,092	122,044	138,571	120,931	127,398

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: unbalanced growth amid mounting fiscal risks

Strong rebound of investments, export growth weakens further

GDP growth in Romania accelerated to 4.7% in the first half of 2019, mainly driven by buoyant domestic demand. Economic policy has remained supportive for private consumption, as minimum wages were hiked considerably again at the beginning of the year. Real wage growth also benefited from tight labor market conditions. It is interesting to note that a minimum wage of RON 3,000 was set in the construction sector together with further measures to attract workforce in this sector (exemption from paying personal income tax, lower social security contributions, easier conditions for granting work permits to non-EU citizens). As a matter of fact, the strong increase in construction activity fueled a substantial rebound of investments. The absorption of EU funds and continued domestic credit growth played an important role in this respect as well.

Current account deficit widens while inflationary pressures persist

Partly reflecting subdued external demand, export growth weakened further in the first half of 2019, with exports almost stagnating in the second quarter. After a strong increase in the first quarter, import growth decelerated somewhat in the second quarter. In total, the contribution of net exports to growth remained clearly negative. The mild nominal depreciation of the Romanian leu vis-à-vis the euro fell short of offsetting ULC increases both for the whole economy and the manufacturing sector.

Mainly driven by the expanding trade deficit, the Romanian current account deficit widened to 4.9% of GDP in the first half of 2019, compared to 4.4% in the first half of 2018. As net inflows in the capital account (including EU funds) rose, the deterioration in the net borrowing position from the combined current and capital account was less pronounced. This position reached 3.7% of GDP, of which about 80% were covered by net FDI inflows.

Monetary policy-relevant CPI inflation rose to 4.1% in July before falling slightly to 3.9% in August, thus staying above the upper bound of the Romanian central bank's target band of 2.5% $\pm$ 1 percentage point. Amid the build-up of demand-pull and cost-push pressures, core inflation continuously went up from 2.4% at end-2018 to 3.4% in August. The central bank left its key policy rate unchanged at 2.5% and repeatedly stated that it will maintain strict control over money market liquidity. It expects the inflation rate to remain above the upper bound of the target band for the remainder of the year.

Growing fiscal risks; significant deviation procedure has not triggered effective action

In 2018, the general government budget deficit reached 3% of GDP, i.e. the limit laid down in the EU Stability and Growth Pact. In the first eight months of 2019, the deficit increased by about 15% in nominal terms. A first budget revision was adopted in August, aiming to reach a deficit of 2.8% of GDP in 2019. Yet, Romania's fiscal council sees significant risks of exceeding the deficit target and the 3% limit in 2019 in the absence of additional measures. The breakup of the ruling coalition in late August 2019 may complicate the adoption of further corrective measures, however. In June, the Romanian parliament passed a new pension law that will have a considerable impact on the budget from 2020 onward and entails the doubling of pillar I pension benefits by 2022.

Under the significant deviation procedure, the EU Council established in June 2019 that Romania had not taken effective action in response to its recommendation issued in December 2018. It recommended that Romania take fiscal measures corresponding to an annual structural adjustment of 1% in 2019 and 0.75% in 2020.

Table 9

Main economic indicators: Romania

	2016	2017	2018	Q1 18	Q2 18	Q3 18	Q4 18	Q1 19	Q2 19
	Year-on-year change of the period total in %								
GDP at constant prices	4.8	7.0	4.1	4.0	4.1	4.2	4.1	5.0	4.4
Private consumption	8.2	10.0	5.2	5.9	5.0	4.4	5.8	7.0	5.3
Public consumption	3.9	2.8	1.9	2.7	–2.4	6.7	0.8	0.1	1.6
Gross fixed capital formation	0.0	3.3	–3.1	1.5	–4.9	–3.9	–3.2	3.9	18.0
Exports of goods and services	16.1	9.7	5.4	7.9	7.1	2.6	4.2	3.6	0.5
Imports of goods and services	16.5	11.3	9.1	11.7	9.4	6.8	9.0	10.2	3.6
	Contribution to GDP growth in percentage points								
Domestic demand	5.1	7.6	5.8	7.0	4.0	5.6	6.7	6.6	5.9
Net exports of goods and services	–0.3	–0.7	–1.7	–2.0	–1.3	–1.3	–2.2	–2.6	–1.5
Exports of goods and services	6.6	4.1	2.3	3.7	2.9	1.3	1.7	2.3	0.2
Imports of goods and services	–6.9	–4.8	–4.0	–5.7	–4.2	–2.6	–3.9	–5.0	–1.7
	Year-on-year change of the period average in %								
Unit labor costs in the whole economy (nominal, per person)	8.6	8.1	14.3	17.3	14.2	14.5	10.6	6.1	3.1
Unit labor costs in manufacturing (nominal, per hour)	8.3	5.6	4.9	5.6	2.5	4.9	6.6	8.0	14.0
Labor productivity in manufacturing (real, per hour)	1.2	8.3	5.5	5.3	7.8	5.4	3.5	4.1	–1.9
Labor costs in manufacturing (nominal, per hour)	9.6	14.3	10.6	11.2	10.5	10.5	10.3	12.5	11.8
Producer price index (PPI) in industry	–1.8	3.5	5.0	3.9	5.2	5.8	5.2	4.6	4.5
Consumer price index (here: HICP)	–1.1	1.1	4.1	3.7	4.5	4.6	3.5	3.8	4.3
EUR per 1 RON, + = RON appreciation	–1.0	–1.7	–1.8	–2.9	–2.2	–1.4	–0.9	–1.7	–2.0
	Period average levels								
Unemployment rate (ILO definition, %, 15–64 years)	6.1	5.1	4.3	4.8	4.3	4.0	4.2	4.2	3.9
Employment rate (%, 15–64 years)	61.6	63.9	64.8	63.1	65.5	66.2	64.5	64.2	66.4
Key interest rate per annum (%)	1.8	1.8	2.4	2.1	2.4	2.5	2.5	2.5	2.5
RON per 1 EUR	4.5	4.6	4.7	4.7	4.7	4.6	4.7	4.7	4.7
	Nominal year-on-year change in the period-end stock in %								
Loans to the domestic nonbank private sector[1]	1.5	4.4	7.9	5.4	6.0	5.8	7.9	6.8	6.4
of which: loans to households	4.5	7.1	9.1	8.8	9.3	9.0	9.1	7.3	6.3
loans to nonbank corporations	–2.4	2.5	6.6	1.7	2.5	2.4	6.6	6.3	6.5
	%								
Share of foreign currency loans in total loans to the nonbank private sector	43.3	37.2	34.0	36.4	35.0	34.6	34.0	34.2	33.4
Return on assets (banking sector)	1.1	1.3	1.6	1.6	1.7	1.8	1.6	1.6	1.2
Tier 1 capital ratio (banking sector)	17.6	18.0	18.6	17.9	17.6	17.8	18.6	17.9	17.7
NPL ratio (banking sector)	9.6	6.4	5.0	6.2	5.7	5.6	5.0	4.9	4.7
	% of GDP								
General government revenues	31.8	30.9	32.0	..	..	..	..	..	..
General government expenditures	34.5	33.6	35.0	..	..	..	..	..	..
General government balance	–2.7	–2.7	–3.0	..	..	..	..	..	..
Primary balance	–1.2	–1.4	–1.8	..	..	..	..	..	..
Gross public debt	37.3	35.2	35.0	..	..	..	..	..	..
	% of GDP								
Debt of nonfinancial corporations (nonconsolidated)	39.8	35.1	33.1	..	..	..	..	..	..
Debt of households and NPISHs[2] (nonconsolidated)	16.5	15.9	15.9	..	..	..	..	..	..
	% of GDP (based on EUR), period total								
Goods balance	–5.5	–6.5	–7.3	–7.0	–7.3	–6.6	–8.2	–8.8	–7.8
Services balance	4.5	4.4	4.1	5.0	4.3	3.6	3.8	4.6	4.8
Primary income	–2.6	–2.5	–2.5	–1.5	–4.3	–3.7	–0.6	0.3	–4.3
Secondary income	1.5	1.4	1.2	0.9	1.5	0.9	1.4	1.1	0.6
Current account balance	–2.1	–3.2	–4.5	–2.7	–5.8	–5.7	–3.6	–2.8	–6.7
Capital account balance	2.5	1.2	1.2	0.7	1.0	0.9	2.0	1.7	0.9
Foreign direct investment (net)[3]	–2.6	–2.6	–2.5	–3.9	–0.5	–4.9	–0.8	–2.9	–2.9
	% of GDP (rolling four-quarter GDP, based on EUR), end of period								
Gross external debt	54.6	51.9	49.0	51.3	50.1	50.0	49.0	48.3	49.2
Gross official reserves (excluding gold)	20.1	17.9	16.3	18.3	16.5	15.9	16.3	15.5	15.4
	Months of imports of goods and services								
Gross official reserves (excluding gold)	5.7	4.9	4.4	5.0	4.4	4.3	4.4	4.1	4.1
	EUR million, period total								
GDP at current prices	170,382	187,282	202,879	38,503	46,553	56,539	61,285	42,307	50,674

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: fragile stabilization amid high macrofinancial risks

Slower decline in GDP growth given pre-election policy stimulus

Following a technical recession in the second half of 2018, the annual contraction of GDP growth in Turkey moderated in the first half of 2019 (–1.9% year on year). All domestic demand components except public consumption have contributed to the decline in GDP since the beginning of 2019. Gross fixed capital formation edged down sizably by 17.6% as a number of public projects, inter alia, were discontinued, while the corporate sector held back investments. At the same time, despite supportive lending by state banks related to the policy stimulus ahead of the local elections in March 2019 and the increase of the minimum wage by 26% as of January 2019, private consumption declined by 3%, albeit at a diminishing rate throughout the first half of 2019. The unemployment rate, which peaked at a historical high of 14% in June, also weighed against a sustainable recovery of private consumption.

On the back of temporary tax reductions, continued minimum wage subsidies and employment incentive schemes that were partly related to an election-related stimulus, the budget deficit widened in the course of 2019 and is expected to reach 2.9% of GDP according to the New Economic Programme that was announced in September 2019. Gross public debt increased only slightly, however, with repayment pressures mounting until end-2019.

Remarkable adjustment of external imbalances

Net exports continued to contribute positively to economic growth in the first half of 2019. Export growth remained robust in line with a strong tourism season and sound economic activity in major trading partners. At the same time, imports nosedived due to stagnating private consumption and the continued depreciation of the Turkish lira. Accordingly, Turkey's current account posted a minor deficit of 0.9% of GDP in the second half of 2019, following a surplus of 1.1% of GDP in the second half of 2018. Net FDI inflows covered nearly 90% of the current account deficit. The traditionally strong portfolio inflows peaked at 5% of GDP in the first quarter of 2019 due to enhanced investor interest, before strongly reversing to an outflow of 4.1% of GDP in the second quarter of 2019. Gross external financing needs remain among the highest in the emerging markets and continued to stay above 20% of GDP.

Somewhat weaker inflation pressures give way to monetary easing cycle

The gradual slowdown in the depreciation of the Turkish lira between early January and end-September 2019 (7% against the U.S. dollar and 1.5% against the euro), coupled with lower domestic demand pressures, contributed to easing inflation. Following a peak of 25.2% in October 2018, consumer inflation (CPI) came down to 9.3% in September 2019 – still clearly above the monetary policy target of 5%. Despite enduring depreciation pressures, the Turkish central bank (CBRT) kept its one-week repo rate unchanged at 24% from mid-September 2018 until recently. Surpassing market expectations, the CBRT slashed its policy rate for the first time since 2017 by a total of 750 basis points to 16.5% in two steps in July and in September 2019 – the largest interest rate reduction in at least 17 years.

Mounting credit risk weighs on banking system

On the back of a pre-election fiscal stimulus and the relaxation of lending standards for some segments, and despite elevated inflationary pressures, financial conditions have eased somewhat since the beginning of 2019. Nevertheless, the growth of credit to the nonfinancial private sector slowed down in the first half of 2019. Credit risk has increased since August 2018, and the NPL ratio rose to 4.7% of total loans. In addition, the Turkish government's policy plans to clean up banks' NPLs – as announced in April 2019 – have stalled.

Table 10

Main economic indicators: Turkey

	2016	2017	2018	Q1 18	Q2 18	Q3 18	Q4 18	Q1 19	Q2 19
	Year-on-year change of the period total in %								
GDP at constant prices	3.2	7.5	2.8	7.5	5.6	2.3	–2.8	–2.3	–1.5
Private consumption	3.7	6.2	0.1	6.0	2.7	0.7	–7.7	–4.8	–1.1
Public consumption	9.5	5.0	6.6	4.9	9.6	6.9	5.3	6.6	3.3
Gross fixed capital formation	2.2	8.3	–0.6	10.4	6.2	–4.4	–11.6	–12.4	–22.8
Exports of goods and services	–1.9	12.0	7.8	0.9	4.5	14.2	10.7	9.2	8.1
Imports of goods and services	3.7	10.4	–7.8	15.3	0.2	–16.4	–24.3	–28.9	–16.9
	Contribution to GDP growth in percentage points								
Domestic demand	4.1	6.9	0.8	7.3	4.8	0.0	–7.2	–5.6	–7.2
Net exports of goods and services	–1.3	0.1	3.5	–3.4	0.9	6.6	8.3	9.2	5.6
Exports of goods and services	–0.4	2.5	1.7	0.2	1.0	3.0	2.2	2.0	1.7
Imports of goods and services	–0.9	–2.4	1.9	–3.6	0.0	3.7	6.1	7.3	3.8
	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)	15.8	4.0	18.1	11.6	15.1	18.6	28.0	24.1	24.2
Labor productivity in manufacturing (real, per hour)	4.4	6.3	1.7	6.0	2.9	1.7	–3.0	–0.1	3.1
Labor costs in manufacturing (nominal, per hour)	21.0	10.5	20.4	18.2	18.5	20.7	24.2	24.0	28.1
Producer price index (PPI) in industry	4.3	15.8	27.0	13.4	20.1	34.5	39.0	30.7	27.9
Consumer price index (here: HICP)	7.7	11.1	16.3	10.3	12.8	19.4	22.4	19.9	18.0
EUR per 1 TRY, + = TRY appreciation	–9.6	–18.9	–27.7	–16.1	–24.5	–37.5	–28.6	–23.2	–20.9
	Period average levels								
Unemployment rate (ILO definition, %, 15–64 years)	11.1	11.1	11.1	10.8	9.8	11.3	12.5	15.0	13.1
Employment rate (%, 15–64 years)	50.7	51.6	52.0	51.1	52.7	53.0	51.1	49.3	50.7
Key interest rate per annum (%)	7.5	8.0	15.5	8.0	11.2	18.9	24.0	24.0	24.0
TRY per 1 EUR	3.3	4.1	5.7	4.7	5.2	6.6	6.3	6.1	6.6
	Nominal year-on-year change in the period-end stock in %								
Loans to the domestic nonbank private sector	15.8	20.8	12.4	19.7	21.7	27.6	12.4	12.9	6.7
of which: loans to households	9.6	16.3	3.2	14.8	14.1	9.2	3.2	1.5	–0.6
loans to nonbank corporations	18.2	22.3	15.5	21.4	24.3	33.9	15.5	16.6	8.9
	%								
Share of foreign currency loans in total loans to the nonbank private sector	35.8	32.9	38.5	33.4	35.2	41.0	38.5	38.6	38.2
Return on assets (banking sector)	1.5	1.6	1.5	1.7	1.7	1.5	1.5	1.2	1.2
Tier 1 capital ratio (banking sector)	12.7	13.6	13.4	13.5	13.1	13.9	13.4	12.6	13.1
NPL ratio (banking sector)	3.4	3.1	4.1	3.0	3.2	3.4	4.1	4.3	4.7
	% of GDP								
General government revenues	33.0	31.4	30.3	..	..	..	..	..	..
General government expenditures	34.1	34.2	32.9	..	..	..	..	..	..
General government balance	–1.1	–2.8	–2.6	..	..	..	..	..	..
Primary balance	0.9	–0.6	–0.2	..	..	..	..	..	..
Gross public debt	28.3	28.3	31.1	..	..	..	..	..	..
	% of GDP								
Debt of nonfinancial corporations (nonconsolidated)	..	..	..	..	..	..	..	..	..
Debt of households and NPISHs[1] (nonconsolidated)	..	..	..	..	..	..	..	..	..
	% of GDP (based on EUR), period total								
Goods balance	–4.7	–6.9	–5.3	–8.3	–8.1	–4.1	–0.4	–1.8	–2.9
Services balance	1.8	2.3	3.3	1.5	2.7	6.2	3.1	1.9	4.4
Primary income	–1.1	–1.3	–1.5	–1.1	–1.8	–1.3	–1.8	–1.3	–2.1
Secondary income	0.2	0.3	0.1	0.1	0.0	0.1	0.2	0.1	0.0
Current account balance	–3.8	–5.5	–3.4	–7.9	–7.3	0.9	1.2	–1.0	–0.7
Capital account balance	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Foreign direct investment (net)[2]	–1.3	–1.0	–1.2	–0.6	–1.0	–1.4	–1.8	–1.2	–0.6
	% of GDP (rolling four-quarter GDP, based on EUR), end of period								
Gross external debt	50.3	51.1	58.3	50.7	53.0	54.8	58.3	61.5	61.0
Gross official reserves (excluding gold)	11.2	9.3	9.7	9.1	8.8	8.4	9.7	10.5	10.4
	Months of imports of goods and services								
Gross official reserves (excluding gold)	5.4	3.8	3.8	3.7	3.5	3.2	3.8	4.1	4.1
	EUR million, period total								
GDP at current prices	778,742	752,677	656,467	168,433	170,607	155,493	161,934	150,799	155,171

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: renewed slowdown of economic dynamics

External factors and stagnating investment dampen growth again

Economic activity in Russia decelerated to +0.7% in the first half of 2019 (year on year) owing to the weakening global economy, weaker oil prices and the end of the construction boom that was linked to a major resource extraction project in Siberia (Yamal LNG). Thus, in the first six months of 2019, net exports lost momentum again and fixed investment stagnated (year on year). Although by no means dynamic, the factor driving growth was private consumption, while public consumption stagnated and fiscal policy remained tight. On the production side of GDP, growth continued to be driven by resource extraction, manufacturing (including automobile production) and retail trade. The unemployment rate declined further to 4.6% in the second quarter of 2019, a new historical minimum.

CBR's tight monetary stance helps bring down VAT increase-triggered inflationary spike

Given the weakness of the oil price (down 4.5% in the first half of 2019 against the same period of 2018), continued foreign exchange purchases of the Russian central bank (CBR) under the fiscal rule and the absence of new U.S. sanctions until August 2019, the exchange rate of the Russian ruble slightly declined in nominal effective terms in the first half of 2019 compared to 2018. In early August 2019, new sanctions were adopted, including U.S. opposition to loans of international financial organizations to Russia and further restrictions on U.S. bank loans to Russia – which, however, do not promise to have a substantial impact on economic stability. The CBR's tight monetary stance (increase of the key rate to 7.75% in late 2018) helped cushion the temporary rise in inflation linked to housing and communal tariff adjustments as well as the VAT increase (from 18% to 20%) in January 2019. Thus, inflation eased from 5.3% in March to 4.0% in September 2019. This, in fact, already corresponds to the inflation target for 2020. Declining inflation and weaker-than-expected GDP growth in the first half of 2019 prompted the CBR to lower its key rate in three steps of ¼ percentage point each (in June, July and September) to 7.0%.

Solid twin surpluses continue, sizable international reserves expand further

The VAT increase, improved tax administration, pension reform (adjustment of the retirement age) and sustained restraint in spending pushed the federal budget surplus to 3.7% of GDP in the first eight months of 2019 (against 3.2% in the corresponding period of 2018). The weakened oil price combined with the slightly weakened Russian ruble held the current account surplus in the first six months of 2019 at 5.8% of GDP (first half of 2018: 6.0%). At the same time, net private capital outflows more than doubled to 3.5% of GDP, driven by banks' accelerated build-up of assets abroad and their continued paying-down of external liabilities. Largely on account of nonresidents purchasing Russian obligations, the country's foreign debt expanded to EUR 425 billion in the first six months of 2019 (+7% year on year), which, however, remains relatively modest in relation to GDP (29.7%). Moreover, Russia's foreign debt has been clearly outgrown by its international reserves (including gold, which the authorities stocked up substantially in recent months), which stood at EUR 482 billion in late September 2019 (+14% over six months).

Rapid retail lending growth adds to banking sector fragility

Notwithstanding Russia's sluggish economic growth and its NPL ratio stagnating at a relatively high level (18% at end-July 2019), retail lending (as opposed to corporate lending) continues to expand swiftly (+17% annually at end-June 2019 in real terms and exchange rate adjusted). Although overall household debt in Russia is comparatively low, this strong lending growth raises concern, given that it is partly driven by unsecured consumer credit (+21% annually). In response, the CBR has repeatedly raised risk weights for unsecured lending and announced additional tightening measures.

Table 11

Main economic indicators: Russia

	2016	2017	2018	Q1 18	Q2 18	Q3 18	Q4 18	Q1 19	Q2 19
	Year-on-year change of the period total in %								
GDP at constant prices	0.3	1.6	2.3	1.9	2.2	2.2	2.7	0.5	0.9
Private consumption	–1.9	3.3	2.3	2.7	1.9	2.0	2.6	1.6	2.8
Public consumption	1.5	2.5	0.3	0.3	0.3	0.3	0.3	0.2	0.2
Gross fixed capital formation	1.0	5.2	2.9	3.5	4.2	5.5	0.2	–2.6	1.0
Exports of goods and services	3.2	5.0	5.5	7.2	7.8	4.8	2.6	–0.4	–4.9
Imports of goods and services	–3.6	17.4	2.7	10.0	2.8	0.1	–0.3	–1.6	0.1
	Contribution to GDP growth in percentage points								
Domestic demand	–1.1	3.6	1.5	1.6	0.6	1.4	2.3	0.4	2.3
Net exports of goods and services	1.6	–2.3	0.8	–0.2	1.4	1.2	0.7	0.2	–1.4
Exports of goods and services	0.8	1.3	1.5	2.0	2.1	1.2	0.7	–0.1	–1.4
Imports of goods and services	0.8	–3.6	–0.6	–2.2	–0.7	0.0	0.1	0.4	0.0
	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)	4.3	17.7	2.3	2.7	0.9	2.6	3.3	3.1	4.7
Labor productivity in manufacturing (real, per hour)	4.7	7.5	4.2	5.1	4.5	4.2	3.0	3.3	3.8
Labor costs in manufacturing (nominal, per hour)	9.1	26.7	6.6	7.9	5.4	7.0	6.3	6.5	8.7
Producer price index (PPI) in industry	4.3	7.8	12.0	5.0	12.0	15.9	15.1	9.2	6.6
Consumer price index (here: HICP)	7.1	3.6	3.0	2.3	2.5	3.1	4.0	5.3	5.0
EUR per 1 RUB, + = RUB appreciation	–8.4	12.6	–11.0	–10.6	–14.9	–9.3	–9.4	–6.6	2.0
	Period average levels								
Unemployment rate (ILO definition, %, 15–64 years)	5.5	5.2	4.8	5.1	4.8	4.6	4.8	4.8	4.5
Employment rate (%, 15–64 years)	..	..	..	..	..	..	..	..	..
Key interest rate per annum (%)	10.6	9.1	7.4	7.6	7.3	7.3	7.5	7.8	7.7
RUB per 1 EUR	74.2	65.9	74.1	69.9	74.0	76.3	75.9	74.9	72.6
	Nominal year-on-year change in the period-end stock in %								
Loans to the domestic nonbank private sector[1]	0.6	5.7	12.3	7.3	9.4	11.4	12.3	11.9	11.6
of which: loans to households	1.6	12.7	22.2	15.5	18.8	21.4	22.2	23.5	22.8
loans to nonbank corporations	0.2	3.1	8.3	4.3	5.8	7.5	8.3	7.2	6.9
	%								
Share of foreign currency loans in total loans to the nonbank private sector	18.9	14.7	13.6	14.5	14.7	14.4	13.6	12.2	11.6
Return on assets (banking sector)	1.2	1.0	1.5	1.7	1.5	1.7	1.5	2.5	2.2
Tier 1 capital ratio (banking sector)	9.2	8.5	8.9	9.9	9.0	9.5	8.9	9.6	9.2
NPL ratio (banking sector)	18.9	19.1	18.0	19.4	19.2	18.7	18.0	18.0	18.0
	% of GDP								
General government revenues	32.8	33.7	35.9	..	..	..	..	..	..
General government expenditures	36.4	35.2	33.0	..	..	..	..	..	..
General government balance	–3.7	–1.5	2.9	..	..	..	..	..	..
Primary balance	..	..	..	..	..	..	..	..	..
Gross public debt	12.9	12.6	12.1	..	..	..	..	..	..
	% of GDP								
Debt of nonfinancial corporations (nonconsolidated)	..	..	..	..	..	..	..	..	..
Debt of households and NPISHs[2] (nonconsolidated)	..	..	..	..	..	..	..	..	..
	% of GDP (based on EUR), period total								
Goods balance	7.0	7.3	11.8	11.2	11.4	11.6	12.9	12.6	9.7
Services balance	–1.8	–2.0	–1.8	–1.7	–1.9	–2.1	–1.6	–1.6	–2.1
Primary income	–2.7	–2.7	–2.5	–1.3	–4.6	–2.2	–2.0	–1.2	–4.8
Secondary income	–0.5	–0.6	–0.6	–0.7	–0.4	–0.6	–0.7	–0.7	–0.3
Current account balance	1.9	2.1	6.9	7.6	4.5	6.6	8.7	9.1	2.6
Capital account balance	–0.1	0.0	–0.1	–0.1	–0.1	0.0	–0.1	0.0	–0.1
Foreign direct investment (net)[3]	–0.8	0.5	1.4	1.4	0.6	1.0	2.3	–0.3	–0.2
	% of GDP (rolling four-quarter GDP, based on EUR), end of period								
Gross external debt	41.5	31.1	28.3	30.7	30.7	29.3	28.3	29.7	29.7
Gross official reserves (excluding gold)	25.7	21.3	23.8	22.1	23.7	23.8	23.8	25.2	25.7
	Months of imports of goods and services								
Gross official reserves (excluding gold)	15.0	12.3	13.7	12.7	13.4	13.6	13.7	14.4	14.8
	EUR million, period total								
GDP at current prices	1,171,677	1,396,089	1,399,910	320,790	335,393	355,474	388,253	326,999	360,921

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 show strong investment momentum in 2019 followed by softening growth dynamics – subdued growth continues in Russia[1, 2]

Economic growth in the CESEE-6 countries[3] is expected to weaken from 4.4% in 2018 to 3.9% in 2019. For 2020 and 2021, we project a further slowdown to 3.5% and 3.2%, respectively. Despite some deceleration, private consumption growth will remain strong over the next years. Growth of gross fixed capital formation is expected to develop very dynamically in 2019, before slowing down thereafter. In line with weaker projections for euro area import growth, CESEE-6 export growth will lose steam in 2019 but will, in parallel with accelerating euro area import growth, gain speed later. CESEE-6 import growth is also forecast to moderate somewhat in 2019, but will recover in both 2020 and 2021. Among the CESEE-6, Croatia and the Czech Republic will record the lowest economic growth in 2019, while Hungary and Poland will post the highest growth rates. The growth differential of the CESEE-6 countries vis-à-vis the euro area will widen to 2.8 percentage points in 2019 (compared to 2.5 percentage points in 2018), before decreasing to 2.3 percentage points in 2020 and 1.8 percentage points in 2021. Risks mainly stem from the external environment and are tilted to the downside.

For Russia[4], we forecast GDP to grow by 1.0% in 2019 and to record a weak recovery to a growth rate of 1.8% in 2020, before reverting to a growth rate of 1.6% in 2021. Private consumption is likely to grow only modestly due to stagnant real incomes and slower growth in consumer lending. We anticipate no reforms aimed at improving the investment climate for private businesses during the forecast horizon. Therefore, any significant pickup in growth is likely to stem from relatively modest increases in public consumption and public investments. Amid a gloomier global economic outlook than in spring 2019, we hardly expect more external support for economic growth in Russia. Upside and downside risks to our forecast are more or less balanced.

1 OeNB CESEE-6 forecast: economic growth will soften continually over the next years

GDP in the CESEE-6 countries grew by 4.2% year on year in the first half of 2019. Hence, GDP growth was somewhat smaller than in the same period of 2018. Across the region, GDP growth surprised on the upside compared to our spring

[1] *Cutoff date for data underlying this outlook: September 20, 2019. 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 of the September 2019 ECB staff Macroeconomic Projection Exercise (MPE) for the euro area.*

[2] *Compiled by Antje Hildebrandt, with input from Katharina Allinger, Stephan Barisitz, Markus Eller, Martin Feldkircher, Mathias Lahnsteiner, 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 price quotes (ten-day average of daily quotes) with September 16, 2019, as our baseline. Assumptions about future contract prices for Brent oil indicate that oil prices will decline slightly over the three-year forecast period, i.e. from USD 64 per barrel in 2019 to USD 59 per barrel in 2020 and USD 57 per barrel in 2021.*

Table 1

OeNB-BOFIT GDP projections for 2019 to 2021 compared with the IMF forecast

	Eurostat	OeNB-BOFIT projections October 2019			IMF WEO forecast October 2019			Difference between OeNB-BOFIT and IMF		
	2018	2019	2020	2021	2019	2020	2021	2019	2020	2021
	Year-on-year growth in %							*Percentage points*		
CESEE-6	**4.4**	**3.9**	**3.5**	**3.2**	**3.8**	**3.1**	**2.8**	**0.1**	**0.4**	**0.4**
Bulgaria	3.2	3.5	3.3	3.1	3.7	3.2	3.0	–0.2	0.1	0.1
Croatia	2.6	2.8	2.6	2.6	3.0	2.7	2.5	–0.2	–0.1	0.1
Czech Republic	2.9	2.7	2.7	2.6	2.5	2.6	2.6	0.2	0.1	0.0
Hungary	5.1	4.4	3.3	3.5	4.6	3.3	2.9	–0.2	0.0	0.6
Poland	5.2	4.3	3.9	3.5	4.0	3.1	2.7	0.3	0.8	0.8
Romania	4.0	4.1	3.3	2.8	4.0	3.5	3.0	0.1	–0.2	–0.2
Russia	2.3	1.0	1.8	1.6	1.1	1.9	2.0	–0.1	–0.1	–0.4

Source: OeNB-BOFIT October 2019 projections, Eurostat, IMF World Economic Outlook of October 2019, Rosstat.

Note: 2018 figures are seasonally adjusted data. CESEE-6: GDP-weighted average.

2019 projections. This was particularly the case in Hungary and Romania but also in Croatia. For the second half of 2019, GDP growth is projected to weaken moderately in most CESEE-6 countries and to remain unchanged in Bulgaria and the Czech Republic as the unexpectedly strong momentum of gross fixed capital formation in several CESEE-6 countries is losing some steam. Furthermore, private consumption growth is expected to moderate. Due to deteriorating external demand on the back of continued global trade tensions, export growth is forecast to decline even further in the course of 2019. For the full year of 2019, GDP growth will amount to 3.9%, before moderating to 3.5% in 2020 and further to 3.2% in 2021.

Monetary policy to remain accommodative overall

Our assumptions regarding the monetary policy stance in the CESEE-6 countries remain more or less unchanged compared to our last forecast of spring 2019. Accordingly, we assume that a no-change policy is the most likely scenario for both 2019 and 2020. In this environment, lending activity in the CESEE-6 will continue to develop dynamically (less so in Croatia, where lending to the corporate sector, in particular, is rather sluggish). Generally, good financing conditions will continue to be supportive for private consumption and gross fixed capital formation.

Fiscal policy in the CESEE-6 region is rather neutral or expansionary

Currently, fiscal policy is rather neutral or expansionary in the CESEE-6 countries. In Poland, the 2019 elections have already caused some fiscal slippage. Furthermore, tax cuts are on the agenda for 2020. After the collapse of the Romanian government at the end of August 2019 due to political turbulence, new elections will only be held in 2020. We therefore expect Romania to implement required fiscal consolidation measures at a later stage when the new government will be in office (currently, the country is subject to the EU's significant deviation procedure). In Croatia, the Czech Republic and Hungary, we expect fiscal policy to be neutral or slightly expansionary in 2019, and to possibly become more restrictive toward the end of the forecast horizon. Bulgaria maintains its cautious fiscal policy stance.

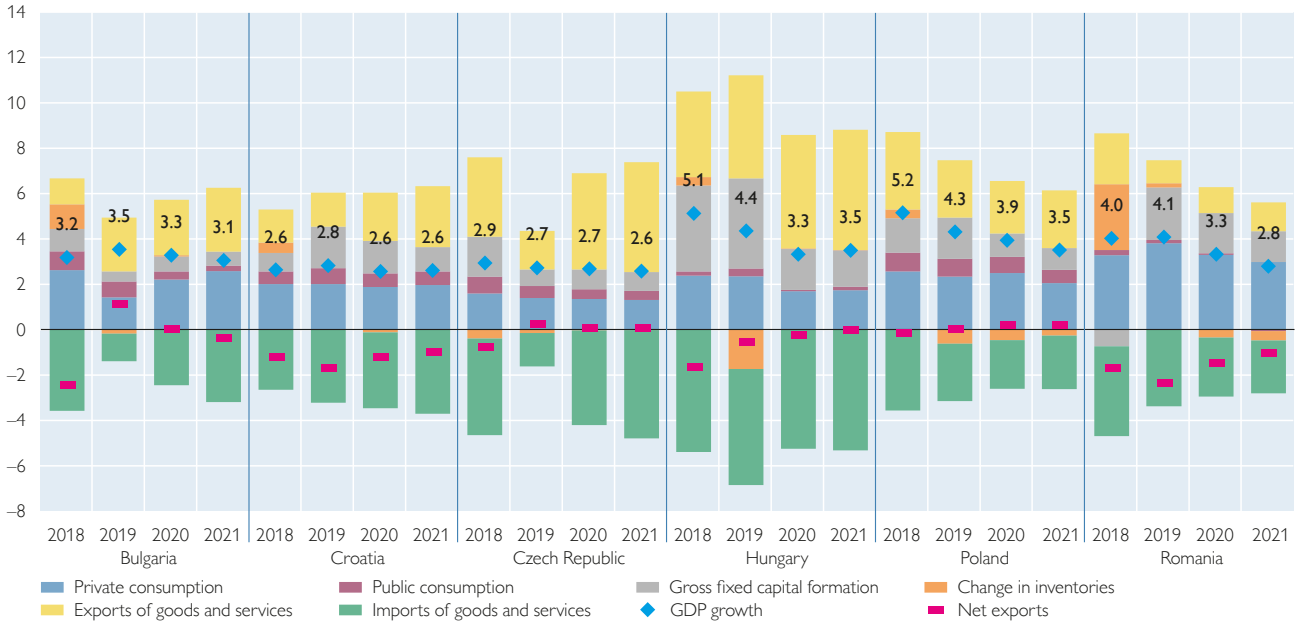
Private consumption growth will remain strong

Despite some moderation over the projection horizon, private consumption growth will generally remain strong in the CESEE-6. One key factor contributing to this development is certainly the remarkable labor market situation featuring record-low unemployment rates. Furthermore, policymakers in the CESEE-6 countries have implemented (or plan to implement) more or less expansionary

Chart 1

CESEE-6: GDP and GDP components

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



Source: Eurostat, OeNB.

Note: Realized data for 2018, projections for 2019 to 2021.

policy measures targeting consumers, which provide an additional boost to private consumption growth. Only in Bulgaria, where – apart from a high base effect – consumer mood has been leveling off somewhat in the course of 2019, do we observe a sharp drop in private consumption growth in 2019. We expect that public consumption growth will develop for the full year of 2019 as it did in the first half of 2019. After that, we forecast some moderation in all CESEE-6 countries, which will be largely driven by consolidation needs.

EU funds drive investment activity

In most CESEE-6 countries, i.e. in Croatia, Hungary, Poland and Romania, gross fixed capital formation is expected to be very strong in 2019 but to lose steam thereafter. In Hungary, for instance, growth rates exceeded 19% year on year in the first half of 2019 (after coming to 16.5% for the full year of 2018). We expect growth rates in Hungary to moderate only slightly to 16.2% for the full year of 2019, before decreasing further to below 7% in 2020. In Croatia, investment growth is projected to more than double to 8.5% in 2019 (from 4.1% in 2018), and to decelerate both in 2020 and 2021. In general, accelerated investment activity in 2019 has been largely driven by a strong use of EU funds within the EU's multiannual financial framework for the period from 2014 to 2020. However, funds are available for up to two more years after the end of a funding period. To our knowledge, some countries (particularly Hungary) will have invested most of the available funds by end-2019, whereas other countries (e.g. Croatia) will still have a large scope for using funds from the current framework. Therefore, we expect the strong impact of EU funds on investment growth to prevail in some of the CESEE-6 countries over the forecast horizon. In Hungary and Romania, investment growth

is also supported by elevated (residential) construction activity. We expect construction activity to generally remain buoyant in the CESEE-6 over the projection horizon, given strong demand for residential construction largely due to favorable income prospects as well as supportive financing conditions and housing subsidies in some countries. In Bulgaria and the Czech Republic, by contrast, gross fixed capital formation is expected to drop significantly in 2019 compared to 2018, as has already been indicated by weak results for the first half of 2019. Apart from a base effect, the weakening in investment activity can be largely explained by deteriorating export prospects, which have made investors more reluctant to invest. For both 2020 and 2021, however, we expect fixed investment growth to recover somewhat in Bulgaria and the Czech Republic.

Export growth in the CESEE-6 dampened on average

For 2019, we project slumping export growth, on average, in the CESEE-6, which is in line with weakening import growth projections for the euro area. Export growth will be particularly subdued in the Czech Republic, Poland and Romania (and will remain unchanged in Hungary) in 2019. The pattern is somewhat different for Bulgaria and Croatia, where export growth will accelerate in 2019 compared to 2018. In both countries, base effects play a role. Furthermore, in Bulgaria, we see some orientation toward export markets outside the euro area, and in Croatia, export growth has been supported by another good tourist season. In all CESEE-6 countries except for Croatia, import growth will moderate in line with weaker domestic demand in 2019. In some countries, especially in Bulgaria and the Czech Republic, imports will gain speed after that. For Poland and Romania, we expect import growth to weaken over the projection horizon, while import growth is forecast to remain robust in Hungary throughout all three years.

In 2018, the contribution of net exports to growth was negative in all CESEE-6 countries. This picture will change in 2019. In fact, we expect the contribution of net exports to turn positive in Bulgaria and the Czech Republic, to become neutral in Poland, and to narrow in Croatia and Hungary. Only for Romania do we expect a widening of the gap. For the remainder of the forecast horizon, we expect a further improvement of net contributions in most countries along with a recovery in export growth.

CESEE-6: risks mostly stem from external developments

Risks to our CESEE-6 forecast are mainly due to external developments that cause a high degree of uncertainty in several areas. Certainly, growth of the world economy, in general, or of the euro area economy, in particular, could turn out higher (lower) than assumed in our baseline scenario and would thus translate into higher (lower) growth prospects of the CESEE-6 countries. In our overall risk assessment, however, we conclude that the risks to global economic growth and to euro area growth – and eventually to our CESEE-6 projections – are slightly tilted to the downside for several reasons:

- First, there is still a high risk that trade tensions between the U.S.A. and its major trading partners will escalate further. This would shake the world economy and would have negative spillover effects on the mostly small, open and highly integrated CESEE-6 economies.
- Second, at the EU level, there are still many uncertainties regarding the conditions under which the U.K. will leave the EU. Several options are under discussion; yet, a disorderly Brexit with unknown implications for both the U.K. and the EU remains a possible outcome. In any case, the CESEE-6 will be negatively affected in several ways, both directly and indirectly. Most obviously, a disorderly

Brexit would harm trade flows within the EU and may have financial stability implications. Furthermore, Brexit will have a negative impact on the EU's new multiannual financial framework for 2021–2027 as this will be the first EU budget without the U.K.'s net contribution. However, this effect will only materialize toward the end of the projection horizon.

- Third, new geopolitical risks in the Middle East are emerging, such as those caused by the drone attacks on key oil facilities in Saudi Arabia, one of the largest oil producers in the world, in mid-September 2019. The resulting damage destabilized oil markets across the world and resulted in a sudden jump in oil prices. Although oil prices moderated again thereafter, a higher volatility of oil prices may harm the world economy. Moreover, risks persist that the conflicts in the Middle East might spread to other parts of the world, which would severely affect global growth. This would also have adverse effects on the CESEE-6 countries.

Major domestic risks are predominately related to the developments in the CESEE-6 labor markets. Labor shortage is omnipresent not only in all countries but also in almost all sectors. The manufacturing sector in particular, which is essential for the region's foreign trade, suffers from the lack of a skilled workforce and from the ensuing negative consequences for economic growth. Capacity constraints limit production so that it can no longer proceed in a sufficient and timely manner, wage pressures have already started to erode competitiveness in several countries, and foreign investors are more and more likely to be discouraged from investing in countries with obvious labor shortages and prospects of rising wages. While current labor shortages are factored into our baseline, they could become more pronounced, which would tilt the CESEE-6 countries' risk profile to the downside. Furthermore, rising wages could feed through to inflation, resulting in higher-than-anticipated monetary tightening, which we consider a downside risk. In positive terms, further labor markets strains could also translate into higher real disposable income fueled by stronger wage growth, which would push private consumption beyond the expected levels.

As discussed in our previous forecast, a number of sector-specific risks prevail in some CESEE-6 countries. In the Czech Republic and in Hungary, in particular, economic growth is strongly linked to the automotive sector. To remain competitive, these economies therefore must, for instance, react to new technological requirements for the automotive sector or fulfill new emission standards. One minor sector-specific risk relates to adverse weather conditions that could harm economic growth in those CESEE-6 countries with a comparatively large agricultural sector (mainly Poland and Romania).

Noneconomic internal risks also prevail in some CESEE-6 countries. Further increases in populist tendencies could erode investor confidence and discourage foreign investors. So far, however, political tendencies have not noticeably undermined investor confidence. Overall, we therefore regard political developments in the CESEE-6 as a minor downside risk to our growth projections.

There are also several upside risks to our GDP growth forecast. As mentioned before, higher-than-expected global economic growth and euro area growth, in particular, might boost exports and, eventually, the GDP growth of the CESEE-6 countries even more than currently projected. Furthermore, the countries may make more extensive use of EU funds than expected (this upside risk is mostly relevant for our forecasts for Bulgaria, Croatia and Romania as the other CESEE-6 countries already feature high EU fund absorption rates).

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

Bulgaria: exports and public demand support economic growth in the short run

Our spring forecast for Bulgaria remains largely unchanged as regards the evolution of headline GDP. However, the underlying growth structure is expected to change, especially in 2019, given that the first half of the year brought about a considerable slowdown in both private consumption and gross fixed capital formation, while exports recovered remarkably, partly on the back of a favorable base effect in the mineral and fuel product sectors. Over the forecast horizon, we expect the economy to lose pace only marginally, decelerating from an anticipated real GDP growth rate of 3.5% in 2019 to 3.1% in 2021.

Given the developments in the first half of the year, private domestic demand components are expected to lose considerable steam in 2019 compared to previous years, before recovering until the end of the forecast horizon. Private consumption is likely to suffer from worsened consumer sentiment, decelerated bank lending and rising energy prices in the near term. Conversely, tight labor markets should keep wage growth at favorably high levels. Private investment is expected to suffer from industrial weakness due to labor shortages and economic uncertainty stemming from major trading partners. Bank lending to nonfinancial corporations may remain constrained in view of pending gradual macroprudential tightening. Housing construction, by contrast, has seen a notable revival recently. Moreover, Bulgaria's prospects of entering the Exchange Rate Mechanism (ERM) II and the banking union in the foreseeable future as well as the further deepening of the country's cooperation with the OECD are likely to boost investor confidence.

Public domestic demand is expected to follow a trend opposed to that of private sector demand, namely to expand in 2019, before cooling off by the end of the forecast period. This development mirrors the budgeted fiscal expansion in 2019 and the targeted general government budget surplus for both 2020 and 2021. The considerable expansion of government consumption in 2019 reflects higher public expenditure on wages and a continuous increase in health insurance payments. Government investment is projected to accelerate in the short run due to the planned construction of a large section of the Hemus motorway, which was approved by the government at end-2018. Local elections in October 2019 are likely to constitute an incentive for both the government and local authorities to speed up investment projects. Stronger infrastructure investment could be sustained until 2020, given an increased absorption of EU funds as the EU's current multiannual financial framework is coming to an end.

In the first half of 2019, Bulgaria managed to put a stronger weight on export markets outside the EU (e.g. China, Egypt and Serbia). At the same time, however, this reorientation strongly depended on the specific structure of the exported products. Therefore, it remains to be seen to what extent Bulgaria manages to decouple from sluggish near-term economic developments in the euro area. In any case, we expect Bulgarian exports to gradually gain further momentum thanks to the mild economic acceleration projected for the euro area until the end of the forecast horizon and Turkey's expected recovery from recession. Imports should follow a similar path given recovering domestic demand. On balance, the positive growth contribution of net exports recorded in 2019 is likely to turn negative by the end of the forecast horizon.

Croatia: investment growth accelerates sooner and more strongly than anticipated

At 3.1% year on year, Croatian GDP growth surprised on the upside in the first half of 2019. This development can be attributed to the fact that investment growth accelerated earlier and more strongly than anticipated. Gross fixed capital formation grew by 9.7% year on year in the first half of 2019, contributing roughly as much as private consumption to total GDP growth. Private consumption and export growth were in line with our forecast for the first half of 2019. The already large negative contribution of net exports increased by more than forecast, given higher-than-expected import growth. Based on the trajectories of investment and export growth and factoring in current economic policy measures, we have revised our forecast for 2019 mildly upward to 2.8% and have left our forecast for 2020 and 2021 roughly unchanged at 2.6%.

Regarding private consumption, the Croatian government increased the base salary of civil servants by 2% and that of health care workers by 7%, effective from September 1, 2019. Moreover, the Croatian government announced that several new rounds of its housing subsidy program will be implemented until mid-2020. 2020 will also see a new round of tax reforms with a volume of roughly HRK 3.75 billion (EUR 508 million). These reforms are aimed at lowering the tax burden of the tourism industry and at boosting youth employment by e.g. reducing income taxes for citizens below the age of 25 by 100% and for citizens aged 25 to 30 by 50%. The government reaffirmed that it would cut the VAT from its current rate of 25% to 24%, lowering the rate even further to 13% for the hotel and tourism sector. The reform package also includes lower thresholds for profit taxation, higher excise duties on cigarettes and alcohol as well as a new tax on sugary drinks. Conditional on the necessary legal amendments, the proposed measures will take effect on January 1, 2020. Overall, we expect the above-mentioned measures to sustain private consumption growth in Croatia.

The main driver behind investment growth are EU funds, which finance roughly three-quarters of public investments in Croatia. We project investment growth to peak in 2019 and to decelerate over the forecast horizon as the momentum of EU fund absorption wanes. The projected investment trajectory is one of the main reasons behind the lower GDP forecast for both 2020 and 2021. There could be an upside if structural policies supporting investments were passed; given the fragmentation of Croatia's political scene, however, a strong reform momentum seems unlikely in the near term.

Public consumption should continue to make a moderate positive contribution to GDP growth over the forecast horizon, even though the Croatian government targets a broadly balanced budget over the next years and plans to reduce the public debt-to-GDP ratio by roughly 10 percentage points until 2021.

The negative contribution of net exports to GDP increased markedly compared to figures recorded in the same period in the previous year. Import growth is projected to remain high, driven largely by strong domestic demand. We forecast a moderate increase in export growth over the projection horizon as we expect economic developments in the euro area to improve again. The tourism sector is projected to continue growing moderately at the pace seen in both 2018 and the first half of 2019. Export developments, however, are subject to considerable uncertainty, especially when considering current headwinds to global trade.

Czech Republic: solid growth is driven predominantly by domestic demand

Despite some moderation compared to previous years, the expansion of the Czech economy is expected to continue at a solid pace of just below 3% in the period

from 2019 to 2021. Economic growth will continue to be driven predominantly by strong domestic demand on the back of robust private consumption and investment growth. After having put a drag on GDP growth in 2018, the contribution of net exports is expected to turn slightly positive in 2019 and neutral in the medium term.

Private consumption will keep expanding at a rather robust pace throughout the forecast period. This is because households' disposable income will continue to be spurred by still relatively vigorous growth in wages and other income components (e.g. entrepreneurial income and social benefits will also contribute positively to private consumption growth). In particular, following the unprecedented increase in January 2019 (of about 7% of average monthly pensions), pensions will be raised again at a similarly extraordinary rate far beyond the statutory indexation in 2020, which is likely to boost private consumption.

Public consumption will continue its fast growth particularly on the back of rising employee compensation in the government sector as well as social transfers and other nonwage expenses. However, the expansion in public consumption is projected to lose momentum in real terms as the growth of the deflator will outpace the increase in nominal expenditures.

Gross fixed capital formation is expected to slow down to less than half the pace recorded in 2018. This is, on the one hand, attributable to base effects; on the other hand, investment growth in the business sector has been dampened by a slowdown in external demand. While investment growth is projected to slightly accelerate over the remainder of the forecast horizon, a more pronounced expansion in investment activity will be held back by weakened external demand and tightened monetary policy. Tight labor market conditions, by contrast, will incentivize firms to improve labor efficiency by investing into automation and labor-saving technologies. In addition, public gross fixed capital formation will benefit from improving the drawdown of EU funds.

Expansion in exports will be dampened by slower growth in foreign demand and a tight labor market as strong increases in wages impair the price competitiveness of Czech firms. Import growth, which is typically tightly linked to export growth, will be reinforced by a sustained expansion in domestic demand. Against this background, net exports will only make a slightly positive contribution to GDP growth in 2019 before their impact on economic expansion will become virtually insignificant.

Hungary: economic policy measures temper slowdown

Real GDP grew by 5.2% during the first half of 2019, and thus at a slightly stronger pace than in the full year of 2018 and at a rate above the one anticipated in our last forecast (4.7%). Growth was driven by accelerating (instead of slowing, as expected) investments, while private consumption growth contracted by less than we had anticipated and public consumption unexpectedly strengthened (possibly in light of local elections in September 2019). Net real exports were less of a drain on overall GDP growth than expected in our forecast, mainly because import growth slowed down in parallel to a sharp reduction in inventories (while export growth picked up slightly on the back of stronger euro area imports). Based on the developments during the first half of 2019 and information on new economic policy measures, we have revised our GDP forecast upward over the entire projection horizon. Nevertheless, we still expect slowing dynamics in both 2019 and 2020, and a minor temporary uptick in 2021.

At the end of May 2019, the Hungarian government announced an Economy Protection Action Plan, including tax cuts and tax simplification measures, tax

incentives and financial support for business investments as well as support for R&D activities. Following the launch of the Funding for Growth Scheme Fix (FGS-fix) at the beginning of 2019, Magyar Nemzeti Bank moreover initiated a Bond Funding for Growth Scheme at the beginning of July 2019. The objective of this corporate bond purchasing program is to complement the FGS-fix by promoting the diversification of funding provided to the domestic corporate sector. Corporate bond issuance under the program is expected to gain speed in the last quarter of 2019. These measures, along with selected elements of the government's Family Protection Plan aimed at promoting home construction as well as a tight labor market (i.e. capital-for-labor substitution), are expected to provide a cushion for investment activity. Nevertheless, we expect investment growth to slow markedly from 2020 onward, as will the allocation of EU funds. Furthermore, the gradual erosion of economic sentiment, the worsening of export expectations and the modest easing of capacity utilization rates also point toward a slowdown of investment growth.

Most elements of the Family Protection Plan (including, inter alia, subsidized loans, debt takeovers and car purchase subsidies) came into effect in mid-2019. These measures, along with accelerating growth in loans to households, underpin private consumption. Nevertheless, private consumption dynamics are likely to moderate due to a strong base effect, slower employment and real wage expansion as well as somewhat weaker consumer confidence. In addition, to mobilize additional household savings for government debt financing, the Hungarian government introduced a new type of government bond specifically targeted at households in mid-2019. This new savings instrument is expected to not only change the structure of household savings, but also increase households' propensity to save through its attractive features (i.e. preferential yield, tax exemption, ready availability). We expect public consumption to ease in the second half of 2019 and in 2020, following a strong start into 2019. In light of parliamentary elections in mid-2022 and the entry into force of some elements of the Family Protection Plan in 2021, we expect consumption growth to gain some momentum in 2021.

Export growth is expected to hold up well, while sharp destocking should keep import growth restrained in 2019 despite strong domestic consumption and investment. Thus, the negative contribution of net real exports should decline notably compared to 2018. The combination of strengthening export growth in line with stronger euro area imports and slowing domestic demand is expected to keep import growth stable, leading to a modest improvement in net real exports for the remainder of the forecast horizon.

Poland: lower fixed investment growth will slow down GDP growth in 2020

In Poland, GDP growth will decline to 4.0% year on year in the second half of 2019, implying that full-year growth will slow down from 5.2% in 2018 to 4.3% in 2019. In 2020, the economy will expand at a lower rate of 3.8%. This moderate deceleration will mainly result from a further slowdown in domestic demand, causing the growth structure to become somewhat more balanced.

The composition of domestic demand, as measured by its contribution to GDP growth, will change significantly in 2020 as gross fixed capital formation growth will become substantially less dynamic. At the same time, private consumption growth will remain strong, accelerating by 4.0% in 2019 and ticking up further to 4.3% in 2020. Consumption growth will further be driven by the one-off thirteenth-month pension payment as well as an increase in public sector wages and several fiscal transfer measures, including the widening of family benefits to

higher income segments, which entered into force in July 2019. Changes in the personal income tax system (introducing a zero tax rate for persons under 26 years of age, lowering the first tax bracket to 17%, introducing higher deductible amounts for employees) will provide further support in 2020. These measures will more than offset the cyclical weakening of the labor market, which will become stronger in the course of 2020. Public consumption growth will remain strong both in 2019 and 2020, given public sector wage hikes envisaged for both years and post-election fiscal tightening.

Gross fixed capital formation growth will be slightly higher than in 2018, amounting to 9% in 2019. For 2020, we forecast a slowdown in investment growth, resulting in an annual growth rate of about 5%. Investment by the public sector, particularly by local governments, will almost stagnate in 2019 and 2020 as the EU funding cycle is coming to an end. This will have an adverse knock-on effect on investment growth in the business sector, adding to the direct impact that the fading-out of the EU funding cycle will have especially on publicly owned companies and to the negative effects stemming from weaker foreign demand. However, the slowdown in investment growth will be softened by robust domestic consumption, still high capacity utilization and the favorable financing situation with respect to both own funds (profitability, accumulated deposits) and external funds (low interest rates). Still, weaker investment growth will lead to a cyclical weakening of the labor market, which, in turn, will further slow down both business investment and residential investment in 2020.

In the full year of 2019, export growth will decelerate strongly as a result of the marked slowdown in both imports by the euro area (Germany, in particular) from outside the single currency area and imports by non-euro area countries. In addition, Polish manufacturing unit labor costs are expected to rise more strongly than those of its main trading partners. In 2020, Polish export growth will continue to weaken only slightly, reflecting the expected stabilization of German import growth and the uptick in imports by non-euro area countries. Import growth will come to about 5% in the full year of 2019, and will thus decline even more strongly than export growth. On the back of a turning inventory cycle, this implies a much lower buildup of stocks compared to the previous year. In 2020, import growth will decelerate further to 4.2% (and export growth to 4.4%) as domestic demand growth and fixed investment growth, in particular, will slow down. The contribution of net exports to GDP growth will be about zero in 2019 but slightly positive in 2020.

Romania: pickup in investments postpones economic slowdown

We revise our GDP growth forecast upward to 4.1% for 2019, and thus expect GDP growth in 2019 to approximately come to the same level as in 2018. The revision reflects stronger-than-projected growth in the first half of 2019, boosted by an unexpectedly strong rebound in gross fixed capital formation. While we had projected some recovery in our last forecast, the extent of the rebound in investment from subdued levels surpassed our projection. Moreover, our previous forecast mirrored heightened uncertainty regarding policy measures introduced in late 2018 (including taxes on bank assets). However, this policy package was amended at the end of March 2019, resulting in a marked reduction of the burden on banks. Nevertheless, we still expect growth to slow down to 3.3% in 2020 and to 2.8% in 2021, given increased needs for a correction in fiscal policies (as regards, inter alia, the adoption of the new pension law) and a challenging external environment.

Private consumption will remain the main growth driver over the projection horizon as real wages will continue to rise amid tight labor market conditions. Public wages are set to rise until 2021 as laid down in the unified wage law enacted in 2017, with possible spillovers to the private sector. In the short run, the 15% increase in pensions effective as of September 2019 will provide further support. According to the new pension law passed in June 2019, both 2020 and 2021 will see additional marked increases. Currently, high frequency data do not paint a clear picture as retail sales growth accelerated in July, while consumer confidence weakened in August. Since the yearly growth rate of private consumption benefited from base effects in the first quarter of 2019, we expect full-year growth to come in slightly below the figure seen in the first half of the year.

We expect gross fixed capital formation to continue to recover (mainly based on construction activity in the residential and nonresidential sector), supported by policy measures benefiting the construction sector. The continuation of investment recovery is also driven by sustained EU fund absorption. The upward trend in loans to nonfinancial corporations also bodes well for continued investment activity.

Weak export performance in the first half of 2019 and continued weak industrial production data coupled with downward revisions of euro area import growth explain our low projections for export growth in 2019. In 2020 and 2021, export growth in Romania is likely to accelerate in line with our external assumptions, albeit only slightly, given the rise in unit labor costs in the manufacturing sector. The negative contribution from net exports is projected to decline as import demand will slow down somewhat due to domestic demand developments.

3 Russia: state investment projects slightly boost the pace of economic growth

We forecast GDP to grow by 1.0% in 2019 and to recover slightly to 1.8% in 2020, before reverting to a growth rate of 1.6% in 2021. Fluctuations in global commodity markets continue to influence the pace of Russia's economic expansion, although the country has ample fiscal buffers to sustain even a significant decline in export prices. Our first basic assumption is that Russia will continue to pursue its current economic policies, which are geared to achieving macroeconomic stability and economic independence. This implies restrained growth in public sector expenditures, the accumulation of excess revenues in the National Welfare Fund, and a continuation of the central bank's inflation targeting. Economic independence implies favoring domestic products and services over imports as well as maintaining policies that restrict imports. Our second basic assumption relates to global oil prices (see footnote 4). Additionally, we assume that there will be no major shifts in EU-Russia or U.S.A.-Russia relations. While the current sanctions regime is expected to remain in place, we do not see either side impose new, wide-ranging restrictive measures or remove existing ones.

Private consumption growth in 2018 was supported by a rise in real wages and a very rapid increase in consumer credit, both of which are losing steam. Our baseline only allows for a relatively modest increase in public spending and a more pronounced, albeit temporary, expansion of public investments over the forecast period. The size of the National Welfare Fund increased above the threshold of 7% of GDP in August 2019 and may rise further (based on still relatively high oil prices), allowing

for some of the funds to be invested in domestic projects. We do not, however, expect a significant investment boost stemming from these funds.

Despite brisk growth in fixed investments in 2018, the level of investments (as a ratio to GDP) is still lower than in late 2014. In the first half of 2019, investment growth only came to 0.6% year on year, pointing to a significant slowdown in fixed investment growth. Given the high base effect in the second half of 2018, we do not expect substantial growth for the full year of 2019. In both 2020 and 2021, many of the projects envisaged in Russia's National Projects Program should proceed to the implementation phase, giving a boost to fixed capital formation. We do not expect any real and sustained changes in the investment climate during the forecast period. Uncertainties and lack of structural reforms will hamper private investments.

Russia's export and, above all, import developments have been very volatile in recent years. Overall economic growth was supported by rapid growth in export volumes in both 2017 and 2018. Early 2019, by contrast, saw a decline in exports. While a further surge in volumes of Russia's biggest export commodities (crude oil, petroleum products and natural gas) is unlikely, ramping up liquefied natural gas (LNG) production on the Yamal peninsula, the opening of a new gas pipeline to China and rapid growth in certain metal industry exports could sustain export growth in both 2020 and 2021. Given modest growth in domestic demand, import growth is likely to remain weaker than export growth, implying a small positive growth effect from net exports over the entire forecast period.

Upside and downside risks to the forecast for Russia are relatively balanced

Due to the floating exchange rate and adherence to its fiscal rule, Russia's economic performance has become less dependent on oil price movements. However, large changes in the price of Russia's top export commodity remain hugely important. Any significant rise or drop in crude oil prices will be reflected in the exchange rate of the Russian ruble, thereby affecting Russia's financial markets, cost of investment funding and net exports.

The sanctions imposed by the West have had a distinctly negative impact, particularly on Russia's financial markets. Amid the ever-present risk of a flare-up of geopolitical tensions, new sanctions or threats of new sanctions would undoubtedly have a negative, albeit relatively small, impact on Russia's medium-term growth outlook.

We expect government expenditure and fixed investment to grow modestly. If the government budget rule is relaxed or a significant share of the National Welfare Fund is used for domestic projects, investment growth could accelerate temporarily toward the end of the forecast horizon. Industrial capacity utilization remains extremely high and unemployment is historically low, underlining the need for new investments.

As in our previous forecasts, the largest source of uncertainty relates to net exports as forecasting Russian export volumes has proven to be quite a challenge. Changes in import volumes largely depend on domestic demand and import prices which, in turn, depend on the ruble exchange rate.

Studies

The impact of labor cost growth on inflation in selected CESEE countries

Clara De Luigi, Florian Huber, Josef Schreiner[1]

We analyze the relationship between labor cost and inflation in selected economies in Central, Eastern and Southeastern Europe (CESEE) by using a medium-scale time-varying parameter vector autoregressive model. The proposed framework makes it possible to control for potential movements in the underlying transmission mechanisms, stochastic volatility and flexible model selection. We use our model to simulate the effect of an unexpected labor cost shock and assess the dynamic reaction of inflation over the estimation period. Our findings indicate that a 1 percentage point increase in unit labor cost translates into higher inflation rates in most countries considered. However, the magnitude of the inflation reaction is very heterogeneous across countries and over time: the lowest response was observed for Bulgaria between 2008 and 2012 and the highest median response for Hungary between 2005 and 2007 (more than 0.4 percentage points). Moreover, we find that the wage-inflation pass-through weakened after the global financial crisis for most countries under consideration.

JEL classification: C11, C15, C32, E24, E31
Keywords: inflation, pass-through, labor cost, Bayesian methods, time-varying parameters

A commonly held view in economics is that prices reflect firms' costs of production plus a markup. As labor costs represent a sizable share of total production costs,[2] they should have a direct impact on the price level of an economy based on this notion. Accordingly, a move in labor costs should translate into changes of the inflation rate.

There are several reasons why this relationship does not necessarily hold in the short run. Not all components of the consumption basket are equally sensitive to changes in labor cost: Think of energy prices, which are mostly determined in global markets, food prices, which fluctuate because of weather conditions, housing prices, which depend to a considerable extent on the supply of housing, or the area of regulated prices, which is governed by political decisions. Furthermore, labor is not the only production factor. Changes in the costs of other tangible and intangible production inputs may interfere with wage developments. Finally, firms may decide to compensate for an increase in labor cost by lowering their profit margin to retain market share and/or to avoid costs associated with changing prices. In the longer run, however, a persistent increase in wages should at some point lead to higher inflation.

Even though this proposition has been reviewed extensively in the literature, the empirical results remain inconclusive. Peneva and Rudd (2017), for example, find that changes in labor cost have had only little material effect on price inflation in the U.S.A. in recent years. Depending on the specific measure of compensation used in the estimations, they find that the pass-through of labor cost to prices has either fallen over the past decades or that independent changes in labor cost have had essentially no material effect on inflation in recent years.

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[2] *The share of wage costs in the selected CESEE countries ranges from 73% to 85% (lowest in the Czech Republic and Slovakia and highest in Bulgaria and Croatia). Figures based on 2017 data (Eurostat).*

Bobeica, Ciccarelli and Vansteenkiste (2019), to the contrary, find a strong link between labor cost and price inflation in the four major economies of the euro area and across three main sectors. The relationship, however, is time varying and depends on the state of the economy (especially with regard to the level of inflation) and shocks hitting the economy (see also Forbes et al., 2018).[3]

Empirically, it even remains unclear whether shifts in labor cost precede or follow prices.[4] Knotek and Zaman (2014) report moderate (and over time, declining) correlations between inflation and different wage measures at all leads and lags. In the same vein, Church and Akin (2017) find evidence for both hypotheses in a model using U.S. consumer and producer prices and employment costs. A model calibrated only for core price indexes excluding food and energy suggests that shocks to consumer prices have a significant long-run effect on employment costs but not vice versa. This implies that even the direction of transmission between wages and prices remains ambiguous.

This study sheds new light on the relationship between labor cost and prices by focusing on the experience of selected Central, Eastern and Southeastern European EU Member States (i.e. all CESEE EU Member States except the Baltic countries). These eight countries were chosen because of an especially interesting combination of wage and price developments in recent years: strong wage growth observed against the background of tightening labor markets since 2016 coupled with sustainably low inflation (or even deflation). Average nominal hourly wage growth in the CESEE region accelerated to around 12% in the second half of 2018, far outstripping productivity developments. At the same time, HICP and core inflation remained rather contained at around 2% and 1.5%, respectively. We estimate the effect of an increase in unit labor cost (ULC, i.e. compensation adjusted for productivity) on inflation in the eight selected CESEE countries to assess whether the pass-through has changed over time in the region.

Our research question is addressed through a novel macroeconometric model that allows for drifting parameters and error variances. To circumvent issues associated with overparameterization, we propose using recent shrinkage techniques that push irrelevant predictors toward zero. Moreover, the question of whether coefficients should be time varying or constant is handled through mixture innovation components on the state innovation variances. Since an exact estimation of such a model is unfeasible, we use a straightforward approximation as proposed in Huber et al. (2019) that relies on approximating the mixture indicators during Markov chain Monte Carlo (MCMC) sampling. The resulting MCMC draws are then used to compute the dynamic responses of inflation to ULC shocks.[5]

[3] *In a state-dependent VAR setting, the authors find that the pass-through is stronger at high levels of inflation, while the wage-price link is weak in times of low inflation (or deflation). They also show results for conditional and unconditional forecasting performance finding that, in the four major euro area countries and for most sectors, labor cost has more forecasting power for price inflation than the other way around.*

[4] *From a theoretical perspective, labor cost and inflation are expected to be closely interrelated only in the long run, while, in the short run, firms might be willing to sell at any given price set by the market. Price rigidities, such as menu costs, might also impede sudden price adjustments. Moreover, in New Keynesian models, wages are often determined according to inflation expectations; therefore, depending on whether price or wage rigidities are prevailing, we could expect prices either to follow or lead wages.*

[5] *Time-varying parameter models have been successfully used for forecasting GDP growth in CESEE economies (see, for instance, Feldkircher and Hauzenberger, 2019).*

Our findings point toward a positive, but relatively weak, relationship between ULC growth and inflation for most CESEE countries considered. Furthermore, the responses of price growth to ULC shocks tend to vary strongly across countries and over time. The strongest effect of a 1 percentage point increase of ULC growth on inflation is observed between one quarter and one year after the shock. The median impact of the ULC shock reaches a maximum of more than 0.4 percentage points in Hungary between 2005 and 2007. At the other end of the spectrum, a ULC shock of 1 percentage point translates into a deceleration of inflation by 0.05 percentage points in Bulgaria in the period between 2008 and 2012 (however, those estimates are insignificant). Moreover, we find that most countries experienced a weakening of the pass-through after the global financial crisis. This result corroborates what we see in the data, namely that the effect of the recent strong growth in labor cost on inflation has been rather moderate so far.

This paper is structured as follows: Section 1 describes the data and shows some descriptive statistics. Section 2 introduces the econometric framework, briefly discusses the prior setup and outlines the estimation strategy. Section 3 presents the results including the dynamic responses of inflation to ULC shocks. The final section summarizes the results, elaborates on some further research questions and concludes the paper.

1 Data description

In our analysis, we concentrate on the link between ULC[6] and HICP inflation in eight Central, Eastern and Southeastern European EU Member States: Bulgaria, Croatia, the Czech Republic, Hungary, Poland, Romania, Slovakia and Slovenia. We collected quarterly data over the period from Q1 1995 to Q4 2018. It needs to be noted, however, that in several cases time series are notably shorter (some start only around the year 2000). The dataset includes the following series: the log difference of ULC, the log difference of HICP inflation, real GDP, the nominal effective exchange rate, the log difference of a commodity price index (HWWI index including food, raw materials and energy), oil prices and one-month money market rates. Further details on data sources and data series included in the estimations are provided in the annex.

It should be noted that a considerable number of authors claim that the inclusion of global variables is becoming increasingly important for explaining local consumer price inflation (see, e.g., Borio and Filardo, 2007; Kabukçuoğlu and Martínez-García, 2018; Kamber and Wong, 2018). The inclusion of financial variables and nominal exchange rate and global price indices (such as oil and energy prices) accommodates the exposure of CESEE countries to external shocks in our model.

Chart 1 shows annual changes in ULC and the HICP. In the period under review, price developments were characterized by a broad-based trend of disinflation approximately up until 2005, reflecting economic stabilization after the early years of transition, increased competition (especially at the international level), a shift of monetary policy away from exchange rate stabilization toward inflation targeting

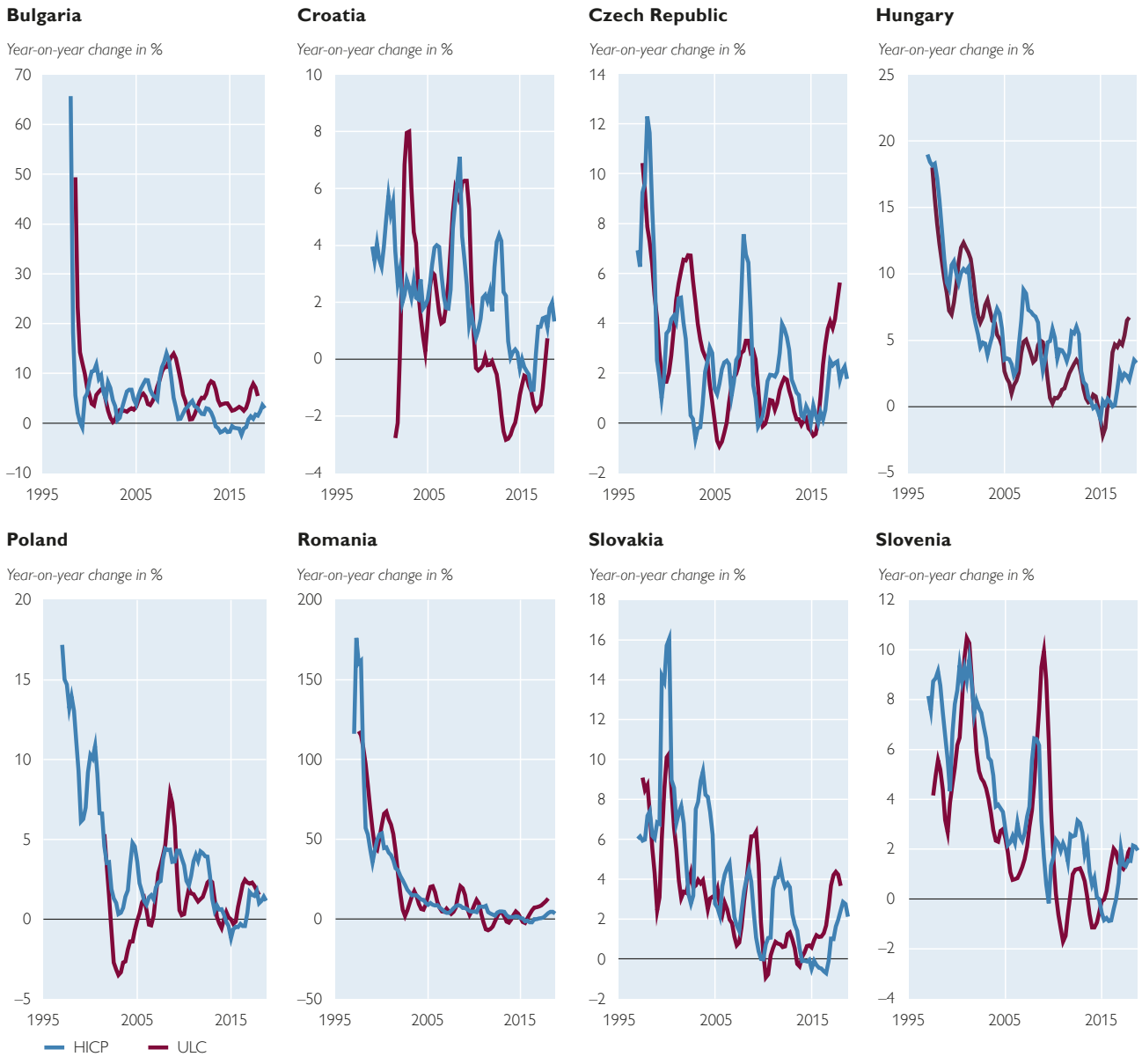
[6] *With unit labor cost (ULC) we refer to the ratio of labor cost to labor productivity on the level of the whole economy. Nominal ULC is calculated as follows: the ratio of compensation of employees to hours worked divided by the ratio of GDP to hours worked. In our analysis, we use ULC instead of compensation of employees since, from a theoretical perspective, only wage increases in excess of productivity growth should put upward pressure on prices. As a robustness check, we also ran the estimations for a wage (compensation of employees) shock. These results are available upon request.*

in many countries and – later on – a stronger reform momentum in the run-up to EU accession. ULC figures by and large mirrored this downward trend. Compensation of employees, however, tended to grow faster than inflation, implying increasing real wages. The latter tendency was a by-product of the greater economic catch-ing-up process. In some countries, however, strong real wage advances can also be partly related to a cyclical overshooting.

In the boom years around the 2004 EU enlargement round, prices and ULC again trended up notably, reflecting buoyant (partly credit-fueled) domestic demand and record-high GDP growth as well as tightening labor markets amid

Chart 1

HICP and ULC over time

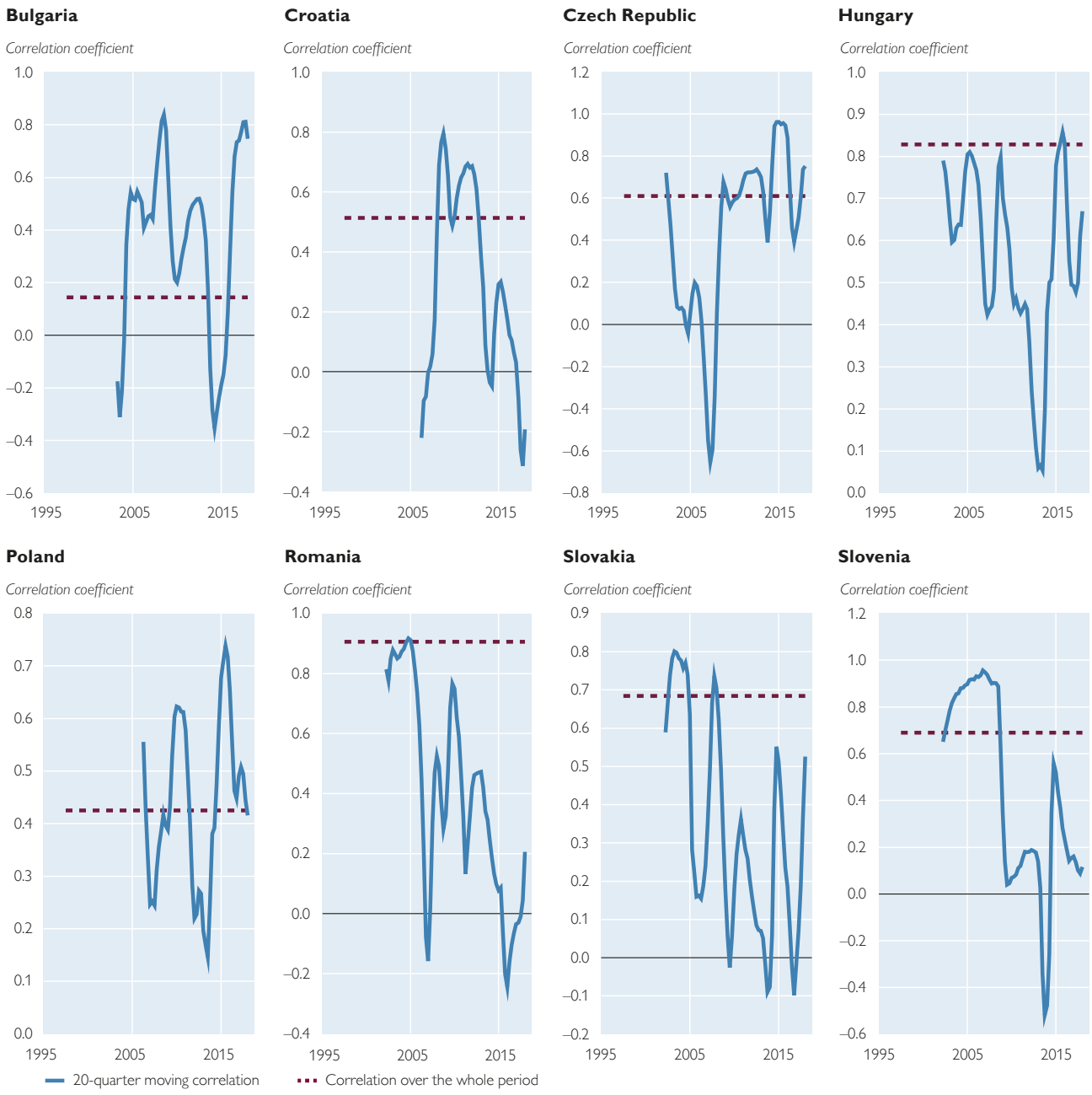


Source: Eurostat.

continuing emigration. The crisis of 2008 and the subsequent years put an end to this phase and sent prices on a downward trend. This trend – temporarily interrupted between 2011 and 2013, when oil prices climbed to above USD 100 per barrel – culminated in a period of deflation around 2015 and 2016. ULC dynamics were heterogeneous. After a notable decline in the aftermath of the crisis, ULC growth again accelerated somewhat until late 2012. At that time, the sovereign debt crisis had sent the euro area into recession for some quarters already, which

Chart 2

20-quarter moving correlation versus correlation over the whole sampling period



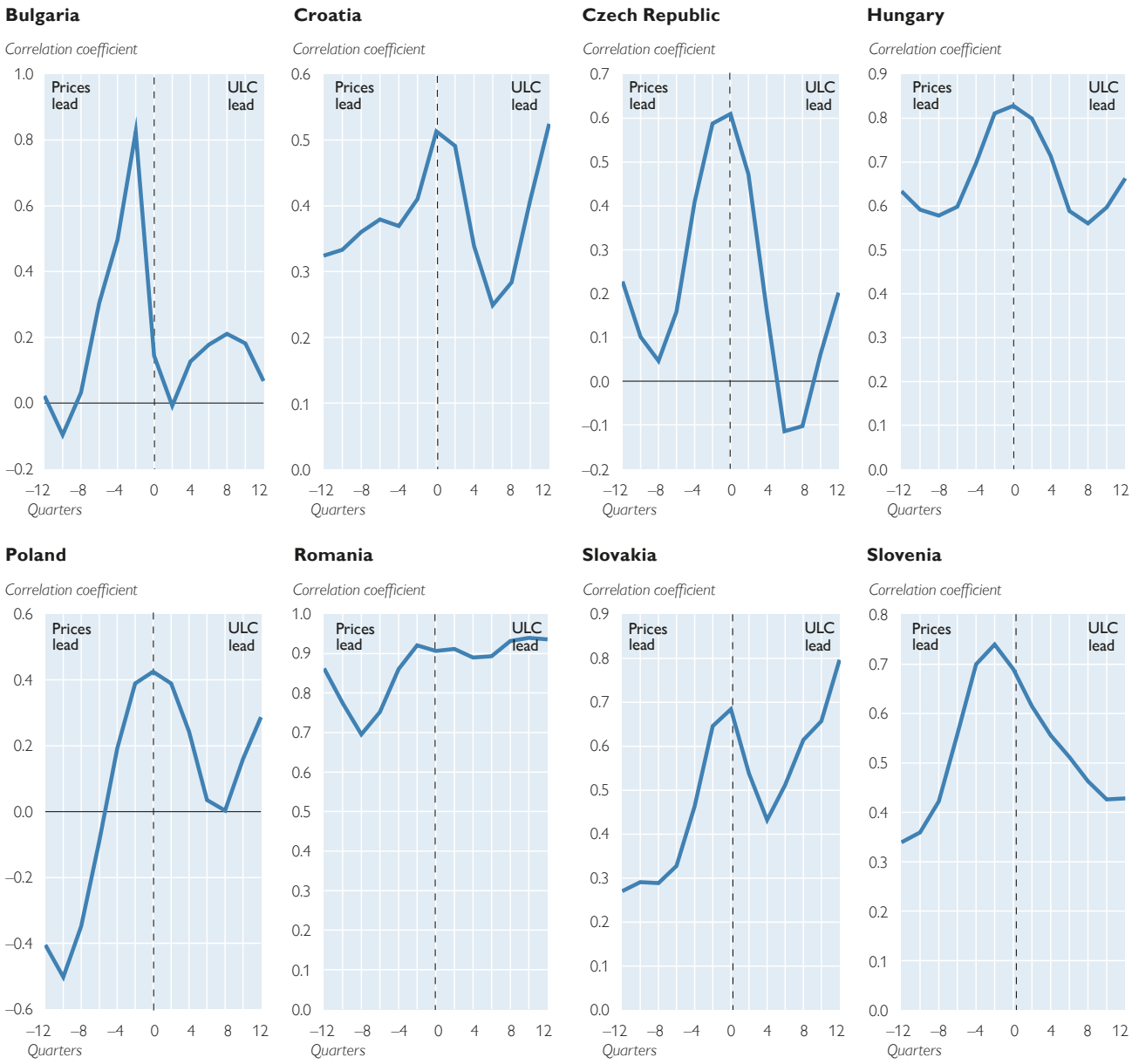
Source: Authors' calculations.

negatively impacted on general economic and wage developments in CESEE. In recent years, ULC dynamics again gained speed and ULC growth reached the highest levels in a decade in many CESEE countries. At the same time, inflation rates remained broadly contained despite an economy in full swing.

Chart 2 shows the correlation between inflation and ULC growth over the whole available time period as well as for a moving window of 20 quarters. Over the whole period, correlations range from 0.14 in Bulgaria to 0.91 in Romania, with the correlation coefficient for the region as a whole amounting to an average of 0.58.

Chart 3

Correlation coefficients of HICP inflation and ULC growth at different leads and lags



Source: Authors' calculations.

For different time frames, the correlations are rather heterogeneous across countries. In a greater regional perspective, however, co-movements are highest in phases of strong economic growth. For the region on average, for example, the correlation coefficient was highest in the five years up to 2008 (0.66), i.e. the boom years after EU accession up to the crisis. Before and after that, correlation was notably weaker. Recently, the average correlation coefficient increased from a low of 0.02 in 2014 to 0.61 in 2018.

Chart 3 shows cross-correlations, which enables a simple examination of the lead-lag structure of the correlations. If increases in compensation systematically come ahead of price inflation in the data, then the strongest cross-correlation would be expected between labor cost inflation in quarter t and price inflation in a later quarter t+x (i.e. higher correlation would appear at point x on the right-hand side of the plots).

This exercise draws a rather heterogeneous picture of the lead-lag structure connecting ULC growth and price inflation. In general, however, the single-strongest correlations usually appear in a specification with no lag or a specification with only a moderate lag of two quarters. Furthermore, we find rather strong correlations in models where ULC growth leads price growth by 12 quarters (e.g. Croatia, Poland, Romania and Slovakia).

2 Econometric framework

To investigate the relationship between ULC growth and inflation in the selected CESEE countries, we consider both the short- and long-run relationships among the two quantities of interest. First, we analyze how the persistent components of ULC and trend inflation co-move over time. Then, we estimate the short-run relationship by considering impulse responses to an increase in ULC growth on inflation over different horizons. For this purpose, we use a time-varying parameter vector autoregressive model with mixture innovations and stochastic volatility (TVP-VAR-SV), which is described in this section. The less technical reader can skip this section and move to section 3.

The dynamic econometric framework adopted is summarized in section 2.1. In section 2.2, we discuss the prior setup used and briefly consider the MCMC algorithm employed.

2.1 TVP-VAR-SV model with mixture innovations

The goal of the present paper is to investigate the dynamic relationship between labor cost growth and inflation in selected CESEE countries. When addressing this research question, we encounter several difficulties that we aim to solve using a novel econometric model. First, for some of the economies we consider in this paper, the length of the time series is rather short (i.e. starting around the early 2000s). This calls for shrinkage techniques to obtain reliable estimates and alleviate overfitting issues. Second, most CESEE countries have undergone structural changes and may have experienced shifts in the wage-inflation pass-through, implying that the parameters of the underlying regression model are possibly time varying. Finally, the estimation period we consider is characterized by major economic shocks that are assumed to affect not only the transmission channels but, more importantly, the magnitudes of the structural shocks.

A model that can handle all three issues raised above is a time-varying parameter VAR model with stochastic volatility (TVP-VAR-SV) proposed in Primiceri (2005) and Cogley and Sargent (2005). This model assumes that the relationship between an M-dimensional vector of macroeconomic quantities y_t evolves according to:

$$y_t = (I_M \otimes x_t')\beta_t + \varepsilon_t, \quad (1)$$

where $x_t=(y'_{t-1},\ldots,y'_{t-p},1)$ is a $K(=pM+1)$-dimensional vector that includes the lags of y_t, and a constant β_t is a MK-dimensional vector of time-varying regression coefficients, while $\varepsilon_t \sim N(0,\Sigma_t)$ is a Gaussian white noise shock vector with time-varying variance-covariance matrix Σ_t. In what follows, we decompose Σ_t as follows:

$$\Sigma_t = Q_t H_t Q_t', \quad (2)$$

where Q_t denotes a lower unitriangular matrix (i.e. lower triangular with a unit diagonal) of dimension $M \times M$ and $H_t=diag\{exp(h_{1t}),\ldots,\exp(h_{Mt})\}$ is a diagonal matrix, while $h_{jt}(j=1,\ldots,M)$ denotes the time-varying variances. For simplicity, we store all free elements in Q_t in a v-dimensional vector q_t (with $v = M\frac{M-1}{2}$).

For convenience, we stack the VAR coefficients and the covariance parameters in a $(K+v)$-dimensional vector $\alpha_t=(\beta_t',q_t')'$. Consistent with the literature, α_t evolves according to a random walk process,

$$\alpha_t = \alpha_{t-1} + \eta_t. \quad (3)$$

We let η_t denote a Gaussian error term with $\eta_t \sim N\{0, diag(\theta_{1t},\ldots,\theta_{K+v,t})\}$. The error variances in equation (3) are given by:

$$\theta_{jt} = \theta_{j1} d_{jt} + \theta_{j0}(1 - d_{jt}), \quad (4)$$

where d_{jt} is a binary indicator that follows a Bernoulli distribution with $Prob(d_{jt}=1)=p_j$ and $\theta_{j1} \gg \theta_{j0}$ are scaling parameters with $\theta_{j0} \approx 0$. This specification implies that if $d_{jt}=1$, the corresponding regression coefficient α_{jt} varies over time, whereas in the case that $d_{jt}=0$, the change in α_{jt} is essentially zero. In what follows, we do not estimate θ_{j0} but set it equal to $\left(\frac{0.1}{4}\right)^2 \hat{\theta}_j$, with $\hat{\theta}_j$ denoting the ordinary least squares variance obtained by estimating a linear regression model.

This specification turns out to be a highly flexible variant of a mixture innovation model originally proposed in Gerlach et al. (2000) and Koop et al. (2009). Our model allows for flexible testing whether coefficients should be time varying, constant or a mixture of both (i.e. dynamic over certain periods in time). Notice that if $d_{jt}=0$ for all j and t, we obtain a constant parameter VAR with stochastic volatility. The indicators make it possible to obtain a parsimonious model specification. This feature is crucial for our present application, since the number of quantities in y_t is moderate and the length of the time series rather short.

Our model is completed by the assumption that the logarithm of the error variances follows a random walk with constant error variances. This captures the notion that the log volatilities feature a rather smooth evolution through time.

2.2 Bayesian prior setup and estimation

In this section, we briefly sketch our estimation strategy. Since the model outlined in section 2.1 is heavily parameterized and the likelihood function of the model is difficult to optimize, we follow a Bayesian approach. This implies that we have to specify prior distributions on all key parameters.

Starting with the initial state α_0, we use a Normal-Gamma prior in the spirit of Griffin and Brown (2010) that flexibly pushes elements in α_0 to zero. For a given element in α_0, this prior is given by:

$$\alpha_{0j}|\tau_j \sim N\left(0, \frac{\tau_j}{2\lambda}\right),\ \tau_j \sim G(c_0, c_0), \lambda \sim G(e_0, d_0), \tag{5}$$

where τ_j denotes a local scaling parameter that features a Gamma prior with hyper-parameter c_0, while λ is a global shrinkage parameter that also follows a Gamma distribution with parameters e_0 and d_0 a priori. A large λ forces all elements in α_0 to zero, while the presence of the local shrinkage parameters τ_j allows for non-zero α_{0j}'s. We follow Huber and Feldkircher (2019) and set e_0=d_0=0.01 and c_0=0.1. Finally, on θ_{j1} and the error variances of the stochastic volatility processes, we use inverted Gamma priors set to be weakly informative.

Since estimating a mixture innovation model with K+v Bernoulli indicators is computationally challenging, we adopt the approximation proposed in Huber et al. (2019) and adopt the corresponding MCMC algorithm. This implies that the full history of d_t is approximated through

$$\hat{d}_{jt}^{(i)} = \begin{cases} 1\ if\ \left|\Delta\alpha_{jt}^{(i-1)}\right| > c_j \\ 0\ if\ \left|\Delta\alpha_{jt}^{(i-1)}\right| \leq c_j \end{cases} \tag{6}$$

during MCMC sampling. Here, we let c_j denote a threshold that features a uniformly distributed prior and the superscript (i) indicates the i^{th} MCMC draw. This approximation captures the notion that if the absolute change in the dynamic regression coefficients exceeds a threshold c_j, we allow for this change by using a high variance of the innovation. By contrast, if it falls below the threshold we use a process innovation variance close to zero and effectively rule out movements in the parameters going from time t–1 to t.

Our MCMC algorithm cycles between the full conditionals that are mostly available in closed form. One exception is the full conditional posterior of c_j, where an inverse transform sampling step is performed. For all empirical results that follow, we use 30,000 MCMC iterations and discard the first 15,000. More details on the proposed model, estimation technique and convergence characteristics can be found in Huber et al. (2019).

3 Empirical results

In this section, we start by describing the time-varying low-frequency relationship between ULC and inflation. This analysis makes it possible to investigate how the persistent components of ULC growth and trend inflation co-move over time. Then, we consider the short-run relationship between ULC growth and inflation by considering impulse responses to a 1 percentage point increase in ULC growth on inflation over different horizons.[7]

[7] *We also ran the estimations for a simple wage shock (compensation of employees) and the results did not change qualitatively.*

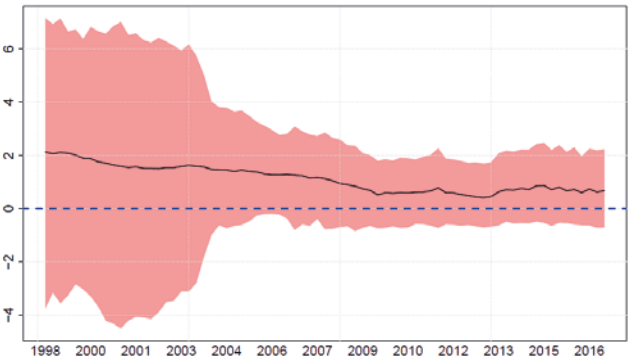
Before proceeding to the empirical analysis, it is worth emphasizing that the time variation in all quantities reported in this section arises from three different sources: changes in the reduced-form VAR coefficients, in the matrix of impact innovations and in the stochastic volatilities. The first two sources potentially impact key transmission mechanisms, while changes in error volatilities mainly reflect movements in uncertainty associated with one-step-ahead prediction errors.

Chart 4.1

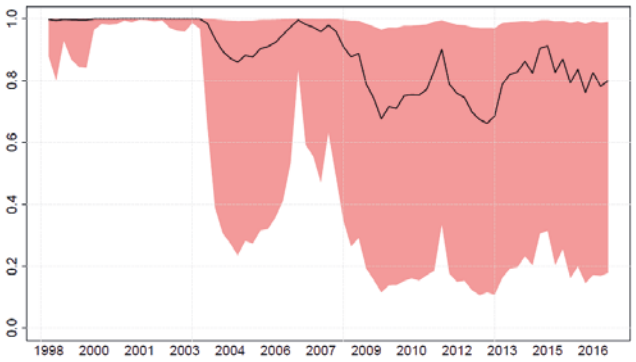
Low-frequency relationship between wages and inflation, and the corresponding measure of fit

Bulgaria

Median and 90% posterior percentiles of the time-varying coefficients of wages on inflation

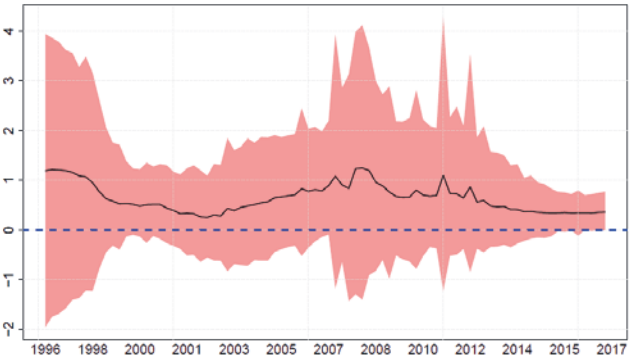


R-squared of wages over price inflation

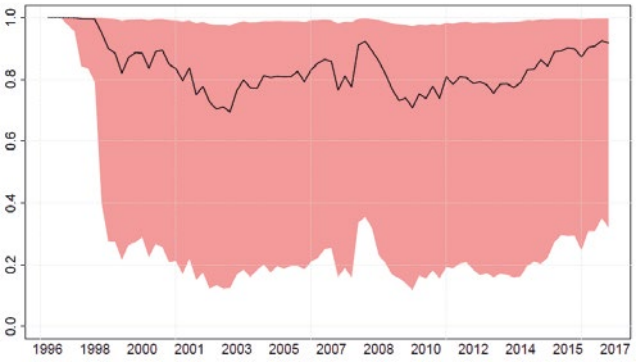


Czech Republic

Median and 90% posterior percentiles of the time-varying coefficients of wages on inflation

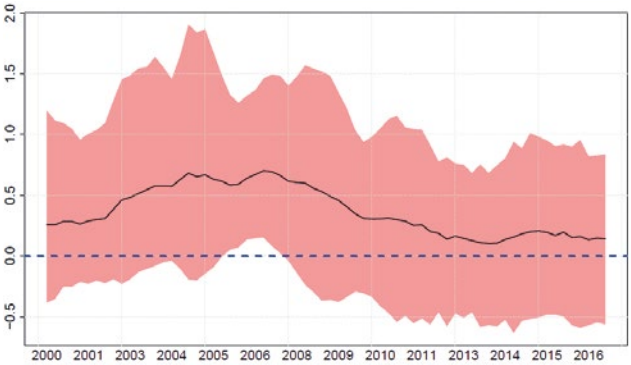


R-squared of wages over price inflation

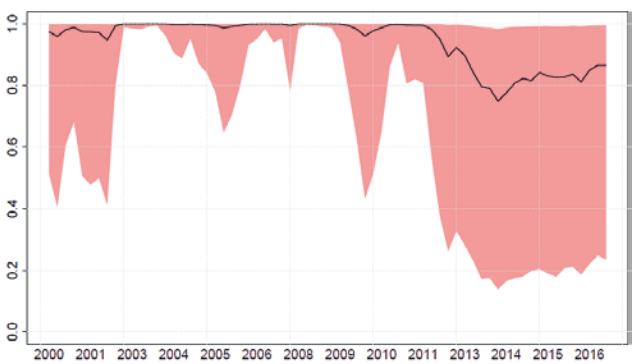


Croatia

Median and 90% posterior percentiles of the time-varying coefficients of wages on inflation



R-squared of wages over price inflation



Source: Authors' calculations.

Charts 4.1 to 4.3 show the low-frequency relationship between ULC growth and inflation (i.e. the long-term evolution of the regression coefficients of wages on inflation) on the left-hand side, together with the corresponding measure of fit, the squared coherency, on the right-hand side (for further details, see Sargent and Surico, 2011; Kliem et al., 2016).[8]

The plots on the left-hand side generally show a positive persistent relationship between ULC growth and inflation. However, the relationship is not equally strong in all countries. Over the whole observation period, we see the lowest coefficients for Poland and Croatia (below 0.5) and the highest coefficient for Bulgaria (around 2). Furthermore, coefficients change notably over time. In particular, the economic and financial crisis seems to have altered the relationship between ULC growth and inflation. In most countries, we see a weakening of the coefficients around 2008. In Croatia, for example, the coefficient declines from around 0.8 in 2007 to close to zero in 2014 and the following years. We also see an increase in the confidence bands around the coefficients in several countries, indicating a higher level of uncertainty in the estimations (e.g. for the Czech Republic, Croatia, Romania, Slovenia and Slovakia).

A changing relationship between ULC growth and inflation is also illustrated by the plots on the right-hand side of charts 4.1 to 4.3. These charts depict the coherency measure, a measure that is akin to the R-squared of a regression model, and show how much of the variation in price inflation is explained by ULC dynamics. We find that ULC was driving the variation in inflation in the years up to the crisis in most countries. Exceptions include Poland and the Czech Republic, where the R-squared is notably more volatile and the confidence bands are much larger than in the other countries of the CESEE region. At around 2008, ULC growth loses explanatory power for inflation variation in all countries. At the same time, confidence bands in the plots of the R-squared measure increase notably for most countries.

In what follows we describe the country-specific time-varying impulse responses by inflation to a 1 percentage point increase in ULC growth to assess whether the magnitude of the pass-through has changed over time. For the identification we employ Cholesky ordering with zero restrictions. Following Bobeica et al. (2019), we assume that inflation reacts with a lag to movements in ULC. In addition, we allow financial variables to react within the same quarter, following the assumption that financial markets react more quickly to shocks in the economy than consumer prices.[9]

Due to the time-varying nature of the model, we plot the distribution of the responses over the estimation sample and for four different time horizons: one quarter, one year, two and three years. The responses of inflation to a 1 percentage point increase in ULC growth are presented in charts 5.1 and 5.2. Additional responses showing the subsequent reaction of ULC to a ULC shock can be found in the annex.

[8] *We can rewrite our model in state-space form and compute the spectral density matrix at frequency zero in time t. These figures can be considered an approximation of the sum of distributed lag coefficients of a two-sided least-squares projection of order infinity of inflation on ULC growth. Another feasible approach would be to estimate the low-frequency component of inflation and ULC by relying on a filter and then compute the slope of a scatter plot between the two low-frequency components (see Whiteman, 1984; Kliem et al., 2016). This approach, however, would make it difficult to spot any time variation in the low-frequency relationship.*

[9] *Robustness checks were carried out with respect to different orderings of the endogenous variables to identify the shock. It should be noted that the one-year-ahead impulse responses to a 1 percentage point increase in ULC do not change when altering the ordering of the variables.*

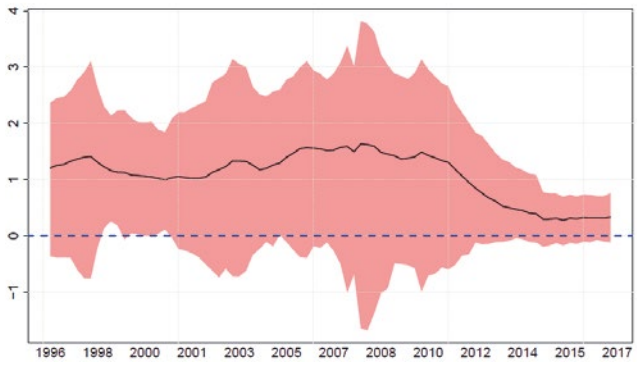
Looking at the reaction of inflation to a 1 percentage point increase in ULC growth (charts 5.1 and 5.2), we observe that the responses are highly time- and country-dependent. In Bulgaria and Slovenia, the responses remain insignificant over the whole sample and for all horizons, indicating a weak link between wages and price inflation. Moreover, in Bulgaria, the median response of inflation turns

Chart 4.2

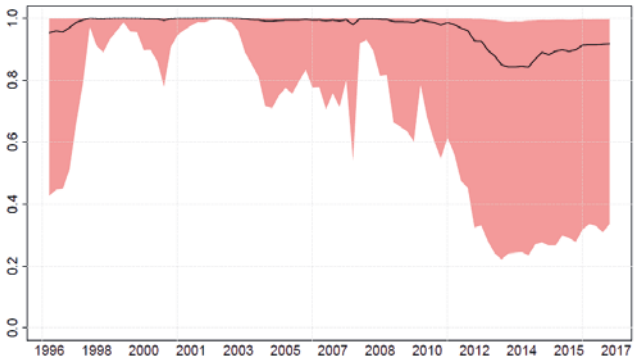
Low-frequency relationship between wages and inflation, and the corresponding measure of fit

Hungary

Median and 90% posterior percentiles of the time-varying coefficients of wages on inflation

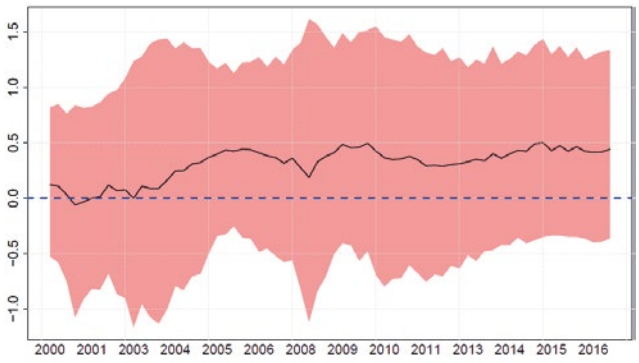


R-squared of wages over price inflation

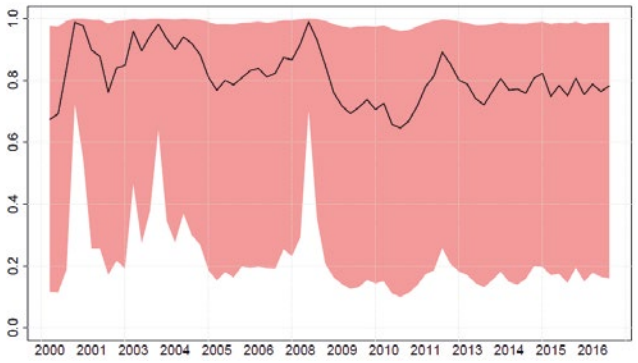


Poland

Median and 90% posterior percentiles of the time-varying coefficients of wages on inflation

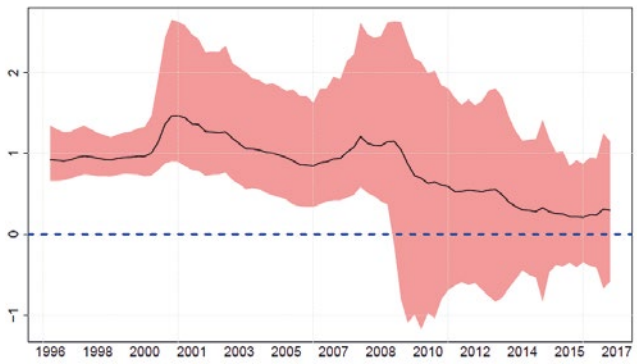


R-squared of wages over price inflation

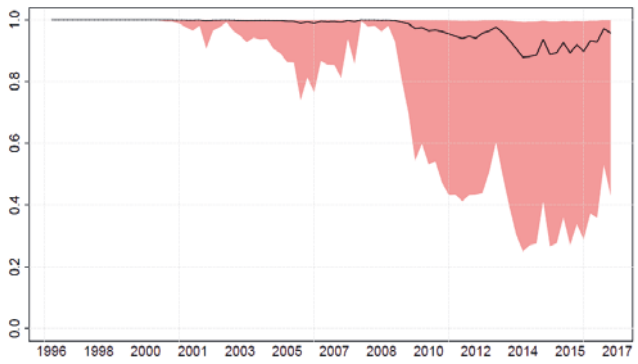


Romania

Median and 90% posterior percentiles of the time-varying coefficients of wages on inflation



R-squared of wages over price inflation



Source: Authors' calculations.

negative (approaching –0.05 percentage points) after the global financial crisis, indicating the most notable failure of the wage-inflation pass-through among the countries in the CESEE region. The peculiar responses of inflation to a ULC shock in Bulgaria could be due to the sustained wage growth that the country experienced, despite the long deflationary episode which lasted from 2013 to 2016. In Slovenia, the median responses remain very low over the whole sample but show slightly stronger and more persistent reactions in 2006 and in the last two to three years of the sample, due to the higher persistence of the labor cost shock (see chart A1.2 in the annex).

In the remaining countries, the link between labor cost and price inflation is more pronounced. In the Czech Republic, Hungary and Slovakia, the response of inflation to ULC shocks is positive and mostly significant already after the first quarter, while in Croatia, Poland and Romania, the reaction is slower and becomes significant only one year after the shock.

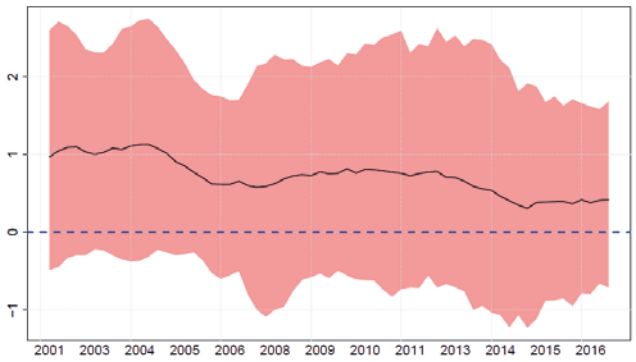
Median responses of inflation reach their maximum magnitude of about 0.4 percentage points in Hungary, followed by the Czech Republic, which shows a reaction of above 0.2 percentage points. The highest responses are mostly observed in the period between 2005 and 2008, but remain high in the Czech Republic up to

Chart 4.3

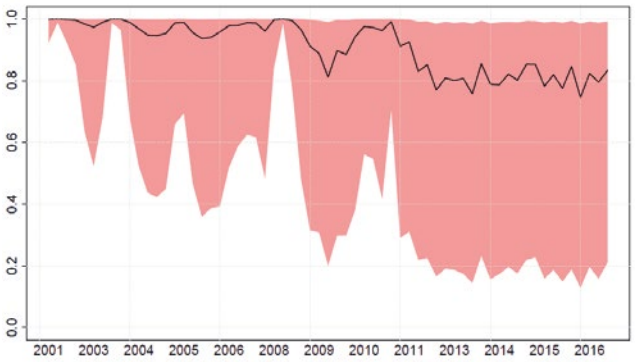
Low-frequency relationship between wages and inflation, and the corresponding measure of fit

Slovenia

Median and 90% posterior percentiles of the time-varying coefficients of wages on inflation

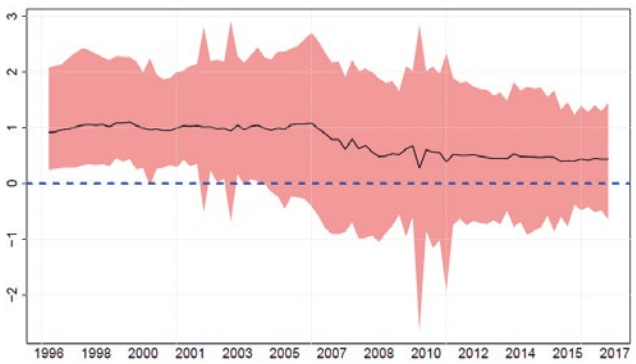


R-squared of wages over price inflation

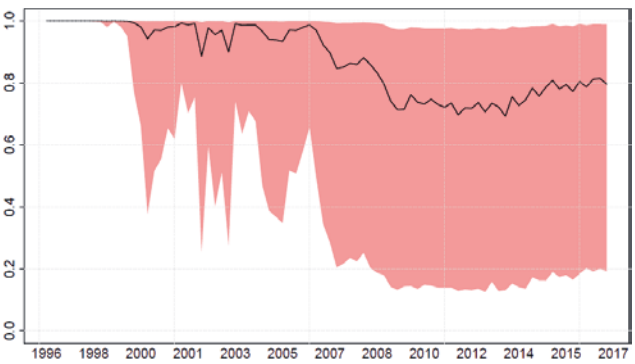


Slovakia

Median and 90% posterior percentiles of the time-varying coefficients of wages on inflation



R-squared of wages over price inflation



Source: Authors' calculations.

the end of the sample. Moreover, the shock displays relatively high persistence in the Czech Republic: Our simulations show strong and significant reactions of inflation (above 0.2 percentage points) at the two-year and three-year horizons in recent years. The Czech Republic is the only CESEE country with such long-lasting inflation reactions to labor cost shocks. This phenomenon is explained by the persistence of ULC shocks in recent years: As shown in chart A1.1 in the annex, ULC remains notably high even three years after the shock. In most of the other countries under observation, the shock has practically faded out after two years already.

Finally, in Poland, the effects of labor cost shocks appear most significant between 2005 and 2011, showing their peak one year after the shock and fading out quickly within the following year. In Romania, on the other hand, inflation reacts relatively strongly in the late 1990s and in the early 2000s, reaching a peak of 0.15 percentage points at the one-year horizon, but showing insignificant reactions otherwise.

As a general observation, prices tend to react less to ULC changes in the period after the crisis. This is true for most countries and most time horizons following a simulated shock (e.g. in Bulgaria, the Czech Republic, Croatia, Hungary and Poland). Furthermore, estimates tend to become less significant after 2008 in virtually all countries under observation. This provides further evidence for the weaker pass-through of wages to prices after the crisis, which we already observed in charts 4.1 to 4.3. Our results corroborate the findings in the literature claiming that the relationship between labor cost and price inflation varies over time and especially depends on the level of inflation: At high levels of inflation the pass-through is stronger, whereas during (and after) times of low inflation (or deflation) the wage-price link is weaker.

Taylor (2000) finds low inflation to be associated with lower expected inflation persistence and with a weaker wage-price and exchange rate pass-through. In fact, the degree to which firms match increases in marginal costs depends on how permanent these changes are (expected to be). When inflation is lower and more stable, changes in wages and prices are expected to be only temporary and firms will pass on less of these changes. This also implies that, under monetary policy aimed at price stabilization, the persistence of deviations of inflation from its trend is expected to be lower, and the pass-through will be weaker. It is worth noting that most of the selected countries show a strong decline in trend inflation in the late 1990s and early 2000s. Policy changes aimed at inflation stabilization in CESEE countries might partly justify the lower explanatory power of wage growth on inflation observed in most countries in the second part of the time series (see charts 4.1 to 4.3).

The weaker pass-through following low levels of inflation might also be explained with downward wage rigidities and different degrees of economic uncertainty which might drive firms' decisions to buffer increases in labor cost with profit margins (Daly and Hobijn, 2014, and Bobeica et al., 2019). In fact, in times of high inflation, firms are more likely to pass through higher production costs to prices, especially if they expect rising interest rates to squeeze future profit margins.[10]

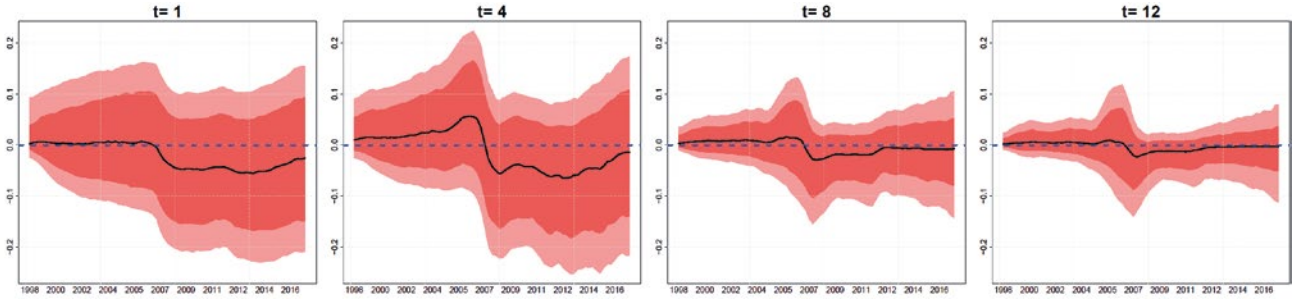
[10] *The opposite might hold if interest rates are expected to decrease when inflation is low (Bobeica et al., 2019).*

Chart 5.1

How does a 1 percentage point increase in ULC affect HICP inflation over time?

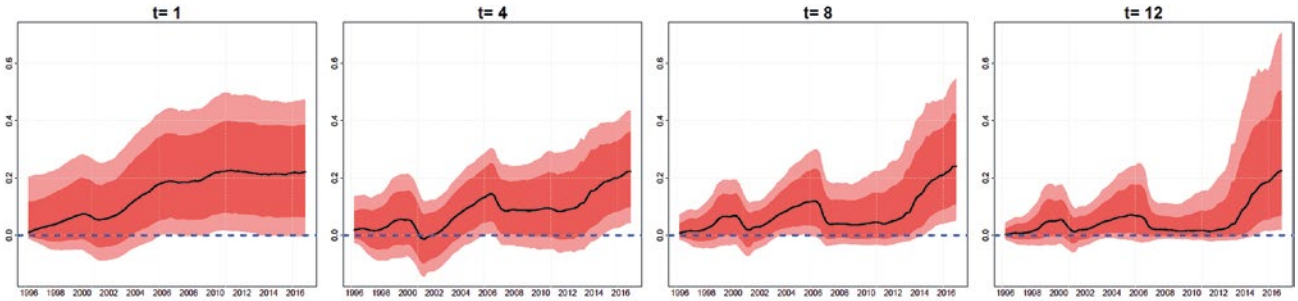
Bulgaria

Impulse responses after one quarter, one, two and three years



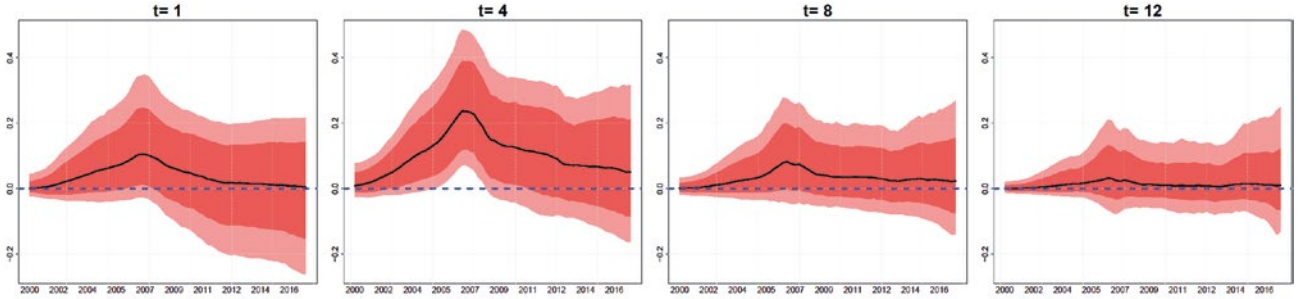
Czech Republic

Impulse responses after one quarter, one, two and three years



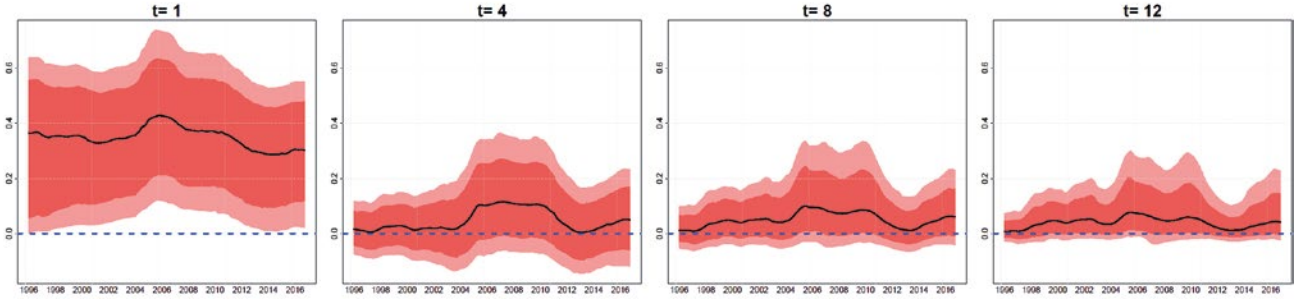
Croatia

Impulse responses after one quarter, one, two and three years



Hungary

Impulse responses after one quarter, one, two and three years



Source: Authors' calculations.

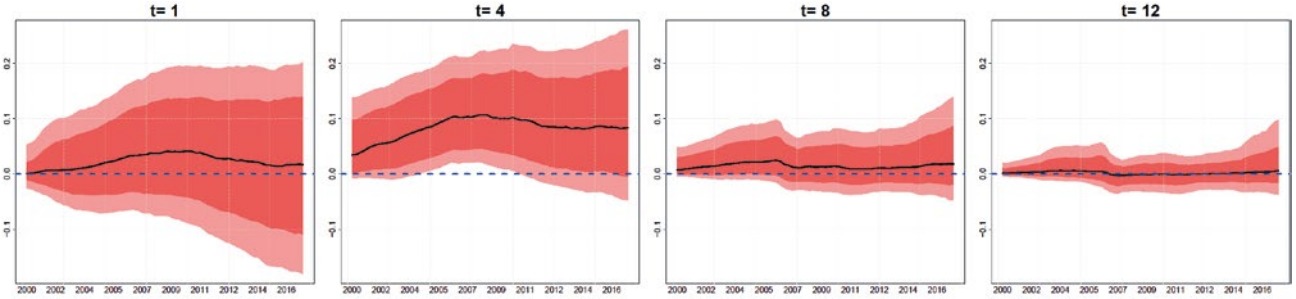
Note: Black lines represent the median response of inflation, whereas dark- and light-red shaded areas represent the 68% and 90% confidence bands.

Chart 5.2

How does a 1 percentage point increase in ULC affect HICP inflation over time?

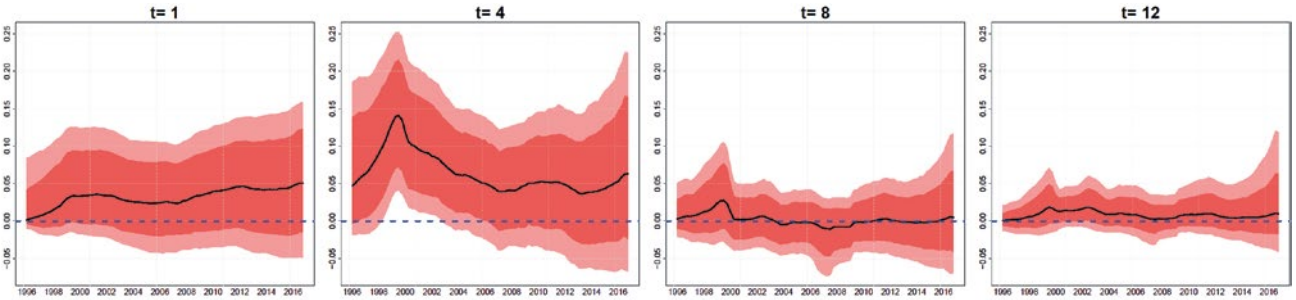
Poland

Impulse responses after one quarter, one, two and three years



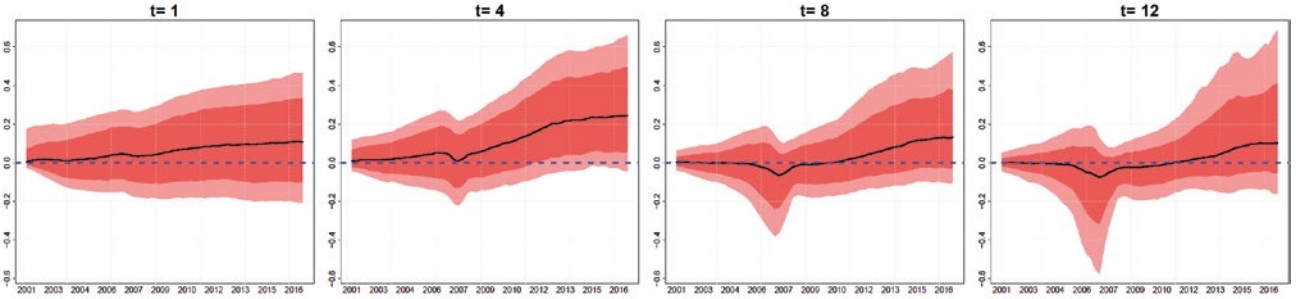
Romania

Impulse responses after one quarter, one, two and three years



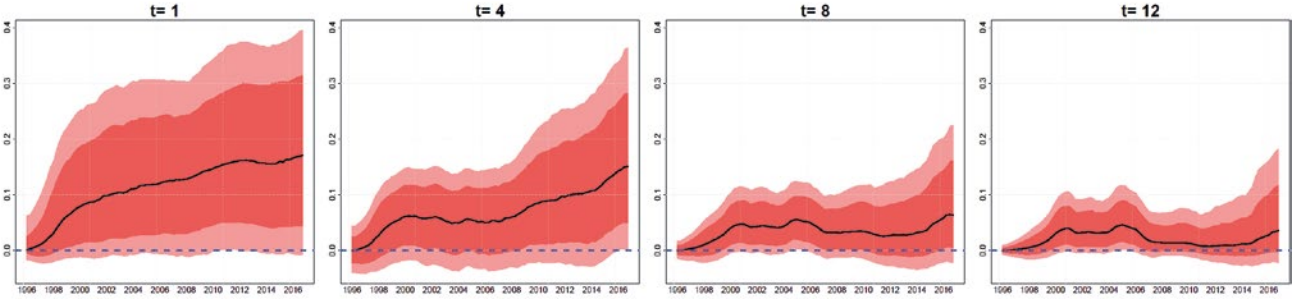
Slovenia

Impulse responses after one quarter, one, two and three years



Slovakia

Impulse responses after one quarter, one, two and three years



Source: Authors' calculations.

Note: Black lines represent the median response of inflation, whereas dark- and light-red shaded areas represent the 68% and 90% confidence bands.

Finally, Head et al. (2010) explain the sensitivity of pass-through to the level of inflation with different degrees of price dispersion in a high- and low-inflation environment and the varying impact of specific degrees of price dispersion on consumers' search intensity.[11]

Among other possible reasons for the weakening of the link between labor cost and inflation in the selected CESEE countries, the following factors should be taken into consideration: (1) Some of the newly created purchasing power from higher wages was used for imports in recent years, which lowered domestic price pressures. (2) Increased import competition did not allow companies to fully pass on higher wages to prices, which was mirrored in lower profit rates. (3) Nominal effective exchange rates appreciated from early 2012, which has led to associated quantity and price effects for imported goods. (4) Several countries reported higher saving rates, and (5) lower net inflows of labor income from abroad. Both of the latter two factors drained purchasing power from the market and thereby lowered inflationary pressure. Furthermore, at the onset of the crisis, ULC growth accelerated due to a contraction in output alongside a much lesser decline in employment and some downward rigidity of wages. Typically, firms treat such recession-caused ULC rises as temporary and refrain from raising prices (also to retain market share).

4 Conclusions

In recent years, many economies have experienced a weakening of the pass-through from labor cost to price inflation. This phenomenon seems to be related to times of recession and low inflation. It is also particularly common in emerging economies, where productivity growth is often followed by rapid wage increases, while price inflation is dampened by international competition.

In this paper we study the link between labor cost and price inflation in selected CESEE countries through a macroeconometric model that makes it possible to integrate drifting parameters and error variances. We use recent shrinkage techniques to circumvent issues associated with overparameterization and include mixture innovation components to make it possible to consider time-varying responses of inflation to ULC shocks.

Using country-specific quarterly data over the period Q1 1995 to Q4 2018, we find a positive relationship between ULC growth and price inflation in most CESEE countries under scrutiny. However, results appear to be very heterogeneous across countries and time.

Estimating the effect of a 1 percentage point increase in ULC growth on price inflation, we find that the shock does not lead to any significant increase in inflation in Bulgaria and Slovenia. In Bulgaria, the median response of inflation turns negative and reaches –0.05 percentage points after the crisis. Conversely, inflation reacts strongly to ULC growth in Hungary in the short term. The ULC shock increases price growth in the country by up to 0.4 percentage points after one quarter. In general, the effect of a ULC shock on inflation is highest between one quarter and one year after the shock, and becomes insignificant thereafter. The most important exception from

[11] *In a nutshell, the argument is the following: A low-inflation environment is characterized by a comparatively homogenous price dispersion. Any shock would notably disrupt price structures and consumers would start to compare prices more intensively and/or to look for substitute goods. This limits firms' price-setting power. In a high-inflation environment, to the contrary, price dispersion and consumers' search intensity is already high. The impact of a shock on the price-setting power of firms would therefore be lower.*

this pattern is the Czech Republic, where ULC shocks have strong and significant effects on inflation even after three years (at least in the period since 2014).

Overall, we also find that the link between ULC and price inflation weakened after the global financial crisis. As most countries entered a period of low inflation (or deflation), the above results corroborate findings in the literature claiming that the wage-price pass-through changes during times of low inflation (see, among others, Bobeica et al., 2019; Daly and Hobijn, 2014; Zanetti, 2007; Mehra, 2000). However, our results also show that the pass-through has again strengthened in some countries in the last few years. As mentioned above, this is especially true for the Czech Republic, but some improvement can also be observed for Hungary and Slovakia. This suggests that ULC growth might translate into larger price movements in the CESEE region in the near future. In fact, price readings of early 2019 indicate higher inflationary pressure amid unabated wage and ULC increases.

The change in the pass-through from ULC growth to inflation after the crisis is not fully explained by our paper and possibly related to the interaction of several factors. These include, among others: exchange rate and trade dynamics, international competition and changing profit shares and saving rates. Further research should be carried out in this direction to gain a more comprehensive understanding of inflationary processes in the CESEE region.

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Annex

Table A1

Data description

Indicator	Unit	Seasonal adjustment	Source	Transformation
All-items HICP	index, 2015=100	not adjusted	Eurostat	log, diff
GDP at constant prices	LCmn, CLV2010	not adjusted	Eurostat	log, diff, seasonally adjusted
Nominal unit labor cost per hour, whole economy	index, 2010=100	not adjusted	Eurostat	log, diff, seasonally adjusted
Nominal compensation per hour, whole economy	index, 2010=100	not adjusted	Eurostat	
Compensation of employees	LCmn	not adjusted	Eurostat	
Thousands of hours worked – total employees	000 hours	not adjusted	Eurostat	
GDP per hour worked	index, 2010=100	not adjusted	Eurostat	
GDP at constant prices	LCmn, CLV2010	not adjusted	Eurostat	
Thousands of hours worked – total employees	000 hours	not adjusted	Eurostat	
One-month money market rate, average	%	not adjusted	Bloomberg, Eurostat	
Nominal effective exchange rate	index, 2005=100	not adjusted	Eurostat	log, diff
HWWI index	index, 2015=100	not adjusted	HWWI	log, diff
Crude Oil, Brent, Spot	USD, average	not adjusted	Macrobond	log, diff

Source: Authors' compilation.

Table A2.1

Data description

	BG	HR	CZ	HU
	Period			
All-items HICP	Q1 97 to Q4 18	Q1 98 to Q4 18	Q1 96 to Q4 18	Q1 96 to Q4 18
GDP at constant prices	Q1 95 to Q3 18	Q1 00 to Q3 18	Q1 96 to Q3 18	Q1 95 to Q3 18
Nominal unit labor cost per hour, whole economy	Q1 95 to Q3 18	Q1 00 to Q3 18	Q1 95 to Q3 18	Q1 95 to Q3 18
Nominal compensation per hour, whole economy	Q1 95 to Q3 18	Q1 00 to Q3 18	Q1 95 to Q3 18	Q1 95 to Q3 18
Compensation of employees	Q1 95 to Q3 18	Q1 00 to Q3 18	Q1 95 to Q3 18	Q1 95 to Q3 18
Thousands of hours worked – total employees	Q1 95 to Q3 18	Q1 00 to Q3 18	Q1 95 to Q3 18	Q1 95 to Q3 18
GDP per hour worked	Q1 95 to Q3 18	Q1 00 to Q3 18	Q1 95 to Q3 18	Q1 95 to Q3 18
GDP at constant prices	Q1 95 to Q3 18	Q1 00 to Q3 18	Q1 95 to Q3 18	Q1 95 to Q3 18
Thousands of hours worked – total employees	Q1 95 to Q3 18	Q1 00 to Q3 18	Q1 95 to Q3 18	Q1 95 to Q3 18
One-month money market rate, average	Q1 99 to Q2 18	Q3 97 to Q4 18	Q1 95 to Q4 18	Q4 96 to Q4 18
Nominal effective exchange rate	Q1 95 to Q3 18	Q1 95 to Q3 18	Q1 95 to Q3 18	Q1 95 to Q3 18
HWWI index	Q1 96 to Q3 18	Q1 96 to Q3 18	Q1 96 to Q4 18	Q1 96 to Q4 18
Crude Oil, Brent, Spot	Q1 95 to Q4 18	Q1 95 to Q4 18	Q1 95 to Q4 18	Q1 95 to Q4 18

Source: Authors' compilation.

Table A2.2

Data description

	PL	RO	SK	SI
	Period			
All-items HICP	Q1 96 to Q4 18	Q1 96 to Q4 18	Q1 96 to Q4 18	Q1 96 to Q4 18
GDP at constant prices	Q1 95 to Q3 18	Q1 95 to Q3 18	Q1 95 to Q3 18	Q1 95 to Q3 18
Nominal unit labor cost per hour, whole economy	Q1 00 to Q3 18	Q1 95 to Q3 18	Q1 95 to Q3 18	Q1 95 to Q3 18
Nominal compensation per hour, whole economy	Q1 00 to Q3 18	Q1 95 to Q3 18	Q1 95 to Q3 18	Q1 95 to Q3 18
Compensation of employees	Q1 00 to Q3 18	Q1 95 to Q3 18	Q1 95 to Q3 18	Q1 95 to Q3 18
Thousands of hours worked – total employees	Q1 00 to Q3 18	Q1 95 to Q3 18	Q1 95 to Q3 18	Q1 95 to Q3 18
GDP per hour worked	Q1 00 to Q3 18	Q1 95 to Q3 18	Q1 95 to Q3 18	Q1 95 to Q3 18
GDP at constant prices	Q1 00 to Q3 18	Q1 95 to Q3 18	Q1 95 to Q3 18	Q1 95 to Q3 18
Thousands of hours worked – total employees	Q1 00 to Q3 18	Q1 95 to Q3 18	Q1 95 to Q3 18	Q1 95 to Q3 18
One-month money market rate, average	Q1 95 to Q4 18	Q4 95 to Q4 18	Q2 95 to Q4 18	Q1 02 to Q4 18
Nominal effective exchange rate	Q1 95 to Q3 18	Q1 95 to Q3 18	Q1 95 to Q3 18	Q1 95 to Q3 18
HWWI index	Q1 96 to Q4 18	Q1 96 to Q4 18	Q1 96 to Q4 18	Q1 96 to Q4 18
Crude Oil, Brent, Spot	Q1 95 to Q4 18	Q1 95 to Q4 18	Q1 95 to Q4 18	Q1 95 to Q4 18

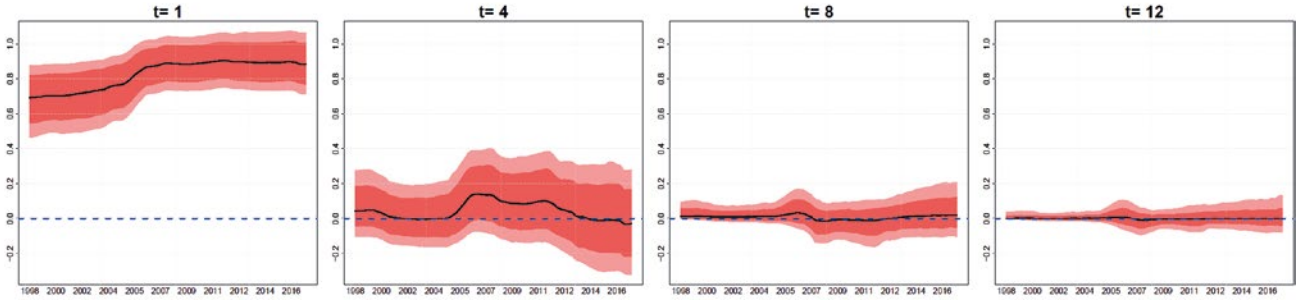
Source: Authors' compilation.

Chart A1.1

How does a 1 percentage point increase in ULC affect ULC over time?

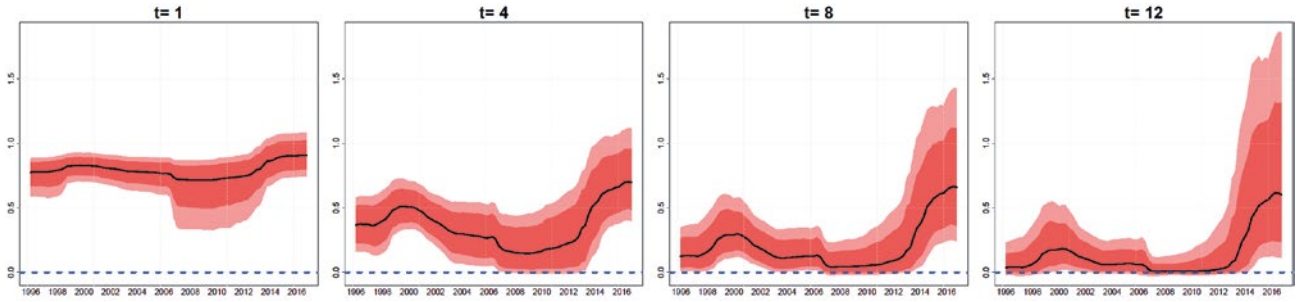
Bulgaria

Impulse responses after one quarter, one, two and three years



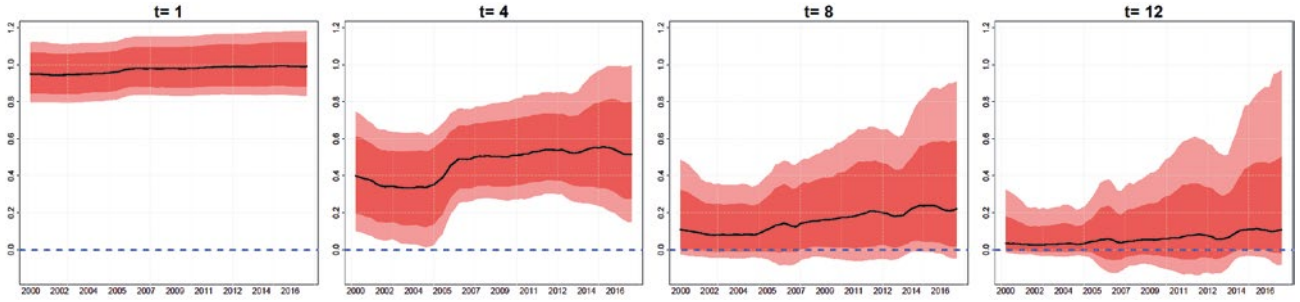
Czech Republic

Impulse responses after one quarter, one, two and three years



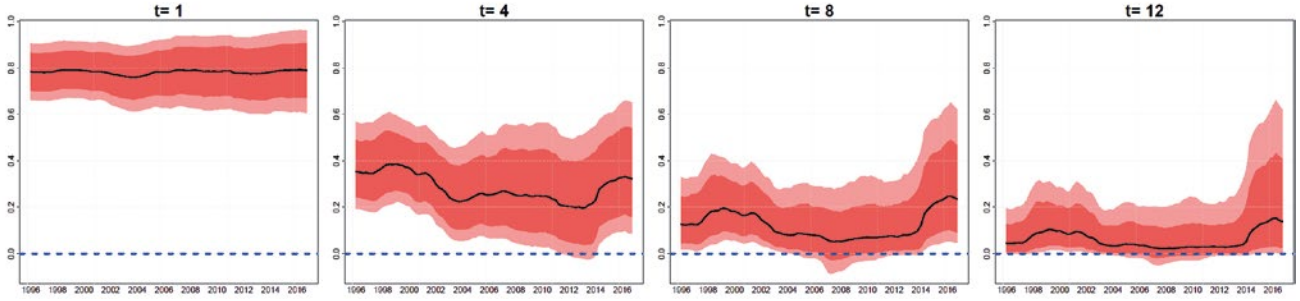
Croatia

Impulse responses after one quarter, one, two and three years



Hungary

Impulse responses after one quarter, one, two and three years



Source: Authors' calculations.

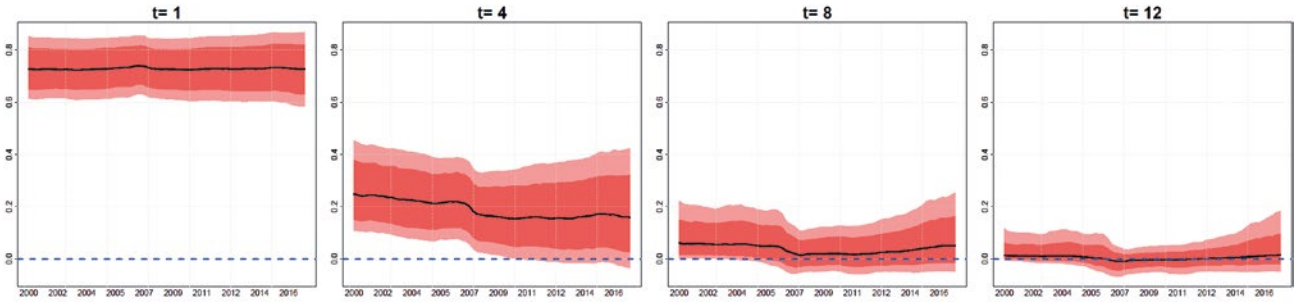
Note: Black lines represent the median response of inflation, whereas dark- and light-red shaded areas represent the 68% and 90% confidence bands.

Chart A1.2

How does a 1 percentage point increase in ULC affect ULC over time?

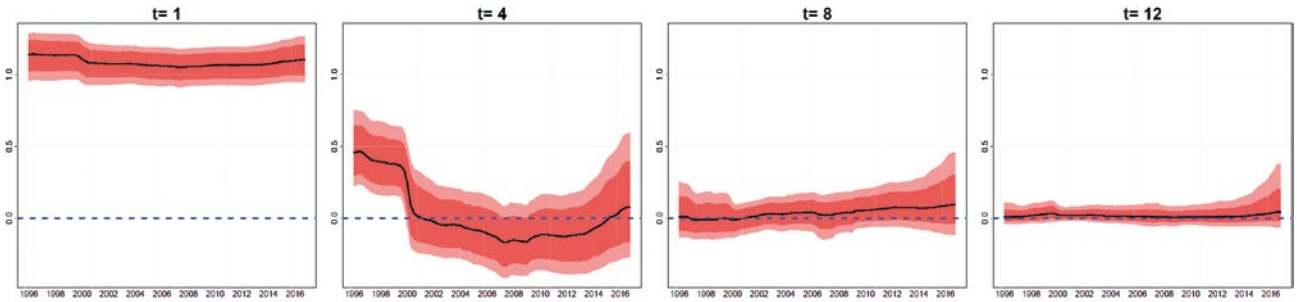
Poland

Impulse responses after one quarter, one, two and three years



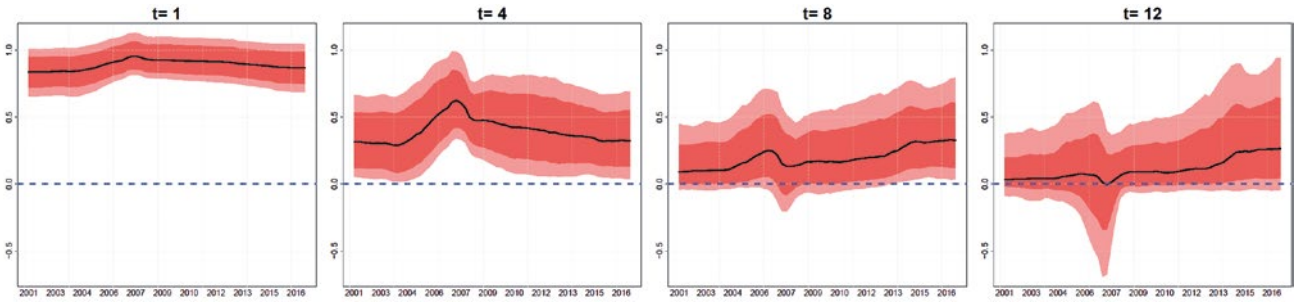
Romania

Impulse responses after one quarter, one, two and three years



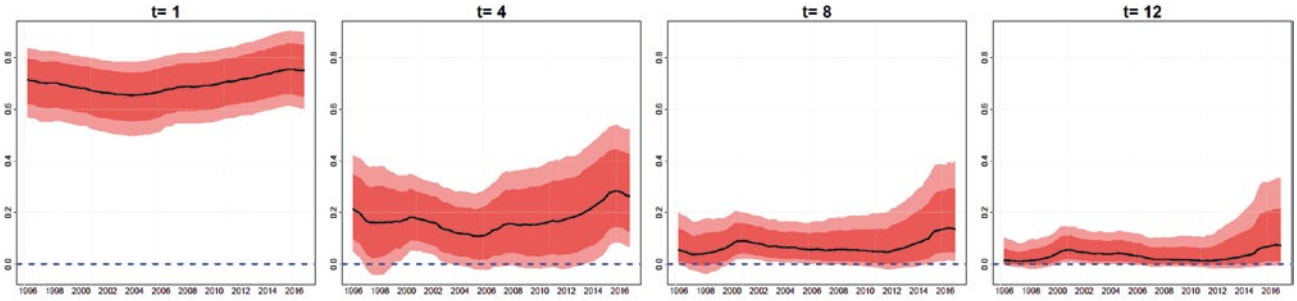
Slovenia

Impulse responses after one quarter, one, two and three years



Slovakia

Impulse responses after one quarter, one, two and three years



Source: Authors' calculations.

Note: Black lines represent the median response of inflation, whereas dark- and light-red shaded areas represent the 68% and 90% confidence bands.

Homeownership and housing finance patterns one generation after the fall of communism

Elisabeth Beckmann, Christa Hainz, William Pyle, Sarah Reiter[1]

Drawing on a recent wave of the OeNB Euro Survey, we document current homeownership patterns across ten countries in Central, Eastern and Southeastern Europe (CESEE-10), the demographic characteristics of homeowners and the connections between their housing assets and the household credit market. Due to the experience of Central, Eastern and Southeastern Europe (CESEE) with both communism and postcommunist privatization reforms, homeownership rates in the CESEE countries are among the highest in Europe. However, the demographic characteristics of homeowners we observe in the CESEE-10 now largely resemble those observed in more mature market settings. Despite high homeownership rates, the percentage of CESEE-10 households with housing loans is relatively small and homeowners infrequently use their dwellings to secure housing loans. However, we find that homeowners do use real estate as collateral for loans that are not used to finance house purchases.

JEL classification: R31, D14, P30, G21
Keywords: housing, residential real estate, household assets, personal finance, CESEE

In Central, Eastern and Southeastern Europe (CESEE), three decades have passed since the disappearance of communist economic systems and, with them, the primacy they attached to nonprivate forms of asset ownership. The transformation of property rights that accompanied the transition from central planning to market economies was widely regarded as essential to the region's development and integration into the broader European and global economies, with the privatization of state-owned enterprises and the growth of a non-state greenfield sector drawing most of the attention (Brada, 1996; Estrin et al., 2009). The expansion of private ownership, however, extended beyond the assets of firms. Notably, millions of people became first-time homeowners, vaulting the CESEE countries into the ranks of countries with the highest homeownership rates in the world. Now, one generation after the fall of communism, we use a recent ten-country survey of individuals to document current homeownership patterns in CESEE, the demographic characteristics of homeowners and the connections between their housing assets and the household credit market. Because of the region's historical experience with both communism and postcommunist reforms, it is by no means self-evident that the homeownership patterns we observe will mirror those observed elsewhere in the world. Our evidence, nevertheless, does suggest that the demographic characteristics of homeowners in CESEE now largely resemble those observed in more mature market settings in OECD countries; CESEE mortgage markets, however, remain relatively small.[2]

Still, the aspect of privatization that most directly affected people in CESEE – homeownership – arguably has received relatively little attention in the literature

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[2] *Throughout the paper, we will use the following definitions: A "housing loan" is a loan that is used to finance the purchase of residential real estate. A "mortgage" is a loan used to finance the purchase of residential real estate that is collateralized by the household's main residence or by any other real estate property owned by the household.*

addressing the tectonic shifts that have shaped CESEE over the past generation.[3] This comes as a surprise, perhaps, given how homeownership has been linked, in other contexts, to a variety of behaviors and outcomes at both the household and community level. Green and White (1997) and Haurin et al. (2002), for example, tie homeownership to better cognitive and educational outcomes for resident children.[4] Homeowners themselves report higher levels of life satisfaction (Rohe and Basolo, 1997; Rohe and Stegman, 1994; Rossi and Weber, 1996) and exhibit lower rates of psychological distress (Cairney and Boyle, 2004). Some studies have also hypothesized that housing assets, by serving as a source of collateral, ease access to bank loans and thereby expand entrepreneurial opportunities as well as consumption (de Soto, 2000; Schmalz et al., 2017).

Di Pasquale and Glaeser (1999) present evidence that homeownership promotes civic engagement.[5] Galster (1983) and Harding et al. (2000) demonstrate that owner-occupied dwellings are better maintained, which likely generates positive local externalities (Rossi-Hansberg et al., 2010). Reduced labor mobility is a frequently cited negative consequence of homeownership (Andrews and Sanchez, 2011; Oswald, 1996). Coulson and Fisher (2009), for instance, find that homeowners have lower wages than renters and that higher regional homeownership rates are associated with a greater probability of individual unemployment. Munch et al. (2008), via the "Oswald conjecture," find that homeownership decreases mobility in terms of transitions into both new local jobs and jobs outside the local labor market. In CESEE, Broulikova et al. (2018) find some support for the proposition that homeowners are less likely to move in search of employment but no evidence that their actual unemployment rates exceed those of renters.

Considering the potential connections between homeownership and this diverse and noteworthy set of outcomes, we see value in exploring the demographic characteristics of homeowners in a manner new to the literature on CESEE. In our paper, we try to find out, for example, whether homeowners rather tend to be young or old, rich or poor, and/or whether they rather live in urban or rural areas. CESEE's unique history, after all, may have produced a set of connections between the above sociodemographic characteristics and homeownership that differ considerably from patterns observed in OECD countries (Andrews and Sanchez, 2011; Arrondel et al., 2014; Goodman and Mayer, 2018). As recently as in the late 1980s, there was no formal private housing market to speak of in CESEE and the rental housing stock was entirely publicly owned (Broulikova and Montag, 2019).[6] Because of shortages and/or subpar quality in the public sector, residents throughout CESEE could and did build and own houses independently, however. Thus, a significant part of the region's housing stock was held privately; in the 1980s, only roughly 30% were formally owned by the state. To ensure that this figure does not create a false impression of the importance and endurance of private tenure rights in the communist system, we add two important caveats. First, prior to 1989, the

[3] *Broulikova and Montag (2019) synthesize and systematize much of the existing evidence on housing market reforms in postcommunist countries, describing the research to date as "fragmented and often quite dated."*

[4] *Barker and Miller (2009) and Bourassa et al. (2016) cast doubt on this relationship.*

[5] *Engelhardt et al. (2010) cast doubt on this relationship.*

[6] *Slovenia, which at the time was part of Yugoslavia, tolerated a second-hand housing market (Broulikova and Montag, 2019).*

de facto distinction between private and public apartments, in terms of residents' rights, may have been "devoid of economic content" (Gebhardt, 2013). Second, at the end of the communist era, cooperatives, a tenure form distinct from private ownership, represented a nontrivial portion of the housing stock throughout much of CESEE.

Privatization of state-owned housing began soon after the fall of communism. In CESEE, roughly one-third of the public housing stock was privatized by 1995 (Hegedüs et al., 1996b) and most countries in CESEE had almost completed the process by the early 2000s. Hungary, for example, entered the postcommunist era with about one-quarter of its rental housing stock in public ownership; about 80% of it was privatized by 2003. Prior to privatization, 35% of Poland's rental units were publicly owned and 25% of dwellings were in housing cooperatives; most of the privatization was completed by 2002. The Czech Republic lagged other countries in CESEE, with only half of its public housing stock having been privatized by 2002 (Lux, 2003); prior to privatization, 38% of its rental units were publicly owned and 18% of dwellings were in housing cooperatives. Further to the south and throughout the Balkans, state ownership of housing was generally less common during the communist era. In Bulgaria, for example, where tenants could acquire their homes after just two years of tenancy, homeownership rates already stood at 86% in 1988 (Broulikova and Montag, 2019).

Although there were some exceptions, tenants of state-owned apartments were generally granted first rights to acquire these apartments as private property at "giveaway" prices in the 1990s (Broulikova and Montag, 2019). In Hungary and Poland, for example, the discount tenants were granted could be 80% or more of the assessed value, and in Slovenia and Slovakia, discounts ranged from 30% to 80% (Lux, 2003; Sendi, 1995; Skiba, 2005). The assessed value reflected, at least partially, the low quality of the housing stock (Pichler-Milanović, 1999).[7] In addition to steeply discounted sale prices, privatization was facilitated in some countries by publicly subsidized low-interest, long-term loans (Hegedüs et al., 1996a; Lux, 2003).[8]

In the following, we discuss the ownership patterns that have emerged in CESEE in the aftermath of the postcommunist privatization push and subsequent developments affecting the region's housing stock. Section 1 describes our unique micro-level dataset, which is derived from the OeNB Euro Survey – a repeated cross-sectional survey that is conducted by the Oesterreichische Nationalbank (OeNB) in ten CESEE countries (CESEE-10) whose legal tender is not the euro. Section 2 documents homeownership rates across the CESEE-10 and compares them with rates found elsewhere in Europe. It also describes variations in homeownership rates within individual countries, across different types of dwellings (houses and apartments), and among different subgroups of the population. Section 3 employs a regression analysis to further identify the household characteristics that correlate with homeownership and then compares these with the ones observed in more mature market settings. Section 4 lays out the connection between housing assets and the household credit market, documenting, among other findings, that a surprisingly large share of real estate loans in the CESEE-10 is not secured. Section 5 presents our conclusions.

[7] *The quality of a privatized home might influence the owner's decision to keep, sell or rent it. In addition, selling and renting was not easy at the early stages of privatization because the real estate market needed time to evolve (Pichler-Milanović, 1999).*

[8] *Throughout much of CESEE, national and/or central governments determined the pace and scope of privatization. In the Czech Republic, control over the privatization of public housing was devolved to the municipalities.*

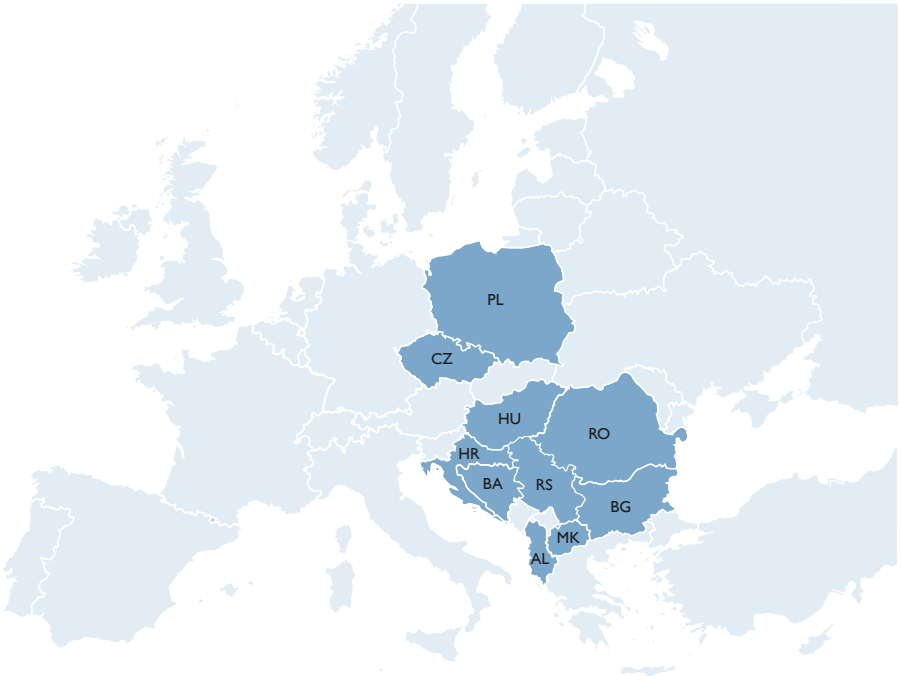
1 Data

We draw on a recent wave of the OeNB Euro Survey, which has been implemented on a regular basis since 2007 as a repeated cross-sectional survey in ten CESEE countries. As shown in figure 1, the OeNB Euro Survey covers six EU Member States which are not part of the euro area (Bulgaria, Croatia, the Czech Republic, Hungary, Poland and Romania) and four (potential) EU candidate countries (Albania, Bosnia and Herzegovina, North Macedonia, and Serbia). As members of the euro area, Slovenia and Slovakia are not included in the survey. In each country and in each survey wave, a nationally representative sample of 1,000 individuals aged 15 years or older is interviewed based on multistage random sampling procedures. Data weighting is used to ensure a nationally representative sample for each country; sampling weights use population statistics on gender, age and region and, where available, education and socioeconomic status as well as ethnicity.[9]

We specifically employ data from the fall 2017 survey wave, which, in addition to the core questionnaire, included questions about the owner and type of the respondent's dwelling, the method by which homeowners assumed homeownership, loans used to finance home purchases, and housing assets pledged as collateral to secure loans. These micro-level data allow for the most comprehensive assessments of homeownership and housing loan lending patterns in the CESEE-10 to date.

Figure 1

Countries included in the OeNB Euro Survey



Source: Authors' illustration.

Note: The OeNB Euro Survey covers ten CESEE countries (CESEE-10): Albania (AL), Bosnia and Herzegovina (BA), Bulgaria (BG), the Czech Republic (CZ), Croatia (HR), Hungary (HU), North Macedonia (MK), Poland (PL), Romania (RO), and Serbia (RS). Note that Slovakia and Slovenia are not included in the OeNB Euro Survey as they both have the euro as legal tender.

[9] *For more information on the OeNB Euro Survey, see www.oenb.at/en/Monetary-Policy/Surveys/OeNB-Euro-Survey.html.*

We draw our measure of homeownership from a survey question about respondents' main residence, which is defined as the "house or apartment where your household lives most of the year." Response options included "I own it myself," "my partner owns [it]," "I own it jointly with my partner," "I own it with someone else," and "somebody other than myself or my partner in this household [owns it]." Positive responses to any of these options were interpreted as meaning that the residence was owned privately by its occupants. This designation is the basis for our subsequent analysis of homeownership patterns in CESEE. Other responses, which were interpreted as an absence of homeownership, were "another individual (not related to persons in this household/not a family member)," "a company (that is not the employer of any household member)," "[the] employer of one of the household members," "a public institution or government," "a cooperative" or "other."

The survey also elicited information about the types of dwelling. For our purposes, we define detached and semidetached houses as well as farms as "houses" as opposed to "apartments." In the survey, homeowners, be they owners of houses or apartments, were asked how they had come by their homeownership: through privatization, restitution, inheritance (or gift), purchase or by building their home themselves. All survey participants were asked about the largest outstanding loan which they had taken on either personally or, if in a relationship, jointly with their partner. Information was collected on the loan's purpose and terms, including information on whether, and how, it was secured.[10] The core section of the OeNB Euro Survey also provided demographic information on the respondents as well as their household: age, educational attainment, household income, household composition (i.e. number of adults and children) and location.

2 Descriptive results

2.1 Homeownership in CESEE

In table 1, we present estimates of homeownership rates based on representative samples of around 1,000 individuals in each of the CESEE-10. As noted above, homeownership refers to the respondents' residence being owned by them and/or their partner and/or another individual who lives in said home. Under this definition, the homeownership rate for the CESEE-10 is 82.8%, with all but two countries posting homeownership rates between 79% and 90%. Albania's 94.6% and the Czech Republic's 59.1% represent the extremes. In general, these estimates closely resemble Eurostat's contemporaneous estimates for the CESEE-10.[11]

In general, CESEE homeownership rates are extremely high. Austria, Germany and Switzerland e.g. were estimated to have homeownership rates of 55%, 51.4% and 41.3%, respectively, in 2017, and for the EU as a whole, the analogous figure

[10] *Drawing on the questions used in the 2017 survey wave, we were able to identify respondents who own a house and are currently paying off a loan for this house. We do not know what percentage of households own a house that was financed by a mortgage that has already been paid off. In 2014, data were collected on what percentage of households owned a house financed by a mortgage: 6.6% of respondents who owned a house in 2014 said that they had purchased it with a mortgage that had since been paid off.*

[11] *Eurostat's estimates for homeownership are based on the European Union Statistics on Income and Living Conditions (EU-SILC) survey, whose questions and response options on homeownership vary across countries. OeNB Euro Survey questions – the basis for our estimates – are consistent across countries. The discrepancy between the two survey estimates for the Czech Republic and Poland may, in part, be a function of the differential treatment of housing cooperatives; in these two countries, the EU-SILC surveys consider cooperatives as owner-occupied dwellings. Additionally, we should note that the EU-SILC survey samples households; the OeNB Euro Survey, by contrast, samples individuals.*

Table 1

Homeownership rates in the CESEE-10 in 2017

	Homeowners		Outright homeowners		Number of observations
	Eurostat EU-SILC	OeNB Euro Survey	Eurostat EU-SILC	OeNB Euro Survey	OeNB Euro Survey
	%				
Albania	n.a.	94.6	n.a.	83.9	1,000
Bosnia and Herzegovina	n.a.	85.8	n.a.	79.0	967
North Macedonia	88.7	88.8	88.0	81.6	988
Bulgaria	82.9	85.5	80.0	77.4	1,009
Croatia	90.5	82.3	83.6	66.9	1,005
Poland	84.2	79.0	73.1	66.6	968
Romania	96.8	89.7	95.7	83.4	1,049
Serbia	82.0	81.5	81.0	78.5	1,006
Czech Republic	78.5	59.1	57.8	45.7	995
Hungary	85.2	81.7	69.3	70.1	990
Total	n.a.	82.8	n.a.	73.4	9,977
EU-28	69.3	n.a.	42.8	n.a.	n.a.

Source: OeNB Euro Survey, fall 2017 (weighted data); Eurostat EU-SILC.

Note: The authors' definition of (outright) homeowners is not fully comparable to the Eurostat definition (see annex, table A1). If, in the OeNB Euro Survey, the respondent refused to answer the question on homeownership or answered „do not know," the observation was not taken into account; n.a. = not available; Countries are listed in OeNB Euro Survey order.

was 69.3%.[12] Similarly, in 2015, in Canada, Japan, Mexico and the United States, homeownership rates were 67%, 64.9%, 71.7% and 63.7%, respectively (Goodman and Mayer, 2018). A survey of 17 Latin American countries found only one with a homeownership rate exceeding 80% (Gandelman, 2009).

Table 1 also presents our estimates for "outright homeownership," referencing homeowners who are neither paying back a loan on their main residence nor using that residence as collateral to secure another loan.[13] With an outright homeownership rate of 73.4% and an overall homeownership rate of 82.8% in the CESEE-10, only 9.4% of dwellings in the CESEE-10 are owned privately but not outright. The comparable figures for the EU-28 are quite different. Specifically, according to Eurostat estimates for 2017, 42.8% of dwellings in the EU-28 are owned outright, whereas 26.5% are owned by residents still paying off a housing loan.[14] In other words, in the EU-28, dwellings owned outright outnumber those that are owned privately but not outright – but only by a factor of 1.6. In the CESEE-10, the

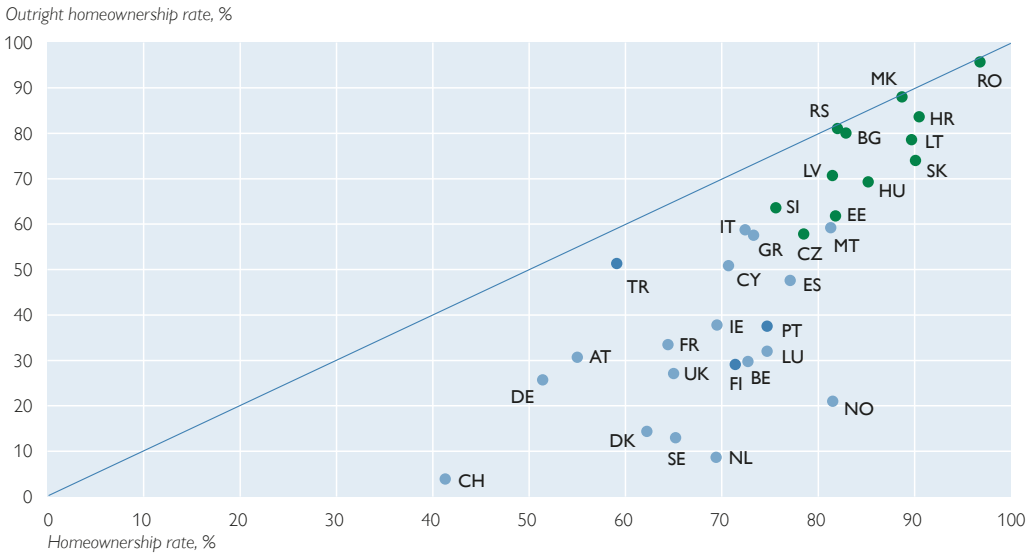
[12] *These data can be accessed at http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc_lvho02&lang=en.*

[13] *If relevant information as to the purpose of the loan or the usage of collateral was missing, a respondent was classified as a non-outright homeowner. By doing so, we likely underestimate the outright homeownership rate. In the OeNB Euro Survey, information on the purpose and potential collateral of a loan is only available for a respondent's "largest, most important loan." For respondents who reported that their largest, most important loan refers to a nonhousing loan, we assumed that the respondent is currently not paying off a housing loan. It is thus possible that we mistakenly classify respondents as outright homeowners if they are still paying back a loan on their main residence, while the purpose of their largest, most important loan is different from financing their main residence.*

[14] *Eurostat's definition of "outright ownership" (see https://ec.europa.eu/eurostat/documents/1012329/8658951/Household+data+-+housing.pdf/6c5216f2-b40b-49d6-a0aa-9c2c4bb32348) differs slightly from ours. Moreover, Eurostat's measure of outright ownership does not consider the possibility that a respondent's dwelling might have been pledged to secure a loan whose purpose is to finance something other than the purchase of that dwelling.*

Chart 1

Relationship between homeownership rates and outright homeownership rates



Source: Eurostat EU-SILC (http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc_lvho02&lang=en).

Note: Green dots represent postcommunist countries; blue dots represent non-postcommunist countries.

former group outnumbers the latter by a factor of 7.8. These differences likely reflect the different levels of development of housing finance across the CESEE-10 and the EU as a whole.

The high homeownership rates in CESEE in general, rather than being a function of robust household credit markets, are characteristic of the region's unique history. The region's postcommunist experience with markets for both the renting of residential real estate and transfers of homeownership has been too short to create homeownership patterns that no longer bear the traces of this unique history. Chart 1 helps illustrate this particularity. The horizontal and vertical axes, respectively, plot country-level homeownership and outright homeownership rates. Since the latter is a subset of the former, countries only appear on, or below, the 45-degree line, with their distance from this line relative to their distance to the horizontal axis a rough proxy for the level of development of national housing loan markets. The postcommunist countries (i.e. the green dots in chart 1) monitored by Eurostat, which include the Baltic countries, have both high homeownership and high outright homeownership rates and are thus clustered on the right-hand side of the scatterplot and relatively close to the 45-degree line. The non-postcommunist countries (i.e. the blue dots in chart 1) almost all have lower homeownership rates and a greater share of homeowners paying off housing loans. Providing evidence, perhaps, of their developing housing loan and rental markets, the postcommunist countries most clearly deviating from the characteristic "high homeownership and high outright homeownership" pattern are those eight that were the first to join the EU in 2004: Slovenia, the Czech Republic, Estonia and, to a slightly lesser extent, Poland, Hungary, Latvia, Slovakia and Lithuania. The countries of Southeastern Europe differ most from the euro area countries in this respect.

2.2 Variation across regions and sociodemographic groups

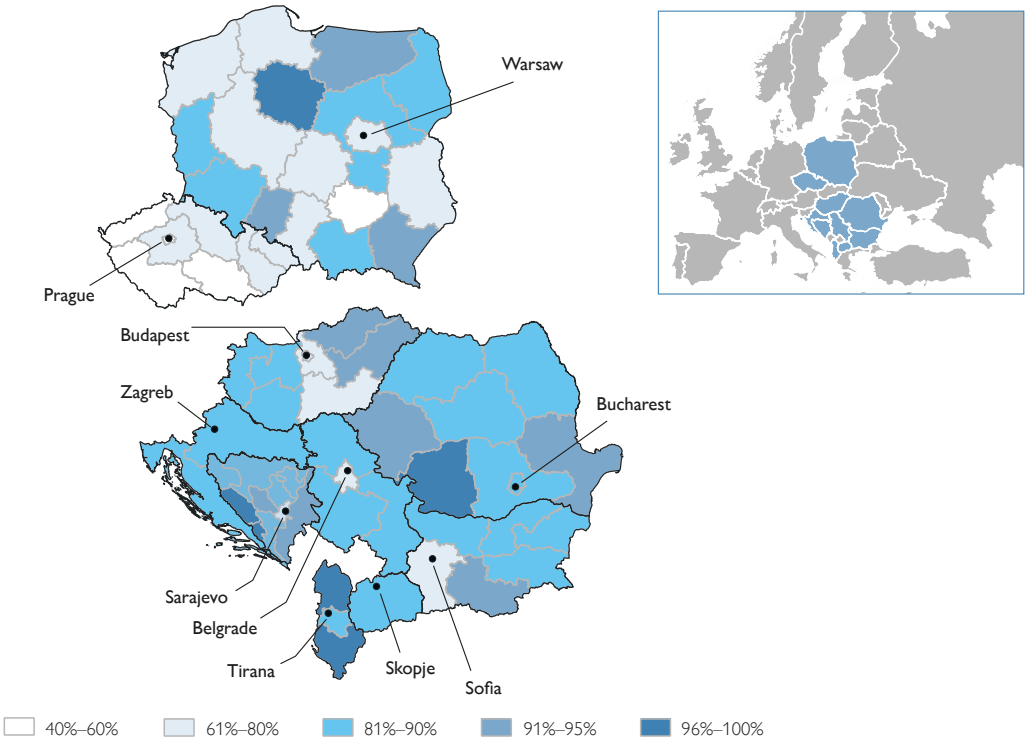
Within the CESEE-10 countries, homeownership rates vary by region, by type of dwelling and by age cohort and income group. Figure 2 presents a map depicting intracountry variation. Poland displays the highest intracountry variation in average ownership rates of all the countries surveyed.[15] The presumably more urbanized regions in which national capitals are located have relatively lower rates of homeownership.

Table 2 shows, perhaps not surprisingly, that in each country, homeownership rates for people living in houses are higher than for people living in apartments.

Mimicking patterns observed elsewhere in the world, chart 2 demonstrates that homeownership rates, in general, climb both with age and income (Andrews and Sanchez, 2011; Goodman and Mayer, 2018).[16] The average homeownership rate for the 25–34 years cohort is 73.2%, whereas that for the 55–64 years cohort

Figure 2

Intracountry variation of homeownership rates



Source: OeNB Euro Survey, fall 2017.

Note: Homeownership rates at the NUTS 2 level; for Bosnia and Herzegovina, homeownership rates are shown according to the OeNB's regional classification scheme. Statistics are based on weighted data.

[15] *Specifically, the standard deviation of regional means is highest for Poland, a finding that holds for NUTS 2 and NUTS 3 as well as for the OeNB's regional classification scheme.*

[16] *We observe the monotonic relationship between the age of the respondents and homeownership even though the homeownership rates of the youngest cohorts are inflated given how we link demographic characteristics, such as age, to homeownership. Since the OeNB samples individuals but attributes homeownership to any resident living in the residence, some of the respondents are adult children living with parents (or older relatives) who may be the formal homeowners. If we were to restrict our definition of homeownership exclusively to responses of "I own it myself" or "my partner owns [it]," we would see an even steeper relationship between age and homeownership than that presented in chart 2. Note that for some subgroups, sample sizes are small.*

is 89.8%. In every country except in the Czech Republic and North Macedonia, the cohort with the highest homeownership rates is the oldest, i.e. the over-65-year-olds. Poland and the Czech Republic, in fact, are the only two countries in which the oldest cohort has a homeownership rate of under 90%. Moreover, these two countries and Hungary are the only ones that have a sub-90% homeownership rate for the 55–64 years cohort.

The relationship between household income and homeownership is upward sloping in most countries but is generally flatter than might be expected.[17] In fact, in several countries (Bulgaria, Croatia and Romania), the poorest tertile records the highest rate of homeownership. Only in the Czech Republic

Table 2

Homeownership rates by type of dwelling

	(a) Houses	(b) Apartments	Difference between (a) and (b)	Number of observations
	%			
Albania	97.8	90.5	7.3	1,000
Bosnia and Herzegovina	88.9	73.3	15.6	956
North Macedonia	89.6	84.9	4.6	987
Bulgaria	92.0	80.3	11.7	1,009
Croatia	85.7	71.4	14.3	988
Poland	83.9	74.8	9.1	968
Romania	91.2	86.8	4.4	1,029
Serbia	87.2	70.4	16.8	1,004
Czech Republic	81.2	43.4	37.8	992
Hungary	85.0	73.4	11.7	989
Total	88.4	73.5	14.9	9,922

Source: OeNB Euro Survey, fall 2017.

Note: All statistics are weighted. The category "houses" comprises detached and semidetached houses as well as farms. Respondents who live in any other type of dwelling (less than 1% of the overall sample) are not taken into account. Also, respondents who did not answer the question or who answered "do not know" are not considered. Countries are listed in OeNB Euro Survey order.

Chart 2

Homeownership rates

Broken down by age groups

Broken down by income

Source: OeNB Euro Survey, fall 2017.

Note: Statistics are based on weighted data.

[17] *In the OeNB Euro Survey, respondents were asked to report their total monthly household income after taxes. Respondents were presented a list of different income categories out of which they had to choose the one that best described their monthly net household income. For each country, we then collapsed these categories into three broader income categories (low, medium, high) such that each of the categories contained roughly one-third of the country's respondents. Overall, 22% of respondents refused to state their income. We account for this by including a dummy variable in the regressions.*

Table 3

Mode of obtaining ownership of main residence

	Obtained through privatization or restitution	Inherited	Purchased	Built	Other	Number of observations
	%					
Albania	18.0	9.0	43.5	27.9	1.5	938
Bosnia and Herzegovina	0.9	29.9	19.4	48.2	1.6	803
North Macedonia	1.4	44.9	19.9	29.8	4.0	856
Bulgaria	8.3	41.8	26.4	16.4	7.1	825
Croatia	9.8	35.2	28.4	25.0	1.6	805
Poland	1.6	23.4	40.5	27.1	7.3	746
Romania	5.0	26.6	47.8	15.8	4.8	912
Serbia	3.6	35.9	26.7	31.0	2.8	793
Czech Republic	8.8	25.2	41.3	20.5	4.2	582
Hungary	2.4	25.1	58.4	13.8	0.3	798
Total	6.1	29.6	35.2	25.6	3.5	8,058

Source: OeNB Euro Survey, fall 2017.

Note: All statistics are weighted. The table shows how homeowners obtained ownership of their main residence. If homeowners refused to answer the corresponding question or answered "do not know," the observation was not taken into account. Countries are listed in OeNB Euro Survey order.

do we observe a steep, upward-sloping relationship between income category and homeownership.

Table 3 shows how homeowners assumed ownership of their main residence. There is substantial cross-country variation but, on balance, we observe large numbers reporting that they have either built their main residence (25.6%), purchased it (35.2%) or inherited it (29.6%). Relatively few respondents, namely just 6.1%, report that they became owners of their homes through privatization or restitution. The small numbers in this group may appear surprising given the magnitude of the housing privatization programs carried out in CESEE in the 1990s and early 2000s. Of course, some of the respondents may respond that they purchased their home when in fact they bought it at a discounted price under a privatization program, because real estate markets hardly existed in the initial transition period. We believe, however, that what we observed in 2017 reflects the inevitable turnover in the ownership of properties that were initially privatized around 25 years earlier. Some of this privatized housing can be assumed to have been re-sold by the initial postcommunist owners and some has probably been passed on as inheritance. To illustrate these dynamics, we consider evidence from the second wave of the Life in Transition Survey (LiTS) implemented by the European Bank for Reconstruction and Development (EBRD). To our knowledge, these LiTS data are the only other comprehensive source of data on the region that address the question of how respondents acquired their homes. This is illustrated by the example of two LiTS countries: In Poland and Romania, 9% and 7% of homeowners, respectively, reported that they had become homeowners directly because of the privatization reforms (Broulikova et al., 2018). The above LiTS data were collected in 2010. The corresponding figures from the 2017 OeNB Euro Survey are 1.6% and 5%, respectively, for Polish and Romanian homeowners. Clearly, with the passage of time, progressively fewer individuals report having benefited directly from the postcommunist privatization programs.

3 Determinants of homeownership

3.1 Empirical model

In this section, we extend the exploration of homeownership in the CESEE-10 provided in section 2 by performing a regression analysis. Our intent is to lay out patterns of correlation that can then be compared to those of other regions. Specifically, our approach is designed to mirror that of Goodman and Mayer (2018) and Andrews and Sanchez (2011), who employ similar regressions to identify patterns in the United States and selected OECD countries (Austria, Australia, Canada, Denmark, Finland, Germany, Italy, Luxembourg, Spain, Switzerland and the United Kingdom), respectively.[18] To our knowledge, our data allow us to carry out the most comprehensive exercise of this kind for the CESEE region so far.

As shown in equation (1), we employ a probit regression framework to model the probability of homeownership. Using country fixed effects, we run the model, first, for all ten CESEE countries in the OeNB Euro Survey and then, separately, for the subsets of EU members and nonmembers (i.e. the Western Balkan countries).

$$P\left(Homeowner = 1\right) = \Phi(x\beta + u) \tag{1}$$

Our dependent variable is the same binary measure we used in section 2 to build up estimates of aggregate homeownership rates. Each respondent is characterized as being a homeowner or not, based on a question about the ownership of their main residence. If the respondent, their partner and/or another member of the household owns the residence in question, then the respondent is characterized as a homeowner (i.e. "homeowner," our dependent variable, equals "1"). For all other responses – i.e. the residence is owned by another individual, a company, the government or a cooperative – the respondent is not considered a homeowner (i.e. "homeowner" equals "0").

We want to see whether the determinants of homeownership in CESEE are similar to those in selected OECD countries. Therefore, we include the regressors used in the papers mentioned above, i.e. variables for the respondents' age and education, for their household's income and composition, and for the size of the town in which their residence is located.[19] For each, we apply a series of dummy variables such that in each broad category, the coefficients should be interpreted as differences relative to the excluded category. Individual age and education responses are divided into six and three bins, respectively.[20] Household income is divided into three within-country tertile bins. As in Goodman and Mayer (2018), our household composition dummies include dummies for households made up of single males, single females, married couples with children, married couples without children, single males with children, single males without children but with other

[18] *Using data from the Eurosystem Household Finance and Consumption Survey (HFCS), Arrondel et al. (2014) conducted a similar analysis for the euro area.*

[19] *In addition to the above-mentioned regressors, Andrews and Sanchez (2011) and Goodman and Mayer (2018) consider respondents' ethnicity. In our regression analysis, we do not include "ethnicity" as an additional regressor as the OeNB Euro Survey does not collect information on this characteristic.*

[20] *Similar to Andrews and Sanchez (2011), we excluded respondents under the age of 20 from the analysis. The "low education" group comprises those respondents who reported having completed primary education; the "medium education" group comprises those who reported having completed lower secondary, upper secondary or postsecondary nontertiary education; the "high education" group comprises those that have attained some level of tertiary education.*

adults, single females with children, and single females without children but with other adults. Additional categorical household composition variables reflect the number of adults living in the residence (other than the respondent and their partner). Dwelling types are characterized as apartments, houses or "other," a category which includes mobile homes and "improvised housing units." Dummy variables are included to control for the size of towns (large, medium and small), with the cutoffs between them defined separately for each country by the 75th and 25th percentiles of the town size (for those towns with at least one respondent).

3.2 Regression results

Table 4 shows average marginal effects derived from the probit model outlined above. In general, the coefficients conform to patterns produced by similar exercises in other countries and regions. Across the ten countries, the age of the respondent strongly correlates with homeownership. Respondents in all age categories are less likely to own their residences than those aged 65 or older. Moreover, we observe monotonically increasing "age effects." For instance, respondents in the 25–34 years cohort are nearly 23 percentage points less likely than the oldest cohort to own their dwelling, whereas those in the 45–54 year cohort are only 7 percentage points less likely to be homeowners than the oldest cohort.

We also observe a robust monotonic relationship between income categories and homeownership. Respondents in the bottom- and middle-income tertiles in their country are roughly 8 and 4 percentage points, respectively, less likely to be homeowners than those in the top income category. A clear positive relationship also exists between homeownership and the respondents' level of education. Those in the lowest and middle education attainment categories are roughly 6 and 3 percentage points, respectively, less likely to be homeowners than those who have attained a higher level of formal education.

All these relationships – for age, income and education – resemble those identified recently for the United States (Goodman and Mayer, 2018) and selected OECD countries (Andrews and Sanchez, 2011). These similarities were by no means predictable ex ante. Considering the history of the CESEE-10 – the communist economic model, the dramatic postcommunist privatization reforms (applied in a manner exogenous to individual and household characteristics) and the shorter experience with housing markets – we would not have been surprised to find homeownership patterns that diverged substantially from those elsewhere. The robust positive correlations between homeownership and residents' age, income and education levels are thus striking in their resemblance to patterns observed in countries with longer histories of housing markets and no communist legacy. Unfortunately, since we are operating with a single cross-sectional dataset, we cannot know with certainty whether these similarities in homeownership patterns represent patterns that date to the 1990s or to a more recent process of convergence.[21]

In table 4, we further see that single males living alone and single females living either alone or with others are less likely to be homeowners than married couples

[21] *Due to data limitations, we have not been able to study the dynamics in homeownership for the whole transition period. With its EU-SILC survey, Eurostat provides data on homeownership from 2003 onward; however, for most of the CESEE countries, data collection started later, and some CESEE countries, such as Albania or Bosnia and Herzegovina, are not covered by the EU-SILC survey. As far as we can tell, there are no other data on homeownership that cover a longer period of time and thus also allow for cross-country comparisons.*

Table 4

Determinants of homeownership in the CESEE-10

Outcome variable: Homeowner (0/1)	(1) CESEE-10 countries	(1a) CESEE EU Member States	(1b) Western Balkan countries
	Average marginal effects		
Age			
Base: 65 years and over			
20–24 years	−0.268***	−0.287***	−0.240***
	(0.022)	(0.029)	(0.034)
25–34 years	−0.228***	−0.275***	−0.155***
	(0.014)	(0.019)	(0.020)
35–44 years	−0.134***	−0.160***	−0.096***
	(0.013)	(0.018)	(0.018)
45–54 years	−0.073***	−0.086***	−0.056***
	(0.010)	(0.014)	(0.014)
55–64 years	−0.033***	−0.041***	−0.024*
	(0.010)	(0.014)	(0.013)
Household income			
Base: high income			
Low income	−0.084***	−0.080***	−0.088***
	(0.014)	(0.019)	(0.022)
Medium income	−0.041***	−0.048***	−0.027*
	(0.010)	(0.014)	(0.015)
Income: no answer	−0.003	0.005	−0.009
	(0.011)	(0.016)	(0.015)
Education			
Base: high education			
Low education	−0.062***	−0.139***	0.006
	(0.016)	(0.025)	(0.020)
Medium education	−0.031***	−0.054***	0.003
	(0.009)	(0.012)	(0.014)
Household composition			
Base: married couple living without children (but potentially with other adults)			
Single male living alone	−0.080***	−0.098***	−0.042
	(0.018)	(0.024)	(0.026)
Single female living alone	−0.057***	−0.073***	−0.027
	(0.017)	(0.022)	(0.025)
Married couple living with children (and potentially with other adults)	0.015	0.031**	−0.009
	(0.011)	(0.015)	(0.014)
Single male living with children (and potentially with other adults)	−0.045	−0.091*	0.017
	(0.033)	(0.050)	(0.030)
Single male living with other adults but not with children	−0.019	−0.03	−0.003
	(0.017)	(0.026)	(0.020)
Single female living with children (and potentially with other adults)	−0.087***	−0.070**	−0.098***
	(0.026)	(0.036)	(0.037)
Single female living with other adults but not with children	−0.065***	−0.036	−0.094***
	(0.020)	(0.027)	(0.029)
Missing information	−0.067	−0.099	−0.013
	(0.070)	(0.096)	(0.079)

Source: Authors' calculations based on weighted data from the fall 2017 wave of the OeNB Euro Survey.

*Note: Average marginal effects from probit estimations. Robust standard errors (in parentheses) are adjusted for clustering at the primary-sampling-unit (PSU) level. *, ** and *** denote significance at the 1%, 5% and 10% level, respectively. The category "(1a) CESEE EU Member States" includes Bulgaria, the Czech Republic, Croatia, Hungary, Poland and Romania. The category "(1b) Western Balkan countries" includes Albania, Bosnia and Herzegovina, North Macedonia, and Serbia.*

Table 4 continued

Which features determine homeownership in the CESEE-10?

Outcome variable: Homeowner (0/1)	(1) CESEE-10 countries	(1a) CESEE EU Member States	(1b) Western Balkan countries
	Average marginal effects		
Additional adults			
Base: no additional adults			
One additional adult	0.026**	0.028	0.030*
	(0.013)	(0.018)	(0.018)
More than one additional adult	0.072***	0.070***	0.072***
	(0.013)	(0.019)	(0.016)
Missing information	0.100*	–0.015	0.124***
	(0.052)	(0.111)	(0.037)
Type of dwelling			
Base: house			
Apartment	–0.082***	–0.093***	–0.063***
	(0.013)	(0.018)	(0.019)
Other	–0.139**	–0.137	–0.191*
	(0.070)	(0.094)	(0.115)
Town size			
Base: large town			
Small town	0.095***	0.102***	0.088***
	(0.017)	(0.023)	(0.025)
Medium town	0.067***	0.063***	0.073***
	(0.014)	(0.018)	(0.022)
Country fixed effects	yes	yes	yes
Pseudo R-squared (McFadden)	0.17	0.17	0.17
Pseudo R-squared (McKelvey & Zavoina)	0.30	0.29	0.29
Number of observations	9,688	5,857	3,831

Source: Authors' calculations based on weighted data from the fall 2017 wave of the OeNB Euro Survey.

*Note: Average marginal effects from probit estimations. Robust standard errors (in parentheses) are adjusted for clustering at the primary-sampling-unit (PSU) level. *, ** and *** denote significance at the 1%, 5% and 10% level, respectively. The category "(1a) CESEE EU Member States" includes Bulgaria, the Czech Republic, Croatia, Hungary, Poland and Romania. The category "(1b) Western Balkan countries" includes Albania, Bosnia and Herzegovina, North Macedonia, and Serbia.*

without children (omitted category). There is no statistically significant difference in terms of homeownership between married couples with children and married couples without children. This is unlike what has been found recently for the United States, where married couples with children are 6 percentage points more likely to be homeowners than those without (Goodman and Mayer, 2018). This relationship, however, has been shown to vary across OECD countries, with some recording higher homeownership rates among couples with dependents and some having higher rates among couples without dependents (Andrews and Sanchez, 2011).

Table 4 also presents evidence that across the CESEE-10, apartment occupants are less likely to be homeowners than respondents living in detached or semidetached homes. Those in small and medium-sized towns are 9 and 6 percentage points, respectively, more likely to be homeowners than those in the largest population centers.[22]

Comparing the models run on the subsets of EU Member States and non-Member States, we observe that the patterns associated with the United States and other OECD countries are more pronounced among the EU Member States. The difference in homeownership across age cohorts, for example, is starker in the CESEE

[22] *We ran several robustness checks, including unweighted regressions and clustering at the regional level. We also repeated the exercise estimating a logit model. None of these modifications qualitatively changed our results.*

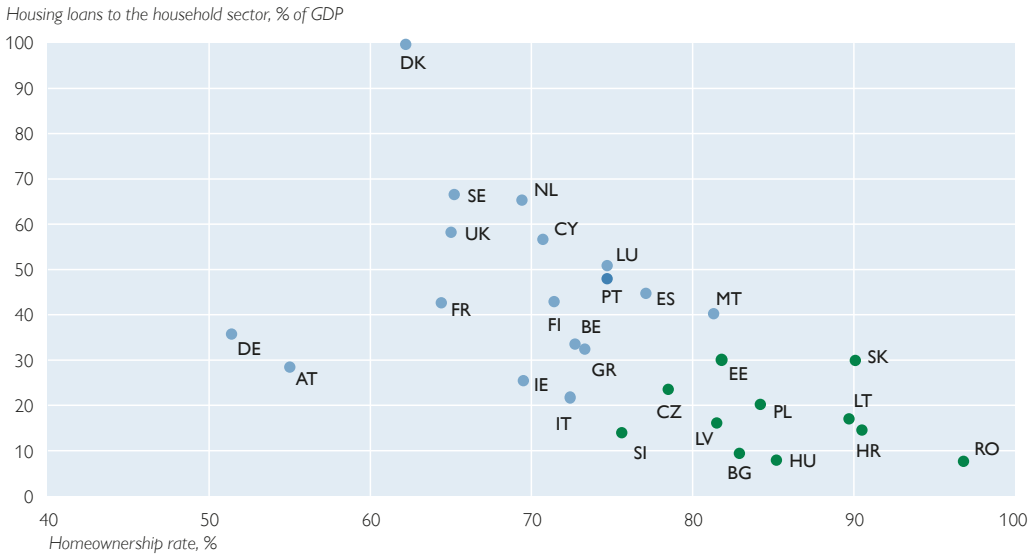
EU Member States than in the Western Balkan countries. In the United States, the 25–34 and the 35–44 years cohorts were 39 and 22 percentage points less likely, respectively, to be homeowners than those aged 65–74 (Goodman and Mayer, 2018). The CESEE EU Member States, more than the non-EU Member States, share this stronger correlation between age and homeownership. Similarly, more pronounced relationships between income and education on the one hand and homeownership on the other can be observed among the EU Member States. In the non-EU countries, unlike in the EU countries surveyed, we see no statistically significant relationship between respondents' educational status and homeownership status. Moreover, in the non-EU countries, we observe only a statistically weak difference in terms of homeownership between the middle- and high-income categories. The statistically stronger positive relationships between homeownership and both education and income in the EU countries bear more resemblance to what has been recently observed for the United States and selected OECD countries (Andrews and Sanchez, 2011; Goodman and Mayer, 2018).

4 Homeownership and the household credit market

We have hypothesized that the high outright homeownership rates in CESEE in general suggest that the relatively high overall homeownership rates we observe there are unlikely to be the result of a robust and/or deep housing finance market. This conjecture is supported by chart 3, which shows the relationship between homeownership rates and housing loans (measured as a percentage of GDP) for the EU-28 Member States. The impression chart 3 gives is very similar to our previous comparisons: It shows that the postcommunist countries have very high homeownership rates and rather small housing loan markets when compared with the other

Chart 3

Housing loans versus homeownership rates in 2017



Source: Eurostat EU-SILC (homeownership rates), OeNB 2019 (housing loans to the household sector, % of GDP).

Note: Green dots represent postcommunist countries; blue dots represent non-postcommunist countries.

EU Member States. It also shows that in CESEE the fraction of homeowners that are paying off a housing loan is low and the size of the housing loan market is comparatively small.

We elaborate on this point by using OeNB Euro Survey data to further explore the connections between people's housing assets and household credit markets in the CESEE-10. We start by looking at the subset of individuals who report that their "largest, most important" loan was taken out for the purpose of financing their main residence or another house or apartment. This restricts us to a subsample of 816 respondents, a number representing slightly under 10% of the original sample and slightly more than 10% of all homeowners surveyed.

When respondents were asked if and how their "largest, most important" loan was secured, we were surprised to find that nearly half of these loans were not secured by any physical property. As table 5 shows, around 30% of these housing loans were unsecured and 17% were secured only by a third-party guarantee. 41% were secured by a physical asset and 13% by both a physical asset and a third-party guarantee.

Notable differences also exist between the EU Member States and the Western Balkan countries in our sample. Third-party guarantees are somewhat more likely in the Western Balkan countries (19%) than in the EU Member States (16%) in our sample. At the same time, in the CESEE-10 the combination of physical assets and third-party guarantees as a package to secure a loan is much more often used by banks in the EU Member States (15%) than in the Western Balkans (6%). When explaining the reasons for this pattern, we must of course consider the possibility that some of these mortgages are quite small or that the respondents are unfamiliar with the terms of their loan contracts. It is also plausible that respondents' seemingly low propensity to pledge physical assets reflects the lack of smoothly functioning legal institutions and/or the correspondingly high costs of seizing pledged assets in the event of loan delinquency. To the extent that they are indeed operative, these factors could be expected to slow the development of mortgage markets in the CESEE-10.

Next, we compare how important real estate as collateral is across different types of loans. Table 6 reveals that most housing loans that are secured by physical

Table 5

Types of securities for bank loans used to finance housing

	(1) CESEE-10 countries	(1a) CESEE EU Member States	(1b) Western Balkan countries
	%		
Assets pledged	41.3	41.0	42.0
Third-party guarantor specified	16.7	15.8	18.9
Assets pledged and third-party guarantor specified	12.5	15.1	5.8
No security (neither assets pledged nor third-party guarantor specified)	29.6	28.1	33.3
Number of observations	816	590	226

Source: OeNB Euro Survey, fall 2017.

Note: Statistics are weighted. The category "(1a) CESEE EU Member States" includes Bulgaria, the Czech Republic, Croatia, Hungary, Poland and Romania. The category "(1b) Western Balkan countries" includes Albania, Bosnia and Herzegovina, North Macedonia, and Serbia. We consider respondents who report that the purpose of their largest, most important loan (that they are currently paying off) is to finance the main residence or another house or apartment. For 728 out of the 816 observations, we know that the largest, most important loan refers to a bank loan; for the remaining 88 observations (i.e. respondents who have both bank loans and nonbank loans), we assume that the largest, mort important loan (and hence, the information provided on housing loan securities) refers to a bank loan.

Table 6

Real estate and its usage as collateral security for different types of bank loans

	(1) CESEE-10 countries			(1a) CESEE EU Member States			(1b) Western Balkan countries		
	Percentage of loans secured by some asset	*Percentage of loans secured by real estate asset*	*Number of observations*	*Percentage of loans secured by some asset*	*Percentage of loans secured by real estate asset*	*Number of observations*	*Percentage of loans secured by some asset*	*Percentage of loans secured by real estate asset*	*Number of observations*
Housing loans	53.5	50.7	812	55.9	53.9	587	47.6	42.7	225
Consumption loans	16.0	7.6	769	11.0	5.6	502	25.1	11.3	267
Business loans	49.1	42.3	94	43.1	43.1	37	53.4	41.7	57
Other loans (e.g. loans for education)	16.8	10.2	330	15.8	15.2	163	17.7	5.3	167

Source: OeNB Euro Survey, fall 2017.

Note: Statistics are weighted. "Housing loans" comprise loans used to finance the main residence or another house or apartment; "consumption loans" comprise loans used to finance consumption goods such as furniture, traveling, household appliances or cars; "business loans" comprise loans used to finance a business or professional activity; the category "other loans" comprises loans used to finance education and any other types of loans. Statistics refer to a respondent's largest, most important bank loan (note that in some cases when respondents have both bank loans and nonbank loans, we assumed that the largest, most important loan refers to a bank loan). The category "(1a) CESEE EU Member States" includes Bulgaria, the Czech Republic, Croatia, Hungary, Poland and Romania. The category "(1b) Western Balkan countries" includes Albania, Bosnia and Herzegovina, North Macedonia, and Serbia.

assets are secured by real estate, most likely the property for which the loan is taken out. In fact, 53.5% of all housing loans on which we have information are secured by some physical asset and 50.7% of all housing loans are secured by housing assets.[23] The percentages of mortgage loans secured by physical assets, generally, and real estate, specifically, are higher in the six CESEE EU Member States (53.9%) than in the Western Balkan countries (42.7%) of our sample. However, they are still lower than in other EU Member States with similar GDP per capita.[24]

But real estate is also used as collateral for other loan types. Perhaps surprisingly, 8% of consumer loans and 10% of loans taken out for other purposes in our sample are secured by real estate. Here, the pattern between the two country groups within the CESEE-10 is ambiguous. While in the CESEE EU Member States in our sample, 6% of consumer loans are collateralized by real estate, this holds true for 11% in the Western Balkan countries. For loans taken out for other purposes, the comparison is reversed, with real estate being used as collateral more often in the CESEE EU Member States (15%) than in the Western Balkan countries (5%) in the sample. We also observe that physical assets play an important role as collateral in general and real estate assets, specifically, in financing business loans. 49.1% of the business loans reported are secured by some asset; and, in fact, the majority (42.3%) of business loans are secured by real estate. Here, there are no meaningful regional differences although we have to keep in mind that the number of business loans in our sample is small.

[23] *Thus, 51% of housing loans are "mortgages" according to the definition applied in other surveys, e.g. the HFCS. See also footnote 2. Overall, 40% of all bank loans in our sample are housing loans.*

[24] *It is difficult to obtain comparable data for other countries as we observe the frequency of loans and not the amounts. Insights from a comparison with macrodata or banking supervision data based on amounts is limited. However, we can compare our results with HFCS results: In Portugal, where GDP per capita is comparable to that in Poland or Hungary, 34.7% of respondents hold mortgage debt; in Greece, where GDP per capita is slightly higher than in Romania, 13.3% of respondents hold mortgage debt (see European Central Bank, 2017, Table E1, "Percentage of households holding debt"). The corresponding figures from the OeNB Euro Survey are 4.3% for Poland, 6.4% for Hungary and 1.9% for Romania.*

5 Conclusion

Our analysis shows that one generation after the fall of communism, homeownership and mortgage lending in the ten CESEE countries covered by the OeNB Euro Survey (CESEE-10) differ from the patterns in Western Europe in important respects. However, there are also interesting similarities. As in other studies on OECD countries, we observe robust positive correlations between homeownership and residents' age, income and education levels. Thus, the demographic characteristics of homeowners in our region of interest resemble those of homeowners in more mature market settings. In terms of homeownership levels, we still observe the legacy of communism and postcommunist privatization reforms, with rates of homeownership and outright homeownership being very high in CESEE. This is mirrored in the small size of the market for housing loans. Studying respondents' loan contracts in more depth, we find that only about half of the housing loans in our sample are collateralized by real estate and that a nonnegligible share of housing loans is secured by third-party guarantees. At the same time, real estate is used as collateral for other loan types as well. Regarding the role homeownership plays in the housing loan market, these last observations were the most surprising ones. They suggest that credit markets in CESEE have special features which banks operating there as well as researchers and policymakers should be aware of.

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Annex

Table A1

Definition of homeownership

Variable name	Variable type	Authors' definition	Definition by Eurostat EU-SILC
Homeowner	Dummy (0/1)	Based on the OeNB Euro Survey question "I would like to ask you some questions about your main residence, i.e., the house or apartment where your household lives for most of the year. Who owns your main residence?" (1) I own it myself (alone), (2) my partner owns, (3) I own it jointly with my partner, (4) I own it jointly with somebody else, (5) somebody, other than myself or my partner, in this household, (6) a family member or relative not living in this household, (7) another individual (not related to persons in this household/not a family member), (8) a company (that is not the employer of any household member), (9) employer of one of the household members, (10) a public institution, government or local authority, (11) a housing cooperative, or (12) other. Respondents can also state explicitly that they do not know the answer to a question. Furthermore, respondents can indicate that they do not want to answer a question. Respondents answering (1) to (5) are coded as homeowners with the dummy variable taking the value 1. Respondents answering (6) to (12) are considered non-homeowners and coded as zero. Respondents who did not answer the question or stated "do not know" were not taken into account in the analysis.	Eurostat EU-SILC distinguishes five different statuses of tenure: (1) outright owner, (2) owner paying mortgage, (3) tenant or subtenant paying rent at prevailing or market rate, (4) accommodation is rented at a reduced rate (lower price than the market price), and (5) accommodation is provided free. The following qualifications and definitions apply to owners and households: "The owner of the accommodation should be a member of the household. If for instance the accommodation is provided by a relative (such as by parents to their children) who is not a member of the household, then one of the other categories should be ticked, depending on whether or not rent is paid by this household. A person is an owner if he/she possesses a title deed independently of whether the house is fully paid or not. A reversionary owner should be considered as the owner" (Methodological guidelines and description of EU-SILC target variables, Directorate F: Social Statistics, Unit F-4: Quality of life, Version August 2017, https://ec.europa.eu/eurostat/web/income-and-living-conditions/methodology). "A 'private household' means a person living alone or a group of people who live together in the same private dwelling and share expenditures, including the joint provision of the essentials of living. EU-SILC implementing regulation number 1983/2003 on updated definitions, defines households in terms of sharing household expenses and (for non-permanent members) in terms of duration of stay and (for temporarily absent members) in terms of duration of absence" (Eurostat Metadata, https://ec.europa.eu/eurostat/cache/metadata/en/ilc_esms.htm).
Outright homeowner	Dummy (0/1)	Outright homeowners refer to homeowners who are neither paying back a loan on their main residence nor using that residence as collateral to secure another loan. If relevant information as to the purpose of the loan or the usage of collateral was missing, a respondent was classified as a non-outright homeowner. By doing so, we likely underestimate the outright homeownership rate. In the OeNB Euro Survey, information on the purpose and potential collateral of a loan is only available for a respondent's "largest, most important loan." For respondents who reported that their largest, most important loan refers to a nonhousing loan, we assumed that the respondent is currently not paying off a housing loan. It is thus possible that we mistakenly classify a respondent as an outright homeowner if she/he is still paying back a loan on the main residence, but the purpose of her/his largest, most important loan is different from financing the main residence.	"The owner is considered as 'outright owner' when he/she has no more mortgage to pay for his/her main dwelling. An owner who has to pay a mortgage only for a second dwelling and/or for repairs, renovation, maintenance, etc. should be treated as 'outright owner'. If the owner has already fully paid the principal of the mortgage and only the interest remains outstanding, the risk of eviction probably remains and consequently in this case the owner cannot be treated as outright owner and should be considered as an owner paying mortgage" (Methodological guidelines and description of EU-SILC target variables, Directorate F: Social Statistics, Unit F-4: Quality of life, Version August 2017, https://ec.europa.eu/eurostat/web/income-and-living-conditions/methodology).

Source: Authors' definition based on OeNB Euro Survey and definition by Eurostat EU-SILC.

Table A2

Definition of variables

Variable name	Variable type	Definition
Homeowner	Dummy	See table A1.
Age	Categorical	Respondents have been assigned to one of six different age groups: (1) 20–24 years, (2) 25–34 years, (3) 35–44 years, (4) 45–54 years, (5) 55–64 years and (6) 65 years and over. Respondents younger than 20 are excluded from the sample.
Household income	Categorical	Income is divided into three categories: (1) low, (2) middle and (3) high. Income groups were defined at the country level such that each group contains roughly one-third of the country's respondents. The category "Income: no answer" comprises all respondents who refused to disclose their income or who answered the question on income with "do not know."
Education	Categorical	Education is categorized into three groups: (1) low education, (2) medium education and (3) high education. "Low education" comprises primary education. "Medium education" comprises lower secondary, upper secondary and postsecondary nontertiary education. "High education" comprises tertiary education.
Household composition	Categorical	Categorization was undertaken in a way similar to Goodman and Mayer (2018). We distinguish the following categories: (1) single males living alone, (2) single females living alone, (3) married couples living with children (and potentially with other adults), (4) married couples living without children (but potentially with other adults), (5) single males living with children (and potentially with other adults), (6) single males not living with children but with other adults, (7) single females living with children (and potentially with other adults), (8) single females not living with children but with other adults. The last category, "Missing information," comprises all respondents who could not be clearly assigned to one of the above categories due to missing or contradicting information.
Additional adults	Categorical	Identifies the number of adults (aged 18 or older) that live in the same household as the respondent, excluding the respondent's spouse in case the respondent is married. For example, if a respondent lives together with her spouse and her two parents, then the number of additional adults is two.
Type of dwelling	Categorical	Three different types of dwellings are identified: (1) houses (detached houses, semidetached houses and farms), (2) apartments and (3) other types of dwellings (mobile homes, improvised housing units, etc.)
Town size	Categorical	Respondents were assigned to one of three categories depending on the size of their town of residence: (1) small towns, (2) medium towns or (3) large towns. The 25th and 75th percentiles (which were computed separately for each country based on information of the respondent's size of town) were used as cutoffs to assign respondents to one of three categories.

Source: Authors' compilation based on the OeNB Euro Survey.

Table A3

Descriptive statistics

	(1) CESEE-10 countries	(1a) CESEE EU Member States	(1b) Western Balkan countries
Outcome variable			
Homeowner (0/1)	0.83	0.80	0.88
Explanatory variables			
Age			
20–24 years	8.31	7.34	9.79
25–34 years	17.88	17.16	18.98
35–44 years	19.60	20.32	18.51
45–54 years	18.59	19.24	17.59
55–64 years	18.06	17.71	18.61
65 years and over	17.56	18.23	16.52
Household income			
Income: no answer	22.38	19.33	27.04
Low income	25.61	26.69	23.96
Medium income	27.52	28.97	25.29
High income	24.49	25.01	23.70
Education			
Low education	13.32	8.31	20.96
Medium education	66.92	73.19	57.32
High education	19.77	18.49	21.72
Household composition			
Single male living alone	5.64	6.62	4.12
Single female living alone	8.04	9.37	6.00
Married couple living with children (and potentially with other adults)	31.03	29.04	34.06
Married couple living without children (but potentially with other adults)	34.21	35.50	32.24
Single male living with children (and potentially with other adults)	1.71	1.60	1.88
Single male living with other adults but not with children	7.89	6.95	9.32
Single female living with children (and potentially with other adults)	3.41	3.28	3.60
Single female living with other adults but not with children	7.10	6.71	7.70
Missing information	0.98	0.92	1.07
Additional adults			
No additional adults	56.49	65.77	42.31
One additional adult	17.10	16.54	17.96
More than one additional adult	25.86	17.28	38.97
Missing information	0.55	0.41	0.76
Type of dwelling			
House	62.95	57.37	71.50
Apartment	36.51	41.97	28.16
Other type of dwelling	0.54	0.67	0.34
Town size			
Small town	26.92	27.20	26.49
Medium town	49.62	49.70	49.49
Large town	23.46	23.10	24.01
Number of observations	9,688	5,857	3,831

Source: OeNB Euro Survey, fall 2017.

Note: Entries refer to sample means (unweighted). Respondents younger than 20 are excluded from the sample. The category "(1a) CESEE EU Member States" includes Bulgaria, the Czech Republic, Croatia, Hungary, Poland and Romania. The category "(1b) Western Balkan countries" includes Albania, Bosnia and Herzegovina, North Macedonia, and Serbia. The category "(1) CESEE-10 countries" includes all of the ten aforementioned countries.

Event wrap-ups

The OeNB's 85th East Jour Fixe Ukraine: political, economic and migration challenges[1]

In cooperation with the National Bank of Ukraine

Compiled by Mathias Lahnsteiner[2]

The Oesterreichische Nationalbank (OeNB) organized its 85th East Jour Fixe in cooperation with the National Bank of Ukraine (NBU). The event, which took place at the OeNB in Vienna on September 12, 2019, focused on Ukraine, a country that held both presidential and parliamentary elections this year. Against the backdrop of political change, the East Jour Fixe assessed Ukraine's current macroeconomic situation and the challenges ahead. Invited speakers provided insights into the peace process concerning parts of Eastern Ukraine, the country's reform progress, the importance of sound governance for economic growth as well as monetary policy and financial stability. The event also discussed migration, which is an important issue for Ukraine and Central, Eastern and Southeastern Europe (CESEE) at large.

Reflecting the cooperation of the two organizing central banks, the workshop was opened by OeNB and NBU representatives. In her introduction, *Doris Ritzberger-Grünwald*, Director of the OeNB's Economic Analysis and Research Department, pointed to the successes the reform process in Ukraine has achieved so far, mentioning inter alia the transformation of the NBU into a modern and independent central bank, macroeconomic stabilization and important reform steps that have taken place since 2014. However, she interpreted this year's election results as a sign that Ukrainians are not yet satisfied with what has been achieved so far. She explained that it was only reasonable for this event to focus on looming challenges in Ukraine by highlighting some of them: the unresolved conflict in parts of Eastern Ukraine, low FDI inflows against the background of the necessary strengthening of the rule of law, and a very high level of nonperforming loans (NPLs). In his introductory statement, NBU Deputy Governor *Dmytro Sologub* shared his thoughts on the situation in his country by partly complementing some issues raised by Ritzberger-Grünwald. He emphasized some of the achievements that have been made in recent years despite very difficult circumstances, stressing the importance of prudent fiscal and monetary policy and the role of Ukraine's flexible exchange rate. He named the gas sector as one of the key reform areas where change has been significant. Among the main challenges, in his view, will be preventing the reversal of what has been achieved so far and overcoming vested interests. Given external risks, further cooperation with the International Monetary Fund (IMF) will be vital for Ukraine. Regarding emigration, Sologub said he did not expect the current pattern to change and for him, this issue was a long-term policy challenge.

Rémi Duflot, Deputy Head of the Office of the Special Representative of the OSCE Chairperson-in-Office in Ukraine and in the Trilateral Contact Group, gave a keynote speech on the challenge of peace from the perspective of the Minsk

[1] *The presentations and the workshop program are available at www.oenb.at/Termine/2019/2019_09_12_east_jour_fixe_85.html.*

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negotiations. As a starting point, he explained the origins and the functioning of the Minsk process and presented some striking figures on the non-government controlled area (NGCA) in the Donbas region, also with regard to the prevailing humanitarian situation. He remarked that the different narratives of the conflict complicated its resolution and referred to empirical research that could help discriminate between possible and unrealistic narratives. Duflot pointed out that according to a SOCIS nationwide survey published in May 2019, 62% of respondents see the conflict as the most pressing issue affecting people's lives. Yet, the U.N. Social Cohesion and Reconciliation (SCORE) survey shows how far views diverge among the population on both sides of the contact line regarding the granting of a special status to the NGCA (a core issue under the Minsk agreements) and that the different views are sometimes even selfcontradictory. Duflot noted that "such confusion was likely the result of a lack of public pedagogy on this important topic." One of the most urgent issues for the OSCE is to restore connectivity between the NGCA and the government-controlled area. Other priority challenges include stabilizing the security situation and reactivating political discussions. Progress on these matters would help building a convincing case for investors in the government-controlled area in the Donbas region, which is one of the declared objectives of the new Ukrainian government.

In the ensuing discussion, the Ukrainian Ambassador to Austria stressed Ukraine's sensitivity with regard to the nature of the conflict and underlined the need for caution in using terminology. Moreover, discussions of the nexus between EU sanctions on Russia and the Minsk agreements concluded that full implementation of the agreements (and, in turn, a lifting of sanctions) was likely to be still a long way off, which was in itself a reason for intensifying resolution efforts.

The first session chaired by *Helene Schuberth*, Head of the OeNB's Foreign Research Division, dealt with Ukraine's economic challenges. The first speaker in this session, *Olena Bilan*, Chief Economist at Dragon Capital (a Ukrainian investment bank), reviewed the reform progress. After providing detailed information on some key reform areas (banking system and NBU transformation, business deregulation, gas sector reform and measures in the fight against corruption), she concluded that the reform progress over the period from 2014 to 2018 was noteworthy, but not sufficient to change the perception foreign investors have of the country. Key obstacles to foreign investment – widespread corruption, lack of trust in the judiciary, and the influence of oligarchs – were not sufficiently addressed. There is hope, however, because the political setup after the elections has been conducive to fulfilling an ambitious reform agenda. The envisaged land reform, in particular, is viewed as transformational for Ukraine, given its potential to attract sizable capital inflows and markedly boost GDP growth. One of the key challenges is to overcome vested interests and resist pressures from oligarchs. In response to a question by the chair, Bilan stressed that the IMF played a major role in pushing for anticorruption measures.

Dimitar Bogov, Regional Lead Economist for Eastern Europe and Caucasus at the European Bank for Reconstruction and Development (EBRD), started his presentation by pointing to the great divergence in economic development between Ukraine and Poland. While at the onset of transition, the two countries had been at the same level, economically speaking, now, 30 years later, Poland is three times richer than Ukraine. He contrasted the comprehensive reforms undertaken in Poland with the lack of political will to reform in Ukraine. The lack of reforms led to a

significant governance gap between Ukraine and Poland, as worldwide governance indicators show. Against this background, Bogov elaborated on why governance was important for economic growth. He also presented some results from recent analytical work carried out at the EBRD, which shows that closing half the gap in the quality of Ukraine's economic institutions relative to the G7 would yield a sizable growth dividend. At the end of his presentation, he presented a list on what remains to be done in Ukraine, e.g. guaranteeing and respecting the independence of the NBU or privatizing state-owned enterprises and state-owned banks.

Sergiy Nikolaychuk, Director of the NBU's Monetary Policy and Economic Analysis Department,[3] focused on challenges for monetary policy and financial stability in Ukraine. By way of introduction, he pointed to the disinflation path and declining tensions in the Ukrainian financial sector. Then he presented a risk map for the banking sector. One risk that deserves particular attention is the legal risk that emanates from a number of controversial court rulings on the nationalization of Privatbank. In this regard, Nikolaychuk pointed to NBU efforts and the strong position of the IMF, which will help keep the situation stable. Regarding the economic recovery, he stressed that other policies than monetary policy (i.e. structural policies) should be used to achieve higher growth. External vulnerabilities are still a challenge, but – on the positive side – these have disciplined Ukrainian authorities to maintain prudent policies. Very high NPLs represent a further challenge as they put a drag on lending. Moreover, Nikolaychuk pointed out that structural rigidities and supply-side constraints in the real economy affect monetary policy through various channels.

The three presentations triggered several interesting comments and questions from the audience: The relation between the new Ukrainian president and the oligarch Ihor Kolomoiskyi was debated, but the debate remained inconclusive. The notion of macroeconomic stabilization was questioned with reference to very high real interest rates. The EU Association Agreement and the Deep and Comprehensive Free Trade Agreement (DCFTA) were characterized as being important background elements.

The second session, chaired by NBU Deputy Governor *Dmytro Sologub*, dealt with migration. *Matthias Lücke*, Senior Researcher at the Kiel Institute for the World Economy and member of the German Advisory Group Ukraine, presented preliminary research findings on labor migration from Ukraine since 2014. When assessing the scope of emigration from Ukraine, a key issue is to differentiate between seasonal or temporary migration and permanent migration. According to a conservative estimate, around two million Ukrainian emigrants (still) interacted with the Ukrainian economy in 2017. Approximately three-quarters of these emigrants live in the EU. In fact, there has been a remarkable shift in destination countries, with a sharp increase in the numbers of Ukrainian migrants in Poland and a decline in Russia. After providing further details on migrants from Ukraine, Lücke elaborated on the macroeconomic effects of migration and remittances, pointing out that those working abroad sustained the livelihoods of at least two million Ukrainians and their dependents. Moreover, he characterized sizable remittance inflows as a stable source of foreign exchange earnings. Regarding the impact of emigration on

[3] *Later in September, Sergiy Nikolaychuk became Deputy Minister at the Ministry of Economic Development, Trade and Agriculture of Ukraine.*

wages in Ukraine, Lücke concluded that it is unlikely that emigration has had a strong effect on the international competitiveness of the Ukrainian industry

Paweł Strzelecki, Economic Expert at Narodowy Bank Polski (NBP), presented analytical work on the contribution of immigration from Ukraine to economic growth in Poland. This analysis was motivated by the rapid increase in the numbers of Ukrainian immigrants to Poland. Labour Force Survey (LFS) data, however, do not show the full extent of immigration because they only cover persons who have been present in Poland for more than one year and because immigrants show low response rates. This is why Strzelecki and his NBP co-authors estimated the average annual number of employed immigrants to Poland. After applying a decomposition exercise, they concluded that the contribution of immigration to Polish GDP for the period from 2014 to 2018 amounted to 10% and helped stabilize labor supply in this period. Strzelecki saw the potential for the further growth of migration from Ukraine as limited as the Ukrainian economy is improving and the country's working-age population is shrinking. He also pointed to the many similarities that exist between Ukrainian immigration to Poland and Polish emigration to Great Britain and Germany.

Anna Raggl, Senior Economist at the OeNB, brought in a regional perspective on migration based on OeNB Euro Survey data focusing on the question of how the quality of public services shapes migration intentions in CESEE. Raggl highlighted that the CESEE countries recorded considerable out-migration in past decades. Together with unfavorable demographic developments, this adds up to a strong decline in working-age population. According to OeNB Euro Survey data collected in the fall of 2018, 9% of the working-age population in CESEE intend to move abroad within the next year. Factors closely related to individual migration intentions are age and gender, family characteristics, unemployment and networks. Yet, the presented analysis also revealed that people's dissatisfaction with public services plays a role in shaping migration intentions. For policymakers this means that improving the quality of public services can reduce emigration pressures and might incentivize re-migration and immigration.

After the three presentations, the speakers and participants discussed the possible impact of changes in German immigration policies on labor migrant flows from Ukraine. Although the discussants agreed that they did not have in-depth background knowledge on planned changes, the overall tenor was that they expected their impact to be rather limited in this context.

24th Global Economy Lecture
Danny Quah on "Demand and supply in a new world order: the role of non-great powers"

Compiled by Maria Silgoner[1]

On November 11, 2019, the Oesterreichische Nationalbank (OeNB) hosted the 24th Global Economy Lecture[2], which was delivered by Danny Quah, Dean and Li Ka Shing Professor in Economics at the Lee Kuan Yew School of Public Policy, National University of Singapore. Professor Quah is a renowned researcher in the fields of economic growth and development economics and has made important contributions to estimation techniques. In his lecture, he focused on large-scale shifts in the global economy and the move to a new "world order," sharing some preliminary findings from his forthcoming book on "Ordering the World: Truth to Power." His considerations combined several fields of science: standard economics, international relations and political economics.

Since the middle of the 20th century, the United States has been a global leader in politics, economic development, culture and technology as well as a global military power. This period has therefore often been referred to as the American Century. After the dissolution of the Soviet Union, the U.S.A. has remained the world's sole great power. In the decades following the Cold War, the U.S.A. grew faster than Europe and Japan. It was not only able, but also willing, to bear the responsibility and burden of acting as the global hegemon.

Today, however, the power of the U.S.A. has been undermined. The U.S.A. is no longer a role model for democracy and economic development. Nowadays, the European Union is more stable in social and economic terms, while emerging market economies like India or China have taken over the role of global growth engines. At the same time, the United States is no longer willing to bear the costs associated with the role of a global hegemon. As a benevolent leader, the U.S.A. might have been expected, for example, to find the appropriate measures to fight the pressing challenges of climate change, poverty and inequality.

This prompts the question of whether we need to replace our current "world order," i.e. the norms, conventions and rules that guide behavior across nations as well as the shared understanding of these rules. Who could take over the role of the new world leader?

Traditionally, this question is discussed only from a "supply-side perspective," i.e. by considering which country would "offer" to be a leader. Whether such a country could indeed emerge victorious from geostrategic rivalries depends, inter alia, on whether it is backed up by its economic size or dynamics or its military power. Asian politicians and economists today, for example, often argue that it would be just "morally fair" to let Asia take over world leadership. Any such shift

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

in world leadership might, however, end up in a "Thucydides Fallacy"[3] as, historically, switches from incumbent to emerging great powers mostly came with conflict and violence.

This line of thought, however, omits the demand-side aspect: Does the rest of the world actually call for, and will it subsequently accept, a new great power? In the past, the demand side, i.e. the countries accepting the global hegemon, was dominated by a small number of major industrial countries. Today, however, the demand side is far more complex – and thus, any transition to a new world order would also be far more complex than in the past. Emerging market economies are no longer economically insignificant, given that together they generate more than 50% of global GDP. We are confronted with a situation in which the demand side consists of a multitude of mostly small and medium-sized countries. In such a setting, the outcome of the battle among potential new leaders is far less easy to predict. We may actually move from a unipolar world order to a multipolar setting, in which several nations take over leadership in certain geographical areas or in specific fields. History provides several examples of small state agency. Professor Quah concluded that it is now time for a non-great power to take control and assume global responsibility.

The discussion following the Global Economy Lecture focused on the role of the European Union in the new global order, on the role small countries can play not only on the demand side but also on the supply side, on unilateral versus plurilateral or multilateral political and trade arrangements and on the implications a new world order would have for the financial system and the number of world currencies.

[3] *The Greek historian Thucydides (460–around 400 B.C.) described the epic struggle between Athens and Sparta.*

Statistical annex

Statistical annex

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

Table 1

Output, unemployment and prices

	2016	2017	2018	Q1 18	Q2 18	Q3 18	Q4 18	Q1 19	Q2 19
Gross domestic product	*Annual real change in %*								
Albania	3.3	3.8	4.1	4.3	4.3	4.7	3.3	2.4	2.3
Bosnia and Herzegovina[1]	3.4	8.0	3.6	3.5	3.9	3.2	3.7	2.8	2.6
Kosovo	4.1	4.2	3.8	2.9	4.4	3.7	4.1	4.2	4.1
Montenegro	2.9	4.7	4.9	4.5	4.9	5.0	4.8	3.0	3.2
North Macedonia	2.8	0.2	2.7	0.9	3.0	3.0	3.7	4.1	3.1
Serbia	3.3	2.0	4.3	4.9	4.9	4.1	3.4	2.7	2.9
Ukraine	2.4	2.5	3.3	3.3	3.8	2.8	3.5	2.5	4.6
Industrial production	*Annual real change in %*								
Albania	–18.0	–0.8	18.7	22.3	28.5	18.1	5.4	–11.7	–6.7
Bosnia and Herzegovina[2]	4.4	3.1	1.6	5.0	1.4	0.8	–0.4	–5.0	–3.6
Kosovo	1.8	2.9	2.4	4.3	1.1	–0.4	5.8	–2.1	6.7
Montenegro	–2.9	–4.2	22.4	39.1	24.0	11.9	17.6	–14.4	–9.5
North Macedonia	3.4	0.2	5.4	5.2	4.9	5.1	6.4	8.8	1.1
Serbia	5.2	3.9	1.3	5.9	2.1	–1.5	–0.8	–2.0	–2.6
Ukraine	2.8	0.4	1.6	2.9	3.2	1.2	–0.4	–0.7	1.6
Average gross wages – total economy	*Annual change in %*								
Albania	–12.0	–0.8	18.7	4.2	2.5	2.4	3.4	4.9	4.5
Bosnia and Herzegovina	0.9	3.1	1.6	2.1	2.8	3.5	4.2	4.0	4.4
Kosovo	5.8	2.9	2.4	..	..	..	..	..	..
Montenegro	3.5	–4.2	22.4	–0.1	0.0	0.3	0.1	0.6	0.5
North Macedonia	2.0	0.2	5.4	4.7	6.2	5.5	6.6	4.6	4.8
Serbia	3.8	3.9	1.3	8.4	2.3	2.7	2.9	9.3	9.9
Ukraine	23.3	0.4	1.6	26.1	26.3	24.7	22.5	20.8	18.8
Unemployment rate[3]	*%*								
Albania	15.6	14.1	12.8	13.0	12.9	12.7	12.7	12.6	12.0
Bosnia and Herzegovina	25.8	21.1	18.9	..	..	..	..	..	..
Kosovo	27.5	30.5	29.5	26.5	29.4	30.7	31.4	26.9	25.3
Montenegro	18.0	16.4	15.5	16.5	14.7	14.4	16.4	15.2	14.7
North Macedonia	24.0	22.6	21.0	21.9	21.4	21.0	19.6	18.1	17.6
Serbia	15.9	14.1	13.3	15.5	12.5	11.8	13.4	12.7	10.8
Ukraine	9.7	9.9	9.1	10.0	8.6	8.4	9.4	9.6	8.0
Consumer price index	*Period average, annual change in %*								
Albania	1.3	2.0	2.0	1.9	2.2	2.2	1.8	1.6	1.4
Bosnia and Herzegovina	–1.6	0.8	1.4	0.8	1.4	1.8	1.7	1.0	0.7
Kosovo	0.3	1.5	1.1	0.0	0.7	1.4	2.2	3.2	3.3
Montenegro	–0.3	2.4	2.6	2.7	3.2	2.7	1.8	0.5	0.5
North Macedonia	–0.2	1.4	1.5	1.7	1.5	1.5	1.2	1.2	1.2
Serbia	1.1	3.1	2.0	1.6	1.8	2.4	2.0	2.4	2.2
Ukraine	14.9	14.4	11.0	13.8	11.6	8.9	9.7	8.9	9.1

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

	2016	2017	2018	Q1 18	Q2 18	Q3 18	Q4 18	Q1 19	Q2 19
Trade balance	*% of GDP*								
Albania	–24.3	–24.4	–22.5	–21.8	–20.3	–22.9	–24.6	–22.6	–21.7
Bosnia and Herzegovina	–22.7	–22.8	–22.1	–21.0	–22.4	–22.9	–22.2	–22.8	–24.0
Kosovo	–37.7	–38.4	–40.6	–39.8	–42.3	–40.1	–40.1	–40.7	–39.8
Montenegro	–41.9	–43.2	–44.4	–46.4	–52.4	–36.9	–45.2	–46.7	–51.1
North Macedonia	–18.8	–17.9	–16.2	–19.3	–15.5	–14.1	–16.1	–18.6	–16.1
Serbia	–8.5	–10.2	–12.3	–11.7	–10.9	–11.2	–15.0	–13.1	–11.7
Ukraine	–7.5	–8.6	–9.8	–8.1	–7.3	–12.5	–10.2	–7.7	–9.3
Current plus capital account balance	*% of GDP*								
Albania	–7.0	–6.4	–5.9	–5.5	–4.6	–3.9	–9.5	–7.4	–7.2
Bosnia and Herzegovina	–3.5	–3.6	–3.1	–4.3	–2.1	–2.4	–3.8	–5.1	–4.4
Kosovo	–7.7	–6.6	–8.1	–12.0	–15.7	6.1	–12.8	–11.1	–12.7
Montenegro	–16.2	–16.1	–17.2	–36.1	–28.8	13.1	–32.3	–36.1	–28.8
North Macedonia	–2.7	–0.8	–0.2	–6.0	0.9	7.0	–3.5	–6.1	–1.5
Serbia	–3.0	–5.2	–5.2	–7.4	–3.4	–5.1	–5.2	–8.8	–6.9
Ukraine	–1.4	–2.1	–3.3	–2.5	–0.1	–7.5	–2.5	–0.6	–1.5
Foreign direct investment[1]	*% of GDP*								
Albania	–8.7	–8.6	–8.0	–10.4	–6.6	–8.3	–7.2	–9.3	–6.3
Bosnia and Herzegovina	–1.6	–2.0	–2.2	–3.2	–1.7	–2.6	–1.3	–2.8	–4.5
Kosovo	–2.9	–3.9	–2.4	–1.6	–2.3	–3.9	–1.4	–4.4	–2.1
Montenegro	–9.4	–11.3	–7.0	–6.0	–9.4	–4.2	–9.0	–9.4	–12.7
North Macedonia	–3.3	–1.8	–5.8	–9.8	–2.8	0.1	–10.7	–1.6	–0.3
Serbia	–5.2	–6.2	–7.5	–7.4	–6.4	–5.4	–10.4	–7.8	–8.7
Ukraine	–3.5	–2.3	–1.8	–1.8	–2.1	–1.2	–2.2	–1.7	–1.7
Gross external debt	*End of period, % of GDP*								
Albania	73.5	68.7	65.3	67.2	66.9	64.6	65.2	64.5	62.8
Bosnia and Herzegovina	69.6	66.6	..	..	..	..	..	..	..
Kosovo	33.2	32.6	29.9	30.9	31.4	31.6	29.9	30.0	31.0
Montenegro	..	..	..	..	..	..	..	..	..
North Macedonia	74.7	73.6	73.1	81.1	81.1	79.4	73.1	75.8	76.0
Serbia	92.2	85.8	84.5	85.8	85.5	84.9	84.5	85.4	86.8
Ukraine	126.4	97.3	90.2	94.0	95.2	92.8	90.2	87.4	83.7
Reserve assets excluding gold	*Period average, annual change in %*								
Albania	27.0	25.4	26.1	23.5	23.9	24.5	26.1	25.2	24.2
Bosnia and Herzegovina	30.0	32.0	33.6	32.7	32.9	33.9	33.6	32.8	34.1
Kosovo[2]	10.0	10.7	11.4	11.0	10.7	13.7	11.4	13.1	14.6
Montenegro	19.7	20.3	22.3	16.3	21.4	22.8	22.3	20.3	17.3
North Macedonia	24.5	20.9	24.4	23.1	23.3	23.6	24.4	24.0	24.2
Serbia	26.0	23.7	24.6	23.8	25.2	24.9	24.6	24.7	25.8
Ukraine	16.4	15.0	15.6	14.0	14.2	12.8	15.6	15.0	14.2

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

	2016	2017	2018	Q1 18	Q2 18	Q3 18	Q4 18	Q1 19	Q2 19
Bank loans to the domestic nonbank private sector	*End of period, annual change in %*								
Albania[1]	0.4	3.6	–0.3	4.7	1.6	–0.7	–0.3	0.6	4.5
Bosnia and Herzegovina[1]	3.4	7.5	5.7	7.3	7.1	6.5	5.7	5.3	6.1
Kosovo	10.4	11.5	10.9	10.4	11.3	11.4	10.9	11.4	10.5
Montenegro	5.7	7.5	9.6	7.1	8.4	10.2	9.6	10.1	6.2
North Macedonia[1]	–0.1	7.4	6.4	8.1	7.7	7.6	6.4	7.8	7.1
Serbia[1]	1.1	7.9	8.4	8.6	7.8	6.4	8.4	8.2	7.6
Ukraine[1]	–4.0	–0.6	6.5	7.1	6.7	9.8	6.5	1.4	0.1
Share of foreign currency loans[2]	*End of period, %*								
Albania	53.4	51.1	50.4	50.7	50.7	50.7	50.4	51.1	50.4
Bosnia and Herzegovina	64.5	62.9	59.0	62.4	61.9	61.0	59.0	54.2	53.2
Kosovo	..	..	..	..	..	..	..	..	..
Montenegro[3]	6.3	5.1	..	6.3	6.3	5.6	5.7	5.2	..
North Macedonia	43.9	41.7	40.4	41.9	41.8	41.8	40.4	40.5	40.8
Serbia[4]	67.9	66.2	66.3	66.8	67.0	66.5	66.3	66.0	65.9
Ukraine	49.5	43.9	42.9	43.4	42.9	44.1	42.9	42.2	40.6
NPL ratio	%								
Albania	18.3	13.2	11.1	13.4	13.3	12.9	11.1	11.4	11.2
Bosnia and Herzegovina	10.1	8.6	7.7	8.5	8.2	8.2	7.7	7.5	7.1
Kosovo	4.9	3.1	2.7	2.9	2.8	2.8	2.7	2.6	2.5
Montenegro	10.3	7.3	6.7	7.3	7.0	6.7	6.7	5.9	..
North Macedonia	5.5	5.1	4.8	4.4	4.5	4.5	4.8	4.7	4.7
Serbia	15.6	10.1	..	9.7	8.8	7.5	..	..	..
Ukraine	30.5	54.5	52.9	56.5	55.7	54.3	52.9	51.7	50.8
Tier 1 capital ratio	%								
Albania	13.8	15.1	17.0	15.6	16.6	16.9	17.0	16.6	17.3
Bosnia and Herzegovina	15.0	14.8	16.5	14.4	14.6	14.6	16.5	16.1	16.9
Kosovo[5]	17.9	18.0	17.0	18.3	17.4	16.1	17.0	17.1	16.8
Montenegro[5]	16.0	16.4	15.6	16.2	17.1	16.5	15.6	15.3	19.5
North Macedonia	13.9	14.2	15.0	14.8	15.1	14.9	15.0	15.5	15.8
Serbia	20.0	21.6	21.1	21.8	22.1	21.9	21.1	22.6	22.1
Ukraine	9.0	12.1	10.5	12.0	11.2	10.3	10.5	10.9	13.0

Source: National central banks.

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

Table 4

Monetary and fiscal policy indicators

	2016	2017	2018	Q1 18	Q2 18	Q3 18	Q4 18	Q1 19	Q2 19
Key interest rate	*End of period, %*								
Albania (one-week repo rate)	1.3	1.3	1.0	1.3	1.0	1.0	1.0	1.0	1.0
Bosnia and Herzegovina[1]	..	..	..	..	..	..	..	..	..
Kosovo[1]	..	..	..	..	..	..	..	..	..
Montenegro[1]	..	..	..	..	..	..	..	..	..
North Macedonia (28/35-day central bank bills)	3.8	3.3	2.5	3.0	3.0	2.8	2.5	2.3	2.3
Serbia (one-week repo rate)	4.0	3.5	3.0	3.3	3.0	3.0	3.0	3.0	3.0
Ukraine (discount rate)	14.0	14.5	18.0	17.0	17.0	18.0	18.0	18.0	17.5
Three-month interbank rate	*Period average, %*								
Albania	2.0	2.2	1.8	2.1	1.9	1.7	1.6	1.4	1.4
Bosnia and Herzegovina	..	..	..	..	..	..	..	..	..
Kosovo	..	..	..	..	..	..	..	..	..
Montenegro	..	..	..	..	..	..	..	..	..
North Macedonia	2.0	1.8	1.5	1.7	1.5	1.5	1.5	1.5	1.5
Serbia	3.4	3.4	3.0	3.1	2.9	2.9	3.0	3.0	3.0
Ukraine	17.6	14.3	13.7	13.5	13.5	13.4	14.4	14.8	14.6
Exchange rate	*Period average, national currency per EUR*								
Albania	137.4	134.2	127.6	132.5	127.4	126.0	124.4	124.6	123.1
Bosnia and Herzegovina	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Kosovo	..	..	..	..	..	..	..	..	..
Montenegro	..	..	..	..	..	..	..	..	..
North Macedonia	61.6	61.6	61.5	61.6	61.5	61.5	61.5	61.5	61.5
Serbia	123.1	121.4	118.3	118.4	118.2	118.1	118.4	118.2	118.0
Ukraine	28.3	30.0	32.1	33.5	31.3	31.8	31.9	31.0	29.8

	2016	2017	2018	2016	2017	2018
	General government balance			General government debt		
	End of period, % of GDP					
Albania	–1.8	–2.0	1.5	68.7	66.9	68.1
Bosnia and Herzegovina	1.2	2.6	2.3	40.4	36.1	34.2
Kosovo	0.2	1.3	0.4	14.0	15.5	16.3
Montenegro	–2.8	–5.6	–2.6	64.4	64.2	70.6
North Macedonia	–2.7	–2.7	–1.8	39.9	39.5	40.5
Serbia	–1.2	1.1	0.6	68.6	60.1	54.5
Ukraine	–2.3	–1.4	–1.9	80.9	71.8	60.9

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.