National Bank of Serbia

2020

November

INFLATION REPORT

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Introductory note

The *Agreement on Inflation Targeting* between the Government of the Republic of Serbia and the National Bank of Serbia, effective as of 1 January 2009, marks a formal switch of the National Bank of Serbia to inflation targeting as a monetary policy regime. The main principles and operation of the new regime are defined by the Memorandum on Inflation Targeting as a Monetary Strategy.

Since one of the underlying principles of inflation targeting is strengthening the transparency of monetary policy and improving the efficiency of communication with the public, the National Bank of Serbia prepares and publishes quarterly *Inflation Reports* as its main communication tool. The *Inflation Report* provides key economic facts and figures that shape the Executive Board's decisions and underpin activities of the National Bank of Serbia.

The *Inflation Report* aims to cover information on the current and expected inflation movements and to provide an analysis of underlying macroeconomic developments. It also seeks to explain the reasoning behind the Executive Board's decisions and to provide an assessment of monetary policy effectiveness during the previous quarter. Also integral to this *Report* are the inflation projection for eight quarters ahead, assumptions on which the projection is based and an analysis of key risks to achieving the target.

The information contained in this *Report* will help raise public understanding of monetary policy implemented by the central bank and awareness of its commitment to achieving the inflation target. It will also play a role in containing inflation expectations, as well as in achieving and maintaining price stability, which is the main statutory task of the National Bank of Serbia.

The November *Inflation Report* was considered and adopted by the NBS Executive Board at its meeting of 12 November 2020.

Earlier issues of the *Inflation Report* are available on the National Bank of Serbia's website (http://www.nbs.rs).

Executive Board of the National Bank of Serbia:

Jorgovanka Tabaković, Governor

Željko Jović, Vice Governor

Ana Ivković, Vice Governor

Dragana Stanić, Vice Governor

ABBREVIATIONS

bp – basis point
CPI – Consumer Price Inde**x**
EBRD – European Bank for Reconstruction and Development
ECB – European Central Bank
EIB – European Investment Bank
EMBI – Emerging Markets Bond Index
EU – European Union
FAO – UN Food and Agriculture Organization
FDI – foreign direct investment
Fed – Federal Reserve System
FOMC – Federal Open Market Committee
GDP – gross domestic product
GVA – gross value added
H – half-year
IFEM – Interbank Foreign Exchange Market
IMF – International Monetary Fund
LHS – left hand scale
mn – million
NAVA – non-agricultural value added
NPL – non-performing loan
OFO – other financial organisation
OPEC – Organization of the Petroleum Exporting Countries
pp – percentage point
Q – quarter
q-o-q – quarter-on-quarter
RHS – right hand scale
RMCP – real marginal cost of processed food production
s-a – seasonally-adjusted
SDR – Special Drawing Right
SORS – Statistical Office of the Republic of Serbia
y-o-y – year-on-year

Other generally accepted abbreviations are not cited.

Macroeconomic projections presented in the Report were concluded on 31 October.

Contents

I Overview

In May, the global economy began to gradually recover from the crisis referred to as "The Great Lockdown", supported by expansionary fiscal and monetary policy measures of a large number of countries. As the decline in economic activity in the second quarter, particularly in advanced economies, was softer than projected, with relatively strong recovery taking place in the third quarter, the leading international financial institutions revised upward the global growth outlook for this year. In October, the International Monetary Fund revised upward the global growth projection for 2020 by 0.8 pp to -4.4%. Somewhat slower recovery, of 5.2%, is expected in 2021 compared to June as it is assumed that some containment measures will remain in force during 2021 – they will be gradually abolished as the use of the vaccine grows. Faster than expected recovery as of May was also seen in the euro area, our most important trade and financial partner. Still, leading economic indicators suggest that the pace of recovery is losing momentum due to weaker activity in the services sector. As the coronavirus began to spread anew, containment measures were re-introduced in many countries, making it difficult to predict the speed of recovery in the coming period and the return of economic activity to the pre-crisis level.

Owing to a softer decline in global economic activity in the second quarter and more favourable leading indicators for the third quarter, the global growth outlook for this year was revised upward, compared to the expectations three months ago.

Amid a twin supply-demand shock, inflationary pressures remain low globally. In the euro area, year-on-year inflation has even been in the negative territory as of August. Consistent with this, leading central banks – the Federal Reserve System and the European Central Bank, continued to support economic activity by conventional and unconventional instruments, and to signal their readiness to further ease their monetary policies if needed. The third quarter was marked by frequent shifts in investors' risk propensity, prompted primarily by changing news about the course of the pandemic. At the same time, the risk premia of most emerging economies, including Serbia, declined in the third quarter.

The monetary policies of leading central banks in the world continued to support the real sector in fighting the effects of the pandemic, in order to ensure as fast economic recovery as possible and inflation's sustainable return to the target in the medium run.

Following the National Bank of Serbia's and Government's vigorous response to the current global crisis caused by the pandemic, in the period from the last *Report*, the National Bank's Executive Board did not change the key policy rate, which stands at its lowest level in the inflation targeting regime (1.25%). Such decision was based on the achieved and expected effects of past

In the period from the last Report, the National Bank of Serbia did not change the key policy rate because past monetary and fiscal policy easing had already affected recovery, which was faster than expected, with positive effects on economic activity expected going forward as well.

monetary and fiscal policy measures aimed at mitigating the negative consequences of the pandemic and encouraging economic growth, as well as better than expected results in most production and service sectors in the previous five months. As highlighted by the Executive Board, this was largely supported by responsible economic policy pursued before the pandemic, owing to which the National Bank and the Government could respond vigorously, helping preserve production capacities and employment, and preventing a sharper drop in business and consumer confidence. Moreover, Serbia's credit rating was preserved even during the pandemic, when rating downgrades across the world were more widespread than during the 2008–2009 crisis.

Credit conditions remained favourable in the third quarter, giving a strong impulse to the recovery of domestic demand, together with the moratorium effects and approval of loans under the Guarantee Scheme.

Owing to the earlier undertaken measures and activities of the National Bank of Serbia, smooth functioning of the interest rate and credit channel was ensured, and corporate and household credit conditions remained favourable in the third quarter. The trend of convergence of interest rates on dinar and euro-indexed loans, present for a longer time already, particularly in the corporate sector, continued, contributing to the increase in the degree of the dinarisation of receivables to the record high level (36.6% in September), and thereby to further strengthening of financial stability. Domestic loans continued to record two-digit, year-on-year growth rates in 2020, and were higher by 13.3% year-on-year in September, with the contribution of corporate loans being higher than that of household. Monetary policy easing as of March and the approval of loans under the Guarantee Scheme to micro, small and medium-sized enterprises and entrepreneurs, provided a strong credit impulse to the real sector. At the same time, disposable income increased also owing to the moratorium on the repayment of credit liabilities and lower loan repayment costs, contributing to the recovery of domestic demand.

Owing to macroeconomic and fiscal stability achieved in the past period, room was created for fiscal policy to respond vigorously in order to minimise the negative effects of the pandemic, while at the same time not jeopardising the sustainability of Serbia's public finance.

The economic assistance package adopted by the Government this year, worth around 12.5% of GDP, was one of the most generous in Europe. Along with reduced budgetary revenue, reflecting the pandemic-induced economic slowdown, the adoption of such a robust and timely package resulted in a consolidated fiscal deficit of RSD 360.8 bn in the first nine months. The deficit widening during the pandemic was justified as it served to preserve production capacities and citizens' lives and health in the extraordinary situation which befell the entire world. Particularly important is rising government capital expenditure, which contributes to the acceleration of infrastructure projects and an increase in the production potential. According to the Ministry of Finance's estimates, the general government fiscal deficit will equal around 8.9% of GDP at the annual level, which

will temporarily push up public debt this year. Still, public debt will remain below the Maastricht criterion of 60% of GDP and return to the downward trajectory as of next year. According to our estimate, the one-off increase in the deficit and public debt does not bring into question the sustainability of Serbia's public finance, while it does contribute to accelerated economic recovery, which will also generate higher government revenue in the period ahead.

The narrowing in external imbalances as of April is in line with the National Bank of Serbia's expectations.

Since the start of the year, the current account deficit has been lower by 15% year-on-year, reflecting the expected reduction in the goods deficit as of April and smaller expenses on account of foreign direct investment receipts. Working in the opposite direction was the lower secondary income surplus in an environment of reduced labour force mobility, the global crisis, and the resulting lower remittances inflows. In the first nine months, the current account deficit was EUR 1.7 bn and was fully covered by net foreign direct investment inflows. As of May, exports have been recovering from the pandemic and got closer to the pre-crisis level. Although renewed spread of the virus poses the risk that the recovery of exports could slow in the short run due to lower external demand, the projected reduction in the current account deficit to around 5% of GDP this year seems realistic as in this case the need for intermediate goods imports will decline. In the medium run, based on higher export capacities and the expected global economic recovery, the share of the current account deficit in GDP is likely to decline somewhat, with the pace of the decline depending on the dynamics of the investment cycle in the coming period.

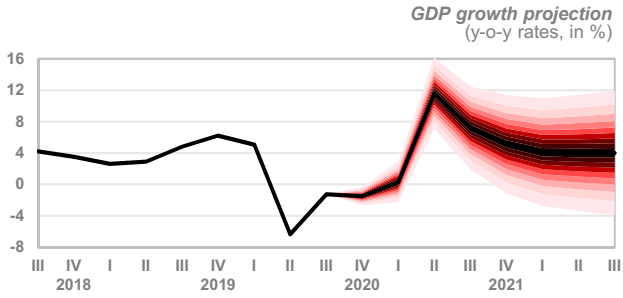
Economic recovery began in May, encouraged by the undertaken monetary and fiscal policy measures, the easing of containment measures and stronger external demand. It was faster than we expected in August in the majority of production and service sectors.

According to our estimate, excluding the effect of seasonal factors, economic activity in Serbia grew by 7.7% in the third quarter compared to the previous quarter. Its decline slowed to 1.3% in year-on-year terms, which is better than we expected in August. Faster than expected recovery was recorded primarily in industry and trade. In addition, the yields of main crops suggest that this year's agricultural season was better than last year's, which was also above-average. On the other hand, due to the high base effect, a year-on-year decline in construction is expected. On the expenditure side, compared to the previous quarter, recovery was recorded primarily for private consumption and private investment, reflecting the undertaken monetary and fiscal policy measures.

We revised upward the Serbian economy growth projection for 2020 – from -1.5% to -1%, which will be one of the best outcomes in Europe. As the response of Serbian economic policy makers was timely and

Owing to a smaller than initially anticipated decline in GDP in the second quarter and better than expected performance in the third quarter as well, we revised upward our GDP growth projection for this year from

adequate, next year will see a more than full recovery from the crisis, with the GDP growth rate of around 6%.



-1.5% to -1%. On the expenditure side, a more favourable outcome is supported by the faster than expected recovery of investment, primarily thanks to the preserved full macroeconomic and financial stability during the pandemic, sustained production capacities, accelerated infrastructure projects, and maintained favourable financing conditions. Domestic factors may contribute to an even better than expected outcome in 2020, though one should bear in mind the exacerbation of the epidemiological situation in the world, which may cause a new slowdown in the euro area and thus dampen the recovery of our exports. Next year, we expect accelerated economic recovery of around 6%, led by domestic demand and exports, with the key role played by the timely and adequate response of economic policy makers in Serbia and the expected recovery of external demand, which will ensure the return to a stable medium-term growth trajectory of around 4% at the annual level. The risks to the projection for next year are symmetric and relate primarily to the course of the pandemic and the resulting speed of economic recovery both in the world and at home. The risks associated with euro area growth are titled to the downside due to the worsening of the epidemiological situation and the tightening of containment measures, while the risks associated with domestic demand are titled to the upside as its rebound may prove to be faster than hoped for.

In the third quarter, year-on-year inflation moved around the average for the last seven years. It equalled 1.8% in September.

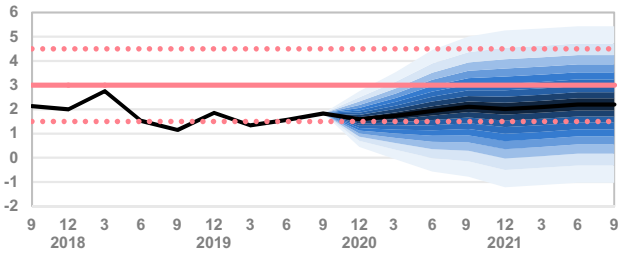
Since the start of the year, year-on-year inflation has been moving in line with our expectations. It equalled 1.8% in September. Cost-push inflationary pressures remained low, owing to lower global oil prices compared to their pre-pandemic levels, the maintained low costs in food production, and ensured relative stability of the exchange rate. Despite the continued growth in wages and employment in most sectors, amid reduced propensity to consume and dented external demand, demand-side pressures also remained low, as indicated by core inflation of 1.7% in September. That inflationary pressures are low is also confirmed by the one- and two-year ahead inflation expectations of the financial and corporate sectors, which continue to move below the inflation target midpoint.

According to the November central projection as well, year-on-year inflation is expected to move in the lower half of the target band until the end of the projection horizon. In the remainder of this year and during next year, it will move closer to lower bound of the target.

According to the November central projection, in the remainder of this and during next year, we expect year-on-year inflation to move in the lower half of the target band, closer to the lower bound. Such movement of inflation will be supported by relatively low aggregate demand and inflation in the international environment, while the effects of the decline in global oil prices will gradually wane. Thereafter, as economic activity and demand grow further, supported by expansionary

monetary and fiscal policy measures, inflation will gradually start to move towards the target midpoint of 3%, but will remain below it in 2022 as well. The uncertainty surrounding the inflation projection in the short run concerns primarily fruit and vegetable prices. In the medium run, the key risks to the projection continue to emanate from the international environment and pertain primarily to the speed of recovery of the euro area, global primary commodity prices and capital flows to emerging economies. The risks also partly concern the pace of recovery of domestic demand and movement of domestic administered and food prices. Overall, the risks to the inflation projection are judged to be symmetric.

Inflation projection
(y-o-y rates, in %)



The National Bank of Serbia will continue to closely monitor the movement and impact of key factors from the domestic and international environment on inflation, financial stability and the speed of economic recovery. It will continuously assess whether all measures are optimally combined and appropriate in scope, to provide necessary support to economic recovery, without prejudice to price and financial stability. The National Bank of Serbia, in coordination with the Government, stands ready to respond as the situation with the coronavirus pandemic evolves at home and abroad.

Looking ahead, full coordination of monetary and fiscal policy measures will be maintained, in order to preserve the achieved price and financial stability and relieve the position of citizens and businesses in the current extreme circumstances.

II Monetary policy since the August *Report*

After its comprehensive and robust response to the global pandemic-induced crisis, in the period since the August Report the NBS has kept the key policy rate unchanged at 1.25%, i.e. its lowest level in the inflation targeting regime yet.

The main reasons for such decision were the achieved and expected effects of past monetary and fiscal policy measures aimed at mitigating the negative impact of the pandemic and encouraging economic growth, as well as the fact that most production and service sectors performed better than expected. It became quite clear that the GDP growth rate in 2020 as a whole would be better than the initially projected -1.5%, and that this would be one of the best outcomes in Europe.

Concerns over renewed and accelerated spread of the coronavirus since October, notably in Europe, motivated the Executive Board at its November meeting to take proactive and pre-emptive steps by providing banks with the possibility of using additional cheap dinar liquidity. Banks will be able to tap two dinar liquidity lines – additional FX swap purchase auctions and securities purchase repo auctions.

A relatively fast recovery of our economy best illustrates the adequacy of the coordinated measures and activities taken by the NBS, the Government and the President of Serbia, owing to which we have maintained production capacities and employment, while precluding a sharper drop in business and consumer confidence. The Executive Board stressed that the NBS stands ready to respond, in coordination with the Government, to potential further effects of the pandemic in the domestic and international environment in order to maintain the achieved price and financial stability and relieve the position of citizens and businesses in these extreme circumstances.

The key policy rate has been kept on hold (1.25%) since the last *Inflation Report*. Such Executive Board's decision reflects primarily the achieved and expected effects of past monetary and fiscal policy measures aimed at mitigating the negative impact of the pandemic and encouraging economic growth. The economic policy makers' response to the crisis has been robust and comprehensive since the very start of the pandemic. When talking about the NBS, in the period March–June the key policy rate was cut by a total of 100 bp, to its lowest level in the inflation targeting regime, in order to sustain the fall in interbank money market interest rates and dinar lending rates and to encourage credit growth, and thus, contribute to a faster recovery of the overall economic activity. Also, the interest rate corridor was narrowed in March (from ±1.25 pp to ±1 pp relative to the key policy rate), with a view to improving monetary policy efficiency through the interest rate channel.

In addition to reducing all main interest rates, the NBS supported dinar liquidity of banks via direct repo operations, FX swap auctions and bilateral purchase of government dinar bonds from banks, in an effort to ensure smooth functioning of the interest rate and credit channel and secure even more favourable financing conditions for corporates and households. More favourable dinar financing conditions were secured also within the Government Guarantee Scheme for micro, small and medium-sized enterprises and entrepreneurs by adjusting the reserve requirement system, i.e. by offering a higher remuneration rate on allocated required reserves to banks which extend loans under the Guarantee Scheme at rates lower than the maximum prescribed. In doing so, the NBS helps increase the degree of dinarisation and thus, reinforce financial stability. The NBS also adopted an array of other measures to minimise the pandemic's toll on economic activity and employment and to ensure as fast a recovery as possible.[1]

In keeping the key policy rate on hold, the Executive Board was guided by the fact that most production and service sectors outperformed expectations. After August readings of the majority of economic indicators came in by end-September, it became quite clear that the GDP

[1] An overview of NBS measures is given in Table II.1, p. 9.

outcome in 2020 as a whole would be better than the initially projected -1.5%. The NBS therefore revised its GDP growth projection for this year to -1%, one of the best GDP growth outcomes in Europe. The Board stressed that industry and retail trade had already reached pre-crisis levels and exports were on the path of normalisation, as well as that the current growth projection for 2020 also reflected improved performance of agriculture. Favourable prospects were further confirmed by the FDI inflow, which remained solid in the face of the pandemic and the economic slowdown of our key foreign trade partners and more than sufficient to cover the current account deficit.

The Board also noted that the speedy recovery of our economy best illustrates the adequacy of the coordinated measures and activities taken by the NBS, the Government and the President of Serbia, owing to which we have maintained production capacities and employment, while precluding a sharper drop in business and consumer confidence. Owing to the responsible conduct of economic policy in the prior period, Serbian monetary and fiscal authorities have had the capacity to fight the ongoing crisis without jeopardising the achieved low and stable inflation, as well as other indicators of macroeconomic stability. The Executive Board said that past monetary policy easing was expected to continue to support favourable financing conditions for corporates and households and contribute to the increase in their disposable income. This would encourage further growth in domestic demand and, along with the gradual rebound in external demand, push Serbia's economic activity above the pre-crisis level already in the first half of the next year.

The adoption of monetary and fiscal stimuli was possible owing to low and stable inflation, underpinned primarily by the relative stability of the exchange rate and the market being amply supplied even in the crisis, and by the anchored inflation expectations. Inflation was stable in Q3, averaging 1.9% y-o-y. The Board said it expected inflation to move around this level in the coming months as well and to gradually approach the target midpoint in the medium run on the back of recovering demand, supported by monetary and fiscal policy measures.

Though the global economy is gradually recovering, partly owing to monetary policy measures of leading central banks and fiscal packages, the prospects still largely depend on the course of the pandemic. The recovery of the euro area, our most important trade and financial partner, was unfolding above expectations, reflecting the ECB stimulus supporting liquidity and credit and economic activity. In deciding to keep the rate on hold, the Executive Board also accounted for trends in the international commodity and financial markets which remained volatile, mirroring the pandemic-related uncertainty and global geopolitical tensions.

Considering developments in the international environment, and most of all persistent uncertainty over the course of the pandemic, the Executive Board highlighted our economy's increased resilience to external shocks, as a result of responsible conduct of economic policy in the past years and our adequate response to the current global crisis. Serbia managed to maintain its credit rating even during the pandemic, when rating downgrades were more widespread than during the 2008/2009 crisis, which is a clear recognition of the Government and NBS's success in preserving macroeconomic and financial stability of the country and a favourable economic outlook.

At its November meeting, the Executive Board kept the key policy rate unchanged, while **deciding to take proactive and pre-emptive steps in an environment of renewed and exacerbated health risks by providing banks with the possibility of using additional cheap dinar liquidity**. Though global economic rebound since May has been faster than hoped for, the accelerated spread of the coronavirus from October, particularly in Europe, remains a concern. With this in mind, the Executive Board made a decision to offer to banks two lines of dinar liquidity – additional FX swap purchase auctions and securities purchase repo auctions. Thus, the NBS seeks to maintain a sufficiently high level of available and cheap liquidity in the banking sector and, in turn, in the corporate sector, in order to sustain the stimulating effect.

The banking sector is still operating at considerable excess dinar liquidity, and the provision of additional assets should make financing conditions even more favourable by maintaining low interest rates and encouraging banks' lending activity. By organising regular weekly swap and repo auctions (swap on Mondays and repo on Thursdays), the NBS gives an opportunity to banks to obtain the necessary dinar liquidity for a three-month period under favourable conditions, using FX or dinar securities as collateral. The first auctions will be held on 16 November (swap) and 19 November (repo).

Looking ahead, full coordination of monetary and fiscal policy will be maintained, easing potential further negative effects from the international environment and the fallout from the spread of the coronavirus on the domestic economy. As so far, in coordination with the Government, the NBS will implement all the measures necessary to preserve the achieved price and financial stability and to relieve the position of citizens and businesses in these extreme circumstances.

Table II.1 **NBS response to COVID-19**

March	April	May	June	July	August	September	November
Monetary policy measures							
Key policy rate							
Cut by 0.5 pp, to 1.75%	Cut by 0.25 pp, to 1.5%		Cut by 0.25 pp, to 1.25%				
Rate corridor narrowed from ±1.25 pp to ±1 pp							
Support to dinar liquidity							
Additional swap auctions, 3M maturity							Additional swap auctions on a weekly basis (Mondays), 3M maturity
	Lower interest rate on FX swaps						
Auctions of repo purchase of government securities 7D maturity							
Auctions of repo purchase of government securities 3M maturity							Additional repo auctions of securities purchase on a weekly basis (Thursdays), 3M maturity
	Outright purchase of government securities in the secondary market						
		Corporate bonds included in the list of eligible collateral in NBS monetary operations					
						Outright purchase of corporate bonds in the secondary market	
More favourable conditions for Guarantee Scheme loans							
				Approval of dinar loans under the Guarantee Scheme at lower interest rates – minimum 50 bp reduction is compensated by the NBS through the higher remuneration rate on allocated required reserves			
Additional NBS measures							
Moratorium							
	Moratorium on debt payments				Moratorium on debt payments		
Housing loans							
			Reduction of mandatory downpayment for first-time home buyers from 20% to 10%				
					Reduction of the minimum degree of completion of a building eligible for financing via bank housing loans		
					Extension of repayment term for housing loans by up to five years		
Other loans							
				Extension of repayment term for household loans (except for housing) by up to eight years			
					Until end-2021 banks allowed to extend household dinar loans (up to 90,000 dinars) only based on signed statement on employment/pension		
Precautionary repo line with the ECB							
				A precautionary repo line with the ECB established to supply additional euro liquidity to local banks in case of need			

Source: NBS.

III Inflation movements

In Q3, y-o-y inflation moved around the seven-year average, measuring 1.8% in September. Compared to a quarter earlier, inflation dynamics were determined primarily by petroleum product prices, whose negative contribution declined consistent with the recovery of the global oil price, after a significant drop in April under the impact of demand- and supply-side factors. Core inflation also remained stable during Q3, measuring 1.7% in September. Low inflationary pressures are further confirmed by the inflation expectations of the financial and corporate sectors, which continue to move below the target midpoint for both one and two years ahead.

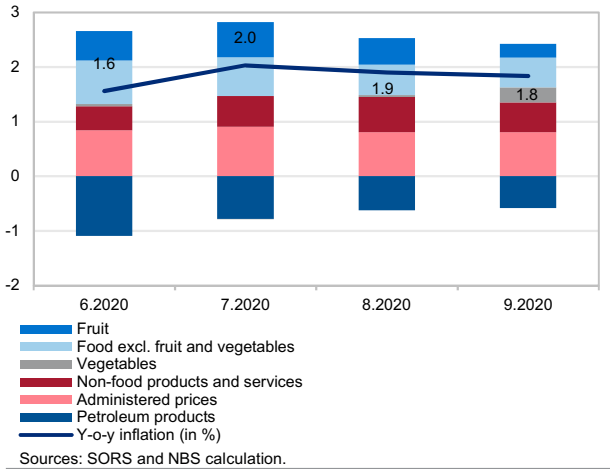
At quarterly level, consumer prices decreased by 0.4% in Q3, predominantly driven by a considerable decline in the prices of fresh vegetables and fruit with the onset of the new agricultural season, while an increase in petroleum product and cigarette prices worked in the opposite direction.

Inflation movements in Q3

In Q3, **y-o-y inflation** moved at the level of the seven-year average (around 2%). After returning within the target tolerance band in June (1.6%), y-o-y inflation first rose to 2.0% in July, mostly due to the lower negative contribution of petroleum product prices. With the onset of the new agricultural season, y-o-y inflation slowed down mildly in the remainder of Q3 – to 1.9% in August and 1.8% in September, mainly on account of the slower rise in the prices of fruit and other food as well. Vegetable prices are an exception, with their contribution to y-o-y inflation in September adding 0.2 pp relative to June, primarily as a result of the low base effect from the same period last year. Other CPI components had a relatively stable movement in Q3, with a similar contribution to the September and June y-o-y inflation outturns. In addition, **core inflation** (measured by CPI excluding the prices of food, petroleum products, alcohol and cigarettes), **remained stable in Q3, measuring 1.7% y-o-y in September**, and providing a negligibly higher contribution to y-o-y inflation in September (0.8 pp) than in June (0.7 pp).

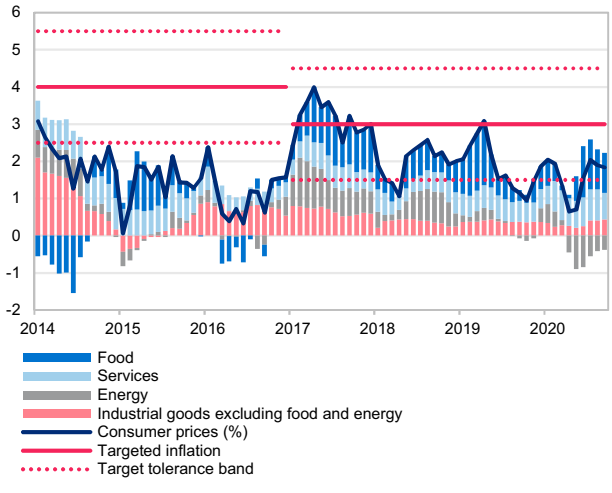
At quarterly level, **consumer prices decreased by 0.4% in Q3.** The prices **of food and non-alcoholic beverages** declined by 3.3%, with a -1.1 pp negative contribution to quarterly inflation, which was entirely driven by the seasonal decline in the prices of vegetables (-18.1%) and cheapening of fruit (-9.4%) unusual for this time of the year. Q3 saw a decrease in the prices of fresh meat (1.9%), namely of pork consistent with of the fall in global pork prices, which is also atypical for this part of the year. Unlike **unprocessed food** prices, the prices of

Chart III.0.1 **Contribution of CPI components to y-o-y inflation**
(in pp)



Sources: SORS and NBS calculation.

Chart III.0.2 **Contribution to y-o-y consumer price growth**
(in pp)



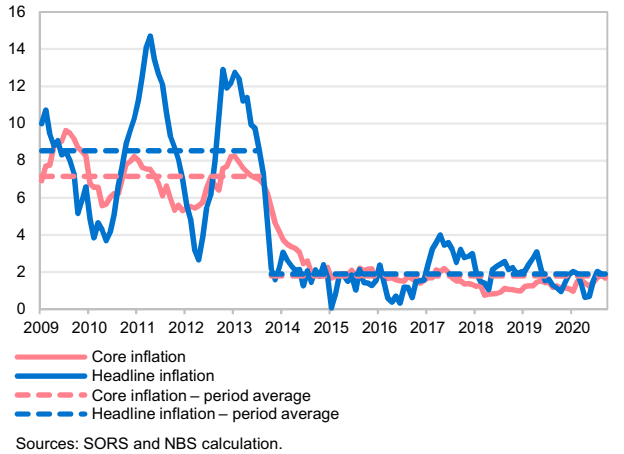
Sources: SORS and NBS calculation.

Table III.0.1 **Growth and contribution of components to consumer price growth in Q3 2020**
(quarterly rates)

	Growth rates (%)	Contribution (pp)
Consumer prices (CPI)	**-0.4**	**-0.4**
Unprocessed food	-10.0	-1.1
Processed food	0.3	0.1
Industrial products excluding food and energy	0.6	0.2
Energy	2.9	0.4
Services	0.2	0.0
CPI excluding energy, food, alcohol and cigarettes	0.1	0.0
Administered prices	0.8	0.2

Sources: SORS and NBS calculation.

Chart III.0.3 **Headline and core inflation**
(y-o-y rates, in %)



Sources: SORS and NBS calculation.

processed food grew by 0.3% in Q3, led by the increase in the prices of meat products (1.2%), with a 0.1 pp cumulative contribution to inflation.

The greatest positive contribution to inflation in Q3 came from the rise in **energy prices** (2.9%, contribution: 0.4 pp), almost entirely attributable to the increase in **petroleum product** prices in the domestic market (8.8%), which predominantly reflected the recovery of the global oil price in July and August. In addition, the prices of solid fuels (firewood and coal) edged up slightly in Q3 (0.3%).

The prices of **industrial products (excluding food and energy)** rose by 0.6% in Q3 (0.2 pp contribution to inflation), reflecting mainly the cigarette price adjustment in July (3.4%) and higher prices of audio and TV devices and mobile phones (3.2%). In contrast, a seasonal decline was recorded for the prices of clothes and footwear (1.7%), as well as a fall in the prices of vehicles and car parts (0.4%), with a -0.1 pp cumulative contribution to inflation.

The 0.2% rise in the **prices of services** in Q3 (with a modest 0.05 pp contribution to inflation) is mostly attributable to the somewhat higher prices of medical services (1.2%), followed by rents and apartment maintenance and repair services, as well as crafts and personal services. The presumed seasonal decline in the prices of travel packages (1.7%),[2] and lower prices of other services related to recreation and culture worked in the opposite direction.

The **administered prices** growth of 0.8% in Q3 (0.2 pp contribution) was a result of the July cigarette price hike, based on the regular annual excise adjustment. In y-o-y terms, these prices slowed down to 4.3% in September (from 4.6% in June) due to a somewhat lower y-o-y growth in the prices of electricity,[3] cigarettes and landline telephony services.

The prices within core inflation edged up by 0.1% in Q3 (0.05 pp contribution), due to the increase in the prices of audio-visual devices, materials, apartment maintenance and repair services, as well as medical services, while the seasonal fall in the prices of clothes, footwear and travel packages worked in the opposite direction.

[2] Due to the impossibility to fully cover these services in Q3 amid the coronavirus pandemic, SORS used the growth rate from the same period last year.

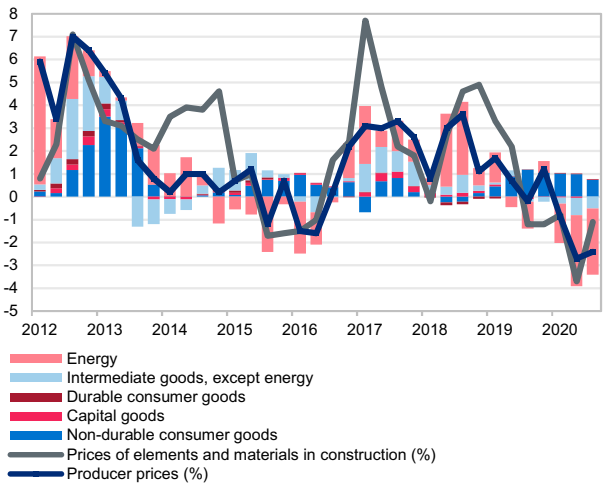
[3] On account of the wearing-off of the base effect for the introduction of the energy efficiency improvement fee in July 2019.

Producer and import prices

Although cost-push pressures remained low, the drop in **industrial producer prices in the domestic market** softened somewhat, to -2.4% y-o-y in September (from -2.7% in June). Such movements in producer prices were driven by a slower y-o-y downturn in the **energy production prices** in Q3 (primarily domestic petroleum products), and the **prices of intermediate goods** (primarily chemical products and base metals). A mild increase in the prices of capital goods worked in the same direction. The producer prices of durable consumer goods stagnated, while those of **non-durable consumer goods** (primarily in food and beverages production) continued up in Q3, though at a slower pace than in the previous quarter. Similar to producer prices, the **prices of elements and materials incorporated in construction** recorded a milder fall of -1.1% y-o-y in September compared to -3.7% y-o-y in June).

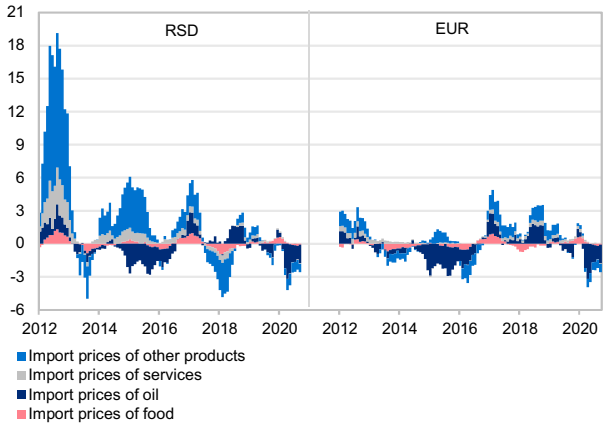
Ever since the global pandemic was declared in March 2020, **dinar-denominated import prices**[4] have been on the y-o-y decline, which measured -2.6% in September (same in June and March). Compared to the same period the year before, the fall in the prices of goods and services imported to Serbia is mainly attributable to subdued global demand. Looking at components, global oil price and export prices of Germany (which are used to approximate the prices of imported equipment and intermediate goods) went down, with a -2.4 pp cumulative contribution to total import prices in September. Lower global food expressed in dinars and lower euro area consumer prices (which are used to approximate the prices of imported services) worked in the same direction, giving a -0.2 cumulative contribution to import prices. The pace of the prices of imported goods and services was also affected by the dinar's strengthening against the dollar, caused by the euro's appreciation vis-à-vis the dollar.

Chart III.0.4 **Contribution to y-o-y producer price growth***
(in pp)



Sources: SORS and NBS calculation.
* Industrial producer prices for the domestic market.

Chart III.0.5 **Contribution of individual components to y-o-y rate of import price growth**
(in pp)



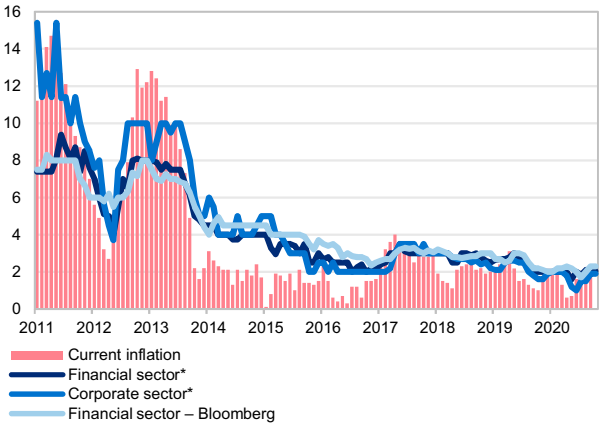
Sources: Destatis, FAO, Bloomberg, Eurostat, SORS and NBS calculation.

Inflation expectations

Anchored inflation expectations of the financial and corporate sectors indicate that market participants expect that price stability will be preserved going forward, confirming the adequacy of the NBS measures.

[4] The weighted average of the global Brent oil price and food price index (FAO index), euro area consumer prices, and export prices of Germany, one of Serbia's most significant foreign trade partners, is used as an indicator of import prices. The base year is 2010.

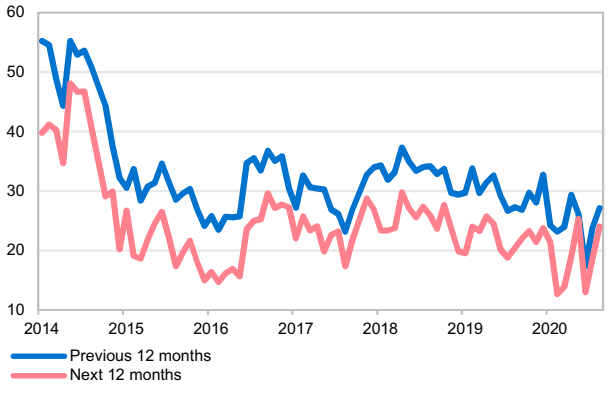
Chart III.0.6 **Current inflation and one-year ahead inflation expectations**
(y-o-y rates, in %)



Sources: Gallup, Ipsos/Ninamedia, Bloomberg and NBS.

* Ipsos and Gallup until December 2014, Ninamedia since December 2014, and Ipsos since January 2018.

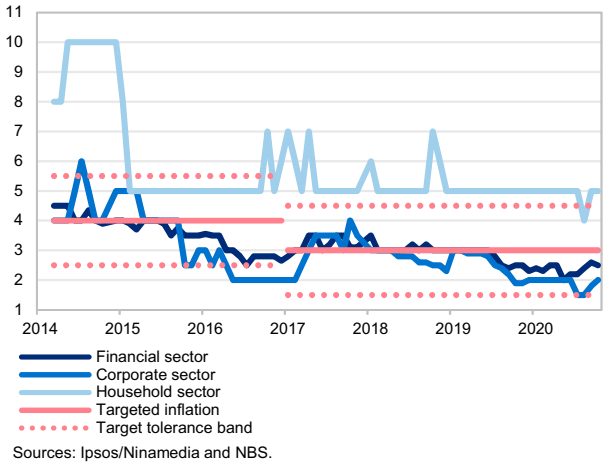
Chart III.0.7 **Household perceived and expected inflation***
(in index points)



Sources: Ipsos/Ninamedia and NBS calculation.

* Ipsos until December 2014, Ninamedia since December 2014, and Ipsos since January 2018.

Chart III.0.8 **Two-year ahead inflation expectations***
(y-o-y rates, in %)



Sources: Ipsos/Ninamedia and NBS.

* Ipsos until December 2014, Ninamedia since December 2014, and Ipsos since January 2018.

According to the results of the Ipsos survey, **one-year ahead inflation expectations of the financial sector** moved at an average 2.0% in Q3, which is also the average for the year so far. In October they increased mildly, to 2.1%. According to the results of the Bloomberg survey, short-term inflation expectations of the financial sector also continued to move within the NBS target tolerance band (3±1.5%), gradually increasing in Q3 – from 1.7% in July to 2.0% in August and 2.3% in September. They stayed unchanged in October. Looking at a longer horizon, the financial sector has expected inflation to be within the NBS target tolerance band for seven years now (since October 2013), which contributes to higher credibility of the NBS.

One-year ahead inflation expectations of corporates returned within the NBS target tolerance band in Q3, after temporarily moving below the lower bound in Q2.[5] Short-term inflation expectations of corporates came at 1.5% in July and August, while in September and October they increased to 1.9%. This is most probably a result of the faster than expected recovery of economic activity, as testified by the rise in the number of corporates expecting fixed investment growth over the next twelve months. Rising inflation expectations are also probably attributable to higher fuel prices than in Q2.

Typically higher than those of other sectors, **one-year ahead inflation expectations of the household sector** were somewhat more volatile in Q3 and in October than in Q2, moving in the 5.0–7.0% range. Short-term inflation expectations of households were probably influenced by uncertainties regarding the duration of the new wave of the coronavirus contagion. However, speaking in favour of the expected preservation of price stability are also the results of the qualitative survey,[6] which show that the index of expected inflation continues to record lower values than the index of perceived inflation. Such movements indicate that households expect inflation to be lower over the next twelve months than in the past year.

Two-year ahead inflation expectations of the financial sector are anchored within the NBS target tolerance band since their monitoring began (March 2014), moving in the 2.2-2.6% range in Q3, and equalling 2.5% in October. **Those of the corporate sector** were somewhat lower, moving in the range of 1.5–2.0%. **Two-year ahead inflation expectations of households** have been stable at 5.0% for almost two years now.[7]

[5] Most likely under the impact of low oil prices and economic deceleration due to the measures taken in the fight against the coronavirus pandemic.

[6] For more details on qualitative expectations of households see the February 2016 *Inflation Report* – Text box 2, p. 15.

[7] Except for August 2020, when they fell to 4.0%.

IV Inflation determinants

1 Financial market trends

The unchanged level of the key policy rate underpinned the stability of interest rates in the interbank money market, which reflected onto interest rates on new dinar loans to corporates and households that exhibited minimum volatility in Q3.

Interest rates

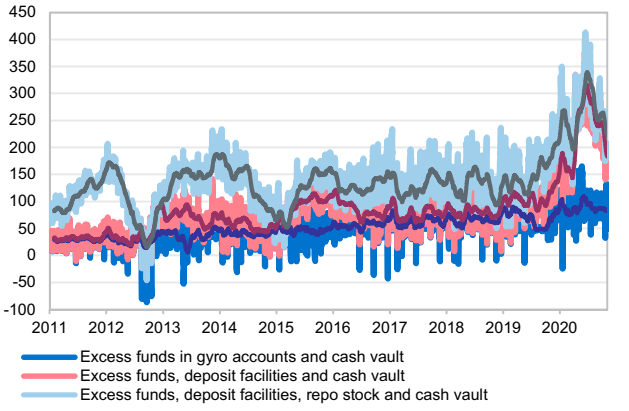
In Q3, the NBS kept the key policy rate at 1.25%, with very stable average repo rate achieved at auctions of repo securities. Namely, after June when it came at the level of the deposit facility rate (0.25%), the average repo rate slid marginally in July and August to 0.23%, and then rebounded to 0.26% at end-September.

Also, interest rates in the **interbank money market** changed negligibly in Q3. At end-September, BEONIA stayed unchanged relative to end-June (0.26%), with the average trading volume in the interbank overnight money market increasing from RSD 1.8 bn in Q2 to RSD 2.3 bn in Q3. BELIBOR rates of all maturities mildly declined in Q3 (down by 2–5 bp), ranging between 0.4% for the shortest maturity and 1.2% for the six-month maturity at end-September.

In the course of October, the values of BEONIA and BELIBOR rates remained almost identical to those from end-September.

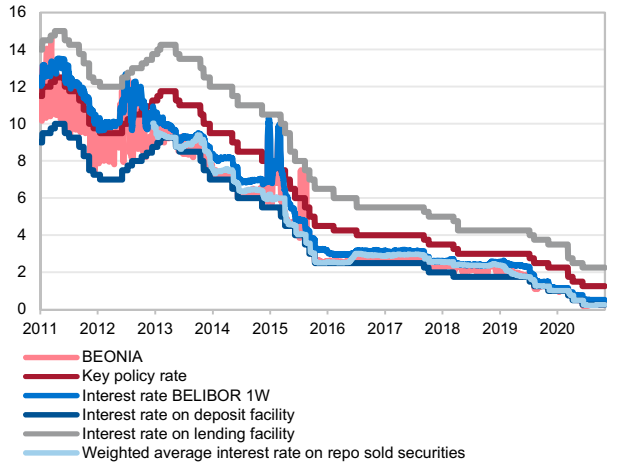
In the **primary market of government securities**, effective rates on five- and twelve-year dinar securities stayed unchanged in July and August (2.6% and 3.85%, respectively), while that on two-year dinar securities decreased by 15 bp, to 1.95%. In two additional sale auctions held in September, effective rates on five- and twelve-year government securities increased slightly so that at end-Q3 they amounted to 2.65% and 4%, respectively.

Chart IV.1.1 **Dinar liquidity**
(daily stock and 30-day moving averages, in RSD bn)



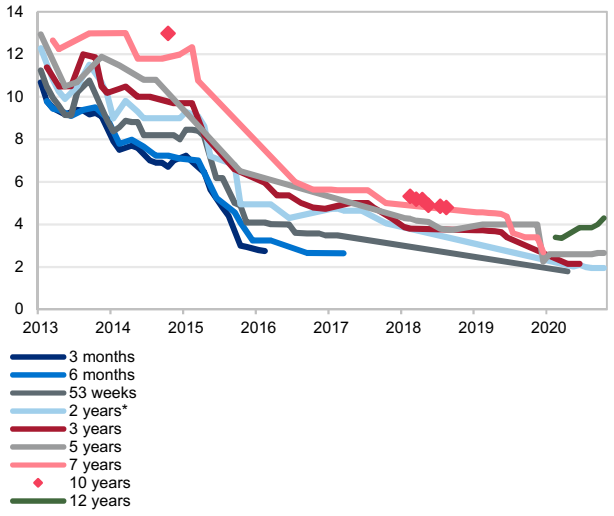
Source: NBS.

Chart IV.1.2 **Interest rate movements**
(daily data, p.a., in %)



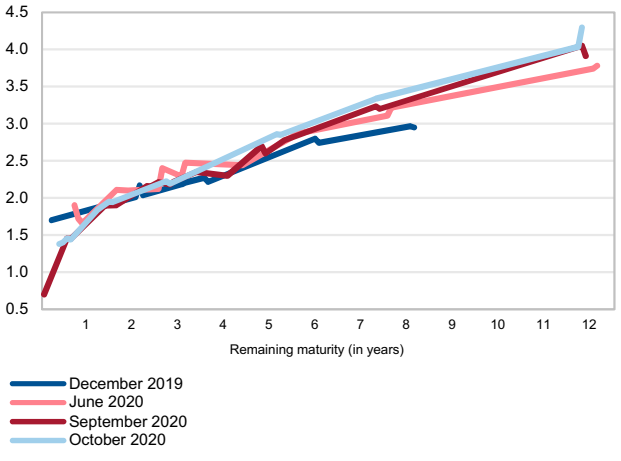
Sources: Thomson Reuters and NBS.

Chart IV.1.3 **Interest rates in the primary market of dinar government securities**
(p.a., in %)



Source: Ministry of Finance.
* Excluding coupon securities with the rate linked to the NBS key policy rate.

Chart IV.1.4 **Yield curve in the secondary government securities market**
(average values, p.a., in %)



Source: Central Securities Depository and Clearing House.

Though the plan was to sell securities worth nominal RSD 40 bn, due to weaker demand after July, Q3 saw the sale of securities in the nominal amount of RSD 23.6 bn. However, one should bear in mind that the previously sold dinar securities in the nominal amount of only RSD 0.7 bn (compared to RSD 83.4 bn sold in Q2) matured in Q3, so the stock of sold dinar securities increased to RSD 912.3 bn at end-September.

In Q3, the stock of dinar securities owned by non-residents decreased by RSD 9.6 bn, to RSD 206.1 bn, or 22.6% of the entire stock of sold dinar securities, as non-residents were selling more in the secondary market than they were buying in the primary market.

Investors were also less active in the **secondary market**, which is testified by lower turnover of dinar securities in Q3 (RSD 55.9 bn) compared to Q2. The same as in H1, yield-to-maturity rates recorded stable values with minimum volatility for shorter maturities, while they edged up slightly for longer maturities. In September, they ranged from 0.7% for the remaining one-month maturity to 4.05% for the remaining twelve-year maturity.

A new auction of twelve-year dinar securities was organised in early October. The planned sales volume of RSD 5 bn was outstripped, as securities worth nominal RSD 19.7 bn were sold at an effective rate of 4.3%, with a significant share of non-residents, who bought securities in the nominal amount of RSD 18.4 bn. In addition, two auctions of two- and five-year securities were organised in October, at effective rates unchanged from the previous auctions held in August (two-year maturity) and September (five-year maturity).

The government also organised an **auction** of five-year **euro-denominated securities** in September. Though the demand was lower than the supply, the effective rate edged down by 0.1 pp, to 1%.

Consistent with the movement of interest rates in the interbank money market, **interest rates on new dinar loans** exhibited minimum volatility in Q3, testifying to the preservation of favourable financial conditions. The interest rate on dinar corporate loans averaged 3.3% in September, same as in June. However, in the structure of new dinar corporate loans, interest rates on investment and other non-categorised loans declined in Q3, while the rate on working capital loans was slightly revised up (by 0.1 pp, to 3.4%).

The average interest rate on dinar cash loans to households, which are the dominant category of new

dinar household loans, declined in Q3 by 0.1 pp, to 9.2%. Still, the 0.3 pp rise in interest rates on other non-categorised dinar loans to households (5.7%) reflected entirely on the rise in the weighted average rate on total dinar household loans, which also increased by 0.3 pp to 8.3% from June to September.

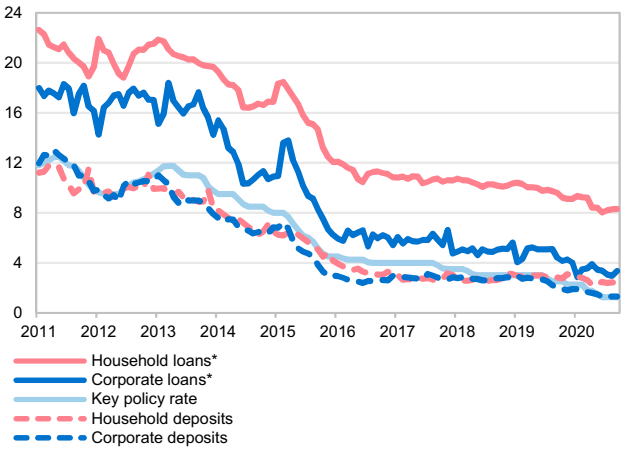
The weighted average rate on **euro-indexed and euro corporate loans** in September stayed unchanged relative to June (2.7%). In the structure of new euro corporate loans, interest rates on investment loans went down (by 0.1 pp, to 3.1%), as did the rates on other non-categorised loans (by 0.4 pp, to 2.2%), while those on working capital loans edged up by 0.2 pp and averaged 2.6% in September.

It is important to note that in August the interest rates on dinar corporate loans were for the first time lower than the rates on euro corporate loans (2.9% vs. 3.0%). Even though it takes time for these interest rates to converge, with the spread between them narrowing for several years now, their standing at similar levels came as a result of monetary policy easing and all other measures taken by the NBS.

The weighted average rate on euro-indexed household loans declined by 0.4 pp to 3.3% in Q3, which can be attributed to the rise in share of the housing loans in total new euro loans, from 66% in June to 78% in September, which are approved at a lower than average interest rate (2.7% in September), and to the drop in interest rates on other non-categorised loans (by 0.2 pp to 5.6%).

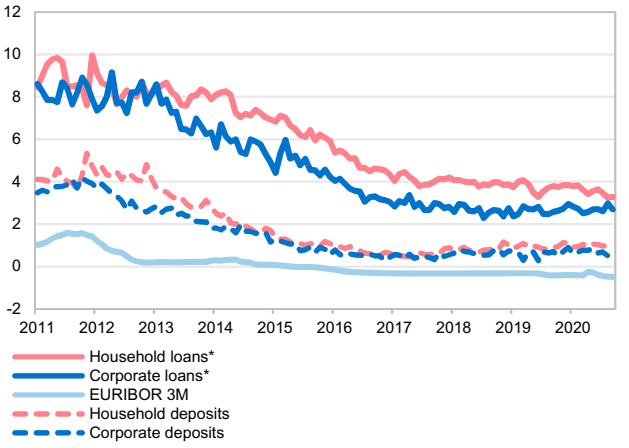
Interest rates on **dinar savings** declined by 0.1 pp, to 2.3% in Q3, while those on time dinar deposits of corporates stayed unchanged, measuring 1.3% in September, same as in June. Also, the average interest rate on household euro savings stayed unchanged relative to June (1%), while the rates on time euro deposits of corporates edged down by 0.1 pp to 0.6%.

Chart IV.1.5 **Interest rates on new dinar loans and deposits**
(weighted average values, p.a., in %)



Source: NBS.
* Excluding revolving loans, current account overdrafts and credit card debt.

Chart IV.1.6 **Interest rates on new euro and euro-indexed loans and deposits**
(weighted average values, p.a., in %)



Sources: European Banking Federation and NBS.
* Excluding revolving loans, current account overdrafts and credit card debt.

Text box 1: How strong is the interest rate channel in Serbia?

The interest rate channel of the monetary policy transmission mechanism is highly important in both advanced and emerging economies. Each central bank therefore seeks to estimate its effectiveness, i.e. the speed at which retail rates adjust to changes in the central bank's key rate. The estimate of the interest rate channel is particularly important for inflation targeters as the interest rate is their main monetary policy instrument.

The strength of the interest rate channel is determined based on the estimate of the degree and speed at which the changes in the monetary policy rate reflect on retail lending and deposit rates. Faster and stronger transmission is desirable in terms of both monetary policy effectiveness and preservation of financial stability. In theory, in the long run, a change in the monetary policy rate should fully spill over to retail rates. However, a complete pass-through can be hindered by different factors, such as asymmetric information, imperfect substitution with other forms of assets, insufficient interbank competition, unfavourable macroeconomic conditions etc.

The impact of the monetary policy rate on bank lending and deposit rates is indirect, i.e. it takes place through short-term money market rates, usually used by central banks as the monetary policy operational target. In case of Serbia, the effectiveness of the interest rate channel depends on the robustness of transmission of the NBS one-week repo rate to interest rates in the interbank money market, and their transmission to retail dinar rates. In case of lending rates, the impact of the money market rate takes place both directly – by linking it to benchmark interest rates in contracts, and indirectly – through costs of funding lending activity, and in case of deposit rates – through changes in the opportunity cost of holding money.

An econometric estimate of these two segments of the interest rate channel in Serbia has been carried out, in respect of lending interest rates. The estimate relies on data for the last ten years (since September 2010), i.e. since a comparable series of data on lending rates is available. The equilibrium error correction model has been applied, involving the estimate of the long-run relationship (between the levels of interest rates) and the short-run relationship (between changes in interest rates).

First, the impact of the repo rate (r_t) on interest rates in the interbank money market – BELIBOR rates (b_t^m) with the maturity (m) from one week to six months (1W, 2W, 1M, 3M, 6M) was estimated. The long-run relationship between money market rates and the repo rate was estimated based on the following regression equation:

$$b_t^m = \beta_0 + \beta_1 r_t + \varepsilon_t$$

The short-run relationship is estimated based on the following equation:

$$\Delta b_t^m = \gamma_0 + \gamma_1 \Delta b_{t-1}^m + \gamma_2 \Delta r_t + \alpha \varepsilon_{t-1} + \mu_t$$

where ε_{t-1} is the residual from the long-run equation, i.e. the speed of adjustment of BELIBOR to the estimated long-run equilibrium from the first equation.

The estimates of the β_0, β_1, γ_0, γ_1, γ_2 and α coefficients are shown in Table O.1.1. The apparent strong link between the repo rate and BELIBOR rates (Chart O.1.1) has also been econometrically confirmed.

In the estimated long-run cointegration relationship, the coefficient of the impact of the repo rate on BELIBOR rates of different maturities is close to one (Table O.1.1), suggesting **a complete pass-through of the main instrument to interest rates in the interbank money market**. The increase in the estimated constant with rising maturity in this equation is consistent with the positive slope of the yield curve. In the estimated short-run relationship, the one-week repo rate, as expected, has the strongest impact on one-week BELIBOR, as indicated by the highest coefficient for change in the repo rate (γ_2=0,78), i.e. **in its major part, the change in the repo rate affects one-week BELIBOR already in the current month**.

Table O.1.1 **Estimated coefficients of the model for BELIBOR**

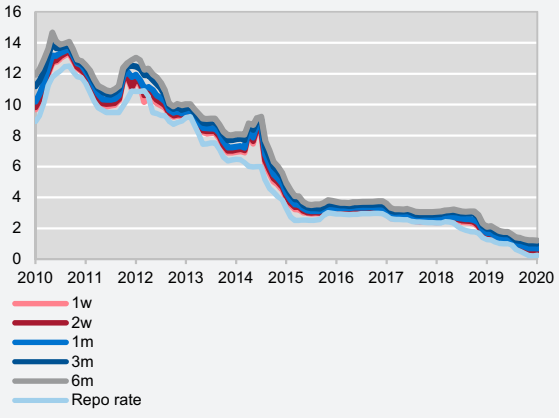
Maturity of BELIBOR	1w	2w	1m	3m	6m
Long-term equation for BELIBOR					
Repo rate (β_1)	1.03***	1.04***	1.05***	1.07***	1.09***
Constant (β_0)	0.24***	0.31***	0.4***	0.63***	0.78***
R^2	0.99	0.99	0.99	0.99	0.98
Short-term equation for BELIBOR					
Lag of BELIBOR – change (γ_1)	0.07	0.07	0.12	0.18*	0.20**
Repo rate – change (γ_2)	0.78***	0.75***	0.68***	0.58***	0.56***
Speed of adjustment to long-term link (α)	-0.34***	-0.3***	-0.25***	-0.18***	-0.16***
Constant (γ_0)	-0.02	-0.02	-0.02	-0.03	-0.04
R^2	0.39	0.39	0.41	0.39	0.38
Q(12)	12.34	12.69	12.77	13.76	14.02

*** Highest statistical significance, i.e. r-value < 0.01; ** r-value < 0.05; and * r-value < 0.1.

This conclusion is also supported by the coefficient for deviation from the long-run equilibrium (α), which is the most negative for one-week BELIBOR. Both coefficients – γ_2 and α, suggest a somewhat weaker pass-through for longer-maturity rates.

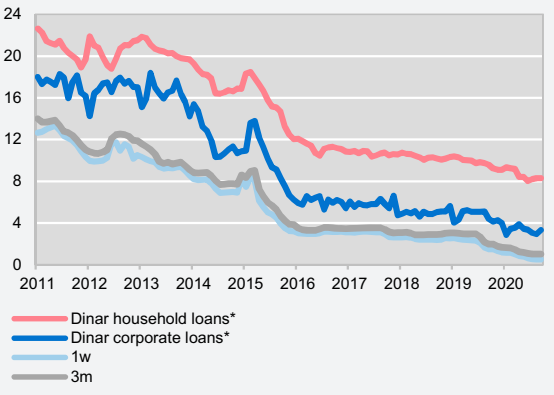
Although the pass-through of the repo rate to longer-maturity BELIBOR rates is somewhat slower, **it is complete in all cases**, i.e. the coefficient for the repo rate is around one.

Chart O.1.1 **Movement of repo rate and BELIBOR interest rates**
(average monthly data, in %)



Sources: Thomson Reuters and NBS.

Chart O.1.2 **Movement of interest rates on loans and BELIBOR interest rates**
(average monthly data, in %)



Source: NBS.

* Excluding revolving loans, current account overdrafts and credit card debt.

In the next step, we analysed the pass-through of interbank money market rates to dinar lending rates. We observed four categories of dinar loans – total household loans, cash loans, total corporate loans and working capital corporate loans. Chart O.1.2 shows that, in the long run, lending rates mirrored interbank money market rates, with the spread declining over time. The short-run relationship is less obvious, i.e. it seems that a change in interbank money market rates does not pass through to lending rates in the same month and that time must lapse for banks to adjust their lending rates to changes in interbank money market rates. According to banks' data, the rates of around a half of dinar loans are non-indexed, while the rates of the other half are indexed to BELIBOR rates – mainly one-month for corporate and three- and six-month for household loans.

As in the previous step, we first estimated the long-run relationship between the levels of variables – four categories (v) of interest rates on dinar loans (k_t^v), interest rates in the money market, and EMBI as the indicator of the country's risk premium (pr_t), which should explain the drop in the interest spread in the observed period:

$$k_t^v = \beta_0 + \beta_1 b_t^m + \beta_2 pr_t + \varepsilon_t$$

In the short run, we observed the impact of the change in lending rates from the previous month, changes in BELIBOR rates and deviation from the long-run equilibrium from the previous period (ε_{t-1}) on the change in lending rates in the current month, and the following regression equation was estimated:

$$\Delta k_t^v = \gamma_0 + \gamma_1 \Delta k_{t-1}^v + \gamma_2 \Delta b_t^m + \alpha \varepsilon_{t-1} + \mu_t$$

Tables O.1.2 and O.1.3 show that **the estimated coefficient for BELIBOR (β_1) is close to one in all cases, which suggests a complete pass-through of BELIBOR to lending rates, with the estimated pass-through even exceeding one in case of corporate loans**. This result can be attributed to the fact that the corporate sector has access to more alternative sources of funding than households. Moreover, in all equations, **the coefficient for EMBI for dollar debt (β_2) is statistically significant, which means that the falling country risk premium also contributed to the decline in lending rates, in place in the major part of the observed period**.

In the short-run equation, the direct pass-through of BELIBOR in the same month is statistically significant and relatively high for corporate loans, in contrast to household loans. In the corporate sector, this coefficient is exceptionally high (0.53–0.65) and statistically significant in all cases. In the household sector, for the 95% significance level it is statistically significant only in one case (total six-month BELIBOR loans), but remains lower compared to corporates.

Still, the relatively high coefficient α in all equations (between -0.20 and -0.24 in the household sector, and between -0.33 and -0.36 in the corporate sector) suggests relatively fast adjustment to the long-run equilibrium in all categories of loans. In other words, the change in the repo rate begins to gradually pass through to lending rates with a lag of one month and more in case of households. In case of corporates, the pass-through starts in the same month.

Table O.1.2 **Estimated coefficients of the model for interest rates on household loans**

	Total					Cash loans				
Maturity of BELIBOR	1w	2w	1m	3m	6m	1w	2w	1m	3m	6m
Long-term equation for interest rates on loans										
BELIBOR (β_1)	1.10***	1.10***	1.09***	1.06***	1.04***	1.03***	1.03***	1.02***	0.99***	0.96***
EMBI (β_2)	0.6**	0.56**	0.55**	0.58**	0.57**	0.55*	0.52	0.52	0.6*	0.62*
Constant (β_0)	5.06***	5.16***	5.1***	4.71***	4.62***	5.79***	5.88***	5.79***	5.22***	5***
R^2	0.95	0.95	0.95	0.95	0.95	0.9	0.9	0.9	0.9	0.89
Short-term equation for interest rates on loans										
Lag of interest rate on loans – change (γ_1)	0.32***	0.32***	0.31***	0.27***	0.25***	0.08	0.08	0.07	0.06	0.05
BELIBOR – change (γ_2)	0.13	0.16	0.19	0.27*	0.32**	0.19	0.2	0.24*	0.24	0.22
Speed of adjustment to long-term link (α)	-0.21***	-0.22***	-0.22***	-0.24***	-0.24***	-0.2***	-0.21***	-0.21***	-0.22***	-0.23***
R^2	0.31	0.32	0.32	0.36	0.38	0.26	0.26	0.27	0.29	0.30
$Q(12)$	8.63	6.09	6.17	6.64	7.19	12.35	12.69	12.77	13.76	14.02

*** Highest statistical significance, i.e. r-value < 0.01; ** r-value < 0.05; and * r-value < 0.1.

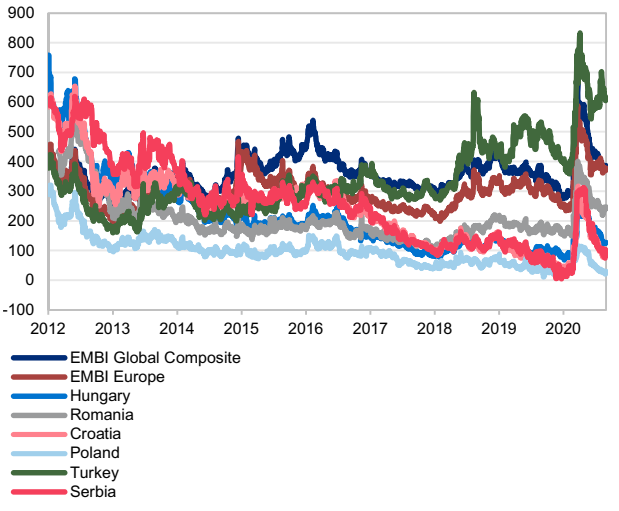
Table O.1.3 **Estimated coefficients of the model for interest rates on corporate loans**

	Total					Working capital loans				
Maturity of BELIBOR	1w	2w	1m	3m	6m	1w	2w	1m	3m	6m
Long-term equation for interest rates on loans										
BELIBOR (β_1)	1.25***	1.25***	1.23***	1.2***	1.18***	1.39***	1.38***	1.37***	1.34***	1.32***
EMBI (β_2)	0.7***	0.67***	0.66***	0.72***	0.71***	0.54*	0.51*	0.5*	0.54*	0.51*
Constant (β_0)	-1.14	-1.11	-1.18	-1.72	-1.83*	-0.94	-0.89	-0.95	-1.45	-1.5
R^2	0.96	0.96	0.96	0.96	0.96	0.95	0.95	0.96	0.96	0.96
Short-term equation for interest rates on loans										
Lag of interest rate on loans – change (γ_1)	-0.07	-0.07	-0.08	-0.08	-0.08	-0.08	-0.08	-0.09	-0.08	-0.08
BELIBOR – change (γ_2)	0.54***	0.56***	0.65***	0.65***	0.64***	0.53**	0.56**	0.61**	0.61**	0.59**
Speed of adjustment to long-term link (α)	-0.35***	-0.35***	-0.34***	-0.34***	-0.33***	-0.34***	-0.34***	-0.34***	-0.36***	-0.36***
R^2	0.27	0.27	0.28	0.28	0.27	0.24	0.24	0.25	0.26	0.26
Q(12)	16.51	16.8	17.8	17.47	16.94	12.35	12.69	12.77	13.76	14.02

*** Highest statistical significance, i.e. r-value < 0.01; ** r-value < 0.05; and * r-value < 0.1.

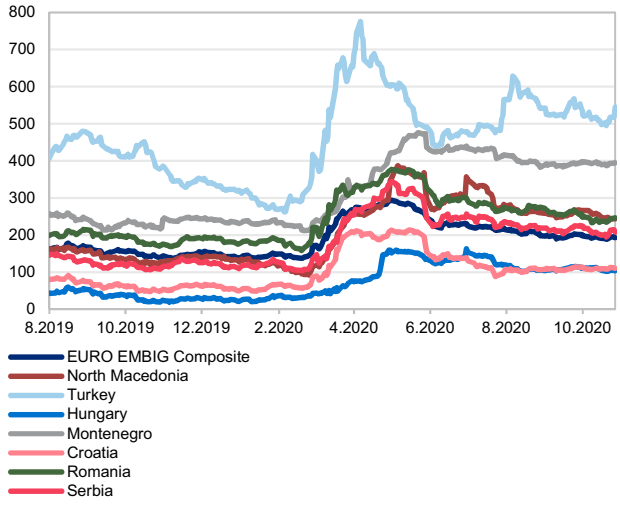
Finally, we can conclude that the presented results of regressions – which show a complete pass-through from the repo rate, as the main instrument, to BELIBOR rates, as the operational target, and a complete pass-through from BELIBOR rates to retail lending rates – confirm that the interest rate channel in the dinar segment of the Serbian lending market is highly effective. The obtained results confirm what we have emphasised earlier – the decline in interest rates on dinar corporate and household loans from May 2013 to September 2020 by 13.5 pp and 12.3 pp respectively was under the strongest impact of the 10.5 pp cut in the key policy rate, with an additional positive impulse coming from the reduced country risk premium.

Chart IV.1.7 **Risk premium indicator for dollar-denominated debt – EMBI**
(daily data, in bp)



Source: J.P. Morgan.

Chart IV.1.8 **Risk premium indicator for euro-denominated debt – EURO EMBIG**
(daily data, in bp)



Source: J.P. Morgan.

Table IV.1.1 **Credit rating**
(change of rating and outlook)

	2017	2018	2019	2020
S&P	BB /stable[4)]	BB /positive[4)]	BB+ /positive[4)]	BB+ /stable[2)]
Fitch	BB /stable[4)]		BB+ /stable[3)]	
Moody's	Ba3 /stable[1)]		Ba3 /positive[3)]	

Source: NBS.
[1)] March, [2)] May, [3)] September, [4)] December.

Risk premium

Large-scale fiscal packages and measures of leading central banks, which injected considerable liquidity volumes in response to the crisis, and the relaxation of physical distancing measures, boosted investors' readiness to invest into emerging economies again. This reflected on the renewed fall in Serbia's risk premium for dollar-denominated debt. Since end-April until the last day of its publishing (28 August) country risk premium fell by 206 bp (the sharpest fall compared to regional peers) to 103 bp, which is significantly below EMBI Global Composite (383 bp). After more than 15 years, the US-dollar EMBI for Serbia is no longer published as of the last day of August 2020. The reason is that there were less than 13 months left to maturity of the only dollar Serbian eurobond at that moment, and according to J.P. Morgan's criteria this is when the bond is excluded from the index calculation.

After Serbia's successful presentation at the international financial market with the first issue of the euro-denominated eurobond in June 2019, benchmark data became available on the EMBI risk premium for Serbia based on euro-denominated debt.[8] Under the impact of global factors, Serbia's risk premium for euro-denominated debt rose in March and April, as was the case with other emerging economies. Having climbed to 344 bp in early May, EURO EMBIG for Serbia started to go down, driven by large-scale measures of leading central banks, the relaxation of restrictions and signals of gradual recovery of the global economy, as well as by Serbia's measures adopted in response to the crisis and better than expected results of economic activity at home. In Q3, Serbia's risk premium for euro-denominated debt dropped by 32 bp, to 225 bp at end-September and by additional 17 bp in October.

Owing to Serbia's sound economic indicators, which were preserved during the coronavirus pandemic, in September, Fitch Ratings affirmed Serbia's credit rating one step away from investment grade, with a stable outlook. Fitch took this decision taking into account greater resilience of the Serbian economy to risks, which is a result of responsible economic policy pursued over the past several years and the adequate response of Serbian economic policy makers to the crisis. Fitch pointed out that Serbia's macroeconomic developments are more favourable than those of its rating peers, partly due to the adopted comprehensive package of economic

[8] On 30 June 2020, a seven-year eurobond in euros was introduced in the calculation of EURO EMBIG for Serbia.

measures which is helping the economy recover faster from the pandemic shock. Fitch stressed the credibility of Serbia's economic policy built up over recent years, and placed an emphasis on the preservation of low and stable inflation, increased foreign exchange reserves and ordered public finances.

Foreign capital inflow

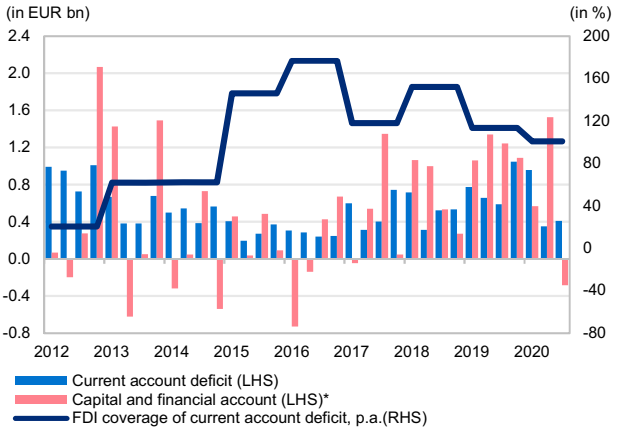
The coronavirus crisis led to the narrowing of external imbalances, but also to a lower capital inflow compared to the same period last year. Capital inflows in Q3 were generated by FDI and financial loans taken by residents abroad. Outflows, on the other hand, were recorded under trade loans, banks' increased balances in accounts abroad, and portfolio investment (after a significant inflow in the previous quarter).

Despite the global crisis, net **FDI** inflow to Serbia remained solid, reaching EUR 244.3 mn in Q3, according to preliminary data. Net FDI inflow in the first nine months of 2020 thus exceeded EUR 1.7 bn, providing for the full coverage of the current account deficit (100.8%), while gross inflow amounted to EUR 1.8 bn. Compared to the same period of 2019, net FDI inflow was lower by one third (33.1%), but one should bear in mind that Serbia had a record high FDI inflow in 2019. Lower FDI inflow during the year reflected mainly reduced reinvested earnings (by 61.6% y-o-y), due to the fact that the economy was affected by the pandemic. Sector-wise, one third of investments was channelled into manufacturing, followed by transport and warehousing, as well as construction. The bulk of FDI came from European (73%)[9] and Asian countries (24%).

After a successful eurobond issue in the international market in May, **portfolio investment** saw a net outflow of EUR 181.3 mn in Q3, driven chiefly by the movements in the domestic secondary market, where foreign investors net sold government securities.

Foreign **financial loans** generated an inflow of EUR 230.0 mn net. Of this amount, banks' liabilities to foreign creditors equalled EUR 224.1 mn and companies' EUR 115.2 mn, while the Government reduced its liabilities to foreign creditors by EUR 105.2 mn and the NBS by EUR 4.1 mn. At the same time, outflows were recorded under trade loans (EUR 279.7 mn) and cash and deposits (EUR 249.8 mn), reflecting the increase in banks' balances abroad and the decline in non-residents' balances with banks in Serbia.

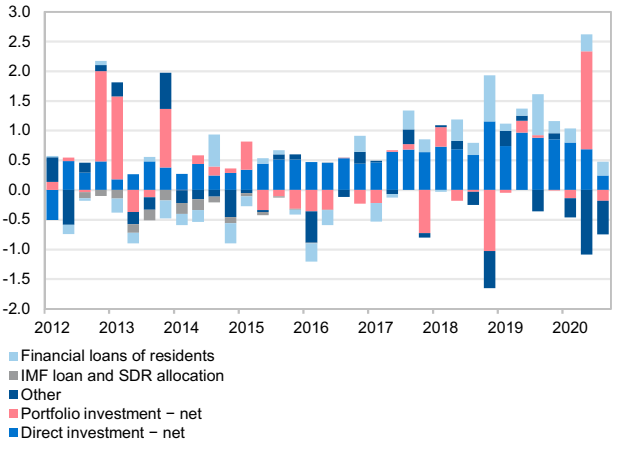
Chart IV.1.9 **Current account deficit and net capital inflow**



Source: NBS.

Note: Preliminary data for Q 3 2020.
* Excluding changes in NBS FX reserves.

Chart IV.1.10 **Structure of the financial account**
(in EUR bn)

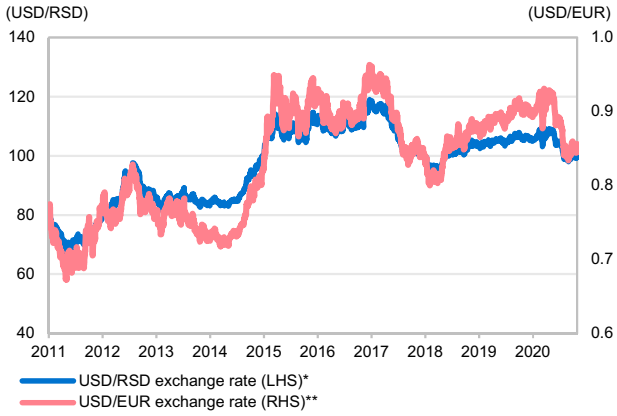


Source: NBS.

Note: Preliminary data for Q3 2020.

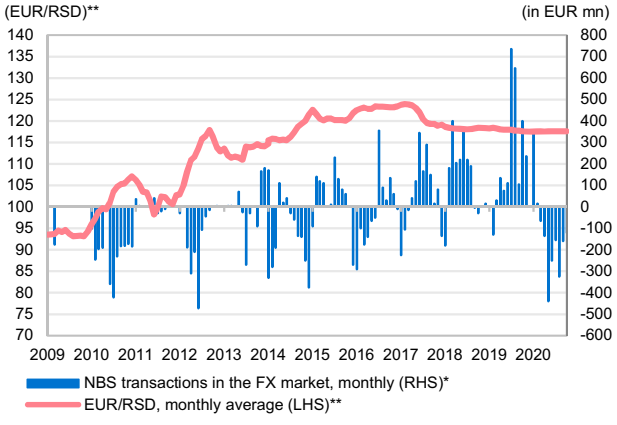
[9] Mostly EU investments.

Chart IV.1.11 **Movements in USD/RSD and USD/EUR exchange rates**



Source: NBS.
* USD 1 in RSD.
** USD 1 in EUR.

Chart IV.1.12 **Dinar exchange rate and NBS transactions in the FX market**



Source: NBS.
* + net purchase; - net sale.
** EUR 1 in RSD.

Trends in the FX market and exchange rate

Though depreciation pressures, triggered by the global spread of the pandemic, were also present in Q3, stable movements of the EUR/RSD exchange rate continued, so its value, both at the quarterly level and since the start of this year, remained almost unchanged. The dinar's stability was mainly supported by the NBS's FX liquidity provision to banks against the background of limited supply of foreign exchange and cash. On the other hand, due to the dollar's weakening against the euro, the dinar gained 4.5% on the dollar in Q3.

FX demand surpassed supply in Q3, though to a lesser degree than in Q2. Domestic companies were buying less FX from banks than in Q2, partly owing to the recovery in exports in Q3. Non-residents also lowered their FX demand, due to contracted sale of government securities in the secondary market amid decreasing uncertainty in the international financial market. Conversely, the increase in FX supply was facilitated by the longer FX positions of banks on account of intensified use of payment cards by non-residents, which can be attributed to the gradual normalisation of transport and passenger flows after the opening of economies. Working on the FX supply side was growth in FX-indexed bank assets,[10] and after a couple of months of net sale of foreign cash, September saw net purchase of foreign cash from households and exchange dealers.

In order to maintain relative stability in the domestic FX market, the NBS net sold EUR 605.0 mn in the IFEM in Q3, and with the difference between FX supply and demand being reduced, the amount of sales decreased from one month to another.

Q3 saw a lower volume of interbank FX trading compared to Q2 – daily trading in the IFEM[11] averaged EUR 21.0 mn, down by EUR 4.1 mn relative to Q2. The highest daily trading volume was recorded in July (EUR 22.5 mn on average).

The volume of trading in FX swap auctions also declined in Q3. As of June the NBS started organising these auctions again by the method of variable multiple swap points, with equal purchase and sale amounts. In the regular two-week auctions, the NBS swap bought and swap sold EUR 20.0 mn each, while in the three-month auctions it swap bought and swap sold EUR 73.0 mn each.

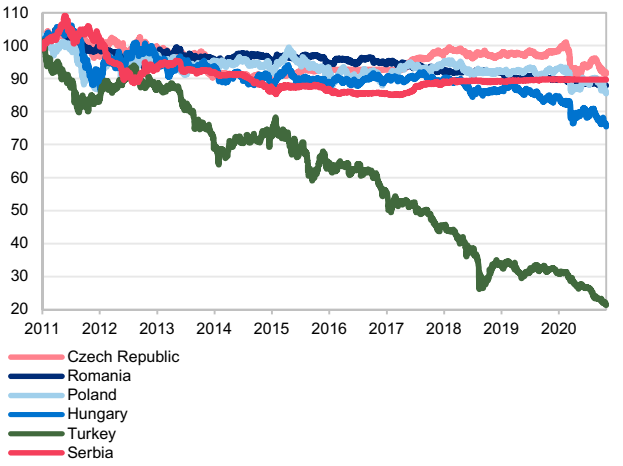
[10] Aiming to balance their open long FX position and thus reduce the exposure to FX risk, banks sell foreign currency, which leads to the strengthening of the dinar.

[11] Excluding the NBS.

The NBS and the ECB agreed in July to set up a repo line to provide additional euro liquidity to Serbian financial system in case of need due to pandemic-induced disruptions in the market. The precautionary repo line, which enables borrowing up to EUR 1 bn in exchange for adequate collateral, will remain in place until the end of June 2021. The maximum maturity of each drawing will be three months. Since FX liquidity of the banking sector has not even for a moment been threatened, and the level of FX reserves has been more than sufficient to respond to potential FX liquidity shocks, the repo line has not been used so far.

In contrast to the dinar, which kept its value against the euro, the currencies of all other inflation targeting countries in the region weakened during Q3. End-of-period, the Romanian leu weakened the least against the euro (0.6%), while the Turkish lira lost the most (15.6%). The Polish zloty weakened by 1.3%, the Czech koruna by 1.7%, and the Hungarian forint by 2.2%. All the mentioned currencies weakened against the euro also relative to end-2019.

Chart IV.1.13 **Exchange rates of selected national currencies against the euro***
(daily data, 31 December 2010 = 100)



Sources: NBS and websites of central banks.
* Growth indicates appreciation.

2 Money and loans

The growth in monetary aggregates stepped up since the outbreak of the pandemic owing to corporate and household lending, which increased on the back of NBS measures and activities aimed at ensuring smooth functioning of the interest rate and credit channels, and fiscal stimuli. Still, as we expected, this growth slowed in Q3 compared to Q2, reflecting reduced uncertainty and the resulting diminished need to keep liquid funds in bank accounts.

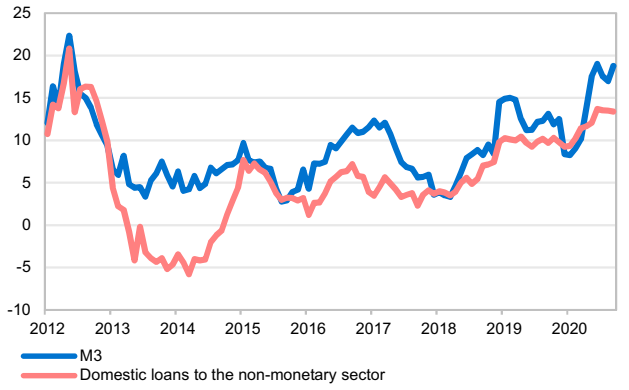
Money

Money supply increased owing to the comprehensive package of economic aid, including NBS measures and activities adopted in response to the crisis, in an environment of higher needs for liquidity. Money supply continued up in Q3 and the broadest aggregate M3 gained 3.3%[12] in Q3, with almost 60% of the growth attributed to the increase in the dinar component.

In terms of individual categories, **sight deposits** were up by RSD 9.7 bn, reflecting a RSD 20.2 bn rise in household transaction deposits. Corporate transaction deposits, however, contracted by RSD 14.6 bn in Q3 as money was used to finance production, while at the same

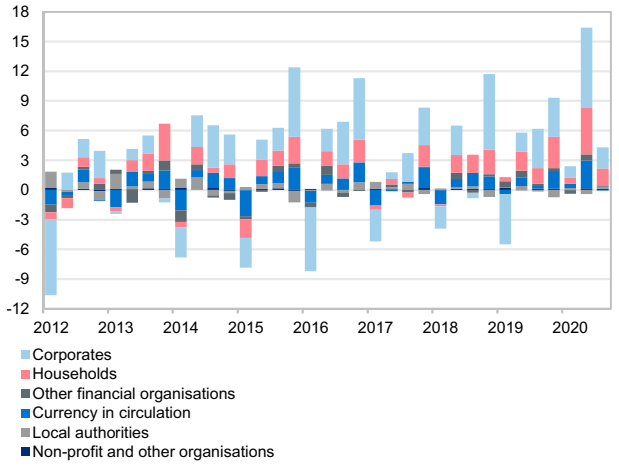
[12] This implies slowdown compared to the 8.9% growth in Q2, which is consistent with our expectations from the August 2020 *Inflation Report*.

Chart IV.2.1 **Domestic loans to the non-monetary sector and M3**
(nominal y-o-y rates, in %)



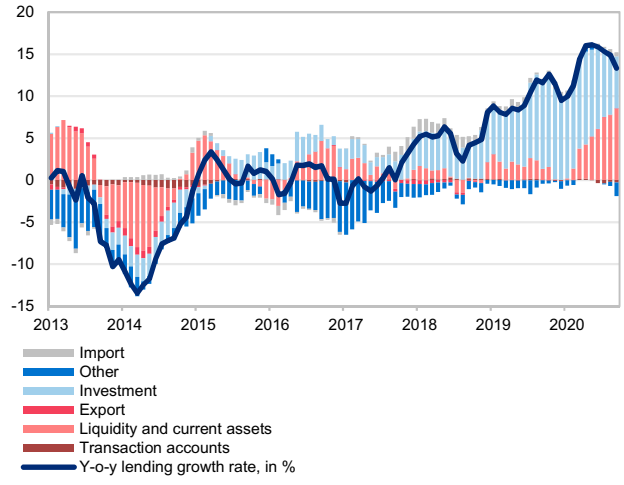
Source: NBS.

Chart IV.2.2 **Contributions to quarterly growth in M2, by sector**
(in pp)



Source: NBS.

Chart IV.2.3 **Contributions to y-o-y corporate lending growth**
(in pp, excluding the exchange rate effect)



Source: NBS.

time the scope of government direct assistance to the corporate sector was smaller than in Q2. Balances in accounts of other sectors changed negligibly in Q3.

Term dinar deposits of non-monetary sectors were up by RSD 50.8 bn in Q3. Deposits increased in accounts of almost all sectors[13], but primarily in the corporate sector (RSD 44.7 bn). Up by RSD 3.8 bn in Q3 (twice more than in Q2), dinar savings of households (residents) continued to record vibrant growth from the previous two years, reaching a new high of RSD 88.8 bn in September. In the year to September, dinar household savings gained RSD 9.8 bn, or 12.4%, despite the pandemic-induced crisis, which indicates citizens' confidence in the stability and safety of the banking sector. Dinar savings remained more attractive than FX savings also owing to higher interest rates and a more favourable tax treatment.

FX deposits rose by EUR 356.8 mn in Q3, with an almost even contribution of corporates and households. FX corporate deposits were up by EUR 179.2 mn in Q3, thanks to the measures undertaken to fight the consequences of the pandemic, export FX receipts, FDI and corporate external borrowing. At the same time, FX savings of households (residents) were up by EUR 166.5 mn to EUR 10.8 bn at end-September.[14]

In y-o-y terms, the growth in monetary aggregates began to slow in Q3, mirroring the slowdown in the most liquid components. In September, M3 gained 18.8%. Money supply is expected to slow further given that the past growth was the result of increased liquidity of the corporate sector and households' reluctance to spend during the pandemic. Also, money supply will decline as government's direct assistance to corporates and households dwindles.

Loans

Supported by NBS and Government measures, **domestic lending** remained on a stable upward path in 2020 even in the pandemic-induced crisis. **Total domestic loans** recorded two-digit y-o-y growth, which equalled 13.3% in September, excluding the exchange rate effect. This is the result of solid disbursement of loans in early 2020, NBS monetary policy easing, moratorium effects and the approval of loans from the Guarantee Scheme. In addition,

[13] A slight decline of RSD 0.1 bn was recorded in local government accounts.

[14] Money supply M3 includes only resident balances. Including non-resident funds, dinar and FX savings reached RSD 89.3 bn and EUR 11.2 bn at end-September, respectively.

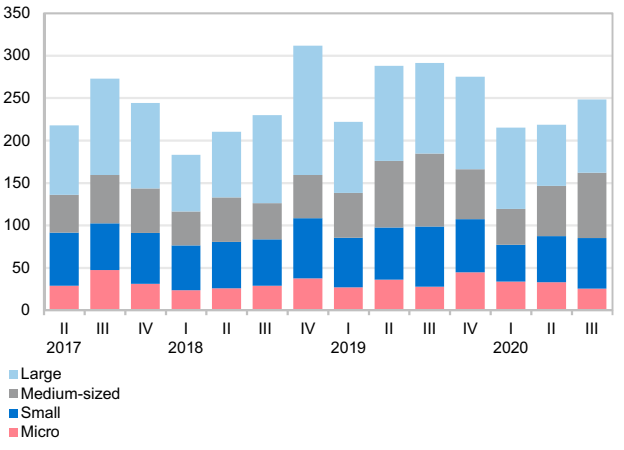
the purchase of corporate bonds in September contributed to a 14.0% y-o-y rise in total bank claims[15] in September.

Excluding the exchange rate effect, **corporate loans** rose by RSD 17.6 bn in Q3 or by RSD 121.1 bn since the start of the year, led by rising liquidity and working capital loans. Slight deceleration in the y-o-y corporate lending growth rate, from 15.9% in June to 13.3% in September, can be correlated with the expiry of the first moratorium in July and consequently more obligations falling due compared to Q2 when the first three-month moratorium was in place. In terms of the loan structure by purpose, investment loans remained the most prevalent category of corporate loans, with a 43.9% share in September. They were followed by working capital loans, whose share increased in the past months – to 42.6% in September, reflecting increased need for liquid assets and the approval of loans from the Guarantee Scheme. In terms of activity, in Q3 the stock of loans of manufacturing, construction and agricultural companies increased the most.

The volume of new corporate loans was RSD 248.4 bn in Q3, up by 13.8% q-o-q and down by 14.7% y-o-y. In Q3, the bulk of corporate loans were liquidity and working capital loans (61%) – over 70% went to micro, small and medium-sized enterprises, with the support of favourable funding conditions under the Guarantee Scheme. Investment loans accounted for 25% of new corporate lending in Q3, with 69% absorbed by micro, small and medium-sized enterprises.

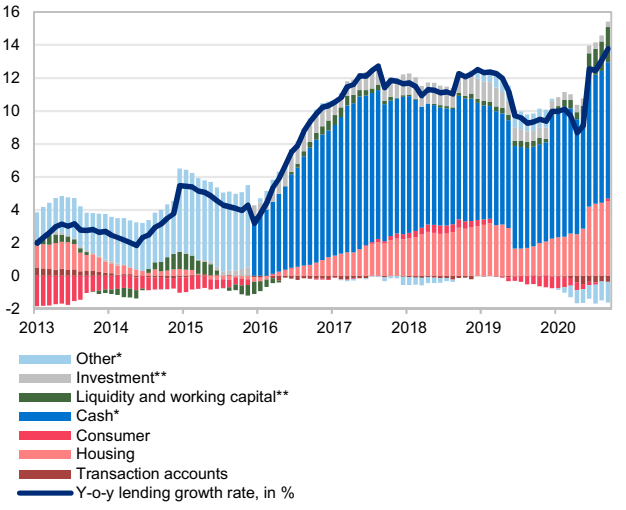
Excluding the exchange rate effect, **household loans** increased by RSD 49.5 bn in Q3. Their y-o-y growth accelerated from 12.6% in June to 13.8% in September, partly owing to the new two-month moratorium on the repayment of loans. In September, the most prevalent categories were cash loans (44.5%) and housing loans (35.9%). In Q3, the NBS adopted decisions to mitigate the consequences of the crisis and create conditions for further household consumption. It passed regulations to facilitate the repayment of cash, consumer or other types of loans (except for housing loans and current account overdrafts) and to encourage banks to offer to debtors the refinancing or change in the maturity date of the last instalment by up to two years for the specified loan types. It also enabled banks to extend the deadlines for the repayment of housing loans by up to five years. To

Chart IV.2.4 **Structure of new corporate loans, by enterprise size**
(in RSD bn)



Source: NBS.

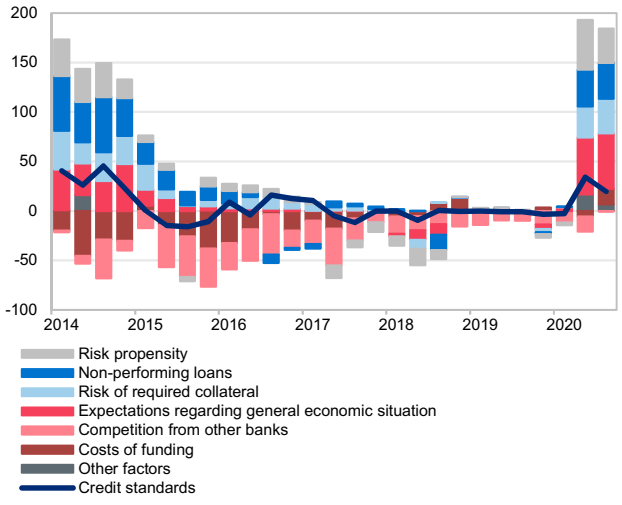
Chart IV.2.5 **Contributions to y-o-y household lending growth**
(in pp, excluding the exchange rate effect)



Source: NBS.
* Until December 2015, the contribution of cash loans is shown within the contribution of other loans.
** Loans extended to entrepreneurs.

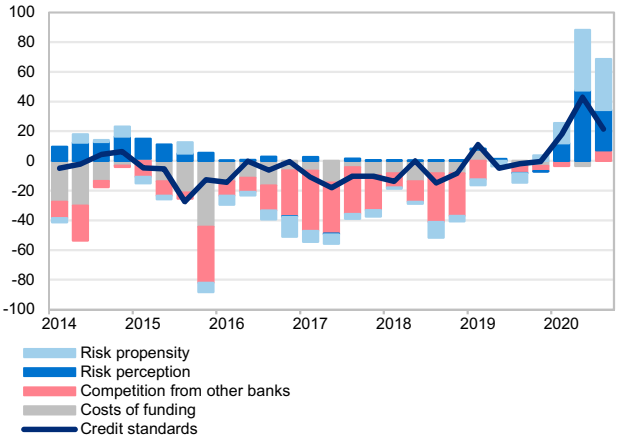
[15] Total bank claims include loan receivables, investment in securities, interest and fees, and other receivables.

Chart IV.2.6 **Change in corporate credit standards and contributing factors**
(in net %)



Source: NBS.
Note: Growth indicates the tightening and decline indicates the easing of credit standards.

Chart IV.2.7 **Change in household credit standards and contributing factors**
(in net %)



Source: NBS.
Note: Growth indicates the tightening and decline indicates the easing of credit standards.

further encourage housing lending, the NBS made the decision to lower the downpayment for first-time home buyers from 20% to 10%, and the minimum degree of construction of a facility whose purchase can be financed with a housing loan. To further alleviate the burden of the crisis, banks were enabled to extend dinar loans (up to RSD 90,000) to employed and retired persons, who need only submit a signed statement on employment/pension.

The volume of new household loans was RSD 120.1 bn in Q3, up by 60.1% q-o-q and down by 8.2% y-o-y. The bulk of new loans were cash loans (55%), followed by housing loans (22%). The share of housing loans increased by over 52% compared to Q2, suggesting the continuation of positive trends in the market of housing loans.

According to the results of the **NBS October Bank Lending Survey**[16], the still heightened risk perception contributed to the tightening of corporate and household credit standards in Q3, though to a significantly smaller extent than in Q2. Credit conditions were generally tightened, while owing to NBS measures the conditions of dinar financing of small and medium-sized companies were more favourable and the deadlines for the repayment of household loans were extended. Banks assessed that both sectors stepped up their loan demand in Q3, driven mainly by the needs for liquid assets and refinancing, and the purchase of real estate in the household sector. Banks expect further improvement in the lending market in Q4 – an increasingly smaller number of banks expect the tightening of corporate credit standards, while in case of household standards they even expect easing. Corporate and household loan demand is expected to increase further, led by almost the same needs as in Q3.

Measured by the share of dinar in total receivables, the **dinarisation of corporate and household receivables** reached record 36.6% in September, up by 2.0 pp compared to end-Q2. The degree of dinarisation of corporate receivables was up by 2.8 pp in Q3 and stood at 19.3% in September, owing also to the approval of dinar loans under the Guarantee Scheme and the purchase of dinar corporate bonds. The dinarisation of household receivables continued up in Q3 (0.8 pp) and reached a record level of 56.6% in September.

The gross **NPL ratio** fell by 0.3 pp in Q3[17] to its hitherto lowest level of 3.4% in September. The NPL ratios of the

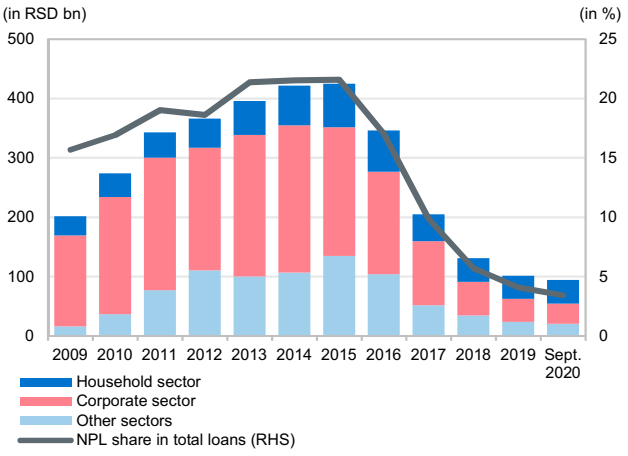
[16] The NBS has been implementing the survey since early 2014.

[17] Partly due to the moratorium effects.

corporate and household sectors declined by 0.3 pp and 0.2 pp in Q3 to 2.5%[18] and 3.6%[19] in September, respectively. The NPL coverage remained high – in September, allowances for impairment to total loans stood at 98.0% of NPLs, and allowances for impairment to NPLs measured 62.4%.

According to the latest available data, the **capital adequacy ratio**[20] was 22.4% at end-Q3 2020, suggesting that the banking sector is highly capitalised and resilient (regulatory minimum: 8.0%).

Chart IV.2.8 **NPL share in total loans, gross principle**



Source: NBS.

3 Aggregate demand

In Q3, the recovery of demand, primarily of domestic demand, from the pandemic was faster than we expected at the time of the August Report. As a result, GDP grew 7.7% s-a compared to Q2. The y-o-y decline slackened to 1.3%, on the back of a smaller than expected negative contribution of private consumption and total investment.

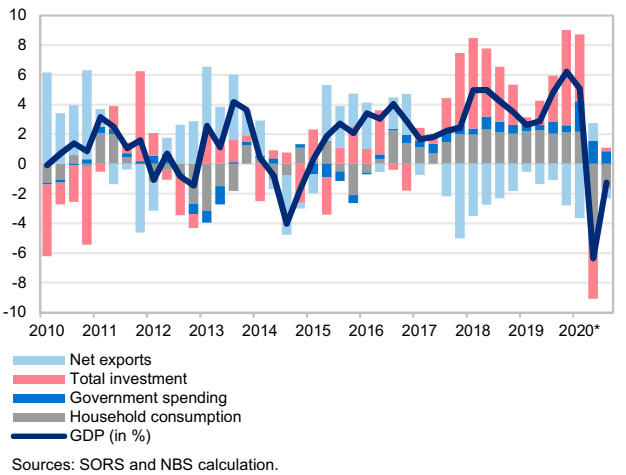
Domestic demand

As the containment measures were eased in Serbia and abroad, economic activity rebounded in Q3 compared to Q2 (7.7% s-a), which is estimated to be the result of the recovery of domestic demand (contribution of 7.5 pp), particularly the recovery of private consumption and private investment.

In y-o-y terms, due to the coronavirus pandemic, private consumption and fixed investment provided a negative contribution to GDP in Q3, though much smaller than in Q2 and weaker than we expected at the time of the previous *Report*.

According to our estimate, **private consumption** declined by 2.5% y-o-y in Q3 (contributing -1.7 pp to GDP), but would have declined much more had the economic policy measures not been undertaken. The implementation of Government and NBS measures which supported the economy prevented the spill-over of the crisis to the labour market and preserved the primary sources of consumption, as also suggested by the two-digit growth in the wage bill recorded in Q3 as well (13.1% y-o-y in July–August). Another, two-month

Chart IV.3.1 **Contributions to y-o-y GDP growth rate – expenditure side**



Sources: SORS and NBS calculation.

* NBS estimate for Q3 2020.

[18] Including companies and public utilities companies. In terms of companies only, the NPL share in total loans was 2.7% in September, down by 0.4 pp from end-Q2.

[19] Including entrepreneurs and private households, the share also declined – by 0.2 pp, to 3.6%.

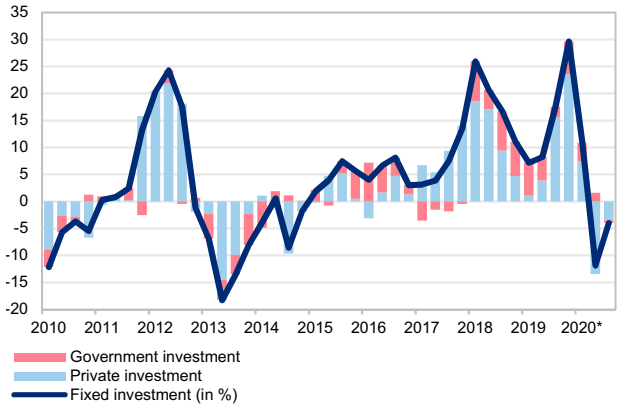
[20] The regulatory Basel III framework has been applied since 30 June 2017.

Table IV.3.1 **Movement in key indicators and sources of household consumption**
(real y-o-y growth rates, in %)

	2019	2020		
	Q4	Q1	Q2	Q3
Household consumption	**3.1**	**3.2**	**-7.9**	**-2.5** *
Indicators				
Retail trade	11.7	10.0	0.0	5.6
Catering turnover	10.2	3.9	-44.6	-22.1 **
Number of domestic tourists	10.5	-3.5	-65.4	11.3
Number of overnight stays of domestic tourists	13.6	1.5	-60.8	13.0
Consumer goods imports (BEC classification), nominal	8.2	9.3	-3.4	13.6
Sources				
Total wage bill, nominal	15.4	13.9	12.1	13.1 ***
Net remittances inflow, nominal	-3.4	-11.2	-31.3	-10.3
Stock of loans intended for consumption, nominal	13.2	12.8	12.3	15.4

Sources: SORS and NBS calculation.
* NBS estimate.
** July (SORS estimate).
*** July–August.

Chart IV.3.2 **Fixed investment**
(y-o-y growth, in pp)



Sources: SORS and NBS calculation.
* NBS estimate for Q3 2020.

Table IV.3.2 **Investment indicators**

	2019	2020		
	Q4	Q1	Q2	Q3
Real y-o-y growth rates (in %)				
Fixed investment (national accounts)*	29.6	10.8	-11.9	-
Construction (national accounts)*	48.3	20.4	0.1	-
Government investment	30.8	15.0	10.0	-3.0
Number of construction permits issued	18.4	22.3	-21.0	-6.7 *
Production of construction material	0.1	-3.0	-11.5	1.2
Value of works performed	56.3	26.1	-0.8	-
Imports of equipment, nominal	42.3	27.4	-14.5	12.4
Production of domestic machinery and equipment	10.7	-0.6	-14.9	0.3
Finished product inventories in industry	-3.5	-5.4	-0.7	2.1

Sources: SORS and NBS calculation.
* July–August.

moratorium on the repayment of loans and the extension of loan repayment terms drove up the disposable income of households. Private consumption picked up also owing to the one-off aid worth EUR 100 paid to adult citizens. In terms of other sources of consumption, remittances fell by 10.3% y-o-y in Q3, which was expected given the weaker labour force mobility during the pandemic, but the decline was smaller than in Q2.

That household consumption recovered, after precipitating down in Q2, is signalled by most service sector indicators. In Q3, real retail trade turnover went up by 5.6% y-o-y, and the number of arrivals and overnight stays of domestic tourists grew 11.3% and 13.0% y-o-y, respectively. Consumer goods imports also went up (13.6% y-o-y), while tourist services imports declined (51.4%). Although catering turnover was down by 22.1% y-o-y in July, the outturn was much more favourable than in Q2, when a drop of around 45% was recorded. The transportation sector was recovering as well, but remained on a downward path in y-o-y terms due to weaker citizen mobility. Household outlays for recreation, cultural and sports events also declined y-o-y amid fears of the spread of the coronavirus.

Government consumption gained 5% y-o-y in Q3 (contributing 0.8 pp to GDP growth), reflecting a rise in expenses relating to wages and purchases of goods and services (needed to fight the coronavirus).

Fixed **investment gave a negative contribution in Q3, though much smaller than in Q2** – it is estimated to have declined, contributing around -1.0 pp to GDP, due primarily to lower private investment. The negative contribution of investment reflects the continuing investor risk aversion and the high base from the same period last year, notably in construction as the number of issued construction permits fell by 6.7% y-o-y in July and August. A mild increase was recorded for the production of domestic machinery and equipment, production of construction material, and equipment imports. In terms of the investment financing sources, Q3 saw a smaller amount of FDI inflows and new investment loans in y-o-y terms. The number of companies able to finance investment from profit also declined during the crisis. On the other hand, the moratorium effects contributed to the increase in available funds for new investment. According to our estimate, **government investment** fell by 3% y-o-y in Q3, which is better than we expected in August, owing to the acceleration of infrastructure projects. Judging by the capital expenditure dynamics in the first nine months of 2020 (12.8% in real, y-o-y terms), government capital expenditure is also likely to rise in annual terms.

A positive contribution in Q3 (1.2 pp) came from an increase in **inventories**, which can be partly associated with a good agricultural season and partly with rising inventories of finished products in the industry. The total contribution of investment to GDP growth thus came at 0.2 pp in Q3.

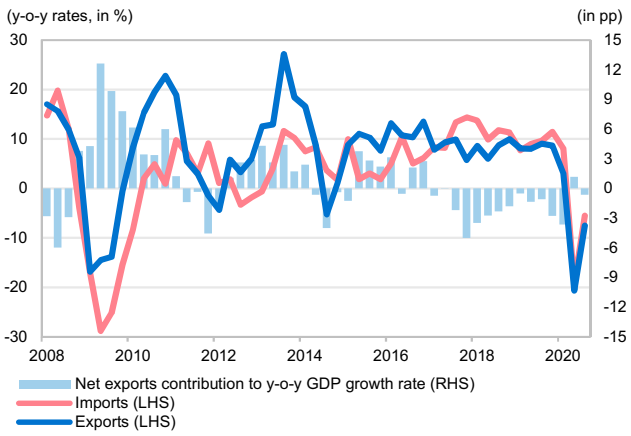
Net external demand

Following a sharp drop triggered by the pandemic, Serbia's external trade was recovering in Q3. The slowdown in the real, y-o-y decline was more evident for the goods and services imports (to -5.5%) than exports (to -7.5%). As a result, the contribution of net exports to GDP growth in Q3 was negative and equalled 0.6 pp.

Supported by higher external demand following the opening of economies and the easing of containment measures, goods exports continued to recover in Q3 – in September, in s-a terms, they got closer to the average value of the January–February period. That the recovery was broad-based is also suggested by s-a rates of exports growth, recorded in Q3 in 17 of 23 fields of manufacturing. Goods exports[21] were up by 0.4% y-o-y in Q3 (following a drop of 20.1% in Q2). This reflects the recovery of manufacturing exports, whose y-o-y decline slowed to 2.6% in Q3 (from 21.8% in Q2), with the exports of electrical equipment, cars, other machinery, equipment and furniture already being higher y-o-y in Q3. The exports of rubber and plastic products in Q3 were the same as a year ago. The y-o-y decline in exports mainly slowed down in other key export branches. Owing to a good last year's season, the exports of agricultural products increased by 15.2% y-o-y in Q3. Given the rising prices of cereals in the global market and this year's solid crops[22], a positive impact on exports on these grounds can also be expected in the coming period.

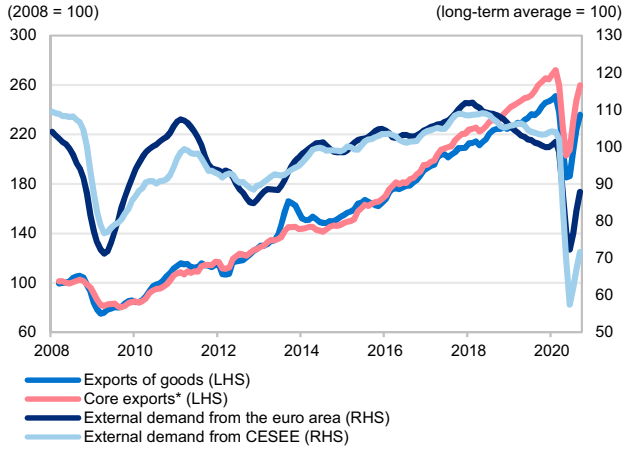
Goods imports also recorded recovery. According to balance of payments data, their y-o-y decline decelerated to 0.7% in Q3 (from -20.0% in Q2), reflecting primarily consumer goods imports, which increased by 13.6% y-o-y. Equipment imports also went up (12.4% y-o-y), suggesting the recovery of investment in the coming period, while the decline in intermediate goods imports slowed to 10.7% y-o-y. Similar trends are indicated by the classification of imports by EU destination, with

Chart IV.3.3 **Exports and imports of goods and services**
(in previous-year constant prices, ref. 2010)



Sources: SORS and NBS calculation.
Note: NBS estimate for Q3 2020.

Chart IV.3.4 **Movement of indicators of external demand for Serbian exports**
(3M moving average, s-a)

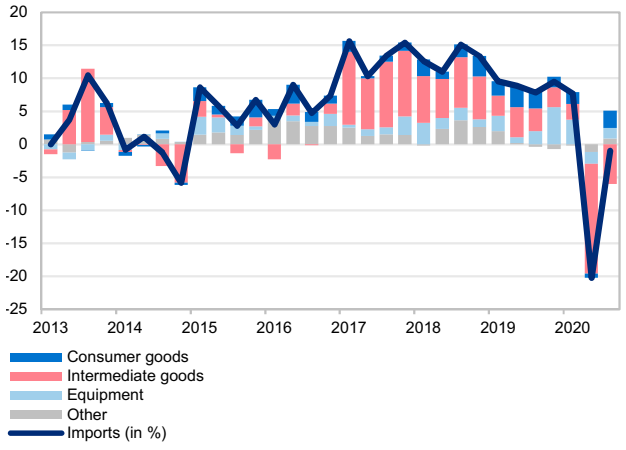


Sources: European Commission, SORS and NBS.
* Core exports are total exports excluding exports of agricultural products, base metals, motor vehicles, petroleum products and electricity.

[21] Exports of goods in euro terms, according to balance of payments data.

[22] According to SORS data, compared to the ten-year average (2010–2019), in 2020 the production of wheat, corn and soybean picked up by 17.8%, 29.4% and 60.3%, respectively.

Chart IV.3.5 **Movement of key import components**
(contributions to y-o-y growth, in pp)



Sources: SORS and NBS calculation.

consumer goods being the strongest contributor to the recovery of imports, followed by capital goods. Weaker imports of energy and intermediate goods worked in the opposite direction.

The Q3 surplus in external trade in services was smaller in y-o-y terms. Services exports and imports contracted by 24.4% and 26.3% y-o-y respectively. External trade in all types of services was on a y-o-y decline. Tourism and transportation, which are the most severely hit by the pandemic, were the strongest negative contributors both to services exports and imports.

The coverage of goods imports by exports[23] was broadly unchanged from June. In September, it equalled 73.7%, or 83.2% including services.

[23] Measured by the 12-month moving average.

Text box 2: Impact of the coronavirus pandemic on global automobile industry and the implications for Serbia

Global automobile industry, whose growth has been decelerating in the past two years, is one of the branches of manufacturing hit most badly by the coronavirus pandemic. The automobile industry felt the first negative effects of the pandemic already in January and February, when the production and supply chains were suspended and, in some cases, even halted due to the spread of the epidemic in China. The peak was recorded in April when the automobile industry suffered the largest losses, particularly bearing in mind that a great number of manufacturers, especially in Europe, ground their production to a halt. In an environment of intensified recession pressures and significantly deteriorated global outlook, the world automobile industry was also affected by the shaken consumer and investor confidence, resulting in considerably weaker demand for automobiles and lower investment. Apart from having a short-term adverse impact on global economic growth, lower investment in the automobile industry caused by the pandemic might also affect the long-term production potential for the currently most widespread internal combustion engine vehicles, particularly bearing in mind the plans of many countries to start developing technologies and adjusting production capacities to mass production of electric cars and engines. Gradual recovery of the automobile industry began in mid-May, but its future pace depends largely on the course of the pandemic.

The significance of monitoring trends in the global automobile industry is best illustrated by the around 6% and 8% shares of this industry in global GDP and exports, respectively. Looking at the EU alone, automobile industry accounts for around 7% of its GDP and around 10% of its exports. According to the EC, automobile industry is a direct and indirect source of jobs for 13.8 million people, accounting for 6.1% of EU employment, while the production of motor vehicles only employs 2.6 million people, accounting for 8.5% of employment in manufacturing. The EU as the most important export market for Serbian car-component producers makes up around 20% of the global production of motor vehicles.

Even though the impact of the coronavirus pandemic on the automobile industry is still unfolding and we will be able to grasp it in full only once it is over, the European Automobile Manufacturers Association (ACEA) estimates that the losses suffered so far are extremely large as the majority of EU producers completely halted the production in the initial stage of the pandemic. Closing of the production was on average the longest in Italy and the UK (41 business days, i.e. as long as around eight weeks), followed by Spain and France (34 business days), and Germany (30 business days). In Central European countries which also have a developed automobile industry, the shutdown lasted around 30 days on average.

Analysing lost production by the number of vehicles, it is estimated that during the peak of the pandemic only (March-May 2020) the production losses amounted to almost 2.2 motor vehicles, which is 13% of total production in 2019. The heaviest losses (more than 600 thousand vehicles) were suffered by Germany, followed by Spain and France who are at the same time the largest producers in the EU.

Due to these production losses, largely a consequence of factory shutdowns, as well as the fact that production capacity did not return to pre-crisis levels in the second half of May and June, the ACEA estimates the losses in H1 2020 at 3.3 mn motor vehicles. It is estimated that 362 thousand motor vehicles were lost that would normally have been manufactured in Q3, or from the beginning of the year 3.7 mn vehicles, which is around 22% of total EU production in 2019. Half of the losses pertain to Germany (29.1%) and Spain (20.4%), followed by France (11.2%) and Italy (7.7%). Central European countries (Czech Republic, Slovakia, Poland, Hungary and Romania) lost around 844 thousand vehicles that would normally have been produced in the first nine months of the year, or 22.8% of total lost production in the EU.

The ACEA data about the number of new registered passenger cars in the EU are also illustrative of the impact of the pandemic on the automobile industry. Namely, in the first nine months of 2020 the number of new registered passenger cars went down by 28.8% y-o-y, to 7 mn. This decrease has been recorded since the beginning of the year, but in the first two months it measured 7.4% y-o-y on average, whereas in the March-May period it was almost two times sharper (as much as 76.3% y-o-y in April).

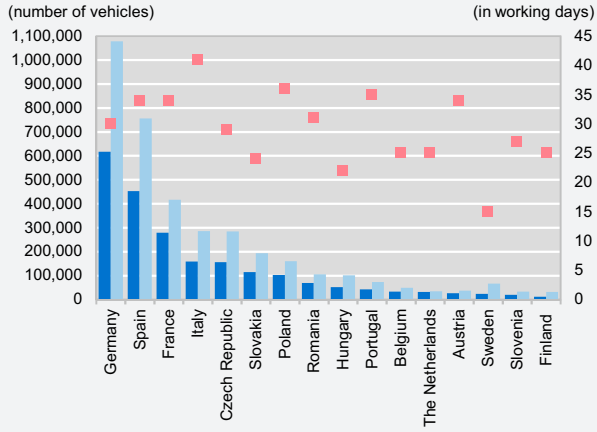
Automobile industry across Europe has been witnessing a gradual recovery since May. In September, for the first time since the beginning of the year, a y-o-y rise was recorded in the number of registered passenger cars (3.1%). However, as for the largest markets in the EU, Spain and France continued to record dropping figures in September (-13.5% and -3.0%, respectively), whereas Italy and Germany posted growth (9.5% and 8.4%, respectively). The fact that in the first nine months of the year there was close to 2.9 mn less new passenger car registrations speaks volumes about the scale of the impact of the pandemic on the EU automobile industry. Spain recorded the sharpest fall in the number of registered cars (-38%), followed by Italy (-34%), France (-29%) and Germany (close to -26%). As for our regional peers, in the year to September a considerable drop was registered in Croatia (-45%) and Bulgaria (-37%), followed by Romania (-32%) and Slovakia (-27%), while Hungary and the Czech Republic recorded a somewhat softer decrease (-22% each).

The adverse effect of the pandemic on the automobile industry in EU countries reflected on Serbian automobile industry exports which make up around 11% of the total export of goods and services. Cars account for one fifth and car components (most notably tyres and electronic parts) for around four fifths of that share. The decline in the export of the Serbian automobile industry was the most marked in April when it came at 80% y-o-y. The recovery began in May and continued through the following months, with the y-o-y decrease softening to 0.5% in September. The Serbian automobile industry exports in September were around 4% above the pre-crisis level, i.e. average s-a exports in January-February 2020.

Observing the entire January–September period, the export of car components equalled EUR 1,268 mn, down by 16.0% y-o-y. More than a third of the decline is a consequence of the lower export of car parts to Germany (–5.8 pp), followed by Slovakia and the UK (–2.2 pp each), and Italy (–1.3 pp). At the same time, car exports were worth EUR 259 mn, down by 38.2% y-o-y. However, one should bear in mind that the life cycle of the model manufactured in Serbia also accounts for lower exports, which means that the decline would have occurred even if it were not for the pandemic, and this was also factored into our projections of economic and foreign trade activity.

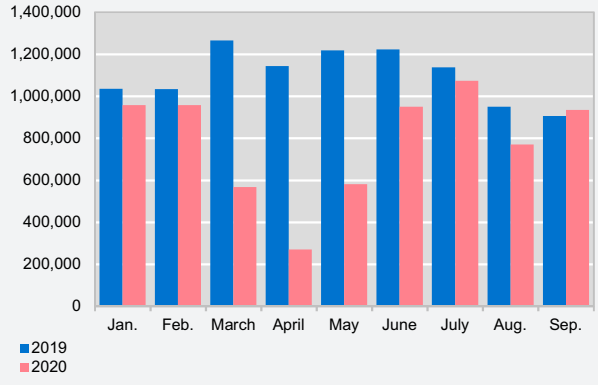
Our most important export market is that of Germany, with around 25% share in total export of car

Chart O.2.1 **Impact of COVID-19 on EU automobile industry**



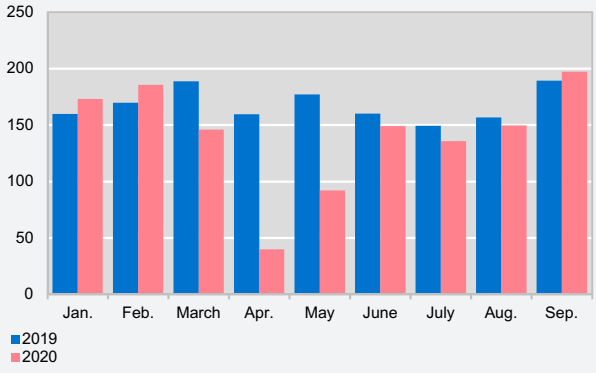
Source: ACEA based on the February IHS Markit production forecast.

Chart O.2.2 **Number of new registered passenger vehicles in the EU by month in 2019–2020**



Source: ACEA.

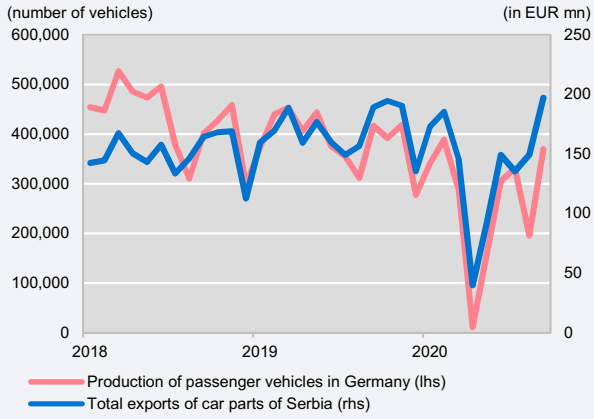
Chart O.2.3 **Total exports of car parts of Serbia, by month in 2019–2020**
(in EUR mn)



Source: SORS.

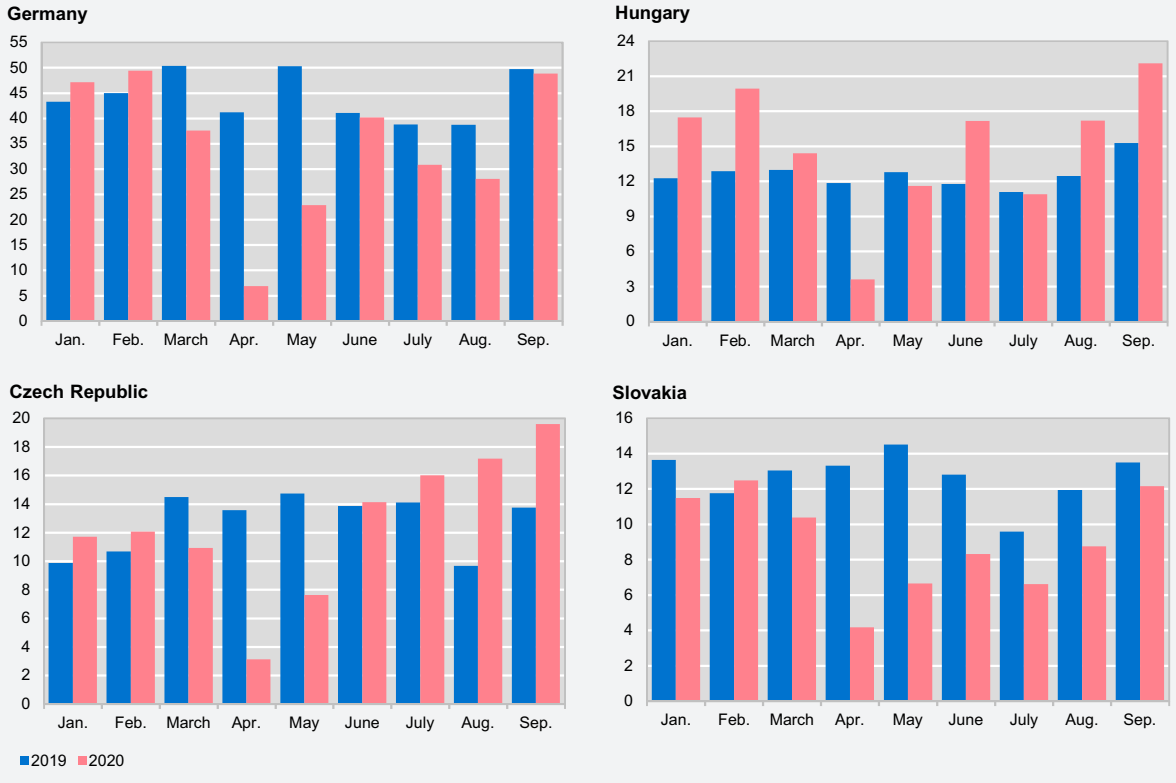
components. The data indicate that the dynamics of the overall export of car components is largely dependent on the dynamics of car production in Germany, which accounts for around 50% of total value added of the EU automobile industry. According to the German Association of the Automotive Industry (Verband der Automobilindustrie, VDA), the 97% y-o-y fall in April was followed by a considerable increase in the number of manufactured cars in Germany in the coming months, with the level in July lower by only 7% (in y-o-y terms). In August, the y-o-y fall widened to 35%, but the situation improved in September with the fall of 11%. A considerable recovery of the production is expected in October as PMI Manufacturing reached the highest level since March 2018 (58.2% vs. 56.4 in September), indicating that Germany continues to lead the euro area recovery. New orders in Germany are the most encouraging sign as PMI New Orders is recording the highest growth since its introduction in 1996, indicating the recovery of external (especially from China) and internal demand. On the other hand, lower expectations of manufacturing output in the coming year, recorded for the first time in the past seven months, are interpreted as a sign of a possibly slower recovery and a consequence of the accelerated spread of the virus in Europe.

Chart O.2.4 **Dynamics of exports of car parts from Serbia and the production of cars in Germany**



Sources: VDA and SORS.

Chart O.2.5 **Exports of car parts of Serbia to key markets, by month in 2019–2020**
(in EUR mn)

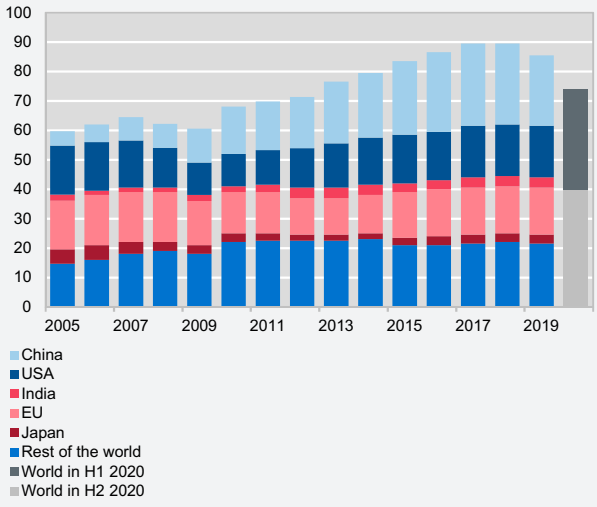


Source: SORS.

In addition to Germany, the most important markets for Serbian car components are the Visegrad Group countries (Hungary, Czech Republic, Slovakia and Poland), as well as Romania, UK, Russia, France, etc.

Even though summer months saw considerable improvement in key export markets of the Serbian car component industry, it is still difficult to determine the pace of recovery of the automobile industry in the coming period. While shaken consumer confidence and increased unemployment have dampened car demand, fear of the coronavirus and avoidance of the public transportation as well as deferred purchases and savings made in the past months should partly offset the decline in demand. Overall, the global recovery of car demand is expected in H2 2020, but the pace of the rebound will largely depend on how the pandemic evolves. At the level of entire 2020, provided that the gradual recovery continues through the year, the International Energy Agency (IEA) estimates that the global sale of cars will contract by around 15% (or by 13 mn cars) from 2019, which is double the fall in 2008-2009. However, the recovery of car sales and demand in China in the past couple of months is encouraging and suggests that a similar trend could be set in train in other markets as well. This means that, unless global health measures are tightened further, it is reasonable to expect continued recovery of the Serbian automobile industry.

Chart O.2.6 **Global sale of cars by key market and forecast for 2020**
(number of vehicles, in mn)



Source: IEA.

4 Economic activity

Economic recovery, which began in May and continued through the following months, was faster than expected in the majority of production and service sectors. We, therefore, estimate that in Q3 economic activity recorded a 7.7% s-a growth q-o-q and that its fall slowed down to 1.3% y-o-y.

The recovery in industry and trade was markedly faster than expected. Besides, yields of major crops indicate that this year's agricultural season was better than last year's which was also above-average.

According to our estimate, in Q3 industrial production picked up by 3.0% y-o-y, adding 0.6 pp to GDP growth. Robust industrial recovery is indicated primarily by the **physical volume of industrial production** which recorded 3.0% y-o-y growth in Q3 after the 7.8% y-o-y fall in Q2. Manufacturing also recorded an increase in the volume of production (2.1% y-o-y) with the y-o-y rise in production recorded in more than a half of industrial branches. The largest contribution to the increase in production stemmed from the higher volume of production of metal products, followed by food products, electrical equipment, clothing and furniture. As for automobile industry, the volume of production of motor vehicles and rubber and plastic products stayed lower than in the same period last year, giving a mild negative contribution to industrial production (0.2 pp).

In quarterly terms, the volume of industrial production returned entirely to pre-crisis levels,[24] as the 11.2% s-a fall in Q2 was followed by the 14.2% s-a growth in Q3, with the rise in the volume of production recorded in almost all branches of manufacturing.

Unlike trade which reached pre-crisis levels already in June, with the growth continuing into Q3 when the real turnover increased by 5.6% y-o-y, the negative effects of the coronavirus crisis remained visible in other services. Thus, tourism turnover, measured by the total number of tourist overnight stays, was down by 25.1% y-o-y in Q3, but the absence of foreign tourists was partly offset by the rising number of arrivals and overnight stays of domestic tourists. Transport also recorded lower activity, as testified by only partial restoration of air-traffic, with the cumulative contribution of services to GDP at -0.9 pp in Q3.

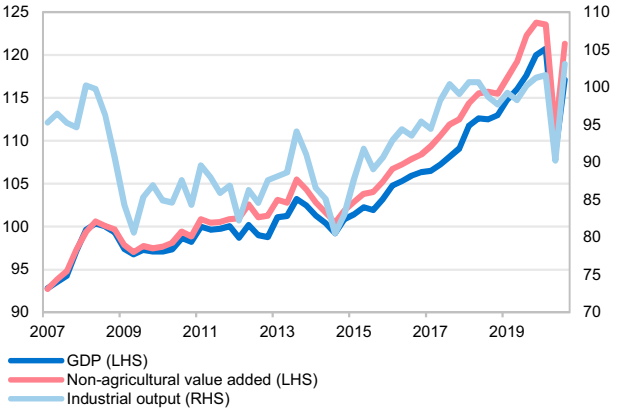
We estimate that **construction** activity dropped at the y-o-y level in Q3 (-0.4 pp contribution to GDP), partly also

Table IV.4.1 **Contributions to y-o-y GDP growth**
(in pp)

	2019		2020		
	Q3	Q4	Q1	Q2	Q3*
GDP (in %, y-o-y)	**4.8**	**6.2**	**5.1**	**-6.4**	**-1.3**
Agriculture	0.0	0.0	0.1	0.1	0.3
Industry	0.4	0.7	1.0	-1.6	0.6
Construction	1.7	2.3	0.7	0.0	-0.4
Services	2.2	2.5	2.7	-3.5	-0.9
Net taxes	0.5	0.5	0.7	-1.0	-0.7

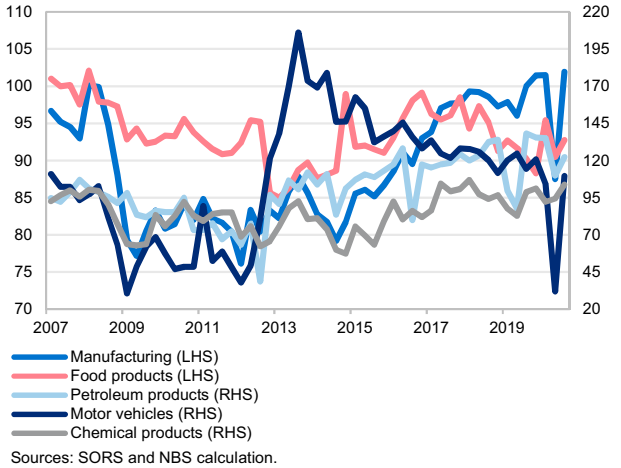
Sources: SORS and NBS calculation.
* NBS estimate.

Chart IV.4.1 **Economic activity indicators**
(s-a, H1 2008 = 100)



Sources: SORS and NBS calculation.

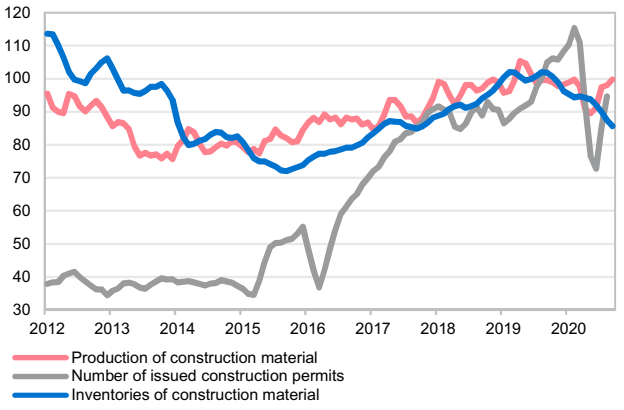
Chart IV.4.2 **Physical volume of production by branch of manufacturing**
(s-a, H1 2008 = 100)



Sources: SORS and NBS calculation.

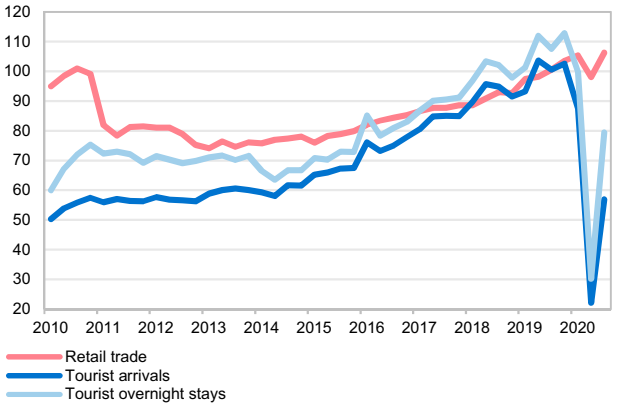
[24] Average for the period January–February 2020.

Chart IV.4.3 **Construction activity indicators**
(quarterly averages s-a, 2019 = 100)



Sources: SORS and NBS calculation.

Chart IV.4.4 **Service sector indicators**
(s-a, 2019 = 100)



Sources: SORS and NBS calculation.

on account of the high base from last year. Namely, in H2 2019 construction recorded extremely high growth, which lost some steam amid the coronavirus pandemic. Reduced activity in construction industry is signalled by a lower number of issued construction permits since the beginning of the year (-4.5% y-o-y for the January–August period, i.e. -6.7% y-o-y for the July–August period). On the other hand, in Q3 the production and import of construction materials went up from 1.2% y-o-y and 6.2% y-o-y respectively, while at the same time inventories of construction material went down by around 15% y-o-y.

The first estimate of **agricultural yield** points to higher than expected agricultural growth despite the high base from last year owing to the above-average agricultural season. According to SORS, the production of wheat went up by 17.1% y-o-y in 2020 and a rise in the production of corn and soybean is also expected (9.6% y-o-y and 15.1% y-o-y, respectively). As somewhat lower production of sunflower and sugar beet is anticipated, we estimate that the annual growth in agriculture will measure around 4.5%, providing a 0.3 pp contribution to GDP.

We estimate that a negative contribution to GDP in Q3 will come from **net taxes** (-0.7 pp), due to the implementation of economic support measures aimed at overcoming the economic consequences of the coronavirus pandemic.

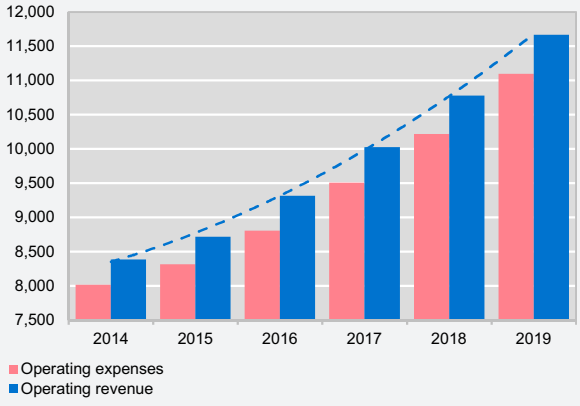
In quarterly terms, the economic slack in Q2 (9.9% s-a) was followed by growth in Q3 (7.7% s-a). In addition to industry, other sectors recorded a q-o-q rise, which was particularly pronounced in services due to the fact that in April activity was completely halted in some branches. We estimate that the cumulative growth in services reached 6.9% s-a in Q3.

Text box 3: Structure and dynamics of corporate costs in 2014–2019

The activity and profitability of the Serbian corporate sector has expanded significantly in the past six years, which is one of the key indicators of the effectiveness of business and economic policies in Serbia and their good coordination. **The bolstered business and financial position of Serbian companies**, with government support, should mitigate the negative effects of the new crisis and ensure further unimpeded functioning. According to data of the Business Registers Agency[1], total and operating revenue of our corporate sector has been rising each year. In 2019, it increased by 36.4% and 39.1% respectively compared to 2014. The **net financial result of the domestic corporate sector, i.e. net income after tax, has been positive for the fifth consecutive year**, and reached RSD 391 bn in 2019. As in 2014 companies operated at a loss (RSD 133 bn), the net gain in 2019 was higher by almost RSD 524 bn. Broken down by sector, significantly more positive financial results in the six-year period were recorded by the key sectors of the Serbian economy – manufacturing (RSD 153.9 bn), trade (RSD 94.0 bn), construction (RSD 65.2 bn) and transportation and warehousing (RSD 64.0 bn). Net income after tax also increased in other service sectors which generally belong to the private sector (RSD 127.0 bn).

The indisputably key contribution to more favourable results of the corporate sector came from the achieved and preserved stability of the macroeconomic environment, owing to which the period under review saw a cumulative reduction in financial costs (primarily exchange rate losses and interest expenses) by 67.5% or RSD 340.4 bn. More favourable results were observed in all sectors, particularly manufacturing (RSD 93.7 bn), trade (RSD 63.0 bn) and other service sectors (RSD 53.6 bn). In other words, owing to the efficiency of monetary and fiscal policies, Serbian companies had a much greater amount of own funds and could also count on more favourable credit sources for additional funding. Higher fixed and working capital investment opened room for the corporate sector to step up its business activity and thus reduce total unit costs. That this investment has been adequately used is shown by the dynamics of the **operating income, which increased each year – in 2019 it was by almost RSD 200 bn higher than in 2014** (Chart O.3.1). This means that the expansion of business activity and revenue from companies' core activity – sale of products, provision of services and/or sale of goods, was constantly accompanied with a slower increase in operating expenses.

Chart O.3.1 **Dynamics of operating revenue and operating expenses of the domestic corporate sector in 2014–2019**
(in RSD bn)



Source: Business Registers Agency.

As the net financial result of the corporate sector does not depend exclusively on the management's decisions, but also on the macroeconomic environment which, as stated, was conducive to business, the remainder of the analysis will focus on the sub-balance (within companies' income statement), which best reflects the companies' internal strengths and weaknesses, and can serve for the assessment of the companies' operational efficiency. In addition to creating operating revenue, which partly reflects the situation in the target sale market, the companies' ultimate result also largely depends on the capacity to manage operating costs arising from core activity. To obtain a clearer picture of the **effect of expansion of business activity** (the so-called ***economies of scale***), the operating costs of the corporate sector can be grouped according to the following scheme:

[1] The annual bulletin of financial reports was prepared for the first time for 2014, in accordance with the new model of financial reporting, harmonised with legislation and official accounting principles and standards.

1. Cost of goods sold
2. Costs of material
3. Costs of fuel and energy
4. Costs of production services
5. Costs of wages, wage reimbursements and other personal expenses

} Generally variable costs

6. Costs of depreciation and long-term provisioning
7. Non-material costs

} Fixed and generally fixed costs

Table O.3.1 **Ratio of operating expenses to operating revenue of the domestic corporate sector in 2014–2019**

	2014	2015	2016	2017	2018	2019
Operating revenue (in RSD thousand)	8,383,308,365	8,716,420,069	9,312,146,463	10,025,364,269	10,778,202,031	11,664,687,982
Share in operating revenue (in %)						
Generally variable costs*	87.6	87.3	85.9	86.2	85.9	85.9
Costs of goods sold	37.8	38.6	39.2	37.6	36.5	36.1
Costs of material	20.5	19.4	19.2	20.1	19.9	19.2
Costs of fuel and energy	6.3	6.0	4.3	4.7	4.7	4.6
Costs of production services	11.8	12.3	11.8	12.1	12.6	13.7
Costs of wages	11.2	11.1	11.5	11.7	12.1	12.3
Contribution margin	12.4	12.7	14.1	13.8	14.1	14.1
Fixed and generally fixed costs	8.0	8.1	8.6	8.7	9.0	9.2
Costs of depreciation and provisioning	3.9	3.8	4.0	4.0	4.1	4.2
Non-material costs	4.1	4.3	4.6	4.7	4.9	5.1
Operating income	4.4	4.6	5.4	5.2	5.2	4.9

* For methodological reasons, balance sheet items relating to revenue from use of own inventory products, increase and reduction in the value of inventories have been included.

Sources: Business Registers Agency and NBS calculation.

Table O.3.1 shows the structure and dynamics of these costs relative to operating revenue they are covered from, and how they add to the contribution margin and operating income of the corporate sector.

According to the analysis, the corporate sector still uses the main part of operating revenue to cover **generally variable costs** of the procurement of goods, material, fuel and energy. In 2019, the corporate sector earmarked for these purposes almost 60.0% of operating revenue, down by 4.6 structural points from 2014. The reduction in unit costs on these grounds can be the result of savings made in the main business functions of companies (procurement, production and sale), introduction of new and more efficient technologies based on rising fixed investment, lower prices of inputs (particularly fuel) and a more favourable cost position of companies. As the prices of liquid energy declined appreciably in the period observed, the costs of fuel and energy recorded the strongest relative decline, and their share in operating revenue fell from 6.3% in 2014 to 4.6% in 2019. The share of the cost of goods sold and costs of material declined by 1.5 and 1.2 structural points respectively. On the other hand, within generally variable costs, the outlays for the coverage of production services costs increased in relative terms (by 1.9 structural points), as well as wage expenses, though to a lesser extent (by 1.1 structural points). **Overall, the contribution margin of the corporate sector, as the difference between total operating revenue and generally variable costs, increased by RSD 604.3 bn in 2019 compared to 2014**.

Contrary to variable costs, as a rule, **fixed and generally fixed costs**, do not change in line with a change in the volume of activity in terms of technological characteristics of the companies' capacities, which means that their unit value declines as the volume of operations increases (the so-called *average fixed cost degression*). This, however, was not the case with the Serbian economy during 2014–2019, when the share of (fully) fixed costs was on the rise – e.g. depreciation, from 3.9% in 2014 to 4.2% of operating revenue in 2019, as a result of robust fixed investment, starting from 2015. Similarly, non-material costs (including the costs of non-production services, insurance, payment operations, subscription fees, taxes etc.) show a mild upward tendency (by 1.0 structural point), reflecting chiefly a step-up in activities supporting core business.

In enterprise economics, the contribution margin shows that it pays off for a company to perform its core activity as long as it covers from operating revenue its total variable costs commensurate with the scope of operation, as otherwise losses arise from the uncovered part of variable and total fixed costs. As their contribution margin increased, Serbian companies had more room to cover fixed costs, which went up in parallel with a greater use of production and sales capacities, resulting in an operating income in each year of the period observed. In this way, **companies operating in Serbia gradually improved their market position** also in terms of strategic management, competitiveness and acceptability of products and services in consumers' perception.

Table O.3.2 **Ratio of operating expenes to operating revenue of manufacturing companies in 2014–2019**

	2014	2015	2016	2017	2018	2019
Operating revenue (in RSD thousand)	2,232,525,209	2,413,310,416	2,623,002,748	2,855,072,313	2,985,416,628	3,116,444,004
Share in operating revenue (in %)						
Generally variable costs*	88.7	88.2	86.4	86.9	87.5	87.8
Costs of goods sold	15.7	15.5	16.1	14.5	14.5	15.3
Costs of material	49.0	48.9	47.4	49.0	48.3	46.9
Costs of fuel and energy	4.1	4.1	3.4	3.5	3.6	3.7
Costs of production services	8.3	8.2	8.3	8.2	8.5	8.7
Costs of wages	11.5	11.5	11.1	11.7	12.5	13.2
Contribution margin	11.3	11.8	13.6	13.1	12.5	12.2
Fixed and generally fixed costs	7.6	7.5	7.3	7.2	7.2	7.5
Costs of depreciation and provisioning	4.1	4.0	3.9	3.8	3.8	4.0
Non-material costs	3.5	3.4	3.4	3.4	3.4	3.5
Operating income	3.8	4.4	6.3	5.9	5.3	4.7

* For methodological reasons, balance sheet items relating to revenue from use of own inventory products, increase and reduction in the value of inventories have been included.

Sources: Business Registers Agency and NBS calculation.

In sectoral terms, manufacturing companies channelled the major part of operating revenue to cover material costs, whose share declined from 49.0% in 2014 to 46.9% in 2019, reflecting primarily the companies' improved cost position (Table O.3.2). In parallel, the share of cost of goods sold, fuel and energy declined. As a result, a major part of operating revenue was earmarked for the payment of wages and other reimbursements to employees, and for servicing the costs of production services, whose share increased in total from 19.8% in 2014 to 21.9% in 2019. Despite this, in 2019 generally variable costs burdened operating revenue less than in past years, which suggests that companies in this sector improved their operational efficiency and, as a result, the contribution margin was up by RSD 126.4 bn. In the same period, the depreciation costs and generally fixed costs retained an almost unchanged share in operating revenue, which means that **manufacturing companies used the increased business revenue for fixed investment in order to strengthen their competitive position**. Along with the contribution margin, this boosted the operating income by total RSD 61.5 bn in 2019 compared to 2014.

In the **construction sector**, the costs of production services and material costs were dominant – to cover them, companies earmarked 45.5% and 23.9% of operating revenue in 2019, which is by 9.1 structural points more than in 2014. A higher relative share of these costs reflects the rising needs of construction companies for equipment and material, and related services (transportation, maintenance, use of own inventory products etc.), reflecting the acceleration of the investment cycle in the country. However, the share of generally variable costs fell by 1.6 structural points, owing to smaller outlays for the purchase of goods, fuel and energy, and wages of employees, as many of them are seasonal workers. In addition, the relative share of fixed costs was down by 3.5 structural points, meaning that the intensification of activity in construction, which indirectly spilled over to other sectors, contributed to the reduction in the unit value of these costs and significant effects of the economies of scale. Among other service sectors, **wholesale and retail trade** saw a relative drop in the cost of goods sold, as the most dominant category of costs in trade companies (by 2.0 structural points), which was even more pronounced in the **sector of transportation and warehousing** (by 8.7 structural points). In both sectors, the share of generally variable costs in operating revenue declined, and the contribution margin increased by RSD 110.6 bn in trade and RSD 22.5 bn in transportation.

Given all the above, the following conclusions can be made:

1) the expansion of activity in the domestic corporate sector was initially financially spurred by a significant reduction in non-business costs, reflecting an adequately pursued economic policy;

2) owing to the effects of the economies of scale and relatively favourable price relations, the corporates' contribution margin sharply increased, opening room for accelerated growth in capital investment;

3) investment helped further strengthen the corporate sector's competitiveness, and drove down further total unit costs, which suggests their adequate reallocation and is manifested in our economy's increasing presence in global markets; and

4) the increase in value added helped cover rising labour cost expenditure.

All this suggests that the significant improvement in the business and financial position of Serbian companies in the past six years was achieved on sustainable grounds, which will to a considerable degree help the domestic economy overcome the consequences of the global pandemic, while preserving the necessary level of business activity and employment going forward.

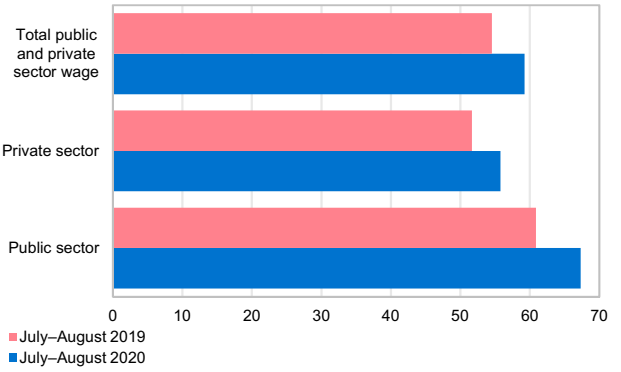
5 Labour market developments

Timely and ample economic support to the Serbian economy during the pandemic contributed to the preservation of wages, continued private sector employment and a further reduction in unemployment, whereby the domestic labour market avoided more serious consequences of the crisis so far.

Wages and labour productivity

Despite the consequences of the pandemic, **the average nominal net wage continued up, reaching RSD 59,271** (EUR 504) and posting an 8.6% y-o-y growth in July and August. At the same time, the y-o-y increase in the average wage was registered both in the private and public sector (8.0% and 10.6%, respectively), but both recorded somewhat lower average wage in August than in July (-1.4% s-a and -1.3% s-a, respectively). Bearing in mind the expected economic recovery in the coming period, in September the Serbian Government adopted the decision on minimum wage increase[25] as of 1 January 2021, from RSD 172.54 per hour to RSD 183.93 per hour, which will increase the average minimum wage next year by 6.6% (or around RSD 2 thousand) from 2020. The expected further increase in the average wage in the public sector, coupled with higher minimum wage as of next year will aid further the recovery of the domestic demand and preservation of living standards.

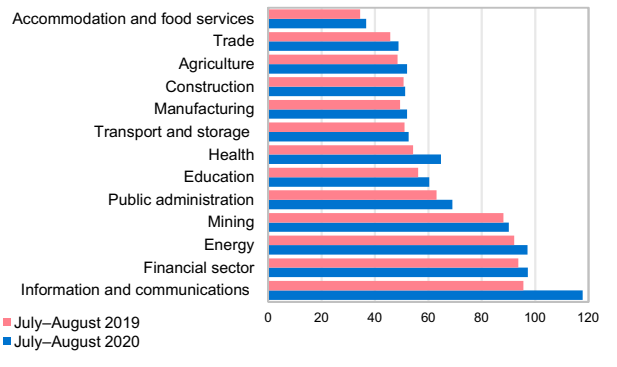
Chart IV.5.1 **Average nominal net wage**
(in RSD thousand)



Source: SORS.

Compared to previous months, the average nominal net wage in July and August recorded somewhat slower y-o-y growth in almost all **economic branches**. In service activities, the rise equalled 8.2%, in agriculture 7.5% and in industry 6.8%. In services, the highest y-o-y wage growth was recorded in information and communications (23.2%), followed by health and social protection (19.3%) largely on account of health workers' wage increase. Other branches also recorded a y-o-y wage rise in July and August.

Chart IV.5.2 **Nominal net wage by economic sector**
(in RSD thousand)



Source: SORS.

Total nominal net wage bill, as the dominant source of consumer demand, rose by 13.1% y-o-y in July and August, driven by the further increase in wages and employment.

According to preliminary data, the y-o-y drop in **overall economic productivity** of 7.9% in Q2 amid the pandemic softened considerably in Q3 (to -3.2%) on account of economic recovery.

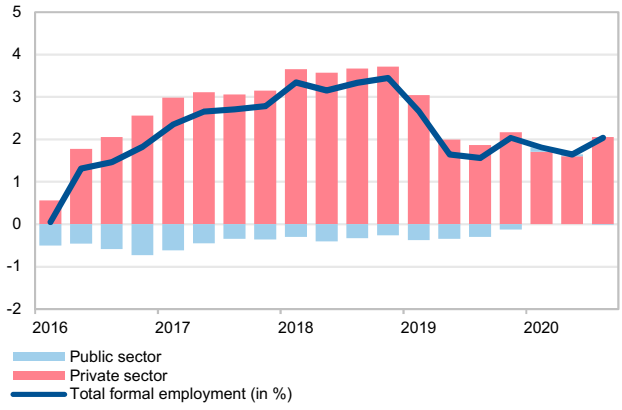
[25] RS Official Gazette, No 116 of 16 September 2020.

Table IV.5.1 **Formal employment and unemployment**
(y-o-y growth rates, period average)

	2019	2020		
	Q4	Q1	Q2	Q3
Total number of formally employed	2.0	1.8	1.6	2.0
Employed with legal persons	2.2	2.4	2.2	2.3
Entrepreneurs and their employees	3.4	1.0	1.1	2.7
Individual farmers	-8.4	-7.4	-7.8	-7.6
Unemployed	-8.9	-9.1	-3.3	-0.4
First-time job seekers	32.9	26.3	11.3	12.3
Used to be employed	-29.4	-28.5	-14.8	-11.4

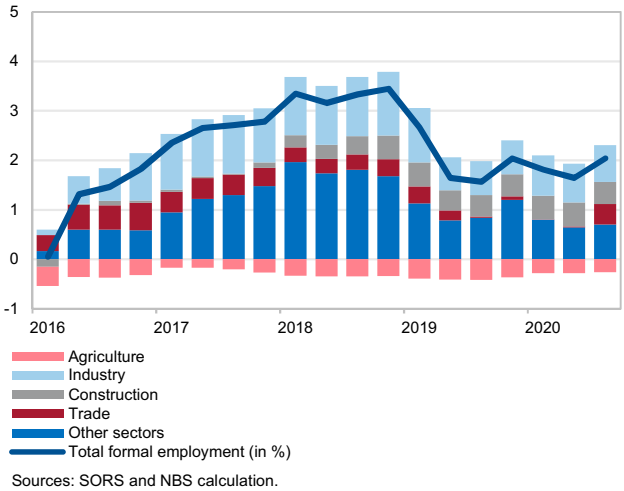
Sources: SORS and NES.

Chart IV.5.3 **Structure of y-o-y growth in total formal employment**
(in pp, period average)



Sources: SORS and NBS calculation.

Chart IV.5.4 **Contribution to y-o-y growth in total formal employment by economic sector**
(in pp, period average)



Sources: SORS and NBS calculation.

Employment

According to SORS data obtained from the Central Registry of Mandatory Social Insurance, formal employment in Q3 was by around 44 thousand persons higher than a year ago. Hence, **formal employment y-o-y growth accelerated to 2.0%** in Q3 (from 1.6% in Q2). Employment in Q3 also rose from Q2 by around 28 thousand people, which is yet another confirmation that economic measures supporting the Serbian economy contributed to job preservation. Such y-o-y trend of formal employment was driven by continued employment with legal entities and entrepreneurs in Q3 (by close to 50 thousand persons on average), while a drop in the number of registered individual farmers (by around 5 thousand persons on average) was somewhat milder than in previous quarters. Positive employment tendencies are also suggested by the Employment Expectations Indicator (EEI)[26] for Serbia, which further increased to 109.6 in September (from 106.0 in June).

Overall y-o-y formal employment rise in Q3 was accounted for by the private sector. The rise in employment among workers employed in standard arrangements by around 58 thousand exceeded the fall in employment among workers in non-standard arrangements (around 8 thousand persons.) Compared to the same period last year, **the highest number of new recruits in Q3 was recorded in manufacturing** (by around 14.5 thousand persons on average), followed by construction and service activities – wholesale and retail trade, information and communications, transport and storage, as well as catering and tourism, which were the most badly hit by the new crisis in Q2. As opposed to that, employment shrank in energy and agriculture, and also slightly in the public sector partly due to controlled recruitment by public fund beneficiaries[27].

In Q3 the **downward trend in unemployment** continued and, according to the National Employment Service, **for the first time since 2000** the number of unemployed persons went below 500 thousand equalling 498,708 in September, which is almost 4 thousand less than a year ago. This contributed to the reduction in registered unemployment by 0.8% y-o-y in September, which is nevertheless slower than at the beginning of the year (-9.8% y-o-y in March). Q3 saw the continued y-o-y fall

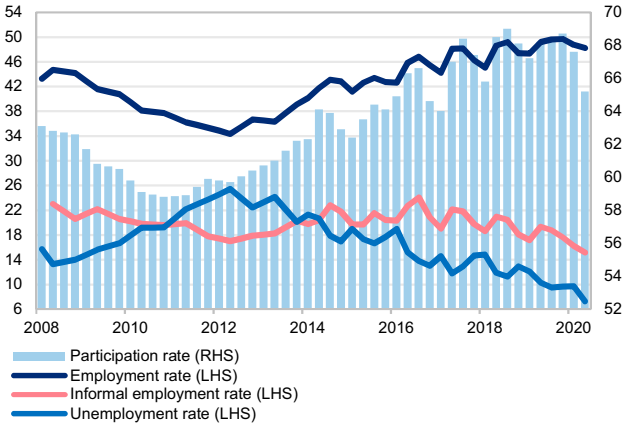
[25] The EEI is an indicator of employment expectations produced by the European Commission based on a monthly survey among employers. Values above 100 points indicate plans of higher employment, while the opposite holds true for values below 100.

[26] Pursuant to the Decree on the Procedure for Obtaining Consent for New Employment and Additional Engagement in Public Fund Beneficiaries.

in unemployment in almost all occupation groups, though at a slower pace than in the previous period. The decrease averaged around 3.6 thousand persons in occupations in industry and around one thousand in construction and services (trade, tourism and catering, transport). A milder unemployment drop was also recorded in agriculture.

According to the Labour Force Survey for Q2 (covering both formal and informal labour market segment), the unemployment rate was lowered to 7.3%, which is a y-o-y decrease of 3.0 pp and at the same time its lowest level on record. The reduced unemployment rate is largely a consequence of the decreased activity rate of the working age population (15–64) to 65.2% in Q2, primarily due to more difficult conditions for finding a job during the pandemic. At the same time, the employment rate also dropped to 48.2% (y-o-y decrease of 1.0 pp), dominantly driven by the reduced employment of workers without a formal employment contract by around 132 thousand people in the past year, whereby the informal employment rate dropped to the new low of 15.2% in Q2.

Chart IV.5.5 **Labour market indicators according to the Labour Force Survey**
(in %)



Source: SORS.

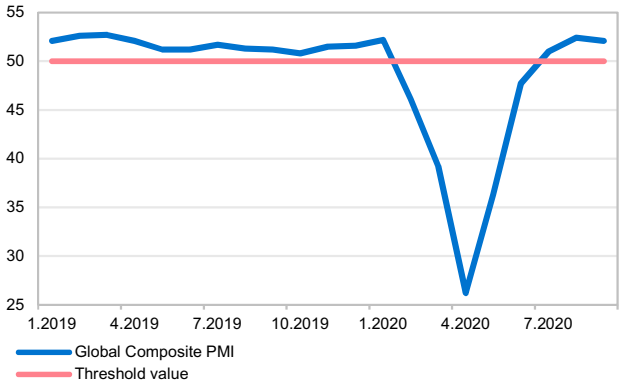
6 International environment

In the period since the previous Report, the global economy began to gradually emerge from the crisis that has been termed "The Great Lockdown", driven by better performance in Q2 than previously anticipated, notably in advanced countries, as well as by the recovery of the Chinese economy. Movements of leading economic activity indicators in Q3 also suggest a faster than expected recovery. However, the renewed spread of the coronavirus during H2 led to the reinstatement of some containment measures in many countries, hampering the projection of the return of economic activity to the pre-crisis level. Inflationary pressures remained low, and the euro area recorded a y-o-y drop in consumer prices, while core inflation fell to its lowest level on record for Eurostat. Accordingly, leading central banks continued to support the economic activity by conventional and unconventional tools, and to hint at an extended period of low interest rates, which is also reflected in the changes of long-term targets and strategies of the Fed's monetary policy adopted in August.

Economic activity

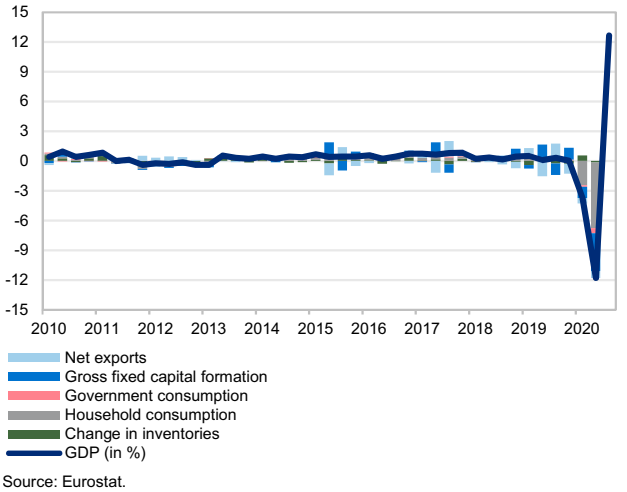
As the majority of economies gradually began to open as of May and June, **the global economy struck a path of recovery faster and sooner than previously anticipated**. This is the main reason behind the IMF's upward revision of the global growth forecast for 2020 in

Chart IV.6.1 **Leading Global PMI activity index since the start of 2019**
(in index points)



Sources: JP Morgan and Markit Group.

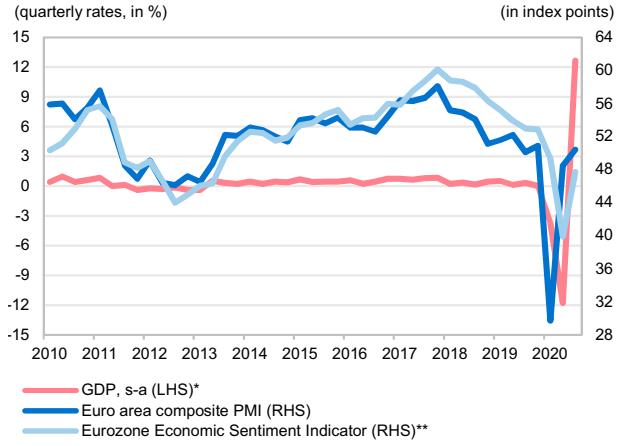
Chart IV.6.2 **Contributions to s-a GDP growth rate of the euro area**
(in pp)



Source: Eurostat.

the October World Economic Outlook relative to June (by 0.8 pp to -4.4%), mostly bearing in mind that the majority of advanced countries recorded a lower GDP drop in Q2 than previously projected, that the Chinese economy has already entered the growth stage, and that Q3 has offered signs of stepped-up economic recovery. This is also indicated by the Global Composite PMI, which returned to the expansion zone in Q3 and measured 52.5 in September (compared to 47.7 in June). The adverse effects of the global recession were mitigated mostly owing to comprehensive fiscal, monetary and regulatory measures which preserved corporate cash flows and the disposable income of households, and at the same time provided support to lending. However, the renewed spread of the virus in H2 slowed down the incipient opening of a number of countries, notably emerging and developing ones, for which in October the IMF slightly revised down its June global growth projection for 2020 (by 0.2 pp to -3.3%). As the health and economic crises are unpredictable, **the speed of economic recovery to the pre-crisis level remains uncertain** and subject to possible halts due to the length of the pandemic and associated costs, the efficiency of economic measures and development of financial conditions.

Chart IV.6.3 **Movements in GDP and economic activity indicators of the euro area**



Sources: Eurostat, Markit Group, Banca d'Italia and European Commission.

* Eurostat's preliminary flash estimate for Q3 2020.
** ESI is standardised relative to PMI.

Faced with the coronavirus pandemic as of mid-March, **the euro area economy** posted a sharp fall of 11.8% s-a in Q2, dominantly due to the significant contraction in domestic demand (with a negative contribution to GDP of 10.9 pp). The forced suspension and postponement of business activities, particularly during April, was widely spread across countries and sectors. All leading euro area countries recorded a drastic s-a GDP fall in Q2, notably Spain (-17.8%) and France (-13.7%), followed by Italy (-13.0%) and Germany (-9.8%), the latter two being Serbia's key foreign trade partners in the euro area. At the same time, the greatest losses were recorded in the production of motor vehicles and investment equipment, as well as in transport, tourism and catering. The loosening of restrictive measures as of May and adjustment to the new circumstances, coupled with coordinated activity of the monetary and fiscal policies, heralded a gradual **economic recovery of the euro area in Q3**. The Eurozone Composite PMI[28] moved within the economic expansion zone during Q3, equalling 50.4 points in September (after measuring 48.5 in June), and was primarily the result of stepped-up recovery of the production sector. The Economic Sentiment Indicator[29]

[28] Index value above 50 points indicates expansion, and below 50 a decline in economic activity.

[29] Index value above 100 points indicates improvement, and below 100 worsening of economic expectations.

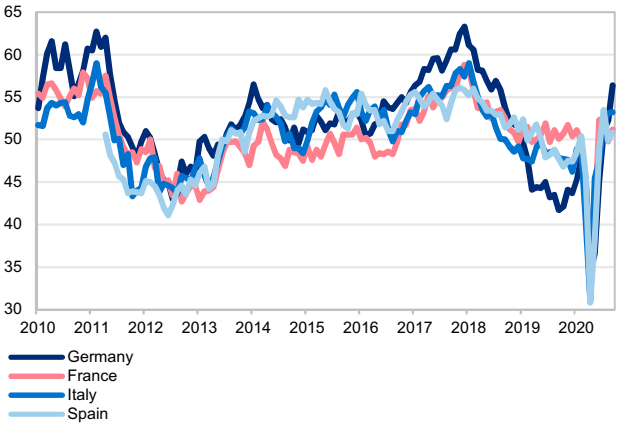
increased to 90.9 points in September (from 75.8 in June), suggesting that the nascent economic recovery is still incomplete.

According to Eurostat's preliminary flash estimate, the euro area's economic growth of 12.7% s-a in Q3 offset the GDP fall in the previous quarter and thus exceeded the **ECB's** expectations from September (8.4% s-a), which were based on the assumptions of a lower impact of restrictive containment measures, recovery of external demand and support to economic policies. Also, key euro area economies were characterised by GDP growth in Q3. However, the deteriorated epidemiological situation from October onwards and the reintroduction of containment measures contributed to the poorer economic outlook of the euro area in Q4. This is also indicated by diverging movements of leading economic indicators by sector within the euro area, given that activity in the services sector continues to weaken (Services PMI of 46.9 in October) in contrast to further growth in the production sector (Manufacturing PMI of 54.8 in October).

The adverse effects of the crisis are also evident in the labour market where conditions have worsened since April, when the crisis struck the hardest. As at September, the number of unemployed persons in the euro area rose by around 1.7 mn (8.3% unemployment rate), with a simultaneous fall in the number of active and employed persons. More severe consequences to the labour market were avoided owing to the introduction of short-time work schemes and wage subsidies for employed persons, hence the euro area Employment Expectations Indicator[30] rose further, reaching 91.6 in September (from 83.0 in June and 58.9 in April). In regard to this, expectations are that the significant support of the monetary and fiscal policies will help preserve jobs and wages in the real sector, and prevent a larger transfer of the crisis onto the financial sector. Though, relative to June, the ECB's September forecast contained a somewhat lesser decline in euro area GDP (of -8.0% in 2020), the fall is still greater than during the 2009 financial crisis when it equalled -4.5%.

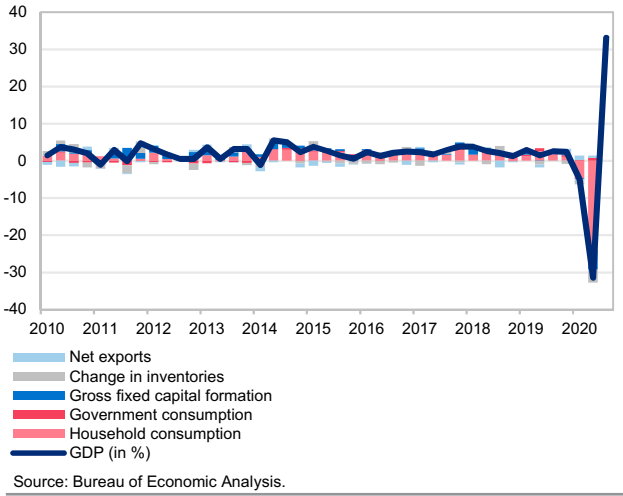
Due to the strict measures implemented between March and June in order to contain the pandemic, **the US economy** suffered a fall of -9.0% s-a in Q2 or -31.4% annualised, under the impact of the significantly subdued personal consumption and private sector investments, with a negative contribution to GDP growth of 32.8 pp,

Chart IV.6.4 **PMI Manufacturing for selected countries**
(in index points)



Source: Markit Group.

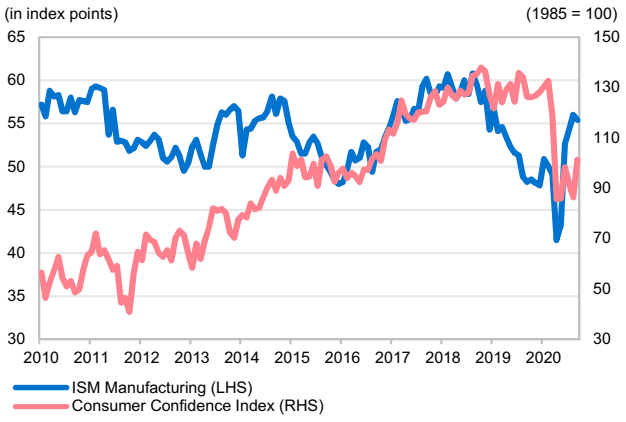
Chart IV.6.5 **Contributions to the annual US GDP growth rate**
(quarterly, in pp)



Source: Bureau of Economic Analysis.

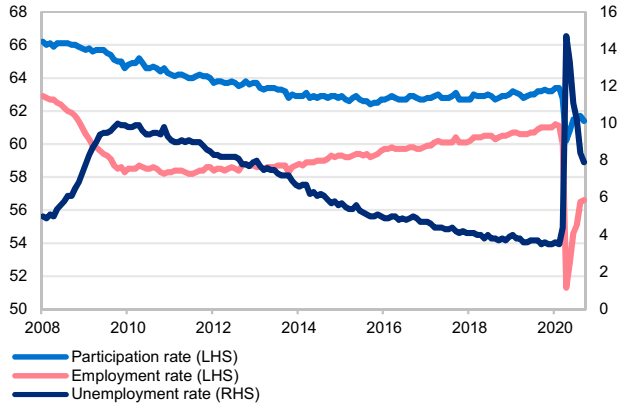
[29] Index value above 100 points indicates managers' high employment expectations, while the opposite holds true for values below 100.

Chart IV.6.6 **Leading economic indicators in the USA**



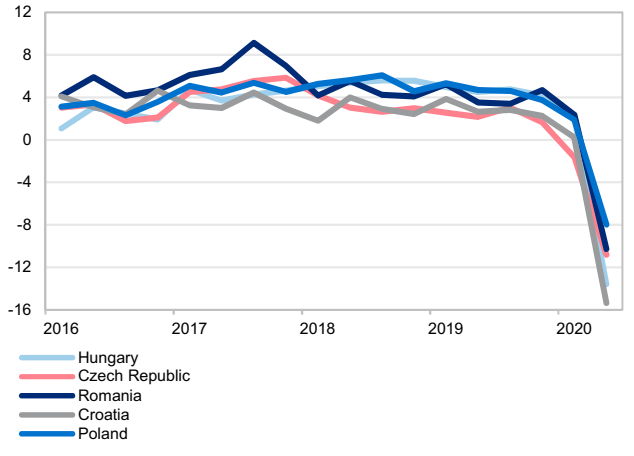
Sources: Institute for Supply Management, Conference Board.

Chart IV.6.7 **US labour market developments**
(monthly rates, in %)



Source: Bureau of Labor Statistics.

Chart IV.6.8 **Y-o-y GDP growth rates in CESEE countries**
(quarterly, in %)



Source: Eurostat.

while government consumption and net export exerted a positive contribution (1.4 pp in aggregate). Favourable movements in the leading ISM Manufacturing PMI index from June to September, accompanied by a gradual rise in the Consumer Confidence Index, suggested that **the US economy came out of recession in Q3**. According to the **Fed**, this was strongly supported by comprehensive economic measures. The preliminary data of the Bureau of Economic Analysis indicate that US GDP rose 7.4% s-a in Q3 (or 33.1% annualised), on the back of the recovery of personal consumption and investment. As Q3 indicators turned out to be better than anticipated, the Fed revised its projection of GDP growth in 2020 from -6.5% in June to -3.7% in September. Caution mandates an increase in uncertainty at the start of Q4 due to the second wave of the pandemic, heightened apprehensions of the population and political developments in the USA.

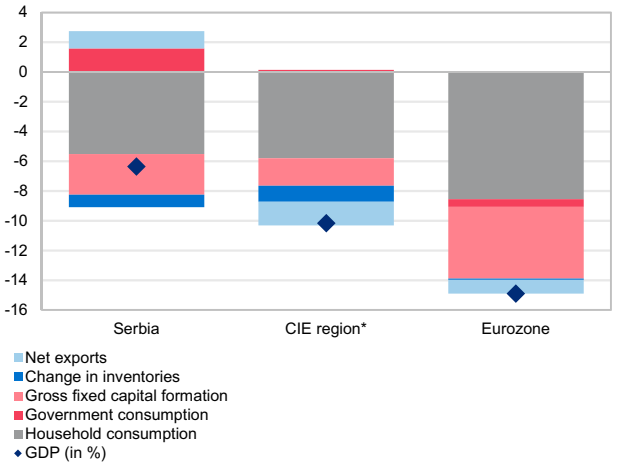
The US labour market is also recovering gradually, given that since the outbreak of the pandemic in April the total number of unemployed persons decreased by 10.5 mn, thus bringing the unemployment rate down from the record high 14.7% in April to 7.9% in September. Also, the number of submitted weekly claims for compensation in the event of job loss continued to decline during Q3, as did the number of applications for other social welfare programmes. Concurrently, the employment rate rose to 56.6% in September (from 54.6% in June), and the number of new non-farm payrolls continued up for the seventh month in a row – in September it was 661,000 higher than in June, notably in the catering and recreation sectors, retail trade, health and social care, and professional and business services. With this in mind, the Fed lowered its projected unemployment rate for 2020 to 7.6% in September (9.3% in June).

The **Central and Southeast European region** also recorded a sharp contraction in economic activity in Q2 (-10.2% y-o-y), dictated by a decrease in almost all components of GDP (except government consumption). Mirroring the euro area, economic contraction was seen in all countries of the region, with the largest y-o-y GDP fall recorded in Croatia (-15.4%) and Hungary (-13.6%), and the smallest in Serbia (-6.4%) and Poland (-8.0%). The initially weak economic outlook of the Central and Southeast European region improved by the end of the year following announcements of additional fiscal stimuli and somewhat more favourable dynamics of the leading economic activity indicators in the majority of the countries in the region, whose economic recovery will largely reflect the pace of the recovery of the euro area as its key trade partner. Based on this, in October the IMF

forecast a -4.6% fall of GDP in **European emerging and developing countries**[31] in 2020, which is 1.2 pp lower than the June forecast.

With a solid foundation of a comprehensive package of economic measures, public investments and the recovery of export, **China's business activity** was normalised in April already, hence the 3.2% y-o-y growth in GDP in Q2 surpassed all expectations, with evident recovery in the production and services sectors. According to China's National Bureau of Statistics, stable economic recovery continued in Q3 with a y-o-y growth rate of 4.9%. This was also indicated by the movements in leading activity indicators in the services sector and manufacturing industry, which have been in the expansion zone since May and equalled 54.8 and 53.0 respectively in September. Therefore, in September the IMF significantly revised up its June projection of Chinese GDP growth – by 0.9 pp to 1.9% in 2020.

Chart IV.6.9 **Contributions to y-o-y GDP growth rate in Q2 2020**
(in pp)

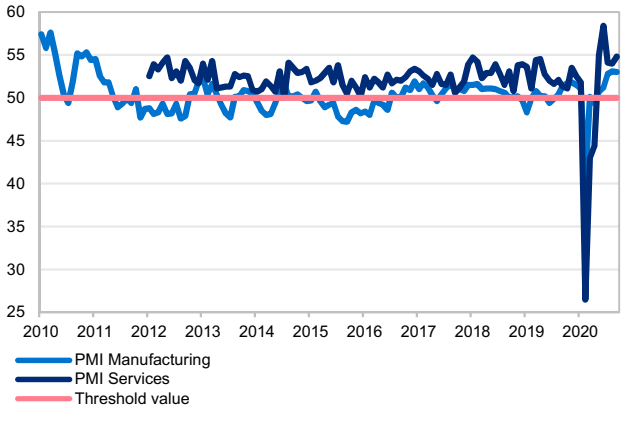


Source: Eurostat.
* Czech Republic, Poland, Hungary, Romania, Slovenia, Slovakia, Bulgaria and Croatia.

Inflation movements

Inflation in the euro area rose slightly in July, to 0.4% y-o-y, mainly on account of accelerated growth in the prices of industrial products excluding energy, and the slower fall in the prices of energy. Though the negative contribution of energy prices continued to decrease in August, other inflation components had a disinflationary effect, therefore inflation entered the negative territory (-0.2% y-o-y). It declined further in September, to -0.3%, with energy, services and industrial products having a disinflationary effect, and the y-o-y growth rate in food prices was the only one to remain at almost the same level as in August. Lower prices of services and industrial products led to a fall in **core inflation**, from 1.2% in July to 0.2% in September, the lowest value of this indicator since it was first monitored by Eurostat. As for Serbia's key foreign trade partners, y-o-y inflation in **Germany**, measured by the Harmonised Index of Consumer Prices, continued to decline during Q3 until it reached -0.4% in September, mostly due to the disinflationary effect of VAT cuts in July and lower energy prices. After briefly leaving the negative territory in July (0.8%), y-o-y inflation in Italy, measured by the Harmonised Index of Consumer Prices, turned negative again in August and went further down in September, to -1.0%, as a result of the lower prices of energy and transport services.

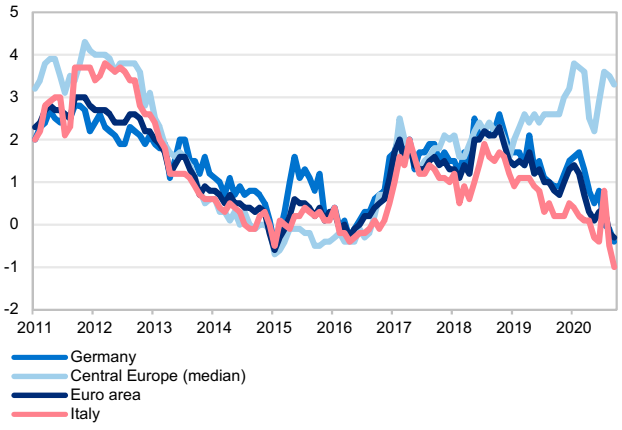
Chart IV.6.10 **Leading activity indicators in China's production and services sectors**
(in index points)



Source: Markit Group.

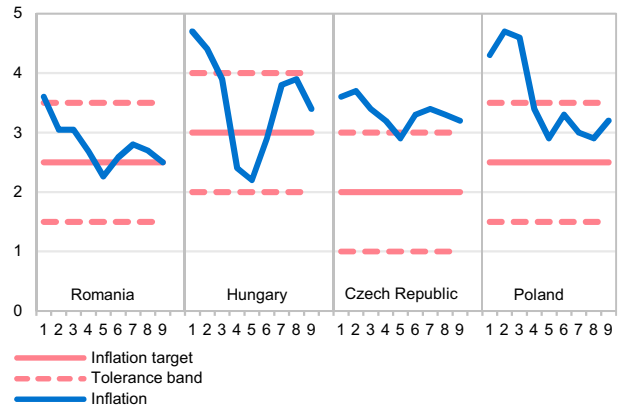
[31] Among others, includes countries of Central and Southeast Europe.

Chart IV.6.11 **HICP for selected countries**
(y-o-y rates, in %)



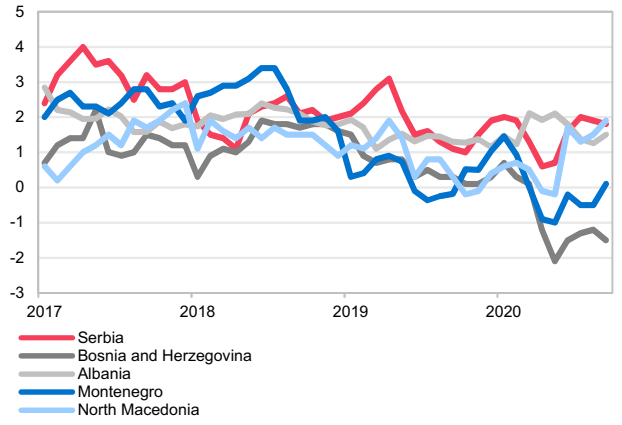
Source: Eurostat.

Chart IV.6.12 **Movement in CPI for selected Central and Southeast European countries in 2020**
(y-o-y rates, in %)



Sources: Central banks of selected countries.

Chart IV.6.13 **Movement in CPI for Western Balkans**
(y-o-y rates, in %)



Sources: Statistical offices of selected countries.

Although it has been rising mildly as of July, headline y-o-y inflation in the **USA**, measured by the personal consumption expenditures index, is still significantly lower than at the start of the year, reflecting low aggregate demand and a sharp fall in the prices of energy early in the year. Inflation in September measured 1.4%, while inflation excluding the prices of food and energy – as the Fed's preferred measure – was also below the target and measured 1.5%.

In the majority of observed **Central and Southeast European countries** (Hungary, the Czech Republic and Romania), inflation posted a y-o-y rise in July, the most pronounced being in Hungary (3.8%), while only Poland saw a slowdown in inflation (to 3.0%). Inflation growth was facilitated by the gradual recovery in demand, as well as the lower disinflationary effect of energy prices. No major inflation oscillations were recorded in August in the observed countries, and the disinflationary effect was recorded on account of lower food prices, while, with the exception of Hungary, the y-o-y fall in the prices of petroleum products slowed down. In all observed countries except Poland, inflation slowed down in September, notably in Hungary where it was mostly driven by the lower prices of services, and in other countries due to the lower prices of food, while the y-o-y fall in petroleum product prices slowed down. Also, inflation in Romania was precisely at the central midpoint in September, in Hungary and Poland it was in the upper bound of the target corridor, and in the Czech Republic it overshot the upper bound.

As for **Western Balkan** countries, positive inflation rates throughout Q3 were recorded by **North Macedonia**, where, after a temporary dip in July, inflation continued up in the remainder of Q3, reaching 1.9% in September, as well as in **Albania**, where, after somewhat higher rates in Q2, inflation dropped to 1.4% in July and remained largely unchanged until September (1.5%). In July and August, **Montenegro** recorded a y-o-y fall in consumer prices (-0.5% in both months), only to see inflation return to the positive territory in September (0.1%). Only Bosnia and Herzegovina recorded a fall in y-o-y consumer prices until the end of Q3, though July and August saw it decelerate and then return to -1.5% again in September, the same as at end-Q2.

After declining to 11.8% in July, y-o-y inflation in **Turkey**, despite the rising food prices and the weaking lira, maintained that level for the following two months thanks to the base effect.

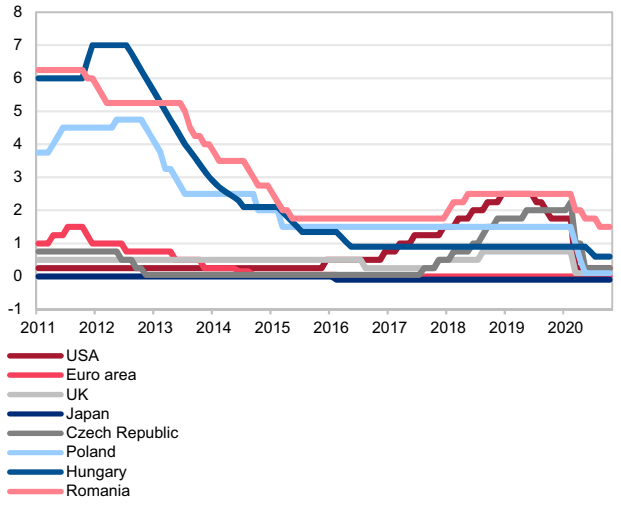
Monetary policy

During Q3, the **ECB** kept its key rates unchanged (interest rate on the main refinancing operations at 0%, deposit facilities rate at -0.50%, and the lending facility rate at 0.25%), as well as its Pandemic Emergency Purchase Programme (PEPP) introduced in March, which is expected to be fully utilised (EUR 1,350 bn) and will last at least until mid-2021. The ECB will reinvest the maturing principal payments from securities purchased under the PEPP at least until end-2022. Also, it will continue with net purchases under the Asset Purchase Programme (ASP) at a monthly pace of EUR 20 bn until the ECB starts raising its rates again, with reinvestments of the principal amounts for an extended period thereafter, as well as with additional asset purchases within the programme in the total amount of EUR 120 bn until end-2020. In its October meeting, the ECB did not change its monetary policy, but it announced it would take additional measures in December to support the economy, noting that efforts are already underway to determine an optimum combination of tools to achieve this goal.

At end-July, the **Fed** decided to extend the duration of its seven aid packages to the economy, adopted in March, until end-2020, as well as to prolong the temporary dollar liquidity lines to other central banks via FX swaps and repo transactions until 31 March 2021. During Q3, the Fed did not change its interest rates either, though in August it adopted changes to its long-term monetary policy goals and strategy,[31] whereby it increased the flexibility of the monetary policy pursuit and sent a signal to the market that federal funds rates are not expected to go up for an extended period of time. The Fed intends to keep its federal funds target range at the current level until inflation reaches 2% and slightly exceeds that level for a while. Also, it announced the continuation of investments in Treasury bonds and mortgage-backed securities in unchanged amounts of USD 80 bn and USD 40 bn a month respectively, but it announced that it would no longer reinvest the principal amounts of commercial mortgage-backed securities.

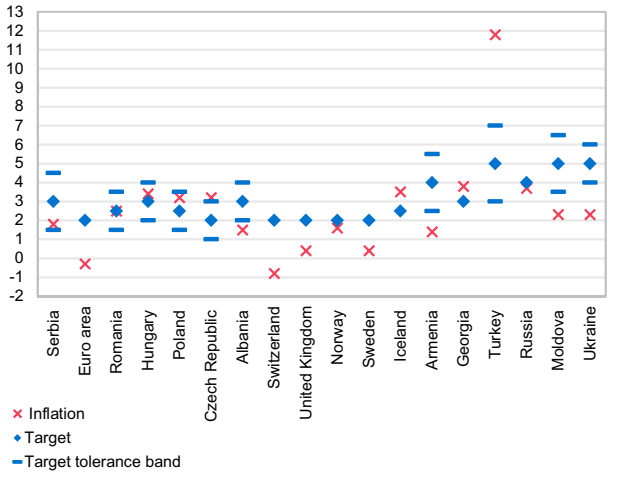
In July, the central bank of **Hungary** lowered its policy rate by 15 bp to 0.6%, and kept it unchanged thereafter, though it expanded its government and corporate bond purchase programme. However, against the backdrop of significant depreciation of the forint, which touched its new lowest level vis-à-vis the euro, the interest rate on one-week deposit facilities rose by 15 bp to 0.75% at end-

Chart IV.6.14 **Policy rates across selected countries**
(p.a., in %)



Sources: Central banks of selected countries.

Chart IV.6.15 **Inflation and target by country in September 2020**
(p.a., in %)



Sources: Eurostat and websites of central banks.

[31] See Text box 4, p. 53.

Table IV.6.1 **Inflation, policy rates and inflation targets by country**
(in %)

Central banks	Inflation*	Inflation target	Policy rate**
Serbia	1.8	3,0 ± 1,5	1.25
Poland	3.2	2,5 ± 1,0	0.10
Czech Republic	3.2	2,0 ± 1,0	0.25
Hungary	3.4	3,0 ± 1,0	0.60
Romania	2.5	2,5 ± 1,0	1.50
Turkey	11.8	5,0 ± 2,0	10.25

Sources: Websites of central banks.
* CPI, y-o-y rates in September.
** End-October 2020.

September, whereby the monetary policy was slightly tightened. In its August meeting, the **Romanian** central bank trimmed its policy rate to a record low 1.5%, and kept it unchanged until end-Q3. It also continued its programme of government bond purchase in the secondary market, launched in April. The central banks of **Poland** and the **Czech Republic** did not change their monetary policies in Q3.

With the lira depreciating and reaching its new lowest level against the dollar, during August the central bank of **Turkey** redirected market participants to a more expensive instrument (Late Liquidity Window), i.e. borrowing at the rate of 11.25%. Afterwards, the policy rate was raised in September, for the first time since 2018, by 200 bp to 10.25%. At the October meeting, the policy rate remained unchanged, contrary to analysts' expectations, however, the central bank increased the lending facilities rate (Late Liquidity Window) to 14.75%, whereby it effectively expanded the interest rate corridor.

Text box 4: Reviews of the Fed and ECB's monetary strategies

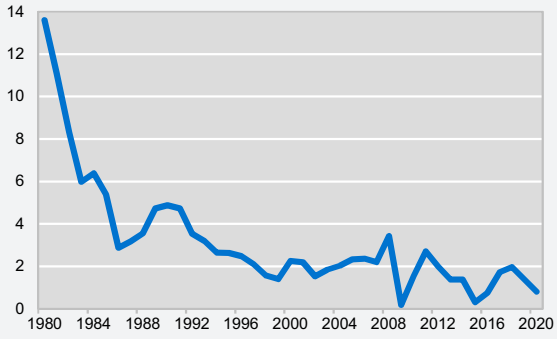
Fundamental changes in the global economic environment that took place over the past several decades, and which became particularly pronounced in the wake of the financial crisis, drove leading central banks to launch a review of their monetary policy frameworks – strategies, tools and communication practices which they use to achieve their objectives. In November 2018, the Fed began the review of its monetary policy framework which seeks to achieve a two-fold objective – price stability and full employment. After detailed analyses and public debates, in late August 2020 the Fed unanimously adopted the changes to the monetary policy strategy which imply a more flexible approach to the inflation target and the perception of the maximum employment level, noting that a detailed monetary policy strategy review via public debate will be organised once in five years. The coronavirus pandemic temporarily halted the review of the ECB's monetary strategy, which was relaunched recently and is expected to be completed by mid-2021. In the review of its strategy, which was last conducted in 2003, like the Fed, the ECB listens to public opinion and organises a series of events to lend an ear to the stances of citizens, academics, European parliamentarians and other interested stakeholders, and their view on the ECB's policy.

The first question that comes up regarding the monetary policy strategy review is **the definition of the inflation objective**. Targeting positive inflation rates lowers the possibility for deflation and leads to higher nominal interest rates. This ensures that in case of an economic shock that causes pressures, the monetary policy is not often on the "effective lower bound." The Fed kept the stance that a long-term inflation rate of 2% is still the best reflection of monetary policy objectives, i.e. the achievement of full employment and price stability, as well as the belief that monetary policy must be forward looking, taking into account the expectations of households and corporates, and the fact that monetary policy influences the economy with a lag. **However, instead of a long-term inflation target of 2%, the Fed's new approach implies an inflation target of 2% on average over a certain period**. This means that after a period of inflation trending constantly below 2%, the Fed will allow it to be moderately above 2% for a while. The Fed will not use any specific mathematic formula, rather it will have a flexible approach to the average inflation target estimate. Bearing in mind that the maximum employment level cannot be directly measured and varies over time due to factors not associated with monetary policy, the Fed still believes that it is better not to define a numerical employment objective. Still, the Fed entered a change in its strategy which implies that decisions will be made based on an assessment of the lack of employment instead of the current assessment of deviation from maximum employment. This means that the Fed will allow employment to exceed the estimated level of maximum employment without worrying that this might cause high inflation, whereas on the other hand, it will react in case of a high unemployment rate.

At present, **the ECB's inflation objective** implies inflation of "below, but close to 2%", which was formulated at a time when inflation was one of the major economic problems. The ECB's research shows that the target formulated in this manner was a key factor in successfully capping inflation expectations. However, in the current environment of low inflation, the issue of **reconsidering the definition of the inflation objective** is presented in order for monetary policy to have sufficient room to respond with its conventional tools, notably interest rates. Some believe this could be **achieved by ensuring that the public perceives the ECB's inflation objective as symmetric**, which would support the anchoring of inflation expectations, and in practice it could mean eliminating the phrase "below, but close to" from the current inflation objective definition. One of the options the ECB is contemplating is targeting average inflation, like the Fed; however, criticists of this approach underline that this could limit the central bank's discretion space and deny the possibility for the central bank to, for example, ignore a temporary shock which causes a change in inflation, such as the oil price shock. There is also the issue of the credibility of the objective, which implies that periods of low inflation are followed by periods of inflation above the target, considering the average inflation in the previous decade of 1.3%, the currently negative inflation in the euro area and the consequent length of the period in which inflation should trend above 2% to compensate for this. In conditions of persistently low inflation, monetary policy is also faced with the challenge of the adequate selection of the **monetary policy horizon**. For example, large and persistent disinflationary shocks caused by the ability to compare prices owing to widespread digitalisation call for more flexibility, but the possibility of de-anchoring inflation expectations and inflation growth indicate that the monetary policy horizon could be even shorter.

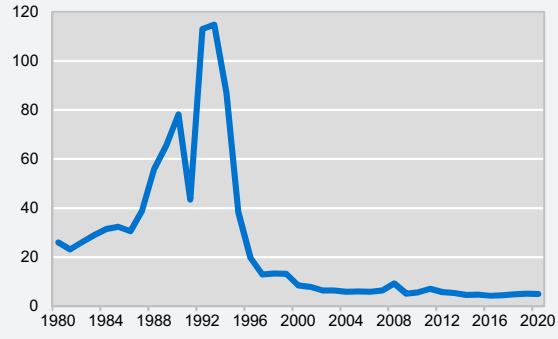
The motives underlying the reviews of the Fed's and the ECB's monetary strategies are similar. Over the past several decades, we witnessed **global disinflationary pressures** under the impact of slower economic growth and falling prices of primary commodities at the global level, as well as the improvement of the monetary policy frameworks of countries around the world that led to the anchoring of inflation expectations. However, in the previous decade, central banks with a numerically defined inflation objective were faced with challenges such as extremely low inflation in the international environment and globalisation (which made inflation less sensitive to movements in domestic demand, and more sensitive to movements in global demand), as well as narrow space for reacting by cutting the policy rate.

Chart O.4.1 **Inflation in advanced economies**
(average consumer prices, in %)



Source: IMF, World Economic Outlook Database, October 2020.

Chart O.4.2 **Inflation in emerging and developing markets**
(average consumer prices, in %)



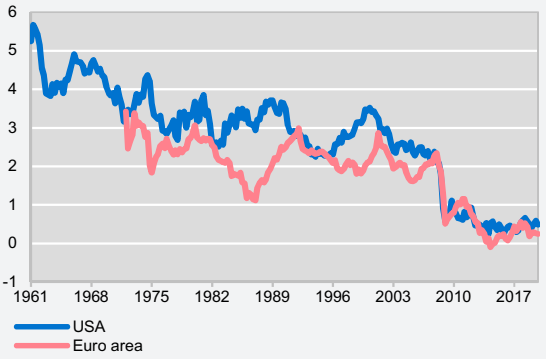
Source: IMF, World Economic Outlook Database, October 2020.

It would seem that the relationship between inflation and economic activity has also weakened. Thus, for example, the US unemployment rate in the past two years (before the coronavirus pandemic) moved close to the 50-year minimum, which is significantly lower than its estimated natural unemployment level. However, the rise in wages and decline in unemployment **did not trigger a major rise in inflation**. The fall in the unemployment rate and recovery of economic activity in the pre-pandemic period did not spill over onto inflation growth, i.e. **we saw a flattening of the Phillips curve** which represents the relationship between unemployment and inflation, i.e. economic activity and inflation. A similar situation was observed in the euro area as well. Output potential declined in the prior period. According to FOMC members, since January 2012 until 2020 the estimated potential growth of the US economy contracted from 2.5% to 1.9%, and the median of estimated unemployment rate over the long-term declined from 5.5% in 2012 to 4.1% according to the latest projection in September 2020. **Difficulties in estimating the output potential and thereby the output gap and the natural unemployment rate**, additionally amplified in conditions of great shocks which the global economy experienced in the prior period, also have significant consequences on models whose inflation projection is based on the Philips curve. It is possible that the economic gap was even wider than reckoned, and the natural unemployment rate lower than estimated, which is why inflation did not respond significantly to economic recovery in the run-up to the pandemic. Also, the ECB underlined the need to consider whether the scope of the unemployment concept is adequate given that, for instance, the effects of part-time work were ignored. Findings of some authors suggest that the flattening of the Phillips curve implies that monetary authorities may encourage economic activity and achieve a lower unemployment rate, at the same time making sure that inflation does not rise to a great extent. However, a flatter Phillips curve also means that in case of excessive inflation growth, economic activity will need to decline much more than previously in order to achieve a lower inflation. The second threat is that the Phillips curve starts to function in its traditional form, e.g. in the event that in one part of the production chain employment growth translates onto higher wages and higher inflation. Based on US data in Chart O.4.4, we can see that the link presented by the Phillips curve was stable in the past, but its weakening has been evident in the previous several decades.

Although the labour market was somewhat stronger that suggested by the euro area's economic recovery, the expected wage growth did not come about until end-2017. However, even when the wage growth set in, inflation remained low, i.e. wage growth did not translate onto inflation as had been expected. One of the explanations which the ECB also underlined in the past period was that in these conditions, corporates lowered their profit margins and did not shift the costs onto consumers. From the monetary policy aspect, what matters is whether this was caused by the expected lower demand or the **long-running structural changes such as globalisation and digitalisation**. Globalisation lifted the global labour supply and increased competition among corporates, thus limiting their ability to raise prices, while digitalisation increased price transparency and enabled many industries to reduce costs. In parallel, demographic changes, i.e. population aging, led to higher savings and declining consumption in advanced economies. Yet, as ECB President Christine Lagarde says, these same structural factors could work in the opposite direction in the post-pandemic period if it comes to de-globalisation as protectionism rises and firms shorten supply chains, while changing global demographics might also reduce the labour supply. Of no less importance is the fact that countercyclical fiscal policy after the crisis induced by the coronavirus pandemic may lead to inflation growth. According to the ECB, climate changes and policies aimed at reducing pollution are another important factor that will affect monetary policy in future, via its impact on economic activity, inflation, long-term interest rates and monetary policy transmission mechanism.

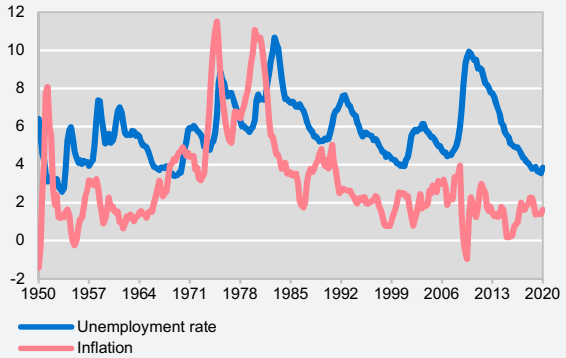
Another key challenge to monetary policy is the **lowering of the neutral interest rate** in the past decade. The natural (neutral) interest rate is the unobservable interest rate that brings desired saving and investment into balance, or in other words, that brings output close to its potential. Whether monetary policy is accommodative or restrictive is determined relative to the neutral interest rate. A decrease in the neutral interest rate means that it was necessary to lower the policy rate even further for monetary policy to be accommodative. Bearing in mind the Fed's resolve not to introduce negative interest rates, Fed President Jerome Powell stressed that movement of interest rates around their effective lower-bound in an upside phase of the economic cycle significantly constrains monetary policy efficiency to support economic activity in times of crisis by trimming interest rates, which was one of the main motives behind the Fed' monetary strategy review. FOMC estimates for the neutral interest rate (consistent with full employment and stable inflation) have dropped from 4.25% in 2012 to 2.5% in 2020, and the estimates for the neutral interest rate in the euro area have declined from 0.6–2.2% on average in the period 1999–2011 to -1.3–0.5% thereafter.

Chart O.4.3 **Estimates for the neutral interest rate**
(in %)



Source: Federal Reserve Bank of New York.

Chart O.4.4 **Unemployment rate and y-o-y inflation in the USA**
(in %)



Source: Federal Reserve Economic Data.

Central banks around the world have responded to lower estimates for the neutral interest rates by trimming their interest rates, and in some cases, they even went into the negative territory, as was the case with the ECB's deposit facilities rate. To ease financial conditions at longer maturities, leading central banks resorted to asset purchases, noting that the effects of these measures were significant. When unconventional instruments were introduced in response to the financial crisis, expectations were that monetary policy would normalise over time in the sense that unconventional measures would be gradually abandoned. However, if neutral interest rates remain low, as well as inflation, we must take into account the possibility that the new toolkit might remain an active part

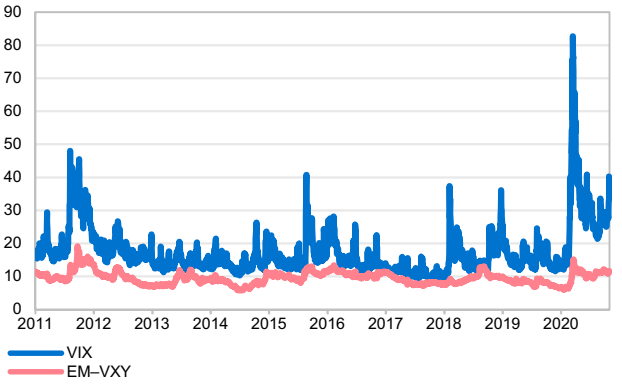
of monetary policy. In this case, the ECB underlined that it will be necessary to clearly define the sequence in which the tools will be applied in case of different shocks. In conditions of **continued implementation of unconventional measures, notably asset purchases, the interaction between monetary and fiscal policies gains special importance**. Fiscal stimuli foster demand, which brightens economic prospects for companies, and encourages them to borrow and fully benefit from the monetary policy stimulus. One of the explanations as to why US inflation was higher than in the euro area in recent times is precisely the fact that the US fiscal policy was more accommodative. The ECB estimated that both policies must remain expansionary long enough to achieve their respective goals in current disinflationary conditions when the economy is running short of its potential.

When it comes to monetary policy conduct, the possibility of de-anchoring inflation expectations is seen as the main challenge and potential threat by monetary policy makers in leading central banks, and would entail large costs. Euro area inflation expectations based on financial instruments indicate a fall in long-term inflation expectations, and since the start of 2019 survey-based five-year ahead inflation expectations also display a downward trend. Long-term undershooting of the inflation objective may have a negative impact on economic activity if it leads to the anchoring of long-term inflation expectations below the target level. Inflation expectations that are anchored below the target are directly associated with lower interest rates in the market, which narrows manoeuvring space for central banks to resort to conventional measures (mainly policy rate cuts) to boost employment and economic recovery in times of crisis. One way to anchor inflation expectations is the approach which the Fed adopted. However, as ECB representatives pointed out, their forward guidance already has built-in guidelines that interest rates will remain record low for as long as the ECB is convinced that inflation growth towards the target is sustainable, provided that this is already evident in the achieved, and not only projected inflation. It remains to be seen whether the ECB will take a leaf out of the Fed's book and implement make-up strategies, as well as how successful this approach really is.

Financial and commodity markets

Q3 was marked by frequent changes in investors' risk propensity in the market. On the one hand, they were impacted by changes in the number of persons infected with the coronavirus and the possibilities for another lockdown and reintroduction of containment measures, renewed trade tensions between the USA and China, and fears that the pace of US economic recovery would be additionally slowed down if adequate fiscal support is not provided. On the other hand, investors' increased readiness to invest was under the influence of the published data indicating a faster than expected pace of the recovery of the global economic activity, with promising news about vaccine development and production. Thus, the implicit measure of **financial market volatility** (VIX) dropped by 4.1 pp at end-Q3 relative to Q2, measuring 26.4%, while the volatility of currencies of emerging economies, measured by EM–VXY, rose by 1.3 pp to 11.8%. During October, VIX rose 11.7 pp owing to concerns over the increase in the number of new coronavirus infections in the USA and Europe, while EM–VXY declined by 0.2 pp.

Chart IV.6.16 **Implied volatility of the global financial market***

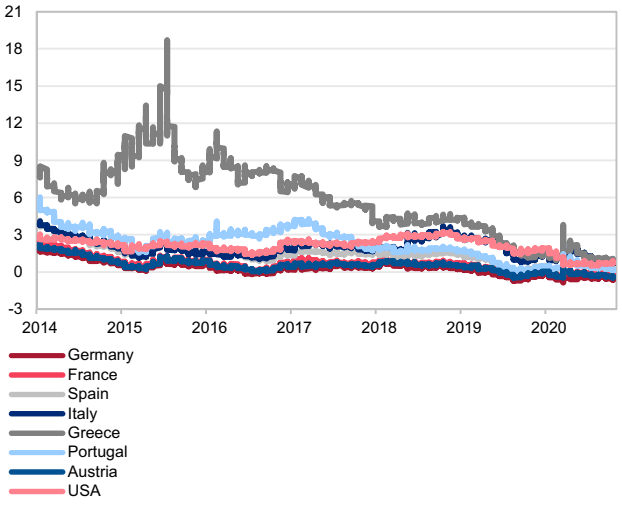


Source: Bloomberg.

* VIX (Chicago Board Options Exchange Market Volatility Index) measures implied volatility of the S&P 500 index; EM–VXY (JPMorgan emerging markets implied volatility index) measures aggregate volatility of emerging market currencies based on three-month forward options.

Despite the increase in the number of new infections in the USA, uncertainty surrounding elections, failure to reach an agreement about continued fiscal aid, and unfavourable data in the labour market, yields on US **ten-year government securities** at end-Q3 remained the same as at end-Q2 (0.7%), thanks to the published data about rising business activity, indicating the continuation of the solid recovery of US economy in Q3. Comparable yields of euro area countries declined additionally in Q3 amid fears of a new wave of the coronavirus, as well as a larger than expected fall in euro area inflation, which intensified the pressure on the ECB to pass new stimuli and keep the possibility for increasing the volume of asset purchases over the coming period. At the same time, the largest fall was recorded in the yields on ten-year government securities of euro area peripheral countries (by 0.2–0.4 pp), though they still remain positive, while yields on ten-year bonds of Germany (-0.5%), France (-0.2%) and Austria (-0.4%) dived even deeper in the negative territory. During October, the observed yields continued to decline by 0.1 pp on average, while the yields on ten-year US Treasuries were the only to post a rise – by 0.2 pp.

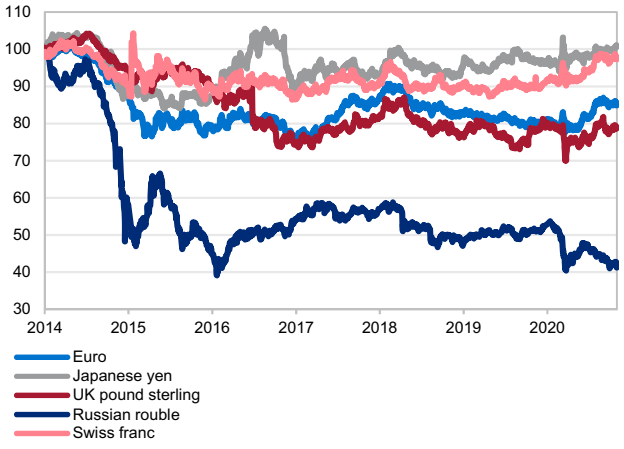
Chart IV.6.17 **Yields on ten-year bonds of selected countries**
(daily data, in %)



Source: Bloomberg.

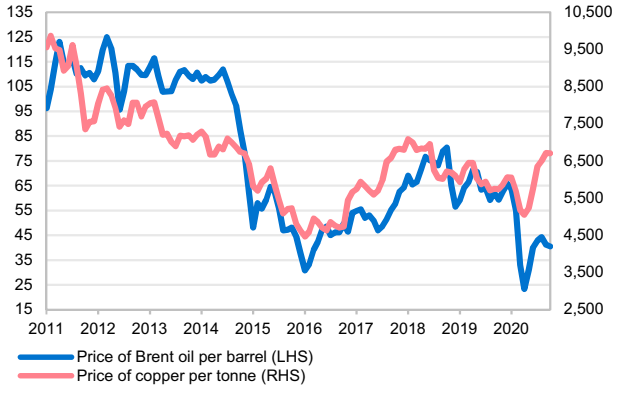
During Q3, the **euro gained** 4.6% **against the dollar**. This was facilitated by favourable prospects regarding vaccine development, which gave rise to optimism in the market and increased investors' risk propensity. The euro also strengthened due to estimates that the euro area is fighting the pandemic better than the USA. The dollar weakened in the wake of the Fed's decision to change the

Chart IV.6.18 **Exchange rates of selected national currencies against the dollar***
(daily data, 31 December 2013 = 100)



Source: IMF.
* Growth indicates appreciation.

Chart IV.6.19 **Oil and copper price movements**
(average monthly prices, in USD)



Source: Bloomberg.

monetary policy strategy, which implies an extended period of low interest rates in the USA. This prompted market participants to sell dollar assets and seek yields in other currencies and asset classes. In early September, the EUR/USD exchange rate exceeded the psychological limit of 1.20 at one moment during the day, for the first time since May 2018. However, as the situation with the coronavirus in Europe abruptly deteriorated in the remainder of the month, the euro started to weaken against the dollar. Increased risk aversion is attributable to investors' fears over the possibilities for the US Congress to reach a deal over a new fiscal stimulus, and this also helped the dollar, as a safe haven currency, strengthen vis-à-vis the euro once again, though at end-Q3 (EUR/USD 1.17) it was still much weaker than at end-Q2 (EUR/USD 1.12). During Q3 the dollar depreciated relative to the majority of other leading currencies as well – the Japanese yen (1.8%), Swiss franc (by 3.1%) and pound sterling (4.6%), while the Russian rouble was the only currency to depreciate against the dollar, by 10.4%, thereby offsetting the appreciation from Q2. The value of the dollar relative to the euro did not change significantly in October.

The price of gold oscillated quite a lot during Q3. Increased demand for gold, as the safest asset, and its rising price were driven by the spread of the coronavirus pandemic, trade and geopolitical tensions, low and negative interest rates, broadly dispersed monetary and fiscal stimuli and the fall in the value of the US dollar. In early August, the price of gold reached a record high level of USD 2,067 per ounce, only to tumble down afterwards under the impact of investors' growing risk appetite, thanks to encouraging economic data in the world and appreciation of the dollar during September. At end-September, the price of gold went up again amid the rising number of infections in the USA, the lack of progress in talks about the adoption of a new package of fiscal stimuli in the USA and the renewed weakening of the US dollar, hence at end-Q3 it was 6.7% higher than at end-Q2 and equalled USD 1,887 per ounce, only to dip slightly in October, to USD 1,882 per ounce.

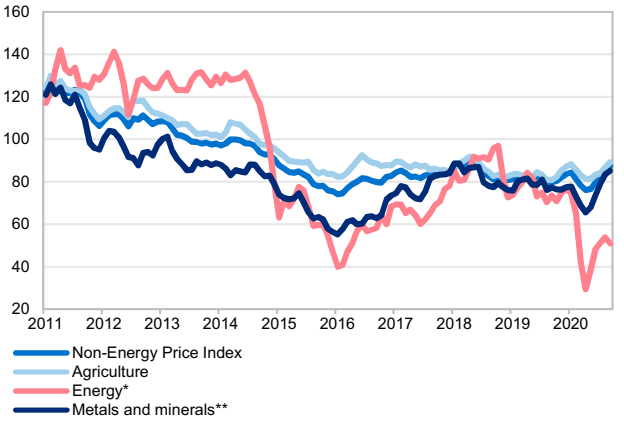
The global price of oil rose during July under the impact of subdued production by OPEC+ countries, diminishing crude oil inventories in the USA and the weakening of the dollar. It stayed on the upward path in August as well, propped additionally by difficulties surrounding oil export from Venezuela, dampened output in Iraq, the recovery of oil demand in China, as well as due to tropical storms that threatened to shut down production in the Gulf of Mexico. After reaching USD 46 per barrel at end-August, the price of oil declined due to concerns over oil demand amid the rising number of coronavirus infections worldwide, growing inventories, lower crude oil import

by China due to large inventories at Chinese refineries, etc. Hence, at mid-September, it dropped to USD 39 per barrel. Thereafter, the price of oil went up again as export harbours had to shut down in the Gulf of Mexico because of the hurricanes, as well as due to announcements by OPEC countries that the previously excessive oil production will be reduced by the end of the year. However, the price growth was of short breath as the health situation in the world deteriorated and oil supply from Libya increased, hence at end-Q3 it was almost the same as at end-Q2 (USD 41 per barrel). The price of oil remained almost the same throughout October, but dipped to USD 36.9 per barrel at the very end of the month.

Amid the gradual rebound in global production, driven mainly by the growth in China, **the prices of metals and minerals** continued up, ending Q3 15.5% higher than at end-Q2. The price of zinc rose 20.6%, the iron ore by 19.8%, and of nickel by 16.7%. The price of the iron ore reached its highest level in six and a half years amid growing steel production in China and the risk of dampened supply from Brazil due to the spread of the coronavirus in Brazilian mines. The price of copper rose 16.5%, backed by the depleted supplies. The prices of aluminium, lead and tin also recorded a rising trend. In addition to the rebound of Chinese industry, another factor driving the price of metals up was the improved sentiment in financial markets and the weakening of the dollar.

Global food prices, measured by the **FAO index**, rose 5.2% during Q3. The largest growth – of 20.7% – was recorded by the prices of vegetable oil, which touched their eight-month high in September. This is mainly attributable to the increase in the price of palm oil, driven by the stepped-up global demand and depleted inventories in Malaysia, while in September the price of sunflower oil also rose significantly due to the poorer production outlook in the Black Sea region. The prices of cereals rose 7.6% in Q3, with the price of wheat being driven by concerns over the harvest perspective in the southern hemisphere and unfavourable sowing conditions in many parts of Europe. The price of corn also posted a rise in response to the dampened production prospects in Europe and the anticipated sharp fall of US inventories. The price of sugar went up 5.4% amid unfavourable weather conditions in the EU and Thailand, the world's second biggest sugar producer, as well as under the impact of strong import demand from China. The prices of dairy also increased – by 3.9%, while meat prices remained on the downward path which they embarked on in January; in Q3 they declined by 3.4%, partly owing to the ban on importing German pork to China in September because of the outbreak of African plague in wild boars, as well as the seasonally high supply of ovine meat from Australia.

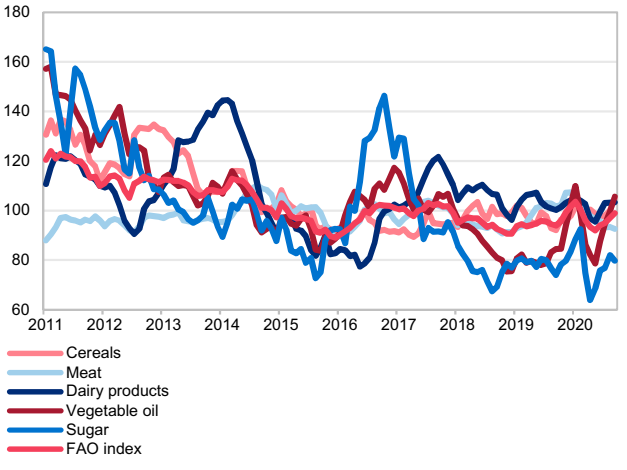
Chart IV.6.20 **Primary Commodity Price Index**
(2010 = 100)



Source: World Bank.

* Crude oil, natural gas and coal.
** Copper, aluminium, iron ore, lead, nickel, zinc and tin.

Chart IV.6.21 **World Food Price Index**
(in real terms, 2014–2016 = 100)



Source: UN FAO.

V Projection

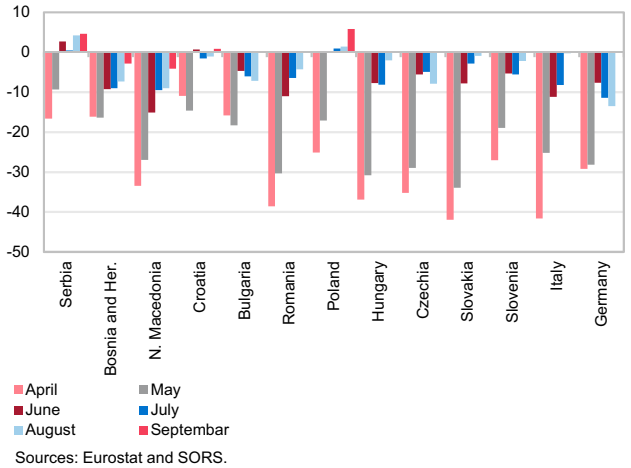
As GDP declined less in Q2 than initially expected, results in industry and trade surprised on the upside in Q3 and main agricultural crops had higher than anticipated yields, we revised our GDP growth projection for this year up from -1.5% to -1%. On the expenditure side, a more favourable outturn is supported by a faster than expected recovery in investment, mostly due to the preservation of full macroeconomic and financial stability during the pandemic, preserved production capacities, accelerated implementation of infrastructure projects and maintained favourable terms of financing. Domestic factors may lead to an even better than projected outcome this year, but it is important to take into account that the worsening of the epidemiological situation worldwide could trigger a new slowdown in the euro area and reflect on the recovery of our exports. Next year, we expect accelerated economic recovery of around 6%, led by domestic demand and exports. A key role in this will be played by the timely and adequate response of Serbian economic policy makers and the anticipated rebound in external demand, which will enable a return to a stable medium-term growth path of around 4% p.a. The risks to the projection for 2021 are symmetric and associated primarily with the course of the pandemic and the related speed of economic recovery globally and at home. The risks relating to euro area growth are tilted to the downside due to a deteriorating epidemiological situation and tighter containment measures, whereas risks associated with domestic factors are skewed to the upside on account of a possibly faster than expected recovery in domestic demand.

Under the central November projection as well, y-o-y inflation is expected to move within the lower half of the target tolerance band, closer to the lower bound until end-2021. Such inflation movements will be supported by relatively weak aggregate demand and subdued international inflation, while the effects of the fall in the global oil price will wane gradually. Thereafter, as the rise in economic activity and demand continues, supported by accommodative monetary and fiscal policy measures, inflation will edge up gradually towards the target midpoint of 3%, but remain below it even in 2022. Uncertainties surrounding the short-term inflation projection refer primarily to movement in fruit and vegetable prices. In the medium term, the key risks continue to stem from the international environment, and relate primarily to the speed of recovery of the euro area, global prices of primary commodities and capital flows to emerging economies. In part, the risks to the projection are also associated with the speed of recovery of domestic demand and movement in administered prices and food prices at home. On the whole, the risks to the inflation projection are judged to be symmetric.

GDP projection

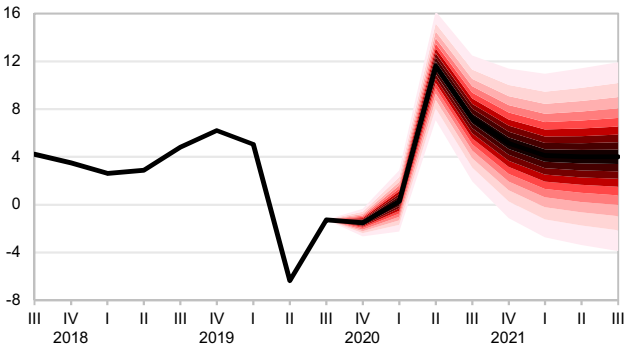
In the past five months, economic recovery in most production and service sectors exceeded our expectations. According to our estimate, economic activity increased by 7.7% s-a in Q3 relative to Q2, while its y-o-y decline slowed to 1.3%. As GDP decreased less in Q2 and recovered faster than anticipated in Q3, supported by the materialisation of upside risks from the domestic environment highlighted in the previous *Report*, **we revised up the projected GDP growth rate for this year from -1.5% to -1%**, despite the uncertainty regarding the future path of the pandemic and the risks stemming from the international environment. Together with a maintained favourable medium-term outlook of our country, the measures taken by the Government and the

Chart V.0.1 **Industrial production by country in 2020**
(y-o-y rates, in %)



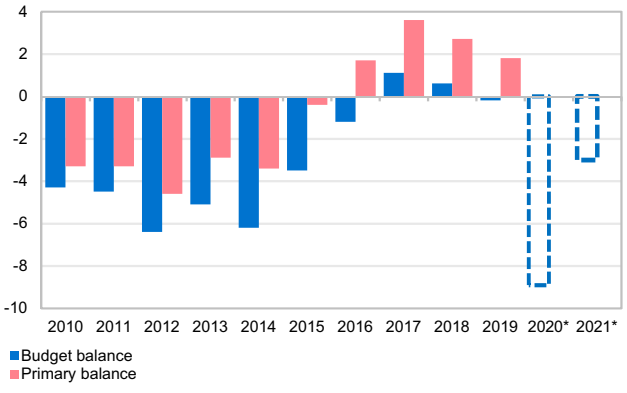
Sources: Eurostat and SORS.

Chart V.0.2 **GDP growth projection**
(y-o-y rates, in %)



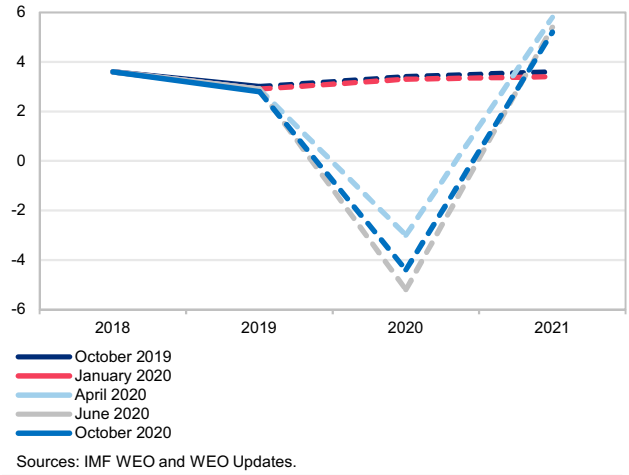
Source: NBS.

Chart V.0.3 **General government fiscal and primary budget balance**
(in % of GDP)



Source: Ministry of Finance.
* Projection.

Chart V.0.4 **IMF's projections of real global economic growth for 2020 and 2021**
(in %)



Sources: IMF WEO and WEO Updates.

NBS will enable a more than complete economic recovery next year, **with a growth rate of around 6%**, and a return to a stable and sustainable growth path of around 4% thereafter.

Economic activity rebound was propped up by the measures taken by the Government and the NBS, including the second package of economic assistance measures adopted in July, worth roughly RSD 66 bn, the extension of the moratorium on loan repayment by further two months and the gradual rallying of external demand as economies opened and containment measures were relaxed.

The economic assistance package adopted by the Government this year, worth around 12.5% of GDP, is one of the most generous in Europe. Along with smaller budget revenues due to the pandemic-induced slowdown in economic activity, the enactment of such large-scale and timely taken assistance package resulted in a **consolidated fiscal deficit** of RSD 360.8 bn in nine months. According to the estimates of the Ministry of Finance, this deficit will measure around 8.9% of GDP at year level. As a result, public debt went up temporarily this year, but it will stay below the Maastricht criterion of 60% of GDP until the end of the year and is expected to resume a downward path from 2021, supported by a significantly lower deficit for the next year planned at around 3% of GDP and much faster projected nominal GDP growth. In our view, such increased fiscal policy accommodation, which does not threaten the sustainability of public finances, is justified, as the economic activity downturn in 2020 would have otherwise been much sharper. Also, if these measures had not been taken, economic recovery would have been much slower in 2021 and in subsequent years due to loss of production capacities and human potential.

In the period since the August *Report*, there has also been an incipient **global recovery**, supported by a gradual opening of economies and accommodative fiscal and monetary policy measures of a large number of countries. Results achieved globally in Q2 exceeded the expectations of international financial institutions in June and July, primarily in advanced economies, while faster recovery is also signalled by leading economic activity indicators in Q3. With this in mind, the IMF revised up its **global growth projection** for 2020 in October by 0.8 pp to -4.4%, while at the same time expecting a somewhat slower recovery of 5.2% in 2021 relative to the June projection (by 0.2 pp), since it assumes that some containment measures will remain in place in 2021 as well, though they will gradually be lifted as vaccine use increases. In the medium run, the IMF projects global

economic growth of around 3.5% annually. According to the IMF, the uncertainty surrounding this projection is unusually large and relates mostly to the future path of the pandemic and the response to it, especially in view of the new worsening of the epidemiological situation worldwide and the tightening of containment measures, including even partial lockdown of some economies. Another source of risk is the extent to which soft demand, lower remittances and weaker tourism will spill over to other sectors. Uncertainty also relates to investor sentiment and its implications for global capital flows. Moreover, it is still difficult to assess the damage caused by the pandemic to the production potential, which will depend on the duration and strength of the pandemic, but also on the effectiveness of the economic policy response. At the same time, the introduction of restrictive public health measures and partial lockdowns in some economies may indicate a slackening of euro area economic activity in Q4. This is suggested by leading economic activity indicators as well, and the possibility of a negative GDP rate outturn is not excluded either.

With the relaxation of containment measures, **euro area** recovery began in May and continued in the months to come. It was supported by the ECB's measures and fiscal assistance packages taken by the majority of member states. Leading economic activity indicators, however, signal that this recovery lost momentum over time and that, by contrast to manufacturing which remained in the expansion phase in October as well, activity in the service sector contracted. As a result, the composite economic activity index was in the contraction phase in October too. An exception was recorded in Germany, which individually speaking is our most important trade partner, where the composite economic activity index remained in the expansion phase in October as well thanks to a major rebound in industrial production. Still, coronavirus containment measures in Germany could slow its economic activity in Q4.

After rather pessimistic forecasts in June and July and better than expected results in the summer months, international financial institutions revised up their forecasts of euro area GDP for this year. Thus the ECB revised up the 2020 GDP growth rate from -8.7% in June to -8.0% in September. In its October WEO, the IMF revised its projection up to -8.3%, which is 1.9 pp higher than in June. At the same time, projections for next year were revised down due to a higher base effect – the ECB expects euro area growth to measure 5% and the IMF – 5.2%. Consistent with the October projection of Consensus Forecasts, in our new projection we assumed a roughly 7.5% slump in the euro area's economic activity this year, led by subdued domestic demand, with

Table V.0.1 **Revision of IMF forecast of real GDP growth for 2020 and 2021**
(in %)

	2020		2021	
	Previous projection	New projection	Previous projection	New projection
World	-5.2	-4.4	5.4	5.2
Euro area	-10.2	-8.3	6.0	5.2
Germany	-7.8	-6.0	5.4	4.2
Italy	-12.8	-10.6	6.3	5.2
USA	-8.0	-4.3	4.5	3.1
Russia	-6.6	-4.1	4.1	2.8
China	1.0	1.9	8.2	8.2

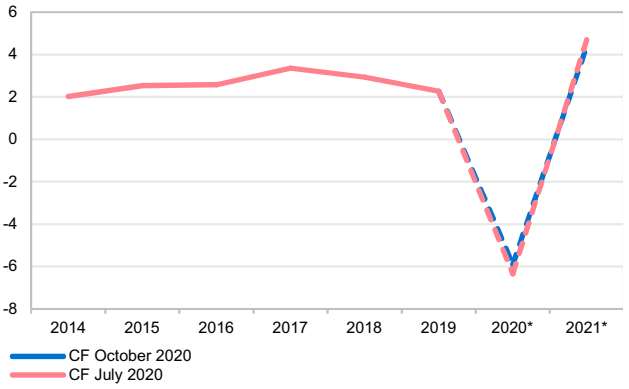
Sources: IMF WEO Update (June 2020) and IMF WEO (October 2020).

Table V.0.2 **Economic growth estimate by country**
(real growth, in %)

	July 2020		October 2020	
	2020	2021	2020	2021
Poland	-4.2	4.3	-3.6	4.2
Czech Republic	-7.4	5.2	-6.5	4.6
Hungary	-5.0	4.2	-5.9	4.8
Romania	-5.7	4.9	-4.9	4.4
Slovakia	-7.9	6.3	-7.2	6.0
Slovenia	-7.8	4.7	-7.3	4.8
Croatia	-8.1	4.7	-8.8	5.1
Bulgaria	-5.7	4.5	-5.1	3.9
Albania	-6.7	5.2	-6.9	5.5
Bosnia and Herzegovina	-5.9	4.2	-5.6	3.9
Macedonia	-5.0	4.7	-5.1	4.7

Source: Consensus Forcasts.

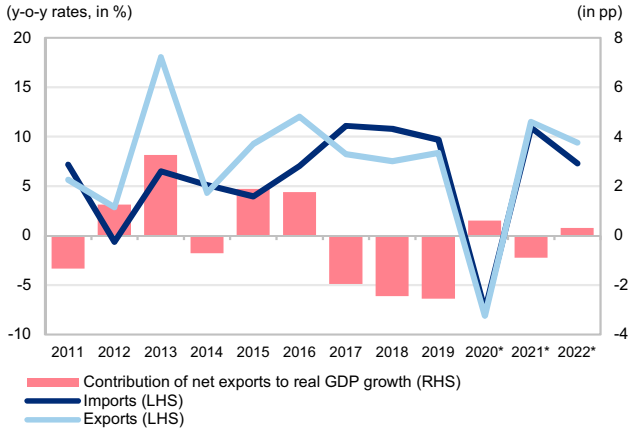
Chart V.0.5 **External demand indicator**
(in %)



Source: Consesus Forecasts.
* Weighted GDP average of 20 countries to which Serbia exports most.

investment affected in particular. Recovery will ensue next year (5.3% growth), helped by the ECB's measures and large-scale fiscal programmes taken in a number of member states. At a conference in October, however, the ECB assessed that the risks to the GDP projection were tilted to the downside, as the epidemiological situation was worsening and many countries were introducing tighter measures to contain the virus. With this in mind, the ECB announced a new set of measures in December to minimize the negative impact from the new coronavirus wave, noting that it will invest intensive efforts over the coming month to recalibrate its instruments.

Chart V.0.6 **Real export and import growth**

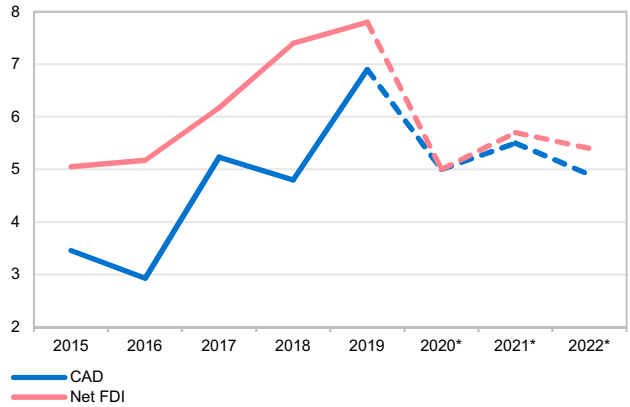


Sources: SORS and NBS.
* NBS estimate.

Relative to the previous report, Consensus Forecasts revised GDP projections for the majority of **Serbia's other important trade partners** (with the exception of Hungary and Croatia) up for this year and down for the next year, assessing that most countries will not reach their pre-crisis level in 2021. Going forward, the speed of recovery of the Central and South East European region will depend primarily on the effectiveness of measures taken to limit the spread of the coronavirus, and the available space for fiscal and monetary stimuli.

Though **Serbia's exports** slumped heavily in **March and April** amid a slack in external demand and halts in supply chains, they began to rally in May, and manufacturing exports have neared their pre-crisis level. In our estimate, the annual fall in goods and services exports will measure around 8% in real terms. Subdued domestic consumption and deferred investments during the pandemic amid weaker economic activity worldwide and global risk aversion will lead to a real **contraction in imports by around** 7.5%. This should result in a **positive contribution of net exports to GDP this year (of around 0.6 pp)**. The contribution of net exports is estimated to be negative in 2021 (around -1 pp) due to the anticipated rise in imports of equipment and intermediate goods for industrial purposes with the continuation of the investment cycle, while in subsequent years, as export capacities go up and external demand rallies, we expect the contribution of net exports to turn positive.

Chart V.0.7 **Current account deficit and net FDI inflow**
(in % of GDP)



Source: NBS.
* NBS projection.

A higher real drop in imports than in exports this year will improve the country's foreign trade position. **The share of the current account deficit in GDP will contract to around 5% this year** as a result of favourable terms of trade, including primarily the fall in the global oil price to around USD 41 per barrel on average this year, lifting of the 100% tax on products delivered to Kosovo and Metohija, and lower expenses on account of primary income amid diminished corporate profitability due to the

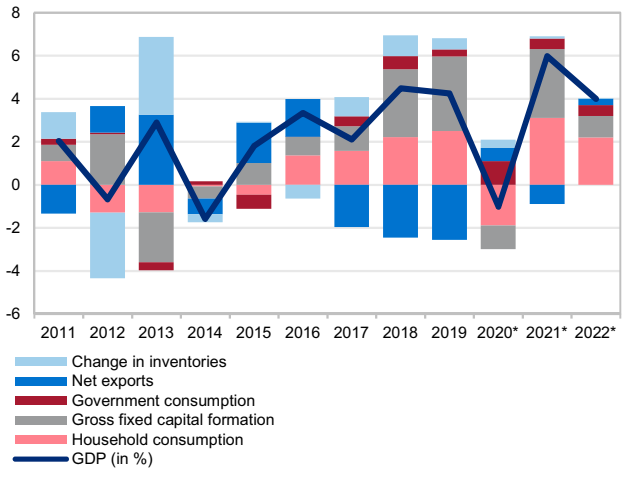
pandemic. Next year, we expect the share of the current account deficit in GDP to rise marginally (to around 5.5% of GDP) due to a complete recovery in domestic demand, while in the medium run, it is expected to subside slightly as export capacities go up and the global economy rallies, while remaining fully covered by net FDI inflow as in the past six years.

After this year's decline, **domestic demand** is expected to see accelerated recovery next year, buttressed primarily by the continuation of the investment cycle and the rise in disposable income of corporates and households.

The introduction of containment measures triggered a fall in **household consumption** in Q2, but it was smaller than initially estimated. In Q3, as containment measures were relaxed, consumption recovered, buttressed by preserved wages and employment in the majority of sectors and higher disposable income of households on account of the moratorium on loan repayment and favourable terms of taking new and repaying old loans. As for some time to come households are likely to refrain from buying durable consumer goods and using services (such as travel and transport services), especially given the deteriorating epidemiological situation from October, private consumption is expected to provide a negative contribution of 1.9 pp to GDP this year. However, thanks to the preservation of employment and wages in the largest part of the economy and the implemented monetary and fiscal stimuli, it is expected to recover fully next year (contributing around 3 pp to GDP growth). By contrast to private consumption, **government spending** provided a positive contribution to GDP this year (close to 1 pp), due, among other things, to higher outlays for procurement of medical supplies, while given the planned fiscal deficit, this growth will continue next year as well, but at a much slower pace.

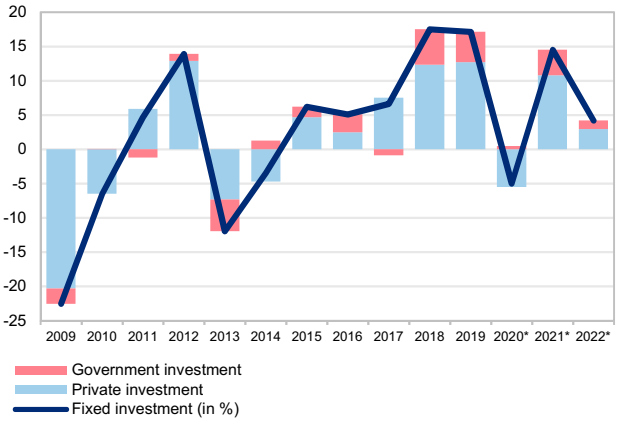
The upward revision of the GDP projection for this year by 0.5 pp resulted primarily from a smaller than expected fall in investment, supported primarily by the implementation of infrastructure projects, which was not discontinued even in Q2, and by the maintained favourable terms of financing. By contrast to initial estimates made after the pandemic broke out, capital government expenditure was higher in the nine months of the year than in the same period last year, and is estimated to reach around 5% of GDP this year and climb to around 6% of GDP in the medium run, which supports growth in the production potential. In our current projection, we estimate that **fixed investment** will decrease this year, amid global risk aversion, declining corporate sector profitability and the expected lower FDI inflows, but that this decline will be

Chart V.0.8 **Contributions to real GDP growth**
(in pp)



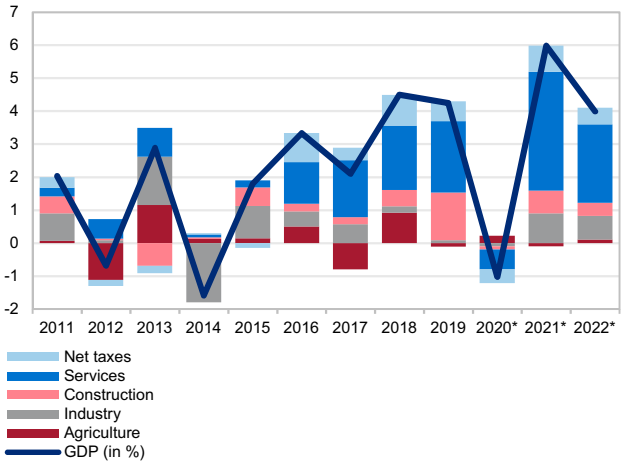
Sources: SORS and NBS.
* NBS estimate.

Chart V.0.9 **Fixed investment**
(y-o-y growth, in pp)



Sources: SORS and NBS calculation.
* NBS estimate.

Chart V.0.10 **Contributions to real GDP growth, production side**
(in pp)



Sources: SORS and NBS.
* NBS estimate.

single-digit (providing a roughly 1 pp negative contribution to GDP). A favourable macroeconomic outlook of the country, maintained favourable financial conditions and the planned investment projects of the government will, in our estimate, drive investment up, as a result of which its contribution to GDP growth in 2021 will reach around 3 pp.

On the **production side**, a higher GDP projection for this year relative to August resulted from faster than expected recovery in industry and some service sectors and a better agricultural season. Though in our previous projection we expected industry to provide a negative contribution to GDP due to a sharp slump in external demand, in our new projection this contribution will most likely be neutral or only slightly negative this year. On the other hand, as the epidemiological situation has worsened, the service sector is expected to provide a somewhat more negative contribution than in our previous projection. Construction is also expected to give a mildly negative contribution. Next year, we expect growth and a more than complete recovery of activity in both service and production sectors. Manufacturing industry growth will be propped up by the activation of new and expansion of existing capacities on the supply side, and by the gradual acceleration of economic growth of our main foreign trade partners on the demand side. Stepped-up growth in activity is expected in service sectors as well, on account of continued positive trends in the labour market thanks to the undertaken economic policy measures and the expected rise in domestic demand. A positive contribution to GDP growth should also come from construction, given the planned further increase in government capital expenditure, most notably the current and planned projects in the area of transport infrastructure, and favourable trends in the real estate market. According to the "Serbia 2025" programme, over EUR 5 bn is planned to be invested in road infrastructure in the next five years.

The **risks to the GDP projection** for next year continue to stem mostly from uncertainty regarding the **course and duration of the pandemic globally**, and the containment and economic policy measures taken in response. As international financial institutions point out, the uncertainty surrounding the projection of **global economic recovery** is unusually large. Consistent with the IMF's assumption presented in the October WEO, in our baseline scenario we assumed a weakening of coronavirus transmission during 2021 amid increased use of the vaccine and progress of treatment options. According to the IMF, progress with vaccines and reduced transmission may allow economic activity to return more rapidly to the pre-pandemic levels than

currently projected. If the virus resurges and containment measures are renewed, global recovery will slow down. The pace of global recovery will also hinge on the implementation of new accommodative fiscal policy measures and their scope, as the room for countercyclical effect of fiscal policy has been narrowed in many countries. Particularly relevant for Serbia is the **epidemiological situation in the euro area and countries of Central and South East Europe**, with which we increasingly foster strong economic ties. According to the ECB, **downside risks to the euro area GDP projection are more pronounced** and a fresh monetary and fiscal policy response will be needed to contain the negative effects of the new wave of the pandemic. Any sharper fall in economic activity in the euro area and the countries with which we have important trade ties would reflect on lower growth in Serbia's exports and weaker FDI, and, by extension, subdued output in manufacturing.

Slower than expected global growth would **add to the uncertainty in the international financial market** and reflect negatively on business confidence and investment decisions, which would probably dent the inflow of capital into emerging economies, including Serbia. The **monetary policies of leading central banks** have been eased in the face of the pandemic, which led to a lowering of risk aversion and enhanced investor sentiment towards emerging economies. At the same time, central banks expressed their readiness to take further measures if needed to moderate any tightening of financial conditions. Members of the ECB's Executive Board are unanimous in the assessment that it is necessary to apply a concrete set of new monetary stimuli already in the December meeting. In addition, the announced shift in the Fed's monetary strategy towards targeting an average inflation of 2% signals that the Fed could keep its key rate at a low level for longer than previously expected. In that case, liquidity in the international financial market would remain high for a longer time period, which would reflect positively on capital flows to emerging economies, including Serbia.

The risks to the GDP projection are also associated with **movements in prices of primary commodities**, most notably oil, which in turn greatly depend on the speed of global economic recovery and geopolitical tensions in the world. Oil prices have been quite volatile in the past months, due to both supply- and demand-side factors, while prices of primary agricultural commodities and metals increased and reached their pre-crisis levels. Consistent with futures, we estimate that oil prices should be relatively stable going forward, and our expectations

are similar for prices of other primary commodities. As Serbia is a net importer of oil, any further decline in the oil price would spill over to higher disposable income and lower operating expenses, while its growth would have the opposite effect. When it comes to prices of base metals (iron and copper in particular) and grains, Serbia, as a net exporter, would not benefit from their fall.

Movements at home will also depend on the course of the pandemic. In our baseline scenario, we assumed that the economy will not be locked down and that restrictive containment measures from April will not be reinstated. We also assumed a weakening of the impact of the pandemic during 2021. If the epidemiological situation deteriorates, **refrainment from consumption** could continue for some time, which would defer its recovery in the anticipated scope next year. On the other hand, the preserved production capacities and wages and employment in the largest part of the economy, as well as higher disposable income thanks to the measures taken by the Government and the NBS, could result in a faster than expected recovery, particularly if a vaccine becomes available sooner. Going forward, the **continuation of structural reforms and the planned further systemic improvements of the business environment** ought to contribute to faster growth in total factor productivity and, by extension, in the production potential. The **overperformance of capital government expenditure relative to the plan** in the past two years indicates that government investment could also rise faster than anticipated in the period ahead, spurring **quicker than expected growth in construction**. As investments are mostly directed into tradable sectors, their stronger activation should also lead to **faster export growth on the expenditure side**, **and a rise in manufacturing on the production side.** To a smaller extent, the risk to the GDP projection is also associated with movements in **agricultural production** which we assumed to be average in 2021 and to provide a negative contribution to GDP given this year's excellent season. Shifts are possible in either direction here, as a better agricultural season would lead to stronger exports of primary and processed food products, especially since global food demand is not elastic and has not shrunk even during the lockdown of economies.

Table V.0.3. **Key risks to the GDP projection**

Risk	Possible channels of influence on GDP in Serbia	Estimate of the risk effect relative to the baseline scenario
International environment		
Uncertainty regarding the course of the pandemic and the effect on global economic growth	Slower global recovery would lead to a slackening of external demand, lower Serbian exports and slower growth in manufacturing, and vice versa.	↕
Pace of euro area's recovery from the pandemic	Slower euro area growth would lead to lower Serbian exports and reduced investment which, on the production side, would lead to slower growth in manufacturing. On the other hand, if a vaccine is obtained sooner than expected or the euro area recovers faster, exports and investment in Serbia should go up.	↓
Capital flows, relations of main currencies in the international financial market, monetary policies of leading central banks	Heightened/diminished uncertainty in the international financial market and the rise/fall in risk aversion on account of slower/faster global recovery would decrease/increase the inflow of investment and raise/lower the costs of borrowing. Accommodative monetary and fiscal policy measures of leading economies help diminish risk aversion and enhance investor sentiment.	↕
Prices of primary commodities: – crude oil (Serbia is net importer) – grains (Serbia is net exporter) – base metals (Serbia is net exporter)	A rise/fall in the price of oil would increase/decrease the disposable income and increase/decrease operating costs. A rise/fall in prices of base metals and grains would increase/decrease exports.	↕
Domestic environment		
Uncertainty regarding the course of the pandemic and the availability of the vaccine	Worsening of the epidemiological situation could lead to extended refrainment from consumption and postpone its recovery. Conversely, preserved production capacities and wages and employment in the largest part of the economy, and the rise in disposable income thanks to the measures taken by the Government and the NBS could result in even faster than expected recovery, especially if a vaccine is available sooner than expected.	↕
Macroeconomic position of the country, structural reforms and execution of capital investment	Continuation of structural reforms and planned further systemic improvements of the business environment contribute to faster growth in investment and exports on the expenditure side, and of manufacturing and construction on the production side. The overperformance of capital government expenditure relative to the plan in the past two years indicates that government investment could also rise faster than anticipated in the period ahead, spurring quicker than expected growth in construction.	↑
Agricultural season	Higher/lower than expected growth in agricultural production contributes to a rise/fall in exports and manufacturing.	↕

Note: ↑ means a more favourable GDP outcome relative to the baseline scenario, ↓ means a less favourable outcome, and ↕ means that risks to the projection are symmetric relative to the baseline scenario.

Text box 5: NBS's projection of domestic GDP growth, its revision during the year and comparison with projections of international financial institutions

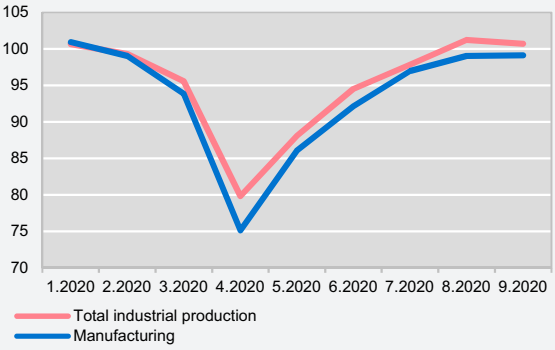
At times of major economic shocks, such as the one triggered by the coronavirus pandemic, it is difficult to make macroeconomic projections. Uncertainty regarding the length of the shock and the intensity of its impact on global economic developments makes risks to such projections particularly pronounced.

Due to the coronavirus pandemic, the 2020 projections of global economic growth and the economic growth of nearly all countries in the world saw a major downward departure relative to expectations from late 2019 or early 2020. The downward revisions were sharper than at the time of the global economic crisis of 2008/2009. Thus, in its January WEO, the IMF expected growth to measure 3.3% in 2020 and pick up slightly to 3.4% in 2021, whereas global economic activity is now (October WEO) expected to drop by 4.4% this year and is not anticipated to recover fully in 2021 either. However, as the negative effects of the pandemic in Q2 were smaller than estimated and followed by faster than expected recovery in Q3, the current forecast of the 2020 economic downturn is less pessimistic than in June. The October WEO forecast of global economic growth in 2021 was revised down slightly to 5.2%, due to the higher base effect.

When it comes to the projection of Serbia's economic growth, in late 2019 and early this year (February Inflation Report) the NBS expected a real growth rate of 4% in both 2020 and 2021. Thanks to a substantial rise in investment, Serbia began this year with a GDP growth rate of 5.1% y-o-y in Q1, which would have been even higher and most probably reached as much as 6%, had the pandemic not broken out. At year level, it would have almost certainly exceeded the projected 4%. The effects of the pandemic on the domestic economy were felt from the latter half of March onwards and played out with particular force in April when social distancing measures were put in place in order to protect public health. Given the global uncertainty caused by the pandemic, we revised down our economic growth projection for 2020 in the May *Inflation Report* to -1.5%, estimating that economic activity could subside by 8% y-o-y in Q2 and that this decline would have been much sharper if the large-scale package of economic assistance measures had not been adopted. The downward revision was based on the fact that euro area, our most important trade partner, was affected particularly hard, which would reflect on our exports through a fall in external demand. Moreover, the negative impact on economic trends at home resulted from a suspension in global production chains and the introduction of restrictive containment measures. In May, following gradual relaxation of these measures and the opening of economies worldwide, recovery ensued and was faster than expected in the majority of production and service sectors. Though we took into account that the fall in economic activity in Q2 was smaller than estimated in May, measuring 6.4% y-o-y, that additional economic measures were taken in the meantime and that the outlook for the agricultural season improved, in August we retained our projection from May as relevant international institutions expected slower global recovery due to renewed spread of the virus. At that time, we estimated that the risks from the international environment were tilted to the downside, and risks from the domestic environment – to the upside, and it is now almost certain that these risks have in fact materialised.

Faster than expected recovery in industry in both July and August, preserved employment in the formal segment of the labour market and continued wage growth, as well as better than expected data on yields of autumn crops, indicate that in H2 as well GDP will be higher than we estimated in the August *Inflation Report*. This is why we have now revised our GDP growth rate for this year from -1.5% to -1.0%, despite uncertainties regarding the future course of the pandemic and the risks stemming from the international environment. This means that, after falling by 0.8% y-o-y in H1, GDP would decline by around 1.2% y-o-y in real terms in H2, due in part to a higher base from the same period last year, primarily in construction. It is important to note that this will be one of the best results in Europe, made possible by the responsible conduct of economic policy and the achieved and maintained macroeconomic stability in prior

Chart O.5.1 **Industrial production**
(Jan-Feb 2020 = 100, s-a)

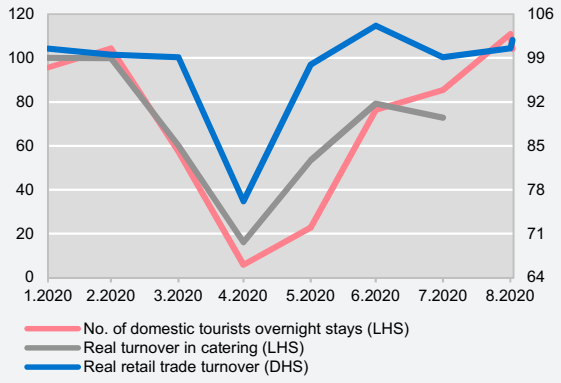


Sources: SORS and NBS calculation.

years, which boosted domestic economy's resilience to risks. This also enabled a powerful countercyclical effect of monetary and fiscal policies through a robust and timely taken economic assistance package, without threatening price stability and the sustainability of public finances. Serbia's GDP decreased less than that of some other countries of the region, which was also due to the smaller share in GDP of sectors powerfully hit by the pandemic, such as tourism, catering and transport.

Such projection is supported by movements in key economic indicators available for Q3. Industrial production has been rallying continuously since May, propped up mainly by a rise in manufacturing, and has reached its pre-crisis level. Retail trade reached its pre-crisis level already in June, rising by 5.6% y-o-y in Q3. This was the result of the lifting of containment measures in early May and the rise in domestic demand spurred by fiscal and monetary stimuli. The number of arrivals and overnight stays of domestic tourists also rallied, growing by 11.3% and 13% y-o-y, respectively, in Q3, which partly offset fewer arrivals of foreign tourists. Catering turnover picked up from May onwards, but its recovery slackened in July with a new surge in the number of coronavirus cases; y-o-y, it decreased by 22.1%. Among indicators of construction activity, implementation of infrastructure projects stands out in particular, as signalled by the performance of fiscal capital expenditures which gained 12.8% y-o-y in real terms in nine months.

Chart O.5.2 **Indicators of service sectors**
(Jan-Feb 2020 = 100, s-a)

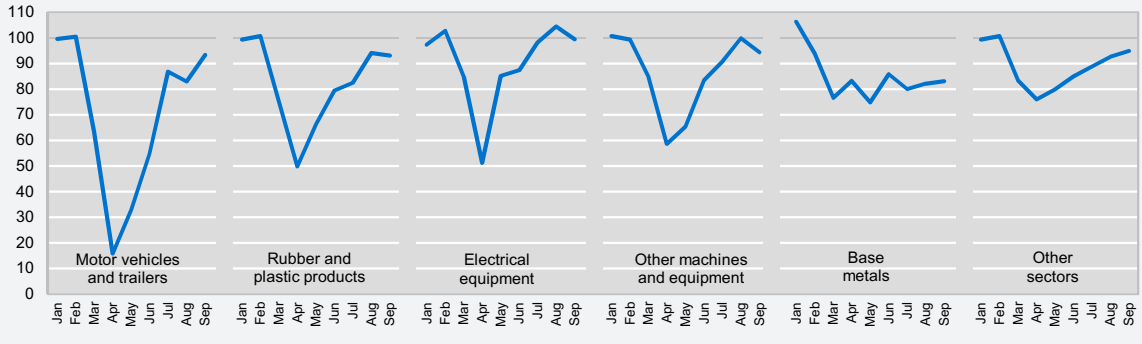


Sources: SORS and NBS calculation.

Manufacturing exports have neared their pre-crisis level. In y-o-y terms, after falling by close to 31% in April and 28% in May, they saw a much softer decline in the subsequent months (around 5% y-o-y in July and August), while rising by 2.2% y-o-y in September. Observed by sector and in y-o-y terms, the recovery was not evenly distributed – exports of base metals and metal products were the slowest to recover, while some branches of manufacturing, such as food, beverages and tobacco and the pharmaceutical industry, were almost unaffected by lower external demand.

The projections of Serbia's economic growth were also revised during the year by other international financial institutions (IMF, European Commission, World Bank, EBRD, Consensus Forecasts, etc.). Late last and early this year, the majority of these institutions expected growth of around 4% in 2020, but their projections were revised down once the pandemic broke out. In the projections published in April and May, the above institutions expected the annual economic activity downturn to range between 2% (Consensus Forecasts) and 4.1% (European Commission). Such expectations were not only based on the fact that Serbia was hit by the pandemic, but still more on the fact that the euro area, our most important trade and financial partner, was powerfully affected as well.

Chart O.5.3 **Manufacturing exports in 2020**
(Jan-Feb 2020 = 100, s-a)



Sources: SORS and NBS calculation.

With time, it became clear that the resilience of Serbia's exports to disruptions in individual segments of external demand has increased thanks to supply-side factors (earlier investments in export-oriented sectors and greater geographical and product diversification of exports), that FDI inflows, though lower than in the previous, record year, remained solid and continued even during the pandemic, and that both the domestic economy and the euro area recovered faster than expected in the summer months. As a result, a number of institutions revised up their projections of Serbia's economic growth for 2020. In its October WEO, the IMF thus revised Serbia's 2020 GDP growth rate to -2.5%, and then further to -1.5% following the fifth review of the policy coordination arrangement. The European Commission also revised up its growth rate for Serbia to -1.8% in its autumn projections, basing this decision on smaller than estimated effects of the pandemic on Serbia. Consensus Forecasts revised up its projections for this year from month to month. According to the October projection, they expect GDP growth of -2.3% this year, which is a 1.1 pp upward revision from July. By contrast, the World Bank even lowered its forecast from -2.5% in April to -3% in October, while the EBRD kept is April projection unchanged at -3.5% in late September. Given the performances in H1 and available indicators for Q3, we assess that World Bank and EBRD projections are unlikely to materialise.

Table O.5.1 **Serbia's GDP projection**

	Projection for 2020					Projection for 2021				
	X-XI 2019	I-II 2020	IV-V 2020	VII-VIII 2020	X-XI 2020	X-XI 2019	I-II 2020	IV-V 2020	VII-VIII 2020	X-XI 2020
NBS	4.0	4.0	-1.5	-1.5	-1.0	4.0	4.0	6.0	6.0	6.0
IMF	4.0	4.0	-3.0	-3.0	-1.5	4.0	4.0	7.5	6.0	5.5
Consensus Forecasts	3.3	3.7	-2.0	-3.4	-2.3	-	3.5	4.2	5.5	5.3
European Commission	3.8	-	-4.1	-	-1.8	3.7	-	6.1	-	4.8
World Bank	3.9	-	-2.5	-	-3.0	4.0	-	4.0	-	2.9
EBRD	3.5	-	-3.5	-	-3.5	-	-	6.0	-	3.0

Sources: NBS (Inflation Reports), IMF (WEO and programme review press releases), Consensus Forecasts (monthly reports for Eastern Europe), European Commission (spring and autumn forecasts), World Bank (regional economic reports, spring and autumn editions), EBRD (regional economic prospects, spring and autumn editions).

The projections for 2021 also differ greatly from institution to institution. Thus, the NBS, IMF, Consensus Forecasts and the European Commission expect economic growth to range between 5 and 6%, i.e. to reach its pre-crisis level in late 2020 or early 2021, and even exceed it in 2021. By contrast, the World Bank and EBRD do not expect that the pre-crisis economic activity level will be reached in 2021 either.

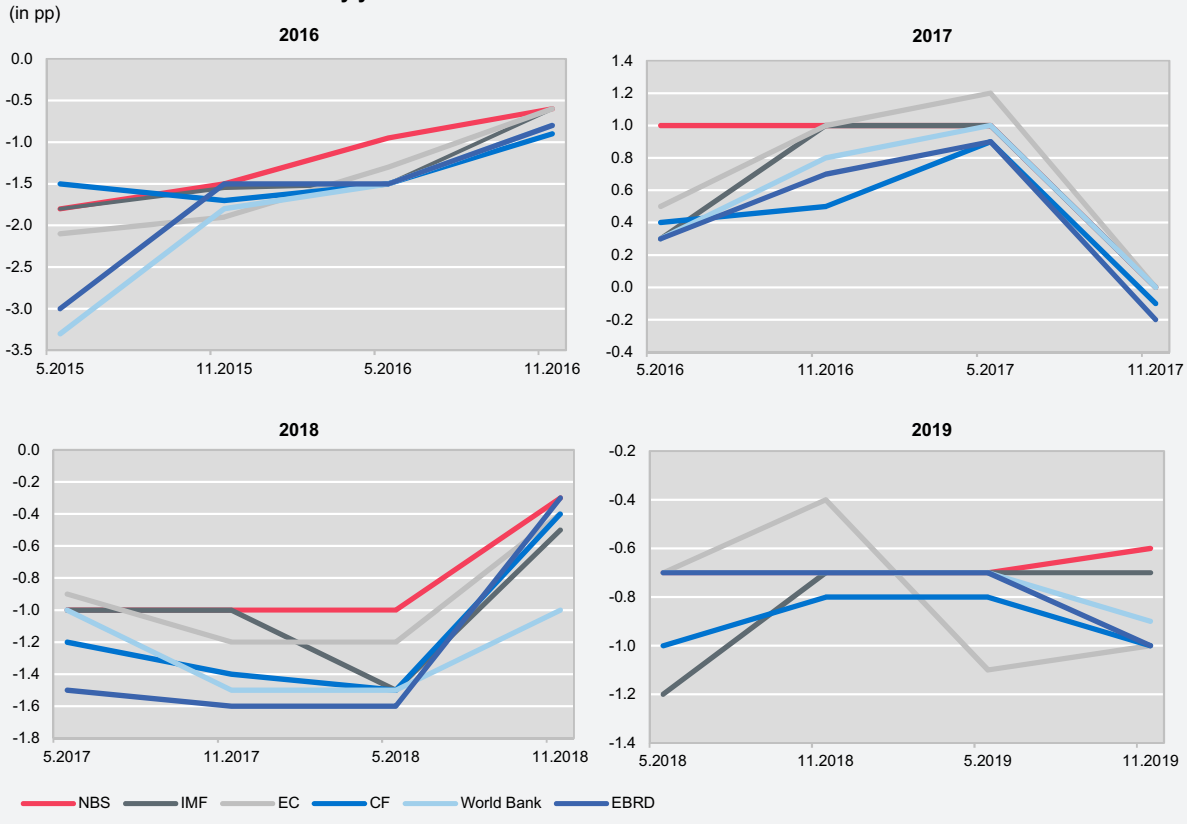
Given the differences in economic activity forecasts of different institutions, we have calculated the mean absolute forecast error for prior years. The mean absolute forecast error (*MFE*) by year is calculated as the average of absolute values of the difference in the projected GDP value for a given year (f_t) and the outturn (a_t) and it is expressed in percentage points:

$$MFE = \frac{\sum_{t=1}^{n} |a_t - f_t|}{n}$$

Since the European Commission, EBRD and the World Bank issue forecasts for Serbia twice a year (the so-called spring and autumn projections), comparisons of projections from May and November of the previous and the current year were made for each year between 2016 and 2019. According to the MFE, the NBS had the lowest forecast error in 2016, 2018 and 2019, with growth even exceeding our projections in those years. In 2017, the World Bank and Consensus Forecasts projections departed the least. GDP growth in 2017 was lower than expected by the NBS due to the negative effect of supply-side factors resulting from cold weather early in the year, when the energy sector was hit particularly hard, as was agriculture. Situation in agriculture was further compounded by a drought during the summer, and this is something that neither the NBS nor other institutions could foresee. This slowdown in activity was partly offset by higher industrial production in H2. By contrast, GDP growth in the preceding two years exceeded our expectations, measuring over 4%, with the NBS's projections closest to the actual outturn.

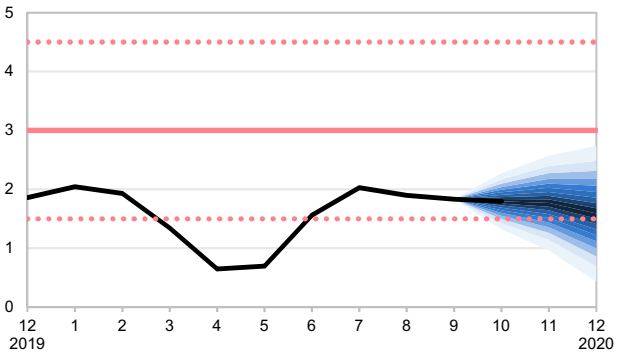
As Serbia's favourable macroeconomic outlook has been preserved and a sharper slump in investment and consumer confidence prevented thanks to timely taken economic measures, we expect Serbia's dynamic growth to continue in the medium run, after a temporary discontinuation this year due to the coronavirus pandemic. Though the future course of the pandemic is difficult to predict, especially as the number of infected persons worldwide is rising rapidly and some European countries are again resorting to partial restrictive measures, our central projection for next year expects a weakening of coronavirus transmission amid increased use of the vaccine, which is in line with the IMF's assumptions used in their latest global economic growth projection. In such circumstances, our projection is that economic growth should reach around 6% next year and return to the medium-term growth path of around 4% p.a. thereafter.

Chart O.5.4 **GDP forecast errors by year**
(in pp)



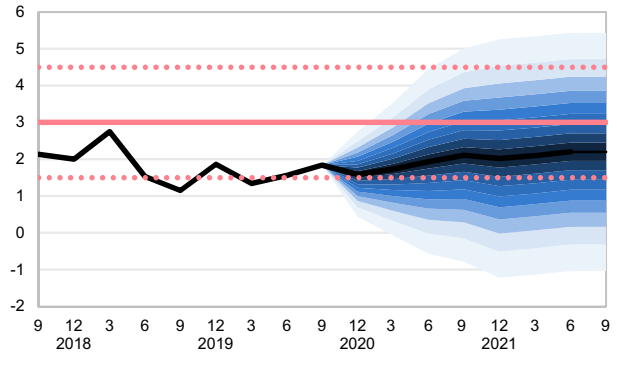
Sources: Websites of international institutions and NBS calculation.

Chart V.0.11 **Short-term inflation projection**
(y-o-y rates, in %)



Source: NBS.

Chart V.0.12 **Inflation projection**
(y-o-y rates, in %)



Source: NBS.

The fan chart depicts the probability of various inflation outcomes in the next eight quarters. The central projection is within the darkest central band and the probability that inflation would lie in it is 10%. Each following shade includes 10% probability, which means that outturns of inflation somewhere within the entire fan chart are expected with probability of 90%. In other words, the probability that inflation in the next eight quarters would lie somewhere outside the band in the chart is 10%.

Inflation projection

In making our inflation projection we took into account that inflation movements in the period ahead will mostly continue to depend on the success in controlling the pandemic globally, as well as on the pandemic's negative effects which are inflationary on the supply side and disinflationary on the demand side. Thanks to the taken and announced large-scale monetary and fiscal stimuli, the negative effects of the pandemic on supply have been greatly mitigated but remain present on the demand side, which is why no major inflationary pressures are expected in the coming period either.

Our medium-term inflation projection is based on the assumption that the pandemic will be controlled by strict application of containment measures in Serbia and most other countries, which will prevent fresh lockdown and allow the initiated economic rebound to continue. It is also based on the positive effects of robust monetary and fiscal measures which alleviate the effects of the pandemic and spur recovery in economic activity. Going forward, we expect sustainable economic growth at home which will not create any major inflationary pressures.

Medium-term inflation projection

Under the central November projection, y-o-y inflation will move within the lower half of the target tolerance band, closer to the lower bound, and gradually approach the target midpoint of 3% towards the end of the projection horizon, propped up by the expected further recovery in demand. Such inflation movements will be supported by relatively weak aggregate demand and inflation in the international environment, while the effects of the fall in the global oil price will wane gradually. As economic activity and demand strengthen further, buttressed by accommodative monetary and fiscal policy measures, inflation will gradually move towards, but remain below, the target midpoint of 3% during 2022.

In terms of individual inflation components, the inflation profile will continue to be determined mainly by prices of **fruit and vegetables** and petroleum products. When it comes to prices of fruit and vegetables, the weather conditions, like in other European countries, were not favourable for fruit and vegetables, while the pandemic in all likelihood pushed up the demand for these foodstuffs. Though they declined in Q3, prices of fruit and vegetables are somewhat above their neutral level. Given the substantial base effect for this category of food, we expect it to provide a positive contribution to inflation until mid-2021, whereafter this contribution should turn negative.

When it comes to **petroleum product prices**, consistent with futures, in our new projection we assumed a lower level of the global oil price than in our previous projection. As the global oil price is lower than last year, but has been revised up after the initial stage of the pandemic, we expect the negative contribution of petroleum product prices to subside gradually in the coming quarters and turn positive in Q2 2021.

Though prices of primary agricultural commodities have increased since this summer, we expect moderate growth in prices of food (excluding fruit and vegetables), as this year's agricultural season in Serbia was better than average and since, based on the futures, prices of primary agricultural commodities in the global market are expected to decline in 2021 and rise only moderately in 2022. Prices of domestic primary agricultural commodities which are currently above their neutral level have so far not generated any major pressures in the direction of price growth. Prices of some food categories did occasionally record substantial growth due to sudden changes in the global market, as was the case with the hike in pork meat prices late last year triggered by a leap in Chinese demand and higher EU prices. On the other hand, in the May-September 2020 period, the usual increase in pork meat prices did not happen, also due to sudden changes in the global market, this time because of the pandemic and lower demand, as well as the closure of slaughterhouses and excess supply in the EU. Sudden changes may also be expected going forward due to the pandemic, but also due to cases of African swine fever in Germany and the ban on German pork meat imports introduced by China and some other countries. In the medium run, we expect to see moderate growth in food prices, guided mainly by a gradual rise in aggregate demand.

Weaker aggregate demand and relatively low import costs and subdued inflation abroad will contain the rise **in prices of non-food products and services**. As demand gradually rallies, these prices are expected to see moderate, though still relatively low, growth. We assumed that growth in **administered prices** will remain stable as so far, at around 4% per annum, until the end of the projection horizon.

In terms of inflation factors, like our May and August projections, the November projection is predominantly determined by the fact that **global supply and demand** are powerfully affected by the current pandemic. Though the negative effect of the pandemic on the global economy is now expected to be somewhat softer than three months ago, the global economy will face a harsher recession this year than at the time of the 2009 global financial crisis, which will restrain major inflation growth

Table V.0.4 **Key projection assumptions**

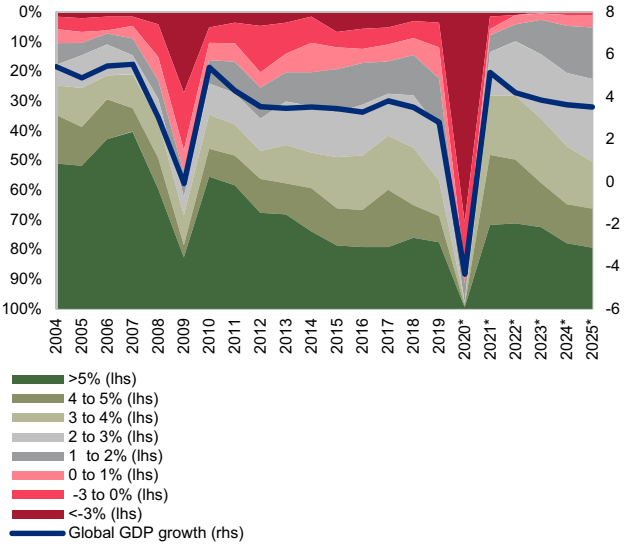
	2020		2021		2022	
External assumptions	Aug	Nov	Aug	Nov	Aug	Nov
Euro area GDP growth	-8.1%	-7.5%	5.9%	5.3%	3.3%	3.0%
Euro area inflation (average)	0.3%	0.3%	0.8%	1.0%	1.3%	1.3%
EURIBOR 3M (December)	-0.5%	-0.5%	-0.5%	-0.6%	-0.5%	-0.6%
International prices of primary agricult. commodities (Q4 to Q4)*	6.9%	18.4%	2.0%	-4.6%	3.0%	3.0%
Brent oil price per barrel (December, USD)	44	41	47	44	49	45
Internal assumptions						
Administered prices (Dec. to Dec.)	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%

* Composite index of soybean, wheat and corn prices.

Sources: NBS, ECB, Consensus Forecasts, Euronext, CBOT and Bloomberg.

Chart V.0.13 **Comparison of the COVID-19-induced crisis and the global financial crisis**

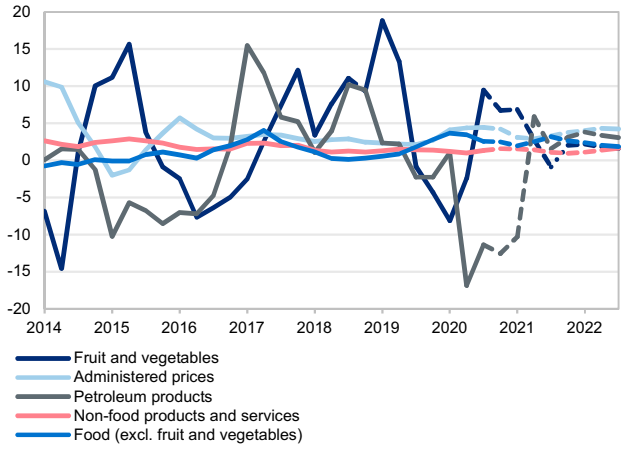
(distribution of countries by GDP growth rate - left-hand scale; global growth rates in % - right-hand scale)



Source: IMF WEO, October 2020.

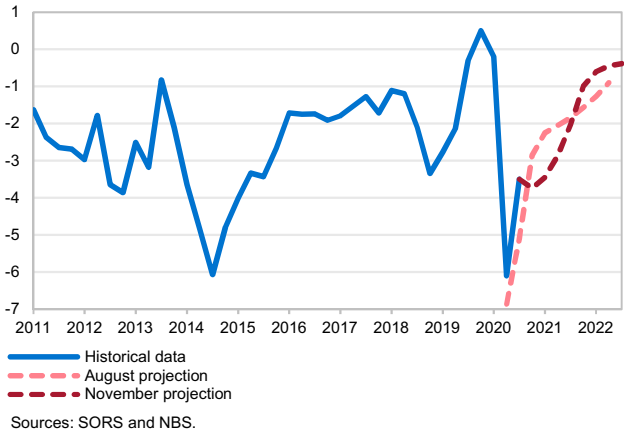
* Projection.

Chart V.0.14 **Projection of inflation components**
(average y-o-y rate, in %)



Source: NBS.

Chart V.0.15 **Output gap projection**
(in % of potential output)



Sources: SORS and NBS.

* Output gap is estimated on the basis of NAVA.

globally. The pandemic continues to affect the functioning of the global economy and, on the one hand, pushes up unit production costs, thereby weakening the position of corporates, undermining business confidence and heightening risk aversion. On the other hand, in many countries this has caused a fall in employment, wages and investment, and, by extension, demand. Weaker demand also reflects on households' reluctance to spend and higher precautionary savings. Moreover, though the response of leading central banks greatly eased financial conditions, there is still fear that banks' lending activity could be contained going forward by a rise in bad receivables from the corporates and households hit hardest by the crisis.

With regard to **economic growth of the euro area** for this year, we assumed a softer GDP decline by -7.5% in our current projection, compared to -8.1% in our previous projection. The GDP downturn in the euro area, our most important trade partner, means that this year demand for products and services of Serbian companies will also go down, producing disinflationary effects at home. Next year, euro area growth is expected to step up at a rate of 5.3%, as is its demand for Serbian products and services.

The virus has been spreading rapidly throughout Europe since October and countries are trying to control the situation through strict application of containment measures in order to avoid renewed lockdown and the undermining of the incipient economic recovery which is expected to be supported from mid-2021 by the use of the vaccine. Some countries have, however, not been able to avoid some degree of lockdown. At the time of making this projection, the prevailing expectation is that the currently deeply negative output gap of the euro area will shrink gradually and finally close in 2022. In line therewith, **Serbia's output gap**, though also negative over the projection horizon, ought to continue narrowing, whereby the disinflationary impact of demand on inflation will gradually weaken. We estimate that the output gap will measure around -3.7% late this year, contract to around -1% in 2021 as domestic demand recovers and external demand goes gradually up, and close almost entirely in late 2022.

The rebound in domestic demand is strongly supported by the timely taken monetary and fiscal policy measures, which have contained the negative effects of the pandemic on economic activity, employment and wages in Q2 and spurred economic growth from Q3 onwards. Serbia faced this crisis in a much better macroeconomic position, which created scope for stimulating economic measures to support households and corporates in tackling the crisis caused by

the pandemic and preserving the production potential. We expect that the acceleration of our economic growth next year will be led by the continuation of the investment cycle and higher disposable income of corporates and households.

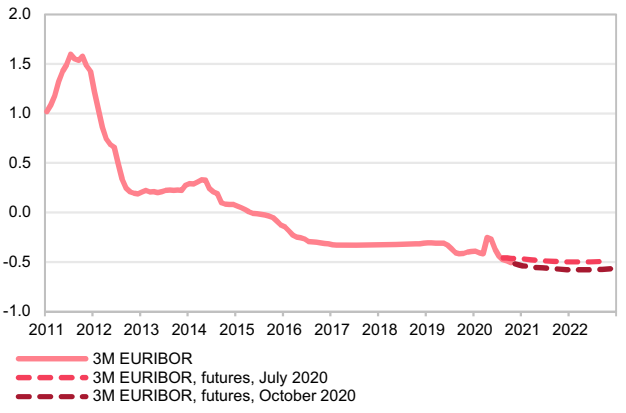
In addition to the positive effect of the NBS's monetary policy easing on domestic demand, another positive impulse ought to come from the anticipated low interest rates in the euro area. The **ECB** has taken unconventional monetary policy measures, including large-scale asset purchases, to substantially increase monetary policy accommodation, while further measures have been announced for December to support economic recovery. Futures indicate that the three-month EURIBOR will be somewhat lower than expected three months ago and remain negative not only until the end of our projection horizon, but even until 2026.

Despite extremely accommodative monetary and fiscal policy measures taken by many countries of the world, **global inflation is expected to be relatively low going forward as well**. Advanced economies' inflation was already low at the outbreak of the crisis, so euro area even recorded a fall in consumer prices. Like three months ago, euro area is not expected to achieve target inflation in the next two years. In our projection, we assumed **euro area inflation** to slow to 0.3% this year, and rise to 1.0% in 2021 and 1.3% in 2022. In most **countries of the region**, which are also our important trade partners, inflation should be relatively low in the coming period. With this in mind, we expect **inflationary pressures from dinar-denominated import prices to be extremely weak** until the end of the projection horizon.

When it comes to import prices, the most significant is the **global oil price** which, after a sharp plunge in April, increased due to tight production caps by OPEC+ countries and a gradual rebound in demand. It is still below its last year's level though and its future growth is expected to be moderate, as the initiated relaxation of production caps by OPEC+ countries will coincide with a gradual rise in demand, which will probably not reach its pre-pandemic level until 2023. Consistent with oil futures, in our new projection we assumed a lower global oil price than in the previous one: USD 41 per barrel in December 2020, and USD 44 and 45 per barrel in December 2021 and 2022. In line therewith, we expect moderate growth in petroleum product prices at home in the coming period.

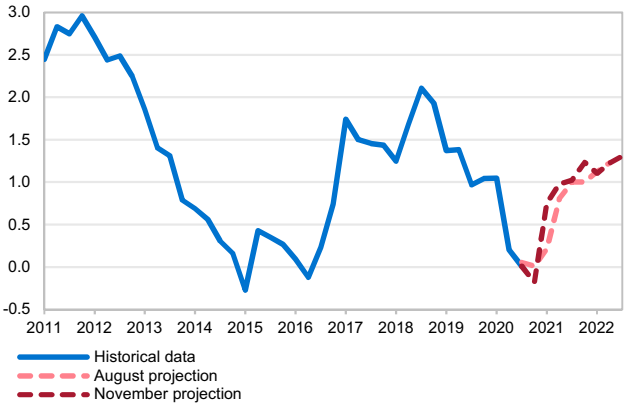
With regard to **global prices of primary agricultural commodities** relevant for us, our projection relies on futures data from global stock exchanges. Consistent with

Chart V.0.16 **Expected 3M EURIBOR**
(p.a., in %)



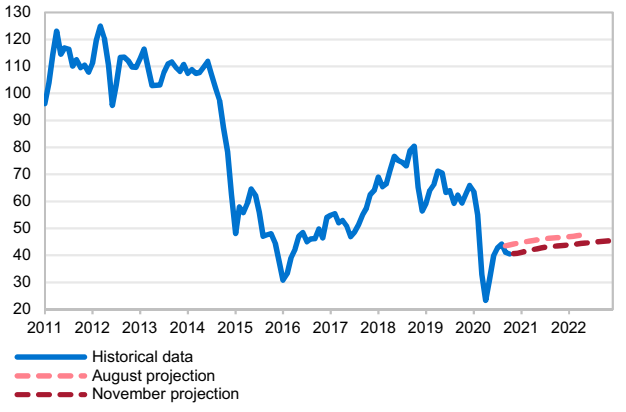
Source: Bloomberg.

Chart V.0.17 **Assumption for euro area inflation**
(y-o-y growth, in %)



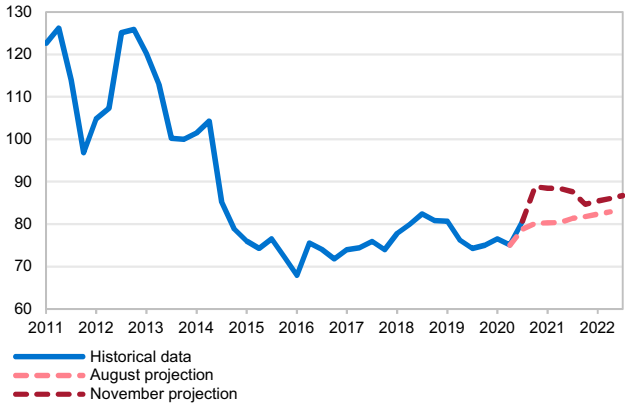
Source: NBS calculation based on projections of relevant institutions.

Chart V.0.18 **Assumption for Brent oil prices**
(USD/barrel)



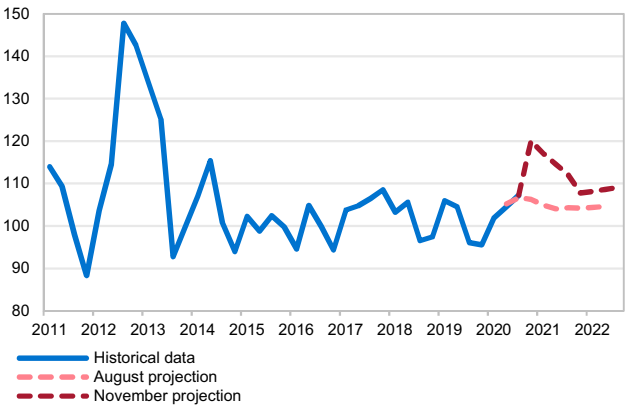
Source: Bloomberg.

Chart V.0.19 **Assumption for international prices of primary agricultural commodities**
(Q4 2013 = 100)



Sources: CBOT, Euronext and NBS calculation.

Chart V.0.20 **Assumption for domestic prices of primary agricultural commodities***
(Q4 2013 = 100)



Sources: Commodity Exchange Novi Sad, CBOT, Euronext and NBS calculation.
* Measured by the composite index of the prices of wheat, corn and soybean.

these data, we revised the assumption of growth in these prices up for 2020 (to 18.4% compared with 6.9% in our prior projection), and down for 2021 (to -4.6% compared with 2.0%). As in our previous projection, we assumed these prices to grow by 3.0% in 2022. For this reason, **we also expect that prices of primary agricultural commodities in the domestic market**[33], **which mirror movements in their global counterparts,** will display similar dynamics.

In the conditions of low and stable inflation for seven years in a row, anticipated low inflationary pressures and enhanced credibility of the NBS, we expect **inflation expectations to remain stable until the end of the projection horizon.**

Uncertainties surrounding the inflation projection in the short run are still mostly associated with movements in fruit and vegetable prices. In the medium run, the key risks to the projection remain associated with the international environment, and relate primarily to the speed of recovery of global trade and economic growth, most notably euro area growth, the global price of oil and primary agricultural commodities and capital flows to emerging markets. The risks to the projection also relate to the speed of recovery of domestic demand and movement in administered prices at home. On the whole, the risks to the inflation projection are judged to be symmetric.

When it comes to **fruit and vegetable prices**, movements in this inflation category are hardest to predict, as the output and the resultant price are largely influenced by weather conditions. In our current projection, we expect a y-o-y rise in prices of fruit and vegetables until mid-2021, and their decline thereafter. Still, as this is the most volatile inflation component, and shifts are possible in either direction, we judge the risks to the projection on this account to be symmetric.

Uncertainty in the medium run is still mostly associated with developments in the international environment, in particular the **speed of recovery of global trade and economic growth, most notably in the euro area, as this affects the pace of recovery of our external demand, and the level of imported inflation**. Like at the time of making the previous two projections, it is currently not known how long the pandemic will last and what its intensity will be, nor can it be said with any certainty when the vaccine will be

[33] Measured by the composite index of the prices of wheat, corn and soybean.

available and what the pace of its distribution will be. Though euro area economy began to rally in Q3, the situation deteriorated in October, making positive GDP growth in Q4 uncertain. To mitigate the negative effects of the pandemic and spur faster economic growth, in addition to the already taken large-scale monetary and fiscal measures, the ECB announced additional measures in December. In view of the intensified resurgence of the coronavirus and the introduction of further containment measures in a number of euro area countries, we estimate the risks to its economic growth and inflation to be skewed to the downside.

Large-scale monetary and fiscal measures of leading world economies helped alleviate the **uncertainty in the international financial market**. Emerging economies saw substantial capital outflows on account of portfolio investments in the initial stage of the pandemic, but after this portfolio flows were more positive, which helped stabilize their foreign exchange markets. The resurgence of the coronavirus in Europe adds to uncertainty, but fresh monetary and fiscal measures have been announced to ease the negative effects of the pandemic. In the period ahead, uncertainty in the international financial market and, by extension, global capital flows, will largely be determined by the success in controlling the pandemic globally and the effects of the undertaken and announced monetary and fiscal policy measures. With this in mind, we judge the risks to the inflation projection on this account to be symmetric.

The outlook for the recovery of global trade and economic growth will largely determine movements in the international commodity market, notably **prices of oil and other primary commodities**. A weaker than estimated economic recovery would lower the likelihood of rebound in demand for primary commodities and limit recovery in their prices. Supply-side factors are specific for each primary commodity. Although market participants, according to futures, still expect relatively low **global oil prices**, shifts in either direction are possible. In addition to the effects of the pandemic, there are also marked trade and geopolitical tensions, mostly between the US and China, which, on balance, undermine business confidence and the investment climate, heightening uncertainty regarding global economic trends. Also uncertain are the effects of a gradual moderation of oil production caps of OPEC+ countries and the extent to which members will adhere to the agreement. Global oil prices will also impact prices of

primary agricultural commodities, primarily through the costs of fuel in production, given that agriculture is an energy intensive sector. Also, energy prices impact demand for inputs in the production of ethanol and biofuels and, by extension, the prices of agricultural products such as corn, sugar and vegetable oil. The uncertainty regarding movement in global prices of primary agricultural commodities is additionally heightened by the pandemic, as the agricultural sector is labour intensive and the reduced supply of labour on account of labour movement restrictions and the spreading of the epidemic may induce price growth. Given the uncertainties surrounding global prices of oil and primary agricultural commodities, we estimate the risks to the projection on this account to be symmetric.

The risks to the projection are also associated with the **speed of recovery of domestic demand**. A deterioration of the epidemiological situation since October could slow the initiated recovery in economic activity. On the other hand, preserved production capacities, jobs and wages in the largest part of the economy, as well as the rise in disposable income and favourable terms of financing thanks to the adopted monetary and fiscal policy measures, could result in faster than expected economic recovery, especially if a vaccine is available sooner than expected. Also, further growth in government capital expenditure could be higher than expected, as was the case in the prior two years, which would also contribute to faster economic recovery. With this in mind, we estimate that the output gap could close even faster than projected on account of domestic demand, i.e. that the risks to the inflation projection on account of domestic demand are skewed to the upside.

Since, over the past few years, **administered price growth** at home was mostly slower than expected, we estimate that growth in these prices could be lower than anticipated in the coming period as well, so risks on this account are mildly skewed to the downside. There are also risks associated with food prices, due to sudden changes in the global market, and particularly in the EU market, as these changes spill over to food prices at home. We estimate shifts on this account to be possible in either direction, i.e. that the risks to the projection on account of food prices are symmetric.

Overall, **the risks to the inflation projection are judged to be symmetric until the end of the projection horizon.**

The NBS will continue to closely monitor movement and impact of key factors from the domestic and international environment on inflation, financial stability and the speed

Table V.0.5 **Key risks to the inflation projection**

Risk	Possible channels of influence on inflation in Serbia	Estimate of the risk effect relative to the baseline scenario
Short-term		
Fruit and vegetable prices (Serbia is a net exporter)	Departures directly affect inflation and are possible in either direction, as this is the most volatile inflation component.	↕
Medium-term		
Pace of euro area recovery	– Slower euro area recovery leads to a slowdown in external demand growth, lower Serbian exports, higher supply in the domestic market and thereby produces disinflationary effects. Conversely, faster than expected euro area growth would push up exports and contain disinflationary pressures; – Slower/faster euro area recovery leads to a slowdown/acceleration in inflation growth in the euro area and, in the conditions of a relatively stable exchange rate, creates disinflationary/inflationary effects at home on account of import prices; – Slower euro area recovery leads to higher expansiveness of the euro area's monetary policy, which leads to lower interest rates on euro loans and, by extension, through growth in credit and disposable income, to a rise in demand and inflationary pressures.	↓
Uncertainty in the international financial market and capital flows to emerging economies	Higher/lower uncertainty in the international financial market leads to higher/lower risk aversion of investors and lower/higher capital flows to emerging economies, which leads to depreciation/appreciation of the domestic currency and, by extension, rise/fall in prices.	↕
Crude oil prices in the global market (Serbia is net importer)	A fall/rise in the global oil price spills over to a fall/rise in petroleum product prices and thereby produces a disinflationary/inflationary effect. This fall/rise also has secondary effects, as it spills over to a fall/rise in other prices, mostly through transport costs. Also, through a rise/fall in disposable income it contributes to an increase/decrease in demand and can produce inflationary/disinflationary effects.	↕
Global prices of primary agricultural commodities (Serbia is net exporter)	Prices of primary agricultural commodities in the domestic market largely mirror the dynamics of these prices in the global market. They rise/fall in the case of a rise/fall in these prices in the global market, which thereby produce inflationary/disinflationary effects.	↕
Pace of recovery of domestic demand	Deterioration of the epidemiological situation could slow the initiated recovery in economic activity and demand, which would produce disinflationary effects. However, preserved production capacities, jobs and wages in the largest part of the economy, and the rise in disposable income and favourable terms of financing, diminish the negative effects of the pandemic on demand. In addition, further growth in government capital expenditure could be higher than expected, as could its impact on demand and inflationary pressures.	↑
Administered prices	Lower growth in administered prices leads to lower inflation.	↓

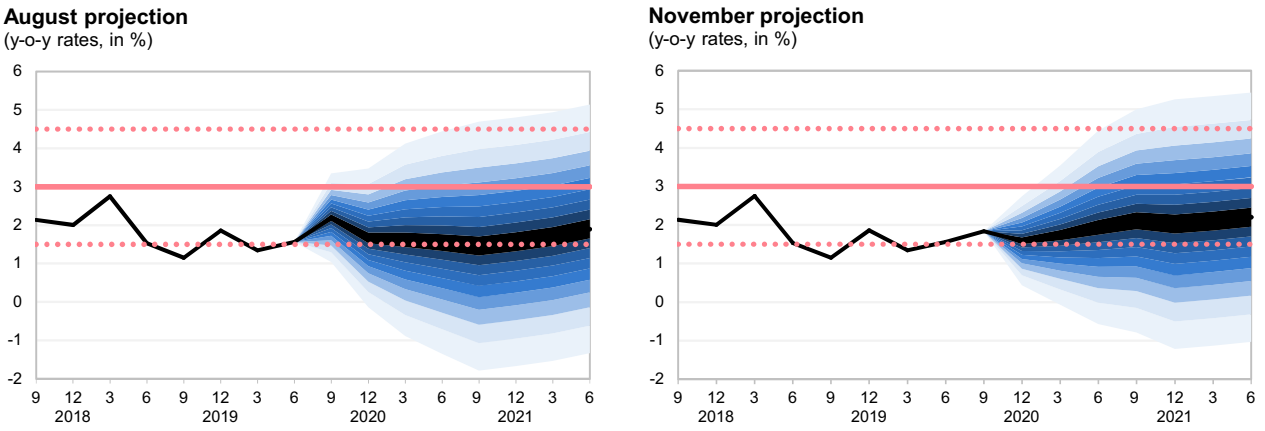
Note: ↑ means a more inflationary effect relative to the baseline scenario, ↓ means a more disinflationary effect, and ↕ means that risks to the projection are symmetric relative to the baseline scenario.

of economic recovery. It will continuously assess whether all measures are optimally combined and appropriate in scope, to provide necessary support to economic recovery, without threatening price and financial stability. The NBS, in coordination with the Government, stands ready to respond as the situation with the coronavirus pandemic evolves at home and abroad.

Current vs. previous projection

Compared to the August projection, the new-medium term inflation projection is slightly higher from next year, but it still moves in the lower half of the target tolerance band.

Chart V.0.21 **Current vs. previous inflation projection**



Source: NBS.

The key reason why the current inflation projection is slightly higher from next year are **food prices** which we expect to be somewhat higher than projected three months ago. These expectations are based on the **rise in prices of primary agricultural commodities globally in the period since our previous projection, which has also spilled over to the domestic market**. Furthermore, a positive contribution to inflation next year will also come from the **base effect for meat prices** which did not increase in the May-September 2020 period due to the pandemic and excess supply in the EU, though this was seasonally expected.

Further, we expect **core inflation t**o be somewhat higher than in our previous projection because of a less negative output gap, i.e. the **anticipated faster recovery in economic activity and, by extension, demand, than expected three months ago**.

Outcome of the November 2019 inflation projection

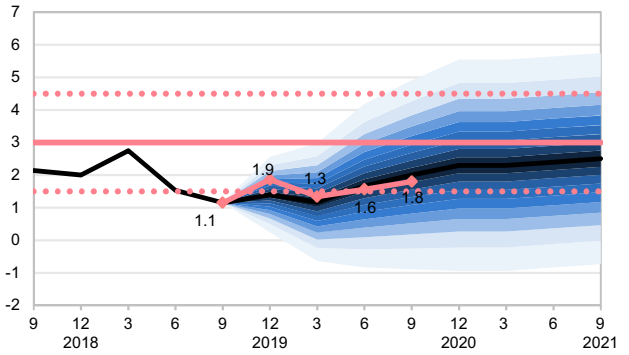
In the past year, inflation was largely aligned with the projection made and published in the November 2019 *Inflation Report*, **which helps strengthen confidence in the NBS and anchor inflation expectations**.

In the observed period, some upward departure of y-o-y inflation relative to the central projection from November 2019 was recorded **only in Q4 2019 due to a rise in prices of food and fresh vegetables**. The food prices increased mostly due to a seasonally unusual **rise in fresh pork meat**. Pork meat prices at home increased unexpectedly mirroring the price hike in the EU, **driven by developments in the international market,** i.e. the fact that demand outstripped supply in China due to the

spread of the African swine fever, so China substantially stepped up its imports from the EU. **Fresh vegetable prices also increased** in Q4, slightly more than usual for that time of the year. Still, **despite higher than expected growth in Q4, vegetable prices were still lower than at end-2018**, because of a previous sharp plunge from May 2019 with the coming of the new agricultural season. Other CPI components displayed relatively stable movements, in line with our expectations.

After Q4 2019, y-o-y inflation was aligned with the central projection from November 2019, with some departures in individual inflation components which, like in other countries, were largely due to the impact of the coronavirus pandemic. These departures were balanced, as they worked in the opposite directions. In particular, this refers to **prices of petroleum products which were lower than expected, and prices of food and fresh fruit and vegetables, which were somewhat higher than expected in November 2019**. Prices of petroleum product hovered around their projected level until Q2, when they fell sharply due to a powerful plunge in the global oil price to around USD 32 per barrel, which is 50% lower than expected, under the impact of a drastic global economic slump due to the pandemic. Though the global oil price later recovered partly, in Q3 it remained well below the level projected in November 2019, so the contribution of petroleum product prices to inflation remained negative. By contrast, food prices were somewhat higher than we expected a year ago. Food prices were also higher in the global market, due to the stocking up on inventories in a number of countries amid fears that a more intensive spread of the virus during autumn and winter could cause problems in food supply chains.

Chart V.0.22 **Achievement of November 2019 inflation projection**
(y-o-y rates, in %)



Source: NBS.

Table A
Indicators of Serbia's external position

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Q1 2020	Q2 2020	Q3 2020
EXTERNAL LIQUIDITY INDICATORS (in %)																
FX reserves/imports of goods and services (in months)	7.5	5.4	9.7	8.4	8.8	7.7	7.6	6.6	6.7	6.2	5.4	5.4	5.7	5.5	6.2	5.9
FX reserves/short-term debt	250.6	162.6	220.6	191.2	299.9	237.3	268.6	294.0	256.4	234.0	202.1	210.9	272.9	249.0	259.6	
FX reserves /GDP	30.5	22.9	32.6	31.7	34.0	32.4	30.7	27.9	29.1	27.8	25.4	26.3	29.1	28.1	30.2	28.1
Debt repayment/GDP	9.6	10.1	12.1	11.3	11.7	12.3	12.6	13.3	11.1	12.3	10.9	11.3	10.0	7.5	6.2	
Debt repayment/exports of goods and services	37.5	37.5	48.8	37.5	37.3	36.0	33.0	32.7	25.2	25.9	22.2	22.9	19.7	15.0	14.3	
EXTERNAL SOLVENCY INDICATORS (in %)																
External debt/GDP	55.1	58.8	68.6	74.5	68.1	76.1	70.4	72.4	73.4	72.0	65.1	62.2	61.5	61.5	67.2	
Short-term debt/GDP	12.2	14.1	14.8	16.6	11.3	13.7	11.4	9.5	11.3	11.9	12.6	12.4	10.7	11.3	11.6	
External debt/exports of goods and services	214.3	218.9	276.9	247.1	216.5	223.6	184.0	177.7	166.8	152.4	132.2	126.0	121.0	121.6	138.1	
FINANCIAL RISK EXPOSURE INDICATORS (in %)																
FX reserves/M1	306.7	300.4	393.4	416.6	429.6	402.1	330.4	278.1	250.2	207.3	176.2	168.0	174.1	165.3	147.1	136.2
FX reserves/reserve money	173.8	140.7	190.5	196.4	207.6	197.9	199.9	196.6	193.7	196.6	185.0	171.4	194.1	175.7	171.6	161.9
OPENNESS OF ECONOMY (EXPORTS + IMPORTS)/GDP	74.7	78.0	65.1	75.3	78.0	84.5	87.1	91.8	96.2	100.6	106.2	108.2	111.6	112.7	94.4	101.3
MEMORANDUM: (in EUR million)																
GDP[1]	31,551	35,701	32,486	31,546	35,432	33,679	36,427	35,467	35,740	36,779	39,235	42,892	45,967	11,025	10,750	12,034
External debt	17,382	20,982	22,272	23,509	24,123	25,645	25,644	25,679	26,234	26,494	25,526	26,662	28,254	28,738	31,024	
External debt servicing	3,039	3,594	3,922	3,564	4,154	4,130	4,595	4,728	3,960	4,508	4,285	4,849	4,592	832	670	
Central bank foreign exchange reserves	9,634	8,162	10,602	10,002	12,058	10,915	11,189	9,907	10,378	10,205	9,962	11,262	13,378	13,115	13,956	13,030
Short-term debt[2]	1,044	1,832	1,852	1,758	612	455	196	99	303	672	844	1,401	1,925	2,326	2,410	
Current account balance	-5,474	-7,125	-2,032	-2,037	-3,656	-3,671	-2,098	-1,985	-1,234	-1,075	-2,051	-2,076	-3,161	-957	-350	-407

CREDIT RATING (change of rating and outlook)	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2019	2020
	July	March/ Dec	Dec	Nov	March	Aug	July	Jan	Dec	Jan/March/ June/Dec	March/Dec	Dec	Sept	Dec	May
S&P	BB- /stable	BB- /negative	BB-/stable		BB /stable	BB-/negative				BB- /positive	BB /stable	BB /positive		BB+ /positive	BB+ /stable
Fitch		BB- /negative		BB- /stable		BB-/negative		B+ /stable	B+ /positive	BB-/stable	BB /stable		BB+ /stable		
Moody's							B1 /stable			B1 /positive	Ba3 /stable		Ba3 /positive		

Methodological notes:

Foreign exchange reserves/imports of goods and services (in months) - ratio of end-of-period foreign exchange reserves to average monthly imports of goods and services during last 12 months.
Foreign exchange reserves/short-term debt (in %) - ratio of foreign exchange reserves to stock of short-term debt at remaining maturity at end-of-period.
Foreign exchange reserves/GDP (in %) - ratio of end-of-period foreign exchange reserves to GDP.
Debt repayment/GDP (in %) - ratio of debt repayment (excl. early repayment of a part of debt to London Club creditors) to GDP during period under review.
Debt repayment/exports (in %) - ratio of debt repayment (excl. early repayment of a part of debt to London Club creditors) to exports of goods and services during period under review.
External debt/GDP – ratio of end-of-period outstanding debt to GDP.
Short-term debt/GDP – ratio of end-of-period short-term debt at remaining maturity to GDP.
External debt/exports (in %) – ratio of end-of-period outstanding debt to annual value of exports of goods and services.
Foreign exchange reserves/M1 (in %) - ratio of foreign exchange reserves to money supply at end-of-period.
(Exports + imports)/GDP (in %) - ratio of value of exports and imports of goods and services to GDP during period under review.

[1] According to ESA 2010. Data for Q3 2020 is NBS estimate.

[2] At original maturity.

Notes:

1. The Statistical Office revised GDP data for the period 2005-2017, which led to a change in the share of macroeconomic indicators in GDP.

2. Data are subject to corrections in line with the official data sources.

3. Starting from 2007 data on exports and imports of goods and services are shown in accordance with BPM6. Data for 2005 and 2006 are shown according to BPM5.

4. As of 1 January 2010 the Serbian Statistical Office applies the general trade system of registration of exports and imports which is a broader concept and includes all goods entering/exiting country's economic territory, apart from goods in transit. Statistical Office has published comparable data for 2007, 2008 and 2009. Previous years are disseminated using the special trade system. Trade with Montenegro is registered within relevant transactions as of 2003.

5. In September 2010, the methodology of external debt statistics was changed – public sector external debt now includes liabilities under SDR allocation (EUR 476.9 mn) used in December 2009. Private sector external debt excludes loans concluded before 20 December 2000 in respect of which no payments are made (EUR 946.1million, of which EUR 426.9 million relating to domestic banks and EUR 519.2 million to domestic enterprises).

6. Foreign debt repayment for 2019 does not include advance debt repayment on Eurobonds.

Table B
Key macroeconomic indicators

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Q1 2020	Q2 2020	Q3 2020
Real GDP growth (in %)[1]	6.4	5.7	-2.7	0.7	2.0	-0.7	2.9	-1.6	1.8	3.3	2.1	4.5	4.2	5.1	-6.4	-1.3
Consumer prices (in %, relative to the same month a year earlier)[2]	11.0	8.6	6.6	10.3	7.0	12.2	2.2	1.7	1.5	1.6	3.0	2.0	1.9	1.3	1.6	1.8
NBS foreign exchange reserves (in EUR million)	9,634	8,162	10,602	10,002	12,058	10,915	11,189	9,907	10,378	10,205	9,962	11,262	13,378	13,115	13,956	13,030
Exports (in EUR million)[3]	8,110	9,583	8,043	9,515	11,145	11,469	13,937	14,451	15,728	17,385	19,312	21,166	23,349	5,566	4,680	5,609
- growth rate in % compared to a year earlier	-	18.2	-16.1	18.3	17.1	2.9	21.5	3.7	8.8	10.5	11.1	9.6	10.3	5.4	-20.0	-7.5
Imports (in EUR million)[3]	15,468	18,267	13,099	14,244	16,487	16,992	17,782	18,096	18,643	19,597	22,343	25,257	27,960	6,861	5,464	6,582
- growth rate in % compared to a year earlier	-	18.1	-28.3	8.7	15.7	3.1	4.7	1.8	3.0	5.1	14.0	13.0	10.7	7.7	-21.0	-6.7
Current account balance[3]																
(in EUR million)	-5,474	-7,125	-2,032	-2,037	-3,656	-3,671	-2,098	-1,985	-1,234	-1,075	-2,051	-2,076	-3,161	-957	-350	-407
as % of GDP	-17.3	-20.0	-6.3	-6.5	-10.3	-10.9	-5.8	-5.6	-3.5	-2.9	-5.2	-4.8	-6.9	-8.7	-3.3	-3.4
Unemployment according to the Survey (in %)[6]	18.1	13.6	16.1	19.2	23.0	23.9	22.1	19.2	17.7	15.3	13.5	12.7	10.4	9.7	7.3	
Wages (average for the period, in EUR)[7]	347.1	402.0	337.8	331.8	372.5	366.1	388.5	379.8	367.9	374.5	383.9	419.7	465.9	504.0	503.4	504.1
RS budget deficit / surplus (in % of GDP)[4]		-1.6	-3.0	-3.2	-3.8	-5.6	-4.9	-5.9	-2.7	-0.2	0.7	0.6	0.2	-3.6	-20.4	-4.2
Consolidated fiscal result (in % of GDP)[4]	-1.8	-2.5	-4.2	-4.3	-4.5	-6.4	-5.1	-6.2	-3.5	-1.2	1.1	0.6	-0.2	-4.1	-20.5	-3.6
RS public debt, (central government, in % of GDP)[8]	27.9	26.8	30.9	39.5	42.8	52.9	56.0	66.2	70.0	67.8	57.9	53.7	52.0	51.9	57.3	56.7
RSD/USD exchange rate (period average)	58.39	55.76	67.47	77.91	73.34	88.12	85.17	88.54	108.85	111.29	107.50	100.28	105.28	106.57	106.76	100.63
RSD/USD exchange rate (end of period)	53.73	62.90	66.73	79.28	80.87	86.18	83.13	99.46	111.25	117.14	99.12	103.39	104.92	106.68	104.63	100.17
RSD/EUR exchange rate (period average)	79.96	81.44	93.95	103.04	101.95	113.13	113.14	117.31	120.73	123.12	121.34	118.27	117.85	117.57	117.58	117.59
RSD/EUR exchange rate (end of period)	79.24	88.60	95.89	105.50	104.64	113.72	114.64	120.96	121.63	123.47	118.47	118.19	117.59	117.50	117.58	117.58
MEMORANDUM:																
GDP (in EUR million)[5]	31,551	35,701	32,486	31,546	35,432	33,679	36,427	35,467	35,740	36,779	39,235	42,892	45,967	11,025	10,750	12,034

[1] At constant prices of previous year. Data for Q3 2020 is SORS flash estimate.

[2] Retail prices until 2006.

[3] Starting from 2007 data on balance of payments (current account, exports and imports of goods and services) are shown in accordance with BPM6. Data for 2005 and 2006 are shown according to BPM5. Due to the break in the series for 2007, exports and imports growth rates are not shown. As of 1 January 2010, the Serbian Statistical Office applies the general trade system of registration of exports and imports which is a broader concept and includes all goods entering/exiting country's economic territory, apart from goods in transit. The Statistical Office has published comparable data for 2007, 2008 and 2009. Previous years are disseminated using the special trade system. Trade with Montenegro is registered within relevant transactions as of 2003.

[4] Includes below-the-line items (payment of called guarantees, bank recapitalisations and debt takeover) in line with IMF methodology, as of 2008 on RS budget level and as of 2005 on consolidated level. Data for Q3 2020 is NBS estimate.

5) According to ESA 2010. Data for Q3 2020 is NBS estimate.

[6] New methodology of Labour Force Survey since 2014.

[7] Until 2017, wages are shown according to the old methodology. Since 2017, wages are shown according to the new methodology and data are based on Tax Administration evidence. For conversion of wages from RSD to EUR, we used the average of the period RSD/EUR exchange rate. Data for Q3 2020 is average of two months.

[8] Data on the share of public debt in GDP were downloaded from the website of the Ministry of Finance.

Notes:

1. The Statistical Office revised GDP data for the period 2005-2017, which led to a change in the share of macroeconomic indicators in GDP.
2. Data are subject to corrections in line with official data sources.
3. Source for the data on unemployment: Labour Force Survey, Statistical Office.
4. Source for public debt: MoF.

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Executive Board meetings and changes in the key policy rate

2019

Date	Key policy rate (p.a, in %)	Change (in basis points)
10 January	3.00	0
7 February	3.00	0
7 March	3.00	0
9 April	3.00	0
9 May	3.00	0
6 June	3.00	0
11 July	2.75	-25
8 August	2.50	-25
12 September	2.50	0
10 October	2.50	0
7 November	2.25	-25
12 December	2.25	0

2020

Date	Key policy rate (p.a, in %)	Change (in basis points)
9 January	2.25	0
13 February	2.25	0
11 March	1.75	-50
9 April	1.50	-25
7 May	1.50	0
11 June	1.25	-25
9 July	1.25	0
13 August	1.25	0
10 September	1.25	0
8 October	1.25	0
12 November	1.25	0
10 December		

Press releases from NBS Executive Board meetings

Press release from Executive Board meeting held on 10 September 2020

At its meeting today, the NBS Executive Board voted to keep the key policy rate at 1.25%.

In making the decision, the Board was guided by the achieved and expected effects of monetary policy measures adopted to mitigate the negative impact of the pandemic and encourage economic growth. The Board expects that past monetary policy easing and primarily the key policy rate cut by 1 pp from the pre-crisis level will continue to contribute to the preservation of favourable conditions of financing for businesses and citizens and to a further rise in their disposable income.

Consistent with the Executive Board's expectations, our economy began to recover in May, at a faster than expected pace in most production and service sectors. According to the SORS estimate, in H1 the economy contracted by around 0.8% y-o-y, which is a better outturn than initially expected. As highlighted by the Board, such performance reflects Serbia's much better macroeconomic position in the current global crisis compared to the earlier crises. This opened room for robust monetary and fiscal measures and potential future measures if necessary, without jeopardising price and financial stability, and the country's fiscal position. The Board expects the incipient recovery to continue, with economic growth exceeding pre-crisis levels already next year.

Faster recovery will also be supported by the NBS stimulus – a two-month extension of the moratorium on the repayment of loan and lease debt, more favourable conditions of dinar financing for businesses within the Government's Guarantee Scheme, and facilitated housing loan approval and repayment of housing and other loans. The Executive Board also took into account the expected effects of the robust package of fiscal measures (over 12% of GDP), which are a strong support to the private sector and will accelerate the recovery.

The Executive Board stresses that the adoption of the above stimuli was possible owing to the environment of low and stable inflation, underpinned primarily by the relative stability of the exchange rate and a market fully supplied with goods even in crisis conditions, as well as by the anchored inflation expectations. Y-o-y inflation measured 2% in July and is likely to revolve around this level in the coming months. It is expected to gradually approach the target midpoint in the medium run, driven by the recovery of demand, supported by monetary and fiscal policy measures.

At the global level, after a sharp contraction in economic activity in Q2 caused by the coronavirus pandemic, we can see a gradual relaxation of containment measures and a nascent recovery, supported in many countries also by accommodative monetary and fiscal policy measures. Though developments in the international environment remain surrounded by a high degree of uncertainty, economic activity indicators suggest that the global economy has entered recovery as of June, and that some countries, including the euro area as our key trade partner, are rallying faster than initially anticipated. Developments in the international commodity and financial markets remain volatile, reflecting uncertainties over the course of the pandemic and economic tensions between the United States and China.

The next rate-setting meeting is scheduled for 8 October.

Press release from Executive Board meeting held on 8 October 2020

After considering current macroeconomic trends and the overall outlook at its meeting today, the NBS Executive Board decided to keep the key policy rate at 1.25%.

In making the above decision, the Executive Board was guided primarily by the achieved and expected effects of past monetary policy measures aimed at mitigating the negative impact of the pandemic and encouraging economic growth. The Executive Board highlighted that the results recorded in most production and service activities have exceeded expectations for the fourth month in a row. It is quite certain that the GDP outcome in 2020 as a whole will be better than the initially projected -1.5%. Under the new projection, the GDP drop will measure around 1% with risks tilted to the upside, and this will be one of the best outcomes in Europe. Industry and retail trade have already reached pre-crisis levels and exports are on the path of normalisation. The revised GDP projection for 2020 also reflects improved performance of construction and agriculture. Favourable prospects are further confirmed by the FDI inflow, which remained solid in the face of the pandemic and the economic slowdown of our key foreign trade partners and more than sufficient to cover the current account deficit. A speedy recovery of our economy best speaks of the adequacy of the

coordinated measures and activities taken by the NBS, the Government and the President of Serbia, owing to which we have maintained production capacities and employment, while precluding a sharper drop in business and consumer confidence. The Executive Board expects that past monetary policy easing will continue to support favourable financing conditions for corporates and households and contribute to the increase in their disposable income. This will encourage further growth in domestic demand and, along with the gradual rebound in external demand, push Serbia's economic activity above the pre-crisis level already in the first half of the next year.

As emphasised by the Executive Board, the adoption of the said incentive measures was possible owing to low and stable inflation, underpinned primarily by the relative stability of the exchange rate and the market being amply supplied even in the crisis, and by the anchored inflation expectations. Inflation was stable in August, at 1.9% y-o-y, and will continue to move around this level in the coming months. Its gradual approach to the target midpoint is expected in the medium run as demand recovers, supported by monetary and fiscal policy measures.

Though the global economy is gradually recovering, partly owing to monetary policy measures of leading central banks and fiscal packages, the prospects still largely depend on the course of the pandemic. The recovery of the euro area, our most important trade and financial partner, is currently unfolding above expectations, reflecting, among other things, the ECB stimulus. Trends in the international commodity and financial markets remain volatile, mirroring the pandemic-related uncertainty and global geopolitical tensions.

The Executive Board also highlights our economy's increased resilience to external shocks, which is a result of responsible conduct of economic policy in the past years and our adequate response to the current global crisis. Serbia preserved its credit rating even during the pandemic, which is a clear recognition of the Government and NBS's success in preserving macroeconomic and financial stability of the country and a favourable economic outlook.

The next rate-setting meeting will be held on 12 November.

Press release from Executive Board meeting held on 12 November 2020

At its meeting today, the NBS Executive Board voted to keep the key policy rate unchanged at 1.25%.

In making the above decision, the Executive Board was guided primarily by the achieved and expected effects of past monetary and fiscal policy measures aimed at mitigating the negative impact of the pandemic and encouraging economic growth. The Executive Board expects that the timely taken economic policy measures will continue to exert a positive impact on financing conditions for corporates and households, and on their disposable income.

A softer than initially anticipated fall in economic activity in Q2 and better performance in Q3 are largely owed to the well-timed and adequate support provided to the domestic economy by the NBS and the Serbian Government. Having this in mind, the NBS revised the GDP growth projection for this year up from -1.5% to -1%, which is likely to be one of the best outcomes in Europe. Positive trends in the face of the pandemic are strongly underpinned by the recovery in investment, which turned out faster than anticipated, largely as a result of the preserved production capacities and jobs, accelerated implementation of infrastructure projects and the secured more favourable financing conditions. Led by the rising domestic and external demand, the recovery from the crisis should be more than full next year, with a GDP growth rate of around 6%.

The Executive Board stresses that inflation in Serbia has stayed low and stable during the pandemic, as in the past seven years. An important pillar of that stability have been the relative stability of the exchange rate and the well-anchored inflation expectations of the financial and corporate sectors, which at the same time confirm monetary policy credibility. Headline inflation measured 1.8% y-o-y in September, and core inflation was at a similar level (1.7%). Under the NBS's projection, in the coming period inflation will continue to move in the lower half of the target band, closer to its lower bound, and will gradually trend closer to the target midpoint (3%) in 2022 consistent with the expected further recovery of demand. Such movements indicate that there is room for additional monetary policy easing in the period ahead.

Though global economic rebound since May has been faster than hoped for, the accelerated spread of the coronavirus from October, particularly in Europe, remains a concern. The recovery of the euro area, our most important trade and financial partner, will be supported by additional ECB stimuli announced for December, and by the fiscal stimuli adopted by a number of member states. Developments in the international commodity and financial markets still mandate a cautious monetary policy conduct, reflecting the uncertainty regarding the pandemic, as well as geopolitical tensions in the world. However, the Executive Board highlights our economy's increased resilience to external shocks, which is a result of a responsible economic policy in the past years and our adequate response to the current global crisis.

Amid renewed and exacerbated health risks, the NBS decided to act proactively and pre-emptively by providing for the possibility of using additional cheap dinar liquidity. Banks will be able to make use of two dinar liquidity lines – by way of additional FX-purchase swap auctions and securities purchase repo auctions. Thus, in an environment characterised by a faster than expected rebound in domestic economy, the NBS seeks to maintain a sufficiently high level of available and cheap liquidity in the banking sector and, in turn, in the corporate sector, in order to ensure the continuation of such stimulating effect.

The banking sector still shows significant excess of dinar liquidity, and the provision of additional assets should make financing conditions even more favourable by maintaining low interest rates and encouraging banks' lending activity. By organising regular weekly swap and repo auctions (swap on Mondays and repo on Thursdays), banks are given an option to obtain the required dinar liquidity for a three-month period under favourable conditions, using FX or dinar securities as collateral. The first auctions will be held on 16 November (swap) and 19 November (repo).

The Executive Board will continue to keep a close eye on developments and impact of internal and external factors on inflation, financial stability and the pace of economic recovery. In coordination with the Government, the Executive Board is ready to respond in the event of exacerbated negative effects of the pandemic onto movements in the domestic and international environment.

At today's meeting, the Executive Board adopted the November Inflation Report, to be published on 18 November. Apart from the new inflation and GDP projections, the Report also gives detailed explanations of monetary policy decisions and the underlying macroeconomic developments.

The next rate-setting meeting will be held on 10 December.

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